Universitat de Lleida

Entrepreneurial Intentions among Tertiary Students

Kwaku Amofah

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Universitat de Lleida

DOCTORAL THESIS

Entrepreneurial Intentions among Tertiary Students

Kwaku Amofah

Report presented to opt for the degree of Doctor by the University of Lleida

Doctoral Program in Law and Business Administration

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DEDICATION

I dedicate this thesis to my best friend and dear wife, Mrs Mavis Amofah and all my children- Nana Kofi Amofah-Antwi, Akosua Pomaa Amofah-Antwi, Ohene Frimpong Amofah-Antwi, Adoma Amofah-Antwi and Adom Amofah-Antwi. God richly bless you for your prayers and support!!

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Lleida, November, 2020 **Kwaku Amofah**

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ABSTRACT

This thesis examines the entrepreneurial intention (EI) among tertiary students, which led to the production of four empirical papers. The first paper investigates the influence of Perceived Behavioural Control (PBC), Subjective Norm (SN) and Attitude towards Entrepreneurship (ATE), on Entrepreneurial Intention using Structural Equation Modelling (SEM) – Smart Partial Least Square (PLS) approach. The findings suggest that Theory of Planned Behaviour (TPB) is an important tool for predicting entrepreneurial intentions. Thus, the findings support the TPB for EI in Ghana. Two motivational factors (attitude towards entrepreneurship and perceived behavioural control) related to EI, but SN showed a non-significant association with EI. This study also found SN positively affecting attitude toward entrepreneurship and perceived behavioural control. However, only one (PSE-SN relationship) of the demographic-based hypotheses was significant.

The second paper examines the effect of attitude towards entrepreneurship, subjective norm, locus of control, entrepreneurial self-efficacy, and environmental support on entrepreneurial intention of 159 MBA students from two private universities in Ghana. The study uses structural equation modelling (SEM) to analyze the data obtained from the participants. The results show that all the factors but entrepreneurial self-efficacy significantly affects students' entrepreneurial intentions.

The third paper examines how parental self-employment/role models moderates (using Multi-Group Analysis) the relationship between the antecedents of entrepreneurial intention and Social Valuation (SV), Closer Valuation (CV), Entrepreneurial Skills (ES), and Environmental Support. The data of three hundred and nineteen respondents were analysed by structural equation modelling (SEM). Multi-Group Analysis was used to test the moderating role of parental self-employment (PSE) to determine whether there is a significant relationship between respondents with PSE and respondents without PSE. Consistent with prior studies, Attitude towards entrepreneurship (ATE) and Perceived Behavioural Control (PBC) have a positive effect on EI. The results prove that entrepreneurial skills influence ATE, PBC, and Subjective Norm (SN). Regarding the influence of perceived environmental knowledge (ENSUP) and ATE, the

relationship was insignificant, though the impact of ENSUP on PBC and SN was significant. With respect to the correlations between SV and CV and the antecedents of TPB respectively, all the hypotheses were accepted except CV→ATE and SV→PBC relationships. This study revealed that respondents with parental self-employment perceive a higher attitude towards entrepreneurship, PBC, entrepreneurial skills, entrepreneurial support, and entrepreneurial intention than those without PSE. However, the MGA established that the formation of entrepreneurial intentions is similar for respondents with parental self-employment and respondents without PSE. Thus, there was no significant relationship between respondents with PSE and respondents without PSE.

Lastly, the fourth paper investigates entrepreneurial intention by applying the Theory of Planned Behavior by Ajzen (1991). We specifically examined the role of gender on entrepreneurial education and role models or parental self-employment, by carrying out a Multi-Group Analysis. We used a web-based questionnaire to collect information from 216 students at a Spanish university. Data were analysed with the help of Structural Equation Modelling (SEM) – Partial Least Square (PLS). We conducted a tripartite analysis on Complete, Male, and Female Models. Regarding the Complete and Male Models, all the primary hypotheses were accepted, compared with four for the Female Model. Though this study has confirmed the applicability of the TPB model to entrepreneurial intention, we did not find a significant relationship between Males and Females about their entrepreneurial intentions for some relationships. But this study suggests that the relationship between PSE and PBC is stronger for Males than Females.

Generally, the thesis provides new insights into the entrepreneurial intention model, adapted from the TPB. This thesis has unearthed some revelations about entrepreneurial intentions among Spanish and Ghanaian students. In addition to the novel theoretical advancement, the thesis offers relevant implications for students, educators, policy-makers and stakeholders in the entrepreneurial field.

RESUMEN

Esta tesis examina la intención emprendedora entre los estudiantes de educación terciaria, lo que llevó a la producción de cuatro artículos empíricos. El primer artículo investiga la influencia del control conductual percibido, la norma subjetiva y la actitud hacia el espíritu empresarial, en la intención empresarial utilizando el modelo de ecuación estructural (SEM) - enfoque de mínimos cuadrados parciales inteligentes (PLS). Los hallazgos sugieren que TPB es una herramienta importante para predecir las intenciones empresariales. Por lo tanto, los hallazgos respaldan el TPB para la IE en Ghana. Dos factores motivacionales (actitud hacia el emprendimiento y control conductual percibido) relacionados con la IE, pero el SN mostró una asociación no significativa con la IE. Este estudio también encontró que la SN afecta positivamente la actitud hacia el espíritu empresarial y el control conductual percibido. Sin embargo, solo una (relación PSE-SN) de las hipótesis demográficas fue significativa.

El segundo artículo examina el efecto de la actitud hacia el espíritu empresarial, la norma subjetiva, el locus de control, la autoeficacia empresarial y el apoyo ambiental sobre la intención empresarial de 159 estudiantes de MBA de dos universidades privadas de Ghana. El estudio utiliza modelos de ecuaciones estructurales (SEM) para analizar los datos obtenidos de los participantes. Los resultados muestran que todos los factores, excepto la autoeficacia empresarial, afectan significativamente las intenciones empresariales de los estudiantes.

El tercer artículo examina cómo el trabajo por cuenta propia de los padres / modelos a seguir modera (utilizando el análisis multigrupo) la relación entre los antecedentes de la intención empresarial y la valoración social, la valoración más cercana, las habilidades emprendedoras y el apoyo ambiental. Los datos de trescientos diecinueve encuestados se analizaron mediante modelos de ecuaciones estructurales (SEM). Se utilizó el análisis multigrupo para probar el papel moderador del trabajo por cuenta propia de los padres (PSE) para determinar si existe una relación significativa entre los encuestados con PSE y los encuestados sin PSE. De acuerdo con estudios anteriores, ATE y PBC tienen un efecto positivo sobre la IE. Los resultados demuestran que las habilidades emprendedoras influyen en ATE, PBC y SN. En cuanto a la influencia del conocimiento ambiental percibido (ENSUP) y ATE, la relación fue insignificante, aunque el impacto de ENSUP en PBC y SN fue significativo. Con respecto a las correlaciones entre SV y

CV y los antecedentes de TPB respectivamente, se aceptaron todas las hipótesis excepto CV → ATE y SV → PBC. Este estudio reveló que los encuestados con autoempleo de los padres perciben una mayor actitud hacia el emprendimiento, PBC, habilidades emprendedoras, apoyo emprendedor e intención emprendedora que aquellos sin PSE. Sin embargo, la MGA estableció que la formación de intenciones empresariales es similar para los encuestados con trabajo por cuenta propia de los padres y los encuestados sin PSE. Por lo tanto, no hubo una relación significativa entre los encuestados con PSE y los encuestados sin PSE.

Por último, el cuarto artículo investiga la intención empresarial aplicando la Teoría del Comportamiento Planificado de Ajzen (1991). Examinamos específicamente el papel del género en la educación empresarial y los modelos a seguir o el autoempleo de los padres, mediante la realización de un análisis multigrupo. Utilizamos un cuestionario basado en la web para recopilar información de 216 estudiantes de una universidad española. Los datos se analizaron con la ayuda de Structural Equation Modeling (SEM) - Partial Least Square (PLS). Realizamos un análisis tripartito sobre modelos completos, masculinos y femeninos. En cuanto a los modelos completo y masculino, se aceptaron todas las hipótesis principales, frente a cuatro para el modelo femenino. Aunque este estudio ha confirmado la aplicabilidad del modelo TPB a la intención empresarial, no encontramos una relación significativa entre hombres y mujeres sobre sus intenciones empresariales para algunas relaciones. Pero este estudio sugiere que la relación entre PSE y PBC es más fuerte para los hombres que para las mujeres.

En general, la tesis proporciona nuevos conocimientos sobre el modelo de intención empresarial, adaptado del TPB. Esta tesis ha desenterrado algunas revelaciones sobre las intenciones emprendedoras entre los estudiantes españoles y ghaneses. Además del novedoso avance teórico, la tesis ofrece implicaciones relevantes para estudiantes, educadores, responsables políticos y partes interesadas en el campo empresarial.

CHAPTER ONE

INTRODUCTION

This study examines the entrepreneurial intentions among tertiary students in Spain and Ghana. One determinant for the increase in supply of entrepreneurs is an understanding of the factors influencing the intentions of prospective entrepreneurs. This thesis seeks to contribute to knowledge development on entrepreneurial intention in an international context by examining Spanish and Ghanaian tertiary students. The following section introduces the background of the study, problem statement/gaps, entrepreneurship and entrepreneurial intention defined, evolution of entrepreneurial intention and entrepreneurial intentions models/theories, justification for different measurement constructs for this study, the main research objective and specific research objectives, the main research question and its specific research questions, status of the papers, conceptual framework for the thesis and structure of the thesis.

1.1 Background of the study

Entrepreneurs make a difference in every society. Following the works by Schumpeter (1934; 1942), entrepreneurship has become an attractive area of study for scholars concerned with national economic development. Both Schumpeter's (1934) as well as Shane and Venkataraman's (2000) entrepreneurial schools of thought recognise that entrepreneurship contributes to the overall prosperity and wellbeing of nations. Increasing the supply of entrepreneurs in the economy is the heart desire of governments, policy-makers, scholars, and other stakeholders mainly because entrepreneurship leads to accelerated economic growth (Acs, 2006; Acs & Armington, 2003; Audretsch, 2007), reduction in unemployment (Campbell, 1996; Carree & Thurik, 1996; Lee, Florida, & Acs, 2004; Santarelli, Carree, & Verheul, 2009) and innovation (Reynolds, Storey & Westhead, 1994).

Intention is the single best predictor of ultimate behaviour (Ajzen, 1991) and this has led to a considerable interest in entrepreneurial intention and its antecedents (Boyd & Vozikis, 1994;

Krueger, Reilly, & Carsrud, 2000). Also, intentions offer a unique opportunity to explain and predict entrepreneurial activity that has explanatory and predictive power as indicated in prior studies (Guerrero, Rialp, & Urbano, 2008; Kolvereid, 1996; Liñán, Urbano, & Guerrero, 2011; Tkachev, & Kolvereid, 1999; Veciana et al 2005). The place of intentions in entrepreneurship cannot be disputed in the sense that human behaviour is either stimulus-response or planned (Krueger, 2009), and venture creation is conscious and voluntary (Krueger et al., 2000). Hence, entrepreneurship can be classified as a planned behavior (Bird, 1988; Krueger & Carsrud, 1993; Krueger et al., 2000) and all planned behaviour is intentional (Krueger, 2000; 2009). Therefore, since entrepreneurship involves a multi-step process, leading to venture creation (Gartner, Bird, & Srarr, 1992; Krueger et al., 2000; Ruhle, Mühlbauer, Grünhagen, & Rothenstein, 2010), intention is the foremost stage and should be investigated (Lee & Wong, 2004). Undoubtedly, though not all intention leads to action, no action will occur without intention (Krueger, 2000).

University students from diverse regions of the world grow up and live in different political, economic, social, and cultural circumstances. For instance monarchy is a central feature in the Spanish political system unlike Ghana which is typically a democratic system. The life expectancy and the literacy rate in Spain are higher than Ghana. According to Louw, Van Eeden, Bosch, and Venter (2003), differing circumstances matter when it comes to entrepreneurial disposition and interests. There has been rising consciousness in recent decades of the importance of universities as new ideas, inventions, and as major stakeholders in regional and national innovative systems (Abreu & Grinevich, 2013). Entrepreneurship education promotes accelerated economic growth and favourable environment (Kassean, Vanevenhoven, Liguori, & Winkel, 2015), influences the output of entrepreneurs by enhancing their profitability, entrepreneurial spirit, entrepreneurial attitudes, and chances of survival (Ho, Uy, Kang, & Chan, 2018); motivates students to entrepreneurial career (Newbery, Lean, Moizer, & Haddoud, 2018; Wei, Liu, & Sha, 2019). The impact of EE on EI, in particular, has been studied more recently, and studies are also developing that show differing behavioural motivations among entrepreneurs by country (Bae, Qian, Miao, & Fiet, 2014; Pittaway & Cope, 2007). The first entrepreneurship programme was established in Asia (Japan), in the 1930s (Bell, Callaghan, Demick, & Scharf, 2004). But currently, in Europe, Asia, Oceania or the Americas, numerous universities offer their students a possibility to study business formation and creation (Bell et al., 2004). A

comprehensive knowledge of effective and fruitful educational initiatives is critical for any society in the long run. Entrepreneurship education often improves the attitude of students towards entrepreneurship (Wei et al., 2019).

According to Kuratko (2005) the reason behind the accelerated surge in entrepreneurship education is because of its influence on job creation and economic growth and the strong correlation between entrepreneurial activity and economic performance. In a study of over one million students all over the world, the students indicated their preference for organisational employment directly after school, though the desire fades after five years of university education (Sieger, Fueglistaller, Zellweger, & Braun, 2018). Without the proper attitude, both cognitive competencies and non-cognitive competencies are difficult to accomplish and sustain in the long run (Moberg, 2014).

In recent times, there has been an increase of reliance on SEM to the point that it has become the standard method for estimating the relative impact of the TPB constructs on intention (Sok, Borges, Schmidt, & Ajzen, 2020). This thesis model the constructs of the core TPB construct, using reflective indicators. This thesis predominantly used reflective indicators. Beginning in 2017, some scholars started to use the nonparametric and variance-based SEM-PLS method. Compared with SEM-CB (covariance-based), reasons for the application of SEM-PLS are non-normal data, small sample sizes and the use of formative indicators (Hair, Sarstedt, & Ringle, 2019).

The focus of this thesis is on entrepreneurial intentions among university students, using the Theory of Planned Behaviour (TPB) as the basic framework. The justification for the adoption of TPB is due to its ability to explain human attitude towards behaviour. The TPB is applied because it forms appropriate theoretical basis for entrepreneurship education and its impact on the formation of entrepreneurial intention. Also, the TPB is used because entrepreneurship is a planned behaviour and cannot be created without adequate planning (Jena, 2020).

This study comprises of four papers that examines the entrepreneurial intention among tertiary students in Ghana and Spain. Specifically, the thesis focus on entrepreneurial intention among

MBA students in private universities, entrepreneurial intention among technical university students, gender differences in entrepreneurial intentions and the role of parental self-employment/role models on entrepreneurial intentions.

1.2 Problem Statement/Gaps

There has been numerous studies on entrepreneurial intention in the Spanish context (Liñán, 2008; Liñán, Rodríguez-Cohard, & Guzmán, 2008; Liñán et al., 2011; Liñán & Santos, 2007; Mortan, Ripoll, Carvalho, & Bernal, 2014). Despite the numerous studies (Frank, Lueger, & Korunka, 2007; Segal, Borgia, & Schoenfeld, 2005) on entrepreneurship, few have focussed on understanding the levels and drivers of entrepreneurial intention in an international context (Giacomin et al., 2011; Teixeira & Davey, 2009). A plethora of studies on entrepreneurial intentions have concentrated on Europe and USA, at the expense of students in developing countries, leading to a call for more research in an international context (Nabi & Holden, 2008). Emerging economies (Jones, Jones, Packham, & Miller, 2008; Wu & Wu, 2008) and comparison with developed countries hardly feature in the literature of intentions (Nguyen, Bryant, Rose, Tseng, & Kapasuwan, 2009; Pruett, Shinnar, Toney, Llopis, & Fox, 2009), despite calls for cross-cultural perspectives (Liñán & Chen, 2009; Nabi & Holden, 2008).

This thesis is an international survey that seeks to examine the differences between the entrepreneurial intentions of students from a developed country (Spain) and an emerging economy (Ghana). The need for new cross-cultural inquiries has also been acknowledged in relation to the wider entrepreneurship literature (Lingelbach, De La Vina, & Asel, 2011). By virtue of the fact that entrepreneurship play a critical role in economic growth and competitiveness, this thesis aim to contribute to the understanding of students' entrepreneurial intentions in Ghana and Spain, thereby deepening the literature on comparative research between developing and developed countries. This study is probably the first of its kind that seeks to examine the entrepreneurial intentions among Spanish and Ghanaian students, using the TPB.

The Organisation for Economic Cooperation and Development (OECD) estimates that, 24% of the world population currently lives in fragile states, the majority of whom are found in the

African continent, with the number expected to increase to 3.3 billion peoples by 2050 (OECD, 2018). Ghana, like other African countries experiences an increasing population and faces massive challenges with high levels of unemployment among the youth. Ghana's population and GDP per capita is over 31 million and 2,202.31 USD, respectively. However, the population of Spain currently stands at 46.4million and the GDP per capita $40,170. The unemployment situation in Ghana is basically due to lack of skill and entrepreneurial awareness among the youth. Though a developed country, Spain also faces the challenge of youth unemployment, though the problem may not be pervasive as pertains in Ghana. According to Bosma et al. (2020), Spain's job creation policies have not improved the direct labour situation. The authors stressed in the GEM 2018/19 report that special attention be given to high-potential entrepreenurship in Spain and programmes related to enhancing the country's education system, as well as facilitating innovation and knowledge transfers be prioritized by policy-makers. According to Robson, Haugh and Obeng (2009, p.331) 'most of the countries in sub-Saharan African champion the development of small and medium-sized enterprises (SMEs) as a conduit to the alleviation of poverty, the generation of employment, and the promotion of national economic development'.

According to the Global Entrepreneurship Monitor (GEM) (2013), Ghana has both the largest gap between necessity and opportunity entrepreneurship and the second highest total early-stage entrepreneurial activity (TEA) levels in the world (Zambia, 41%, Ghana, 37%, Nigeria, 35% and Angola, 32%) and it was one of the most prosperous countries in Africa over the last 20 years (Dana, 2007) and one of the fast expanding markets (Acheampong & Dana, 2017). However, this situation has not translated into the fortunes of the country as majority of the masses continue to wallow in youth unemployment and abject poverty. A review of the historical development of entrepreneurship in Ghana shows that the concept of entrepreneurship has been part of the Ghanaian culture even before the fifteenth century (Buame, 1996). Ghana has partially exploited its potential of entrepreneurial activity due to some socio-cultural factors reduce the chance to start a firm such as a general dependence from family for major resources (Adeya, 2006); and the existence of an environment where an institutional finance for start-up business is extremely limited (Lall, 1995; Robson & Obeng, 2008).

According to the 2018/19 GEM Report, the Spanish government's pledge, at the institutional and business level, to the UN Sustainable Development Goals (SDGs), as well as to the strategic promotion of SMEs and entrepreneurship, is connected to the policies of the European Union and regional governments, such as strategic entrepreneurship, female entrepreneurship, self-employability, business management and talent, regulatory frameworks, financing, innovation and digitalization, sustainability and internalization. The uncertainty of the international political environment (the threat of Brexit and the tensions between the US and China), as well as domestic political instability, represent major challenges to Spanish entrepreneurs (Bosma et al., 2020).

Ghana's Ministry of Business Development and the Institute for the Creation and Development of the Enterprise (INCYDE[1]) recently signed a GH₵30 million (€4,339, 118.83) agreement with the Spanish government to support young, promising entrepreneurs in exchange programmes in Spain. According to Okpongete (2018), the programme is expected to assist 2,000 young entrepreneurs to imbibe entrepreneurial spirit. As part of the agreement, the beneficiaries would be attached to Spanish companies to give them firsthand knowledge of how businesses are run. According to Spain's Ambassador to Ghana, Alicia Rico, 'Spain will accompany and support Ghana at this very important moment in history, and as well as continue encouraging Ghana to continue on this path of economic transformation, as well as generation and creation of wealth in the country'. This step is in the right direction because entrepreneurship is assumed to have a significant catalyst for economic growth and development in developing countries (Spring, 2009). The agreement on entrepreneurship between Spain and Ghana is expected to create new businesses and increase wealth for individuals at the local, regional, national, and also at the global stage.

[1] INCYDE Foundation is a Spanish Chamber of Commerce initiative that was created in 1999. Its objective is fostering and forming entrepreneurship, improving business owners' qualifications and creating and consolidating businesses. It has been used as a tool in generating employment and innovation and helping SMEs to adapt to new markets. The foundation's activities fall within the European Social Fund (ESF) and European Regional Development Fund (ERDF) community framework; promoting and establishing the largest network of incubators in Europe (96 currently in operation).

The preceding paragraphs points to the fact that both countries have their own challenges, though developed and developing countries now perceive entrepreneurship as an effective means of creating jobs, increasing productivity and competitiveness, improving the quality of life, and achieving community goals. Thus, the interest for entrepreneurship is felt all over the world, both in developed and developing countries. The importance of entrepreneurship for economic development of any country is now widely acknowledged (Thomas & Mueller, 2000). Notwithstanding the extensive development in entrepreneurship research over the past years, the empirical findings remain mixed, contradictory and inconclusive.

1.3 Entrepreneurship and Entrepreneurial Intention defined

Studies using empirical evidence have sought to define and explain the nature of entrepreneurship, with much of the literature development on the seminal papers of Schumpeter (1934) and Kirzner (1973). It important to state that there is no universally agreed upon definition of who is an *entrepreneur* or the term *entrepreneurship*. An entrepreneur can be defined as 'an individual who establishes and manages a business for profit and growth' (Sally Smith, Hamilton, & Fabian, 2019). Entrepreneurship can be defined from either a macro-level perspective (firm perspective) or from a micro-level perspective (individual perspective) (Vecchio, 2003). According to Shane and Venkataraman (2000, p.218), entrepreneurship is the 'scholarly examination of how, by whom, and with what effects opportunity to create future goods and services are discovered, evaluated, and exploited'. Individuals play a vital role in the entrepreneurial process, because they are fundamental actors related to opportunity identification and exploitation leading to venture creation and growth (Shane & Venkataraman, 2000). Entrepreneurship can be described as the search for economic wealth through creative initiatives of the individual operating within an uncertain environment constrained by limited tangible resources (Mitchell, Busenitz, Morse, & Smith, 2002). According to Pham, Jones, Dobson, Liñán and Viala (2021) it is a process that emerges through the iterative stages of entrepreneurial intention(s), cognitive processing of opportunity-related information, and implementation of multiple behaviours. From this definition, incorporated in the meaning of entrepreneurship is

entrepreneurial intention. There are numerous definitions of entrepreneurship but a notable characteristic among them all is that entrepreneurs are *agents of change*.

The concept of EI, defined as the commitment to starting a new business after graduation, has been analysed by several scholars (Audretsch, 2014; Bosma, Hessels, Schutjens, Praag, & Verheul, 2012; Krueger & Carsrud, 1993b). It is assumed that EI precedes the decision to create the business, although it is recognised that the intention does not always result in the desired behaviour (Davidsson, 1995). Entrepreneurial behaviours occur when individuals decide to act upon an opportunity (Shane, 2003) though not all opportunities will lead to entrepreneurial actions but behind entrepreneurial actions are entrepreneurial intentions (Krueger, 2007). 'Intentionality'(Katz & Gartner, 1988, p.431) is classified as a crucial ingredient in determining entrepreneurship. Entrepreneurial intent may be defined as a 'self-acknowledged conviction by a person who intend to set up a new business venture and consciously plans to do so at some point in the future' (Thompson, 2009, p.676). Since venturing is an intentional act that involves repeated attempts to exercise control over the process in order to achieve the expected outcome (Shaver, Gartner, Crosby, Bakalarova, & Gatewood, 2001), intentionality as the state of mind directing a person's attention toward a specific goal or path in order to achieve something, can be considered as an explanation of either creating a new venture or creating new values in an existing venture (Bird, 1988). Entrepreneurial Intention can be seen as a personal projection of future actions and goals to be implemented to develop one's own business (Ajzen, 1991; Fini, Grimaldi, Marzocchi, & Sobrero, 2012); as conscious state of mind that precedes action and directs it towards the goal of creating a business (Shook, Priem, & McGee, 2003); and a state of mind in which the person's attention is directed towards the attainment of a goal (Bird, 1988). Entrepreneurial intention can be perceived as the commitment to performing a behaviour that drives the physical business start-up process (Krueger & Carsrud, 1993b; Palmer, Fasbender, Kraus, Birkner, & Kailer, 2019). Entrepreneurial intention is an individual's state of mind, leading toward the development and implementation of new business concepts (Yıldırım, Çakır, & Aşkun, 2016). Thus, entrepreneurial intention is highly related to individual's intention to establish a new venture (Chen & Greene, 1998; De Clercq, Honig, & Martin, 2013; Frank et al., 2007; Kautonen, Luoto, & Tornikoski, 2010; Krueger, 1993; Liñán & Chen, 2009; Peterman & Kennedy, 2003; Tumasjan, Welpe, & Spörrle, 2013).

1.4 Evolution of entrepreneurial intention and entrepreneurial intentions models/theories

The twenty first century has witnessed an unprecedented surge in research using entrepreneurial models as a framework, thereby confirming the applicability of the concept of entrepreneurial intentions in various settings. Pioneering studies on entrepreneurial intentions date back to the late 1980s, and since then the subject has attracted interest from various scholars, including those from social psychology and cognitive psychology, aiming to understand the role of individual and contextual factors (Liñán & Fayolle, 2015). The study by (Krueger & Carsrud, 1993b) is also credited for making the TPB the 'reference' theory in entrepreneurial research. Krueger and Brazeal (1994) attempted to reconcile it with Shapero's (1984) theory of the entrepreneurial event. Moreover, Bird (1988) is one of the pioneering authors to place intentions at the heart of entrepreneurial research. His model was modified by Boyd and Vozikis (1994), introducing the idea of self-efficacy. Subsequent to this emerged the theory of planned behavior by Ajzen and Fishbein and Shapero's entrepreneurial event which gained great popularity in academic circles.

Specifically, two key models shaping the entrepreneurial intention include Shapero's (1975) Entrepreneurial Event Model and Ajzen's (1991) Theory of Planned Behaviour. Wahidmurni, Zuhriyah, Efiyanti and Abdussakir's (2020) study revealed that Ajzen's TPB and Shapero's model of Entrepreneurial Event as two of the most extensive empirical support from various tests on the factors that became predictors of entrepreneurial intentions of university students. Shapero's model discusses the perceived desirability and feasibility of becoming an entrepreneur. Ajzen's model proposes that entrepreneurial intention is determined by one's personal attitude, perceived social norms and perceived behavioural control. The two models share some similarities, with direct correspondence between perceived feasibility and perceived behavioural control and with personal attitude and perceived social norms as social and cultural influences of perceived desirability (Krueger et al., 2000; Liñán et al., 2011). According to the TPB, the relative importance of attitude, subjective norm and perceived behaviours control in the prediction of intention is expected to vary across behaviours and situations (Ajzen, 1991). Shapero emphasise this by stating that, no single variable or factor can account for the outcome of the process. A number of outcomes are necessary but no one is sufficient.

Krueger provides evidence that perceived credibility, perceived desirability and propensity to act explain well 'over half' of the variance of the intentions towards entrepreneurship, with feasibility perceptions explaining the majority (Krueger, 1993). Hence, Krueger and Brazeal state that as their most important conclusion that superiority of perceived feasibility and the need to research what factors contribute the most to perceptions of feasibility (Krueger & Brazeal, 1994). However, the TPB explains entrepreneurial intentions comprehensively and consistently than other alternative models (Krueger et al., 2000) and it has been successfully applied in a wide variety of fields (Beck & Ajzen, 1991; Harland et al., 1999).

1.5 Justification for different measurement constructs for this study

Though the Conceptual Framework for this study is based on the TPB, the constructs for the four papers somehow differ because there seems to be no consensus on the use of a standard construct for the measurement of entrepreneurial intentions. Probably, since there is no universally agreed upon definition of entrepreneurship it stands to reason that the constructs to measure entrepreneurial intention may also differ. Rueda, Moriano and Liñán (2015) highlighted some of these measurements on their paper on entrepreneurial intentions. According to Chandler and Lyon (2001) some of these differences may have been due to measurement issues and measuring cognitive factors involves considerable challenges (Baron, 1998). Autio, Keeley, Klofsten, Parker and Hay (2001) have recognized that, the measurement of individual entrepreneurial intent has been characterized by different metrics and no rigorous-developed and psychometrically-validated measurement scale has so far been developed (Thompson, 2009), though this study see this as an opportunity to test them in different settings. Numerous studies have established that entrepreneurial intention models can be affected by different variables and constructs (Zhang & Cain, 2017; Obschonka et al., 2017).

Krueger et al. (2000) used a single-item variable to measure constructs in entrepreneurial intentions. Kolvereid (1996) used a belief-based measure of attitudes. Kolvereid and Isaksen (2006) used an aggregate measure for attitudes, but a single-item for intention.

Moreover, some studies used an unconditional measure of intention (Autio et al., 2001; Kolvereid & Isaksen, 2006; Krueger et al., 2000; Zhao, Hills, & Seibert, 2005), whereas others made participates to indicate their preferences and estimated probability of starting a self-employment career 'as opposed to conventional employment' (Fayolle, Gailly, & Lassas-Clerc, 2006; Kolvereid, 1996). Thompson (2009) suggests many different multi-item measures have in fact been used in past research referring to EI. Mueller and Thomas (2001) used a blend of Rotter's (1966) external-internal locus of control and Jackson's (1994) innovativeness scales. Schmitt-Rodermund and Vondracek (2002) used a scale based on three sub-scales adapted from Holland's (1995) vocational interests, skills, and behavioural measures. Reitan (1997) used a 21-item scale, Chen, Greene Crick (1998) used a 5-item scale measure, and (Vesalainen & Pihkala, 1999), used three different continuous measures of entrepreneurial intent, one single item and two multi-item scales. Engle et al. (2010) used a three-item scale to measure entrepreneurial intention when they surveyed twelve countries. Audit (2004) used a two item scale and Thompson (2009) used a six-item scale to measure entrepreneurial intention. Liñán, Nabi and Kueger (2013), Usman and Yennita (2019), Sher, Abbas, Mazhar and Lin (2020) and Trivedi (2017) used a six-item scale adapted from Liñán and Chen (2009) to measure entrepreneurial intention.

The foregoing provide basis for the use of different scales to measure entrepreneurial intentions in the two contexts.

1.6 THE MAIN RESEARCH OBJECTIVE AND SPECIFIC RESEARCH OBJECTIVES

The main objective of this thesis is to examine the entrepreneurial intention among tertiary students. The specific objectives are outlined as follows;

a) To measure the entrepreneurial intentions of technical university students in Ghana
b) To examine the entrepreneurial intentions of MBA students in Ghana
c) To examine the moderating role of parental self-employment/Role Models on entrepreneurial intentions of Spanish students

d) To assess the role of gender on the relationship between attitude towards entrepreneurship education and role models and the antecedents of entrepreneurial intentions of Spanish students

1.7 The Main Research Question And Its Specific Research Questions

To examine the entrepreneurial intentions of tertiary students in Spain and Ghana, a research question has to be formulated. This should set the stage for the specific research this study will undertake. While this thesis can build on previous studies on entrepreneurial intentions, it must mark the unique filed of knowledge the thesis will develop, going forward. Hence, the main research question of this thesis is:

What is the entrepreneurial intention among tertiary students?

In order to answer the main research question, specific research questions have been formulated. The first specific research questions is, *what is the entrepreneurial intention of Technical university students in Ghana?* The main objective of this first objective is to examine the entrepreneurial intention among Sunyani Technical University students, using the TPB. This study is one of the pioneering studies to adopt the TPB and structural equation modelling (SEM) to the technical university system in Ghana after conversion of the nation's public polytechnics into a technical one. Technical universities are required to play a critical role in the support of knowledge creation and knowledge transfer through science and technology. Further, the application of the TPB will help in a comparison with previous studies, of which majority has been conducted in advanced economies. As a novelty, this paper will go a long way in evaluating the technical university concept and its implications for Ghana's educational system.

The second specific research question is, *what is the entrepreneurial intention of MBA students in Ghana?* This paper also applied the core TPB constructs and modified it by introducing two additional constructs (Locus of Control and Environmental Support). But unlike the first paper that focussed on undergraduates, this paper surveyed private MBA university students and their

entrepreneurial intentions. A modified version of the TPB is a novelty used in this thesis to examine private university students. A motivation for this study stems from previous research that qualifications acquired in postgraduate education impact entrepreneurial prospects through the attainment of employment-related skills and competencies.

The third specific research question is, *what is the role of parental self-employment/Role Models on entrepreneurial intentions among Spanish students?* Previous study on entrepreneurship propose that having a family member or close relative who is or was an entrepreneur increase the probability of self-employment because these individuals can act as role models. Feldman et al. (1991, p.16) profess that 'entrepreneurs often…come from families in which a parent owns a business'. This paper follows the cognitive approach and applies an Entrepreneurial Intention model, adapted from the TPB to examine how parental self-employment/role models affect the relationship between the antecedents of EI and social valuation, closer valuation, entrepreneurial skills, and environmental support. This study is one of the pioneering works to carry out a Multi-Group Analysis (MGA) to assess the relationship between respondents with parental self-employment and respondents without role models, using the entrepreneurial intention model.

The final specific research question is, *What is the role of gender on the relationship between attitude towards entrepreneurship education and role models and the antecedents of entrepreneurial intentions?* This paper seeks to investigate entrepreneurial intentions of Spanish students by applying the TPB. Unlike the previous paper, this paper examined the role of gender on entrepreneurial education and role models by carrying out an MGA.

On the whole, the four papers make contributions to knowledge on the entrepreneurial intentions among tertiary students in an international context.

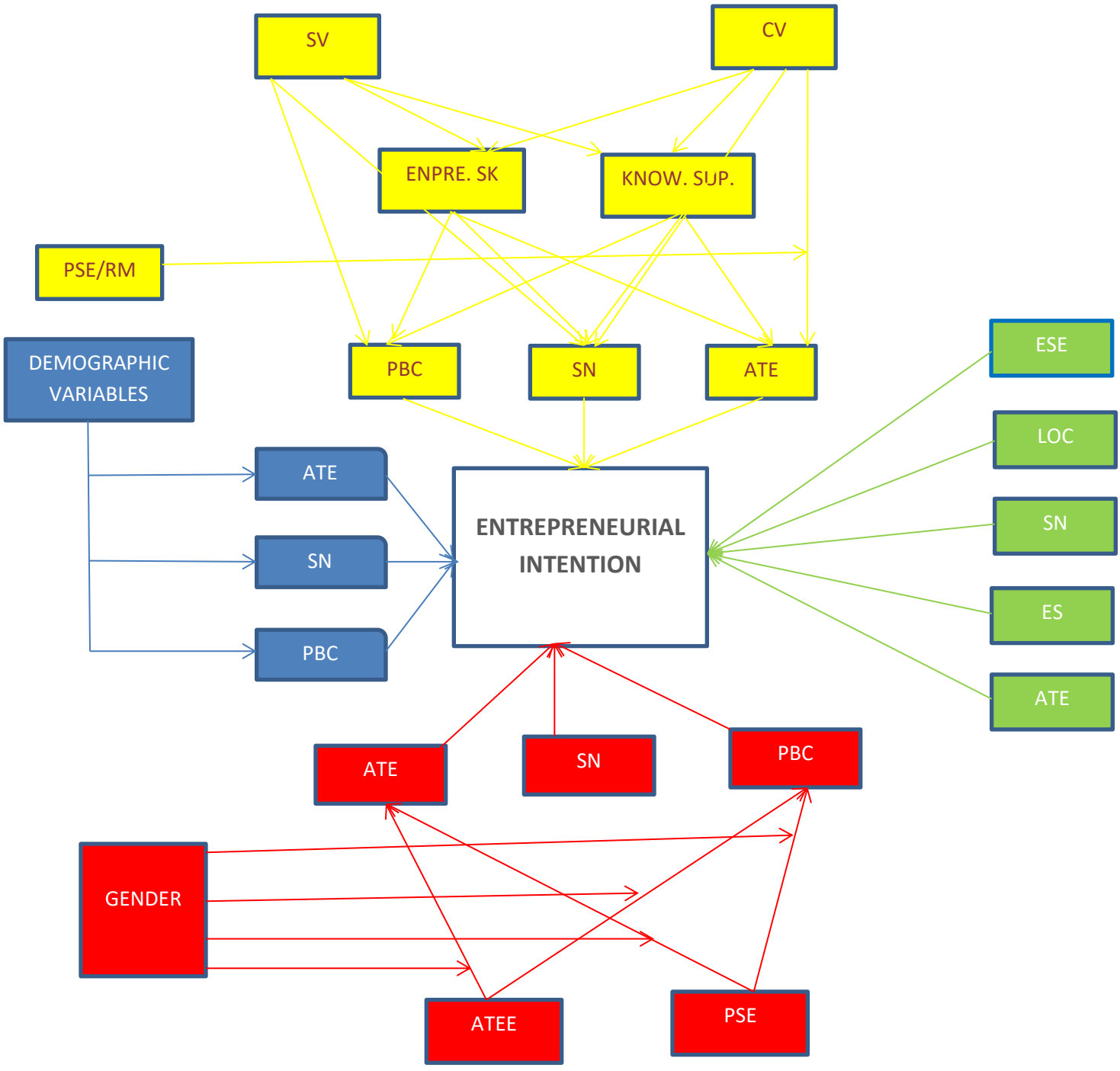
1.8 Conceptual framework for the thesis

The 'heart' of the conceptual framework for this study is the theory of planned behaviour (TPB). The TPB is an extension of the theory of reasoned action proposed by Ajzen and Fischbein

(1980). The main idea of the TPB is the concept of intention, which is the focus of this thesis. It is relevant to note each of the theoretical frameworks in the four papers that make up this study, all revolves around the TPB. This is illustrated in Figure 1 i.e. the Comprehensive Conceptual Framework of the thesis. All the four papers have entrepreneurial intention as a dependent variable as depicted in the framework. The left and right side of the framework represents the first and second paper respectively. The top and bottom part of the framework represents the third and fourth papers respectively. According to Ajzen (1991), intention reflects the degree with which an individual is prepared to attempt, and the amount of effort he plans to invest, to adopt a behaviour.

The TPB has been used successfully in the past to examine EIs of students in the U.S. (Autio et al., 2001; Krueger et al., 2000), India, Singapore, Malaysia (Trivedi, 2017), the Netherlands (Van Gelderen et al., 2008), Norway (Kolvereid, 1996), Russia (Tkachev & Kolvereid, 1999), Finland, Sweden (Autio et al., 2001), Poland, Spain, India, Iraq (Moriano, Gorgievski, Laguna, Stephan, & Zarafshani, 2012), Taiwan (Liñán & Chen, 2009), South Africa (Gird & Bagraim, 2008), Nigeria (Salami, 2019), Ghana (Amofah & Saladrigues, 2020; Amofah et al., 2020), Ethiopia (Issa & Tesfaye, 2020), among others.

Figure 1: Comprehensive Conceptual Framework for the thesis



Source: Authors' construct

Where;

SV→ Social Valuation

CV → Closer Valuation

PSE/RM → Parental Self-Employment/Role Model

KNOW.SUP → Knowledge Support

ENTPRE.SK → Entrepreneurial Skills

PBC → Perceived Behavioural Control

SN → Subjective Norm

ATE → Attitude Towards Entrepreneurship

ESE → Entrepreneurial Self-Efficacy

LOC → Locus of Control

ES → Entrepreneurial Skills

ATEE → Attitude Towards Entrepreneurship Education

1.9 STATUS OF THE PAPERS

The empirical studies of the thesis have resulted in four papers (of which two have been published), which are found in Chapters three to six. The papers have been presented at conferences and have either been published or are currently in a review process. Table 1 shows a summary of the contributions of co-authors and supervisors to the four papers. Table 2 outlines the dissemination of the research at national and international conferences, as well as publication status of each paper included in the thesis.

1.9.1 PUBLICATIONS

Below is the list of papers included in the Ph.D. Thesis

I. Amofah, K., Saldrigues, R. (2020) Going Down Memory Lane in the Application of Ajzen's Theory of Planned Behaviour Model to Measure Entrepreneurial Intention: An Sem-Pls Approach. *International Review of Management and Marketing*, 10(3), 110-121

II. Amofah, K., Saladrigues, R. and Ellis Kofi Akwaa-Sekyi, K. E. (2020) Entrepreneurial intentions among MBA students. *Cogent Business & Management*, 7(1) 1832401 https://doi.org/10.1080/23311975.2020.1832401

III. Amofah, K., Saldrigues, R. (2020) Entrepreneurial Intentions: The Moderating Role of Parental Self-Employment. Draft. Submitted to *Education + Training*

IV. Amofah, K., Saldrigues, R. (2020) Impact of attitude towards entrepreneurship education and role models on entrepreneurial intention. Draft. Submitted to *Journal of Innovation and Entrepreneurship*

1.9.2 CONTRIBUTION

Table 1: Contribution from co-authors and supervisors

Developmental phase	**Paper 1**	**Paper 2**	**Paper 3**	**Paper 4**
Conceptualisation and Idea	KA	KA	KA& RS	KA& RS
Study Design And Methods	KA	KA	KA	KA
Data Collection	KA	KA	KA	KA
Analysis And Interpretation	KA	KA, RS, EAS	KA	KA
Manuscript Preparation/Draft Writing	KA	KA	KA	KA
Critical Review of the Intellectual Content	KA &RS	KA, RS, EAS	KA &RS	KA &RS

KA: KWAKU AMOFAH

RS: RAMON SALADRIGUES

EAS: ELLIS AKWAA-SEKYI

Table 2: Research Dissemination

No.	Paper Title	Conference presentation	Publication outlet & Rank
1	Going Down Memory Lane in the Application of Ajzen's Theory of Planned Behaviour Model to Measure Entrepreneurial Intention: An SEM-PLS Approach		International Review of Management and Marketing, 2020, 10(3), 110-121 **SJR Q3**
2	Entrepreneurial intentions among MBA students	United States Association for Small Business and Entrepreneurship (USASBE) FL, USA, 23-27 January 2019	Cogent Business & Management, 2020, 7(1) **SJR Q2**
3	Entrepreneurial Intentions: The Moderating Role of Parental Self-Employment	A preliminary version of the third paper has been published as working paper in *New trends in accounting and management*, which is edited by the Department of Business Administration of the University of Lleida	In review in: *Education + Training* **SJR Q1**
4	Impact of attitude towards entrepreneurship education and role models on entrepreneurial intention	III Workshop Online About Investigation In Entrepreneurship, organized in collaboration with the Iberus Campus of International Excellence, 13/11/2020. Available on iiiworkshopemprendimientoprograma4-11-20.pdf (unizar.es)	Accepted for publication in: *Journal of Innovation and Entrepreneurship* **SJR Q2**
1-4	Entrepreneurial Intention among Tertiary Students	Presentation at the University of Milano Bicocca, Department of Economics and Business Sciences and Law for Economics (DiSEADE), 31st January, 2020	Available on https://www.diseade. unimib.it/it/eventi/ entrepreneurial-intention-among-tertiary-students

1.10 Organization Of The Thesis

The thesis consists of eight chapters. Chapter One provides an overview of the work, Chapter Two discusses the methodological approach, Chapters Three to Six covers the four papers, Chapter Seven touches on the global discussion and ends with a Conclusion (Chapter Eight).

CHAPTER TWO

RESEARCH METHODOLOGY

This section discusses the methodology used in the study. It includes the research design, research philosophy, approach and methods.

2.1 Research Design

According to Saunders, Lewis and Thronhill (2007), the research design will be the general plan of how one goes about answering research question(s). A good research design is important to avoid what Robson (2002, p.280) characterise as 'the research equivalent of the many awful houses put up by speculative builders without the benefit of architectural experience'. This study adopted the positivist philosophical approach and cross-sectional survey. The study predominantly used Likert scale in measuring the entrepreneurial intentions of students. Thus majority of the questionnaires were Likert scale instruments. Besides information solicited from questionnaires tends to be more accurate, as the particular instrument is developed in line with specific research questions (Dess & Robinson, 1984). According to Creswell (2012), the first process in the quantitative data collection is the selection of participants for the study which involves stating the population and sample, deciding on the participants and the right sample size. According to Saunders *et al*. (2007) a valid questionnaire will ensure accurate data to be collected and reliability will mean that the data collected is consistent. However, the sampling technique was mainly non-probabilistic and the data analysis was SPSS and SEM.

2.2 Research Philosophy

According to Saunders et al. (2009, 2007) research philosophy is an overarching terminology that relates to the development of knowledge and the nature of that knowledge. It includes a set

of assumptions/beliefs about how the world functions. This set of beliefs places strict strategies and philosophies on how research should be carried out (Burns & Burns, 2008). According to (Saunders et al., 2007) the types of research philosophy are positivism, realism, interpretivism, objectivism, subjectivism, pragmatism, functionalism, interpretive, radical realism, and radical structuralist. At the two extreme ends of a philosophical continuum are two main philosophical approaches: interpretivism and positivism (Burrell & Morgan, 1979).

This main objective of this study is to examine entrepreneurial intentions among tertiary students. This led to a comprehensive review of literature and a subsequent formulation of four but related conceptual frameworks about entrepreneurial intentions. In the process, a couple of hypotheses were proposed for testing. This study adopted a positivist approach in testing the proposed hypotheses and the justification for this method is outlined below;

This central theme of this research is entrepreneurship and entrepreneurial research has traditionally been mainly positivist (Grant & Perren, 2002). Thus, almost all empirical studies in entrepreneurial intentions use positivist methodologies (Liñán & Fayolle, 2015).

Also, empirical research on entrepreneurial intentions is grounded on psychological metrics that necessitate the usage of quantitative methods in order to address the general pattern of regularities (Collis & Hussey, 2009; Michell, 2003). Since this study is about entrepreneurial intentions of students, generalizability is possible by choosing a highly structured research approach, the deductive research approach, which permits theory/hypothesis testing through the causal explanation of the links between and among the study constructs (Robson, 2002; Saunders *et al.*, 2009).

Furthermore, by selecting positivism, we can minimize the methodological errors in adopting the same methodology used by other scholars in a particular field of research (Athayde, 2009; Cruz, Rodriguez Escudero, Hernangomez Barahona, & Saboia Leitao, 2009; Peterman & Kennedy, 2003; von Graevenitz, Harhoff, & Weber, 2010). This study chose positivism because the quantitative results can support, confirm or challenge the results of other researchers in a different research context.

Moreover, a quantitative research approach is preferred since it leads to the verification of hypotheses, providing strong reliability and validity (Amaratunga, Baldry, Sarshar, & Newton, 2002). According to Creswell (2012) quantitative research is an inquiry approach useful for describing trends and explaining the relationship among variables found in the literature. In the process, the researcher specifies narrow questions, locates or develops instruments to gather data to answer the questions, and analyses numbers from the instruments, using statistics. From the results of these analyses, the researcher interprets the data using prior predictions and research studies. The final report, presented in a standard format, displays researcher objectivity and lack of bias (Creswell, 2012).

2.3 Research Approach/Research Methods

Research methods refers to the researcher's choice regarding the techniques that are applied in order to collect and analyse the data that are able to provide a more valid investigation, leading to a better appreciation of complex problems or situations (Easterby *et al.*, 2008). According to Saunders et al. (2007), there are two categories of research approaches; deductive and inductive.

The main objective of this research is to assess the entrepreneurial intentions of students and for that matter we applied the deductive method. In line with deductive theory, we formulated the research hypotheses based on the theory and related empirical entrepreneurial literature. By convention, quantitative research is the tool normally used in deductive theory. Bell & Bryman (2007) propose that in social science research, quantitative methods are used in line with the objectivist paradigm. Thus, since this study adopts a positivistic and deductive research approach, the use of quantitative research methods is important. Collis and Hussey, 2009 assert that quantitative research technique calls for a relatively large sample size in order to collect numerical data to enhance generalization of core findings and provide answers to the research questions.

Though qualitative research helps to reveal the underlying thoughts and opinions and to investigate deeper into a problem, quantitative research helps to quantify differently-defined

variables to generalize the findings of a study. According to Creswell (2012), quantitative research is characterized with inadequate measures of variables, loss or lack of participants, small sample sizes, errors in measurement, and other factors typically related to data collection and analysis. A quantitative research method is popular in social science due to its generalizability, reliability, replicability and validity of the research process and outcomes.

CHAPTER THREE (PAPER 1)

GOING DOWN MEMORY LANE IN THE APPLICATION OF AJZEN'S TPB MODEL TO MEASURE ENTREPRENEURIAL INTENTION: AN SEM-PLS APPROACH

3.1 ABSTRACT

Undoubtedly, technical education is the backbone of every nation's growth and development. Understanding and predicting business creation initiatives demand empirical studies using theory-oriented models that appropriately mirror the multi-faceted perception-based processes underlying entrepreneurial intentional and behaviour. Drawing on a model adapted from a study by Liñán and Chen (2009), and based on the Theory of Planned Behaviour by Ajzen, this article empirically investigates the influence of Perceived Behavioural Control, Subjective Norm and Attitude towards Entrepreneurship, on Entrepreneurial Intention using Structural Equation Modelling (SEM) – Smart Partial Least Square (PLS) approach. In addition, several hypotheses (demographic-oriented variables) in relation to TPB are investigated. Data were collected on 574 students from a public technical university in Ghana. The findings suggest that TPB is an important tool for predicting entrepreneurial intentions. Thus, the findings support the TPB for EI in Ghana. Two motivational factors (attitude towards entrepreneurship and perceived behavioural Control) related to EI, but SN showed a non-significant association with EI. This study also found SN positively affecting attitude toward entrepreneurship and perceived behavioural control. However, only one (PSE-SN relationship) of the demographic-based hypotheses was significant. This study, however, cautions against the generalizability of the findings as the sample size comprises of students from a single institution. One of the theoretical implications of our study relates to evidence of the consistency of the theory of planned behavior in explaining entrepreneurial intention in the Ghanaian context. Future studies could replicate this research by sampling more technical universities in Ghana and other settings.

Keywords: entrepreneurial intentions, PLS, TPB

JEL Classifications: MO

3.2 Introduction

Education is arguably an indispensable component in the knowledge-driven society (Schleicher, 2003). Quality education is also quintessential for technological advancement, creativity and innovation to the economic growth and development of any country. Ghana has reached a stage in its development where creativity and innovation have become imperative in propelling its industrialisation agenda for accelerated economic turnaround. For instance, target 4 of the Sustainable Development Goal (SDG) 4 seeks to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship. Technical universities are expected to play an important role in the support of knowledge creation and knowledge transfer via science and technology, which is critical for the development and wellbeing of any country. This is particularly exemplified by the conversion of public polytechnics into technical universities in Ghana. These technical universities are expected to provide high-level technical skills training in the area of Technical and Vocational Education and Training (TVET) as well as provide opportunities for technical and vocational students from the second cycle institutions. According to Lewi (1997) there are five justifications for governments' fixation and investment in technical and vocational education and training (TVET), which include; increasing the importance of schooling by imparting individuals with skills and knowledge required for making the individual an integral member of the community; curtailing the level of unemployment as a result of provision of employable skills to the youth and those who cannot excel academically; increasing economic development because it enhances the quality and skill level of the working population; reducing poverty by virtue of accessibility to higher-income occupations, and changing the attitude of individuals to opt for occupations that have prospects for the future.

TVET, as an integral part of the technical university concept, would provide employment avenues for the teeming youth who are seeking for non-existent white-collar jobs in the country after graduation. In the quest to address the challenge of unemployment, industrialisation, and labour utilisation, policy makers in Ghana perceive technical education as the policy instrument to promote social progress using entrepreneurship education. Furthermore, technical universities in Ghana are mandated to excel at both basic and applied research by positioning themselves strategically in the delivery of services like professional training, marketing of new knowledge,

consultancy, career guidance and counselling, etc. An important theme that runs through the vision and mission of the technical universities in Ghana is entrepreneurship. The immense contribution of entrepreneurship to the fortune of global economies in the area of employment creation opportunities and economic development has necessitated the promotion of entrepreneurship as a topmost agenda for most nations across continents, especially Ghana.

However, there seem to be limited studies on the promotion of entrepreneurship in developing countries, since the attention of previous research on the promotion of entrepreneurship has been on developed countries (Bruton, Ahlstrom, & Obloj, 2008). According to Nabi and Linan (2013) little is known about the factors affecting entrepreneurial intention in developing countries. The knowledge and information about entrepreneurship in the advanced countries may not necessarily be applicable in developing countries due to perhaps diversity in cultural tendencies and other dynamics. This paper seeks to unravel the factors affecting the entrepreneurial intentions of students and offer some valuable insight into aspects of the technical education curriculum that empower students to be entrepreneurially-oriented. Over the years, policy makers and researchers have explored the factors affecting entrepreneurial intentions, given it's immense socio-economic importance (Carree & Thurik, 2006). The tremendous significance of entrepreneurship in any nation's development probably accounts for the reason why the proponents of the technical education concept to situate entrepreneurial education as a focal point in the curriculum. Despite the interest in entrepreneurial intentions, there is scant evidence about entrepreneurial intentions in different entrepreneurship contexts, especially in developing countries like Ghana. Individuals with the intention to pursue a business are highly likely to carry it out (Ajzen 1991; Fishbein & Ajzen, 1975) and it is worth emphasising that examining entrepreneurial intention is an important strategy towards studying actual entrepreneurial behaviour. The most prevalently used theoretical framework in the area of entrepreneurial intention research is the Theory of Planned Behaviour (TPB), which conceptualises that the strength of intentions as an immediate antecedent of behaviour (Ajzen, 1991, 2002, 2020). Entrepreneurship education may nurture a student's attitudes and intentions, as well as the establishment of a new firm (Linan, 2008). According to the Global Entrepreneurship Monitor (2016), people that study entrepreneurship in school are more likely to be entrepreneurs compared to those without entrepreneurial knowledge.

The data obtained from 574 respondents is applied to test the robustness of Ajzen's (1991) theory of planned behaviour (TPB), using structural equation techniques to ascertain the existence of structural relationships. Prior studies on entrepreneurial intentions have used linear regression models (Chandler & Lyon, 2001) despite the limitation of biased results. Thus, this study will contribute to the illumination of a specific pattern of relationships among the intention antecedents in a developing country like Ghana where there seems to be a paucity of research on the theory of planned behavior. To our knowledge, this is the first study in which the robustness of the TPB is being tested using a technical university sample in the Ghanaian context. The main objective of this paper is to test and apply the Theory of Planned Behaviour (Ajzen, 1991) to examine the entrepreneurial intention among Sunyani Technical University students. This will contextualize the contribution of the Theory of Planned Behaviour and its applicability to the technical university system. Furthermore, an application of the TPB will help in a comparison with prior studies, of which the majority has taken place in developed countries. The findings of this study will go a long in evaluating the technical university concept and its implications for Ghana's educational system.

The structure of this article is as follows. After this introduction, we present a research model and hypotheses. Then we present the research methodology, data analysis and results, followed by the discussion and conclusions. We conclude with limitations of the study, theoretical and practical implications and directions for future research.

3.3 Sunyani Technical University in context

Following Perez-Esparrells and Orduna-Malea (2018) we consider Technical Universities as all those universities that contain the words "technical", "technology" or "polytechnic" in their official institutional names. In the Ghanaian context, such institutions include those that focus on vocational training, engineering, business and other related courses.

Sunyani Technical University (STU) was established by the Technical Universities Act, 2016 Act 922. The history of the technical university dates back to the Sunyani Technical Institute in 1967 as a non-tertiary institution under the Ghana Education Service. It was subsequently upgraded to a Polytechnic in January 1997, following the passage of the Polytechnics Law of 1992 (P.N.D.C. L. 321) by the Government of Ghana as a Tertiary Institution of Education. This gave the institution the mandate to run the Higher National Diploma program as certified by the

National Board for Professional and Technician Examinations (NAPTEX) and accredited by the National Accreditation Board (NAB). The Technical Universities Act mandates the University to award certificates, diplomas, degrees and others subject to the approval of the Council. Sunyani Technical University as of 2015/2016 academic year offered six (6) Bachelor of Technology (B.Tech) programmes and fourteen (14) HND programmes and a total student population of 4992.

The mission of Sunyani Technical University is, 'a public institution of higher learning that is committed to the provision of career-focused education in engineering, science and technology, technical and vocational, applied arts and related disciplines with hands-on experience and *entrepreneurial development* to meet the higher and middle-level manpower needs of the country' (Sunyani Technical University 5-year Strategic Plan).

The vision of STU is, 'to become a top-notch Technical University for the provision of career-focused, practically-oriented and *entrepreneurially-inclined* higher and middle level manpower training for the socio-economic development of the Brong Ahafo region and Ghana as a whole'.

The vision and mission statements of the university show the relevance of entrepreneurship as the focal point of the institution. In fact, Act 922 requires all Technical universities in Ghana to integrate the entrepreneurship curriculum.

3.4 Theoretical Framework and Research Hypotheses

Ajzen (2020) defines intentions as 'a person's readiness to perform a given behavior.' Entrepreneurial intention can be defined as conscious awareness and conviction by an individual to establish a new business venture and plan to do so in the future (e.g. Bird, 1988; Thompson, 2009). The route to starting a new firm may be regarded as voluntary with conscious intentionality. Arguably, intention has been perceived as the single most powerful predictor of entrepreneurial behavior (Autio et al., 2001; Krueger et al., 2000), and also an important dependent variable in its own right (Thompson, 2009).

According to the Theory of Planned Behaviour, entrepreneurial intention indicates the effort that the person will make to discharge that entrepreneurial behavior. The TPB depicts the three motivational factors influencing behavior (Ajzen, 1991, Linan, 2004):

- Attitude toward start-up (personal attitude) refers to the extent to which one holds a positive or negative personal valuation about being an entrepreneur (Ajzen, 2001; Autio

et al., 2001; Kolvereid, 1996b). Generally, the more favorable the attitude towards a behavior, the greater the intention to actualize that behavior.

- Subjective norms (SNs) refer to the perceived social pressure to carry out or not to carry out entrepreneurial behaviours. Thus, the perception that 'reference people' would approve of the decision to become an entrepreneur or not (Ajzen, 2001). SNs examine the sum of individuals' perceptions about how important people in their lives think about their engagement in a particular behavior (e.g. starting an entrepreneurial venture). It has been found to be the weakest link of entrepreneurial intention in some studies (Almobaireek & Manolova, 2012; Krueger et al., 2000). However, a couple of other studies have professed that subjective norms influenced entrepreneurial intention (Iakovleva et al., 2011; Kautonen et al., 2013; Siu & Lo, 2011). Other empirical studies have found support for SN positively affecting antecedents of entrepreneurship intentions: attitude toward entrepreneurial behavior and perceived behavioural (Linan & Santos, 2007; Linan et al., 2011a, 2011b; Santos et al., 2014). Consistent with studies by Linan (2004), Linan and Chen (2009) and Linan et al. (2011), a probability of indirect effects of subjective norms on entrepreneurial intention is analysed in this paper, considering the controversy on the relationship. In this sense, there may be reasons to consider the relation SN has on both PA and PBC. Figure 1 exemplifies this notion.
- Perceived behavioral control (PBC) is defined as the perception of the ease or difficulty of becoming an entrepreneur. In conceptual terms, there is no difference between perceived behavioural control and self-efficacy but operationally, PBC and SE are normally assessed differently. Both refer to people's beliefs that they are capable of performing a given behavior (Ajzen, 2019).

Prior studies have empirically applied the TPB to student's Entrepreneurial Intentions and confirmed that Attitude Towards Entrepreneurship, Subjective Norm and Perceived Behavioural all play significant roles (Iakovleva et al., 2011; Karimi, Biemans, Lans, Chizari, & Mulder, 2014; Krueger et al., 2000; Linan & Chen, 2009).

Of the three motivational antecedents in entrepreneurial intentions in the model (see figure 1), ATE and PBC have been shown to relate most strongly to not only EI (e.g. Karimi et al., 2014; Linan & Chen, 2009) but also on both personality factor (Fini, Grimaldi, Marzocchi, & Sobrero, 2012; Nabi & Linan, 2013, 2013; Obschonka, Silbereisen & Schmitt-Rodermund, 2010; Zhao,

Seibert, & Hills, 2005) and contextual factors (Fini et al., 2012; Goethner, Obschonka, Silbereisen, & Cantner, 2012). Previous studies on entrepreneurship (Fini et al., 2012; Goethner et al., 2012; Nabi & Linan, 2013) perceive subjective norms as less relevant than ATE and PBC for entrepreneurial intention because entrepreneurs can be generally characterized as more inward as opposed to outward and directed and thus less oriented towards social norms than non-entrepreneurs (Goethner et al., 2012).

3.4.1 Demographic Factors and Entrepreneurial Intentions

A plethora of studies have established the direct link between demographic variables and entrepreneurial intention (Boyd & Vozikis, 1994; Gird & Bagraim, 2008; Lee & Wong, 2004; Malebana, 2014). Others have incorporated in the original theoretical TPB framework some demographic variables which are likely to have a given effect on intention, such as family background (e.g. parents), gender, past business, entrepreneurship and social and social experiences, entrepreneurship training and education (Davidsson, 1995; Fayolle & Gailly, 2015; Guerrero et al., 2008; Kolvereid, 1996b; Krueger et al., 2000; Ozyilmaz, 2011; Tkachev & Kolvereid, 1999). These variables were found to indirectly affect intentions through their effect on ATB, SN and PBC (Kolvereid, 1996b; Solesvik, 2013; Tkachev & Kolvereid, 1999). ATB, SN, and PBC serve as mediating variables, hence information on them could be used to better assess the impact of demographic characteristics on entrepreneurial intention (Gird & Bagraim, 2008; Krueger et al., 2000; Tkachev & Kolvereid, 1999). Figure 1, depicts the model we will be using in our study which is similar to the TPB by Ajzen (2019) and applied by Autio et al. (2001), Chen and Linan (2009), Fayolle et al. (2006), Kolvereid and Isaksen (2006), and Veciana et al. (2005). By virtue of past researches' inability to show a consistent impact of social norms on intentions, and for consistency with respect to our hypotheses we expect that social norms will mediate the effects of demographic factors on entrepreneurial intentions. For instance studies by Carsrud & Brännback, (2011), Kolvereid and Isaksen (2006) and Conner and Armitage (1998) have all produced mixed results about social norms.

3.4.2 Entrepreneurship Education (EE) and Entrepreneurial Antecedents

Entrepreneurship education consists of 'any pedagogical or process of education for entrepreneurial attitudes and skills' (Fayolle, Gailly, & Lassas-Clerc, 2006b, p.702).

According to Ajzen (2002), a greater knowledge of differential entrepreneurial aspects will definitely contribute to more realistic perceptions about entrepreneurial activity, thus indirectly influencing intentions. The role of entrepreneurship education in the generation of entrepreneurial behavior is gaining popularity in academic circles (Bae et al., 2014; Entrialgo and Iglesias, 2016; Fayolle & Gailly, 2015). In Ghana, the products of technical universities are expected to display a positive entrepreneurial propensity and disposition because of their exposure to entrepreneurial education. However, studies on EE and entrepreneurial antecedents have produced inconsistent results. For instance, Rauch and Hulsink (2015) and Souitaris et al. (2007) found a direct correlation between EE and attitudes and PBC, while studies conducted by Auken Van (2013) reported a negative association and Diaz-Casero et al. (2012) and do Paço et al. (2015) did not find any significant link.

The foregoing observations are the base of the following core and demographic hypothesis of the paper, as depicted in Table 1.

Figure 1: Entrepreneurial Intention Model

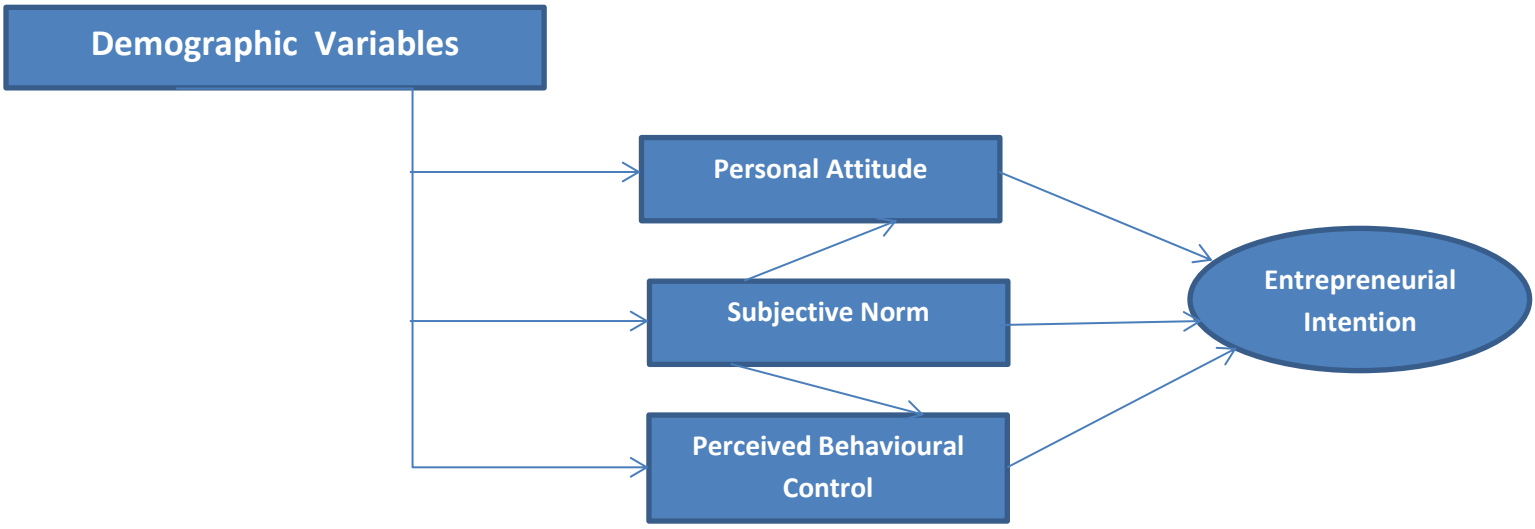


Table 1 Hypotheses (Core & Demographic)

CORE HYPOTHESES		
1	Personal attitude positively influences entrepreneurial intention	PA -> EI
2	Perceived behavioral control positively influences entrepreneurial intention	PBC -> EI
3	Subjective norm positively influences entrepreneurial intention	SN ->EI
4	Subjective norm positively influences personal attitude	SN ->PA
5	Subjective norm positively influences perceived behavioral control	SN->PBC
DEMOGRAPHIC HYPOTHESES		
6	Gender positively influences ATE	GENDER ->ATE
7	Gender positively influences SN	GENDER->SN
8	Gender positively influences PBC	GENDER->PBC
9	PEE positively influences ATE	PEE->ATE
10	PEE positively influences SN	PEE->SN
11	PEE positively influences PBC	PEE->PBC
12	PSE positively influences ATE	PSE->ATE
13	PSE positively influences SN	PSE->SN
14	PSE positively influences PBC	PSE->PBC

3.5 Method

This study examines the application of Ajzen's TPB model to measure entrepreneurial intention among STU students using an SEM-PLS approach.

3.5.1 Sample and Procedure

Participants in the study consisted of students from all the four faculties of the Sunyani Technical University namely, the Faculty of Applied Science & Technology, Faculty of Built Environment & Applied Art, Faculty of Business and Management Studies and Faculty of Engineering. University students constitute a common sampling frame in entrepreneurship research (Almobaireek & Manolova, 2012; Autio et al., 2001; Fayolle et al., 2006; Kolvereid, 1996b; Krueger et al., 2000; Linan & Chen, 2009; Moriano et al., 2012; Tkachev & Kolvereid, 1999; Kautonen et al., 2013; Siu & Lo, 2011; Veciana et al., 2005). According to Linan and Chen (2009), a sample of university students offers the advantage of similar age and qualifications, which promotes homogeneity. Reynolds et al. (2002) established that university graduates between the ages of 25 and 34 show the highest propensity toward starting a business. Data were collected via paper and pencil close-ended questionnaire which was designed in order to measure those variables that have an impact on entrepreneurial intentions. Questionnaires were administered in class, with prior permission from the lecturer. Students were briefed on the purpose of the study by a member of the research team and then asked to voluntarily fill the questionnaire. All questionnaires were completed anonymously to ensure confidentiality.

3.5.2 Measures

The survey is structured by a series of close-ended questions in which varied block of statements are subjectively valued on a Likert-type scale concerning entrepreneurial intention. The 5-point Likert-type on which the items were belt on are; 5 = strongly agree, 4 = agree, 3 = neither agree nor disagree, 2 = disagree, 1 = strongly disagree. Four core variables were used in this direction: PBC, SN, ATE and EI. A range of variables were measured including: age, gender, participation in entrepreneurial education, parental self-employment.

Entrepreneurial intention was measured with three items and based on the proposals of Autio, et al. (2001), Linan and Chen (2009), Miranda, Chamorron-Mera and Rubio (2017). Miranda et al. (2017)'s Cronbach Alpha was 0.891. The Cronbach Alpha value for Entrepreneurial Intention in this study is 0.791 as depicted in Table 2.

Attitude towards Entrepreneurship was measured with an adapted questionnaire by Kolvereid (1996). The Cronbach Alpha value for Attitude towards Entrepreneurship is 0.680 as depicted in Table 2, compared to Kolvereid's (1996) values which ranged from 0.68 to 0.90, though he used a 7-point Likert-type scale.

Subjective Norm was measured based on previous studies by Kolvereid (1996), Krueger et al. (2000), Obschonka et al. (2015). Miranda et al. (2017)'s Cronbach Alpha was 0.819. Autio et al. (2001) reported a Cronbach's alpha value of 0.70. The Cronbach Alpha value for Subjective Norm is 0.698 as depicted in Table 2.

PBC was measured with four items and based on the proposals of Autio, et al. (2001). The Cronbach Alpha value for PBC is 0.553 as depicted in Table 2.

3.6 Results

3.6.1 Profile of Respondents

A total of 574 respondents completed the questionnaire and were subjected to analysis, of which 78.2 per cent were males and 21.8 per cent were females. In terms of Educational Background of Respondents' parents, 25.3 % ticked No formal education, 16.9% for Secondary school, 25.8% for University or higher education, 15.3% for Below high school, 10.3% for Technical & Vocational education and Not Applicable was 6.4%. With respect to programme or department 5.9% are from Secretaryship and Management Studies, 6.6% from Accountancy, 11.8% from Computer Science, 14.5% from Electrical Engineering, 24.9% from Building Technology, 7.7% from Marketing, 13.2% from Procurement & Supply Chain Management, 6.6% from General Agriculture, 5.1% from Civil Engineering, and 3.7% from Mechanical Engineering. With regard to studying entrepreneurship course, 74.2 per cent said No, they have not previously taken a class in entrepreneurship as opposed to 25.8 percent who said YES. With reference to age, 51.2 per cent fall in the 20-24 age category and 37.3 per cent fall into the 25-29 age category. In connection with the year or level of the respondents, 48.3 per cent were in the 1st year, 26.3 per cent in the 2nd year and 25.4 per cent were in the 3rd year. Vis-a-vis, parental self-employment, 65.9 per cent responded YES whereas 34.1per cent indicated NO. On the subject of whether they have plans to be self-employed in the foreseeable future after graduation, an overwhelming

percentage of 79.8 affirmed YES whereas 20.2 per cent responded NO. With respect to religion, 82.8 per cent were Christians and 16.2 per cent were Moslems.

3.6.2 Partial Least Squares

According to Hair et al. (2010) a two-dimensional process can be applied for structural equation modelling (SEM): an

I) assessment of the proposed measurement model and
II) assessment of the structural model. This process ensures the constructs' measures are valid and reliable before attempting to draw conclusions regarding any relationships among constructs (Barclay et al., 1995).

The theoretical framework presented in Figure 1 was tested using Partial Least Squares (PLS), a multivariate analysis technique for testing structural models (Barroso et al., 2010). PLS also allows assessment of the reliability and validity the of measure of theoretical constructs and estimation of the relationships among these constructs (Barclay et al., 1995). According to Wold (1995), the PLS is basically intended for causal-predictive analysis, where the problems explored are complex and prior theoretical knowledge is scarce. Concerning our study, little is known about the application of TPB in the technical university context, hence PLS is a suitable technique to use in this research. PLS is robust for small to moderate sample sizes (Cassel et al., 1999) which makes it appropriate for this study. Lee and Tsang (2001) posit that this technique has been applied in numerous researches developed recently in the entrepreneurship discipline. According to Rigdon (1998) SEM has taken an important centre stage within the academic literature of many disciplines. Currently, SEM is the preferred methodology among researchers in assessing the relationship between constructs such as intention, attitude, satisfaction and role ambiguity. Since SEM is intended for working with manifold related equations simultaneously, it has a number of advantages over some more familiar methods, hence gives a general framework for linear modeling (Monecke & Leisch, 2012). According to the framework for this study, demographic variables will exert a direct influence on entrepreneurial antecedents. Therefore some variables are captured as explaining ATE, SN and PBC. The demographic variables; Gender, Participation in Entrepreneurial Education and Parental Self-Employment) are

dichotomous in nature. The statistical analysis conducted using SMART PLS 3.0. The initial model to be tested is presented in Figure 1.

3.6.3 Measurement Model

Assessing the measurement model for the reflective indicator in PLS is based on individual item reliability, construct reliability, average variance extracted analysis and discriminant validity. Individual item reliability is considered adequate when an item has a factor loading greater than 0.707 on its respective construct. This means more shared variance between the construct and its measures than error variance. In this study, the reflective indicators have loadings above or very near 0.7 (see Table 2: Outer Loadings).

Construct Reliability was assessed using a measure of internal consistency: Composite Reliability (rc). We interpreted this value using the rules offered by Nunnally (1978), who suggest 0.7 as a benchmark for a 'modest' reliability applicable in the initial stages of research. In this study, both the construct and reflective dimensions are reliable (see Table 2).

The Average Variance Extracted quantifies the amount of variance that a construct captures from its manifest indicators relative to the amount due to measurement error (Chin, 1998). The Average variance extracted value should be greater than 0.50. This means that 50 per cent or more variance of the indicators should be accounted for. Consistent with this rule, the average variance extracted measures for the common latent variables for this study are greater than 0.580 (see Table 2).

In order to assess Discriminant Validity, Average Variance Extracted should be greater than the variance shared between the construct and other constructs in the model (i.e. the squared correlation between two constructs). For adequate discriminant validity, the diagonal elements should be significantly greater than the off-diagonal elements in the corresponding rows and columns (Barclays et al., 1995). This condition is met as depicted in Table 3.

3.6.3.1 Explanation of target endogenous variable variance

The coefficient of determination *R2* is 0.442 for the EI endogenous latent variable. This implies that the three latent variables (ATE, SN and PBC) moderately explain 44.2% of the variance in EI as shown below.

Items	R Square
ATE	0.089
EI	0.442
PBC	0.127
SN	0.030

3.6.3.2 Coefficient of Determination (R^2)

A major part of structural model evaluation is the assessment of the coefficient of determination (R^2). In this study, EI is the main construct of interest. From the PLS Path model estimation diagram (figure 2), the overall R^2 is found to be relatively good. A threshold value of 0.25, 0.5 and 0.7 are often used to describe a weak, moderate and strong coefficient of determination (Hair et al., 2013). In our case, it suggests that the three constructs ATE, SN and PBC can jointly explain 44.2% of the variance of the endogenous construct EI.

3.6.3.3 Indicator Reliability

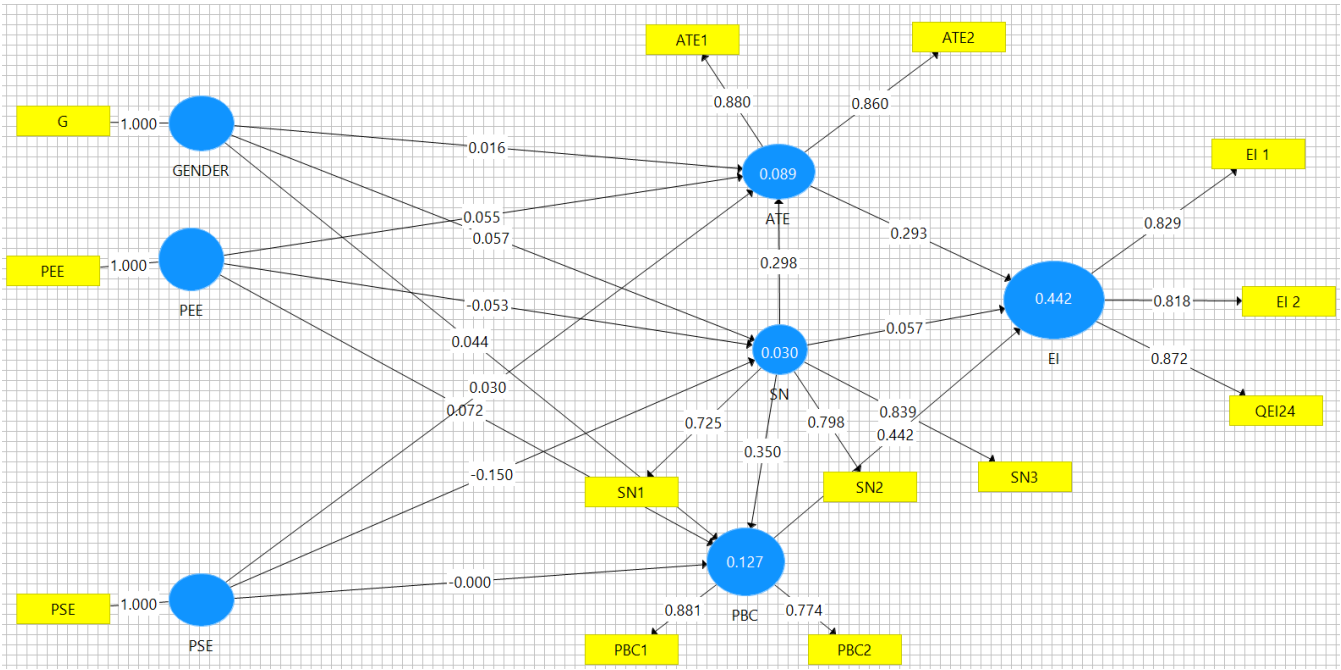
After examining the outer loadings for all latent variables, one indicator that formed the ATE was removed because its outer loading was smaller than the 0.4 threshold level (Hair et al., 2013). Meanwhile, five indicators (ATE10, ATE11, ATE12, PBC18 and PBC19) were found to have loadings between 0.4 and 0.7. A loading relevance test is therefore performed for these 5 indicators to check if they should be retained in the model. In a loading relevance test, problematic indicators should be deleted only if their removal from the PLS model leads to an increase of AVE and Composite Reliability of their constructs over the 0.5 thresholds. As the elimination of these 5 indicators would result in an increase of AVE and composite reliability of their respective latent construct, they are removed from the PLS model. The remaining indicators are retained because their outer loadings are all 0.7 or higher. An indicator's outer loading should be 0.708 or above since that number squared (0.7082) equals 0.50, meaning the latent variable

should be able to explain at least 50% of each indicator's variance. The PLS algorithm is re-run and the resulting path model estimation is presented in Figure 2. The outer loadings of various constructs are shown in Table 2.

Table 2: Full-sample measurement model (reliability indicators)

Construct / Indicator	Loadings	Composite Reliability	AVE	Cronbach's Alpha
ATE		0.862	0.758	0.680
ATE1	0.880			
ATE2	0.860			
EI		0.878	0.706	0.791
EI 1	0.829			
EI 2	0.818			
EI 3	0.872			
Gender		1.000	1.000	1.000
PBC		0.814	0.687	0.553
PBC 1	0.881			
PBC 2	0.774			
PEE		1.000	1.000	1.000
PSE		1.000	1.000	1.000
SN		0.831	0.622	0.698
SN 1	0.725			
SN 2	0.798			
SN 3	0.839			

Figure 2: PLS-SEM Results



3.6.3.4 Internal Consistency Reliability

The **Composite Reliability** for the constructs ATE, SN, PBC and EI are shown to be 0.862, 0.831, 0.814 and 0.878 respectively (see Table 2), indicating high levels of internal consistency reliability (Nunnally & Bernstein, 1994). Prior research suggests that a threshold level of 0.60 or higher is required to demonstrate satisfactory composite reliability in an exploratory study (Bagozzi & Yi, 1988) but not exceeding the 0.95 level (Hair et al., 2013).

3.6.3.5 Convergent Validity

To check convergent validity, each latent variable's AVE is evaluated. The AVE of the constructs ATE, SN, PBC and EI are shown to be 0.758, 0.622, 0.687 and 0.706 respectively (see Table 2). It is found that all of the AVE values are greater than the acceptable threshold of 0.5, so convergent validity is confirmed.

3.6.3.6 Discriminant Validity

Fornell and Larcker (1981) suggest that the square root of AVE in each latent variable can be used to establish discriminant validity, assuming this value is larger than other correlation values among the latent variables. Table 3 clearly shows that discriminant validity is met for this study because the square root of ATE, SN, PBC and EI are much larger than the r corresponding LVC. It should be noted that the AVE values are shown on the diagonal and printed in bold; non – diagonal elements are the latent variable correlations (LVC).

Table 3: Discriminant Validity

	ATE	EI	Gender	PBC	PEE	PSE	SN
ATE	**0.870**						
EI	0.533	**0.840**					
Gender	0.027	0.032	**1.000**				
PBC	0.506	0.610	0.056	**0.829**			
PEE	0.034	0.042	-0.133	0.042	**1.000**		
PSE	-0.012	-0.055	0.012	-0.049	0.055	**1.000**	
SN	0.291	0.296	0.062	0.348	-0.069	-0.152	**0.789**

3.7 Evaluation of the Structural Model in PLS-SEM: Collinearity Assessment

In addition to checking the measurement model, the structural model has to be appropriately evaluated before drawing any conclusion. Collinearity is a potential issue in the structural model and that variance inflation factor (VIF) value of 5 or above typically indicates such a problem (Hair et al., 2011). The collinearity assessment results are summarized in Tables 4 and 5. It can be observed that all VIF values are lower than 5, signifying that there is no indicative collinearity between each set of predictor variables.

Table 4: Outer VIF value

Items	VIF
Gender	1.000
ATE1	1.362
ATE2	1.362
EI 1	1.604
EI 2	1.622
EI 3	1.893
PBC 1	1.171
PBC 2	1.171
PEE	1.000
PSE	1.000
SN 1	1.291
SN 2	1.407
SN 3	1.408

Table 5: Inner VIF Values

	ATE	EI	Gender	PBC	PEE	PSE	SN
ATE		1.372					
EI							
Gender	1.022			1.022			1.018
PBC		1.429					
PEE	1.024			1.024			1.021
PSE	1.026			1.026			1.003
SN	1.031	1.161		1.031			

3.7.1 Checking Structural Path Significance in Bootstrapping

Using a two-tailed t-test with a significance level of 5%, the path coefficient is significant if the T-statistics is larger than 1.96. In this paper it can be observed that only the SN – EI linkage (1.462) is not significant as depicted in Table 7; referring to the core hypotheses. Figure 3 shows the variance explained (R2) in the dependent constructs and the path coefficients (b) for the model. Consistent with Chin (1998), bootstrapping (500 re-samples) was used to generate standard errors and t-statistics. Bootstrap represents a non-parametric approach for estimating the accuracy of PLS estimation. This helps in the assessment of the statistical significance of the path coefficients. Four out of our five core hypotheses were supported since these exceed the minimum level prescribed by a Student's t-distribution with one tail and n-1 (n = number of re-samples) degrees of freedom (Table 6). H3 was not supported. This shows that SN is not a significant antecedent variable of EI. The model seems to have an appropriate predictive power for the dependent variable (Figure 3). Hence EI attains a moderate explained variance figure (0.442). As may be observed, the model is generally supported by this analysis, with the only exception of subjective norm-intention relationship. Therefore, hypotheses 1 and 2 are confirmed, whereas hypothesis 3 is not. It has been argued earlier that the main influence of SN would be exerted through its effects on PA and PBC. Hypotheses 4 and 5 were intended to test this possibility. They have been fully supported since both paths are significant. Demographic variables have relatively small significant effects on the antecedents of entrepreneurial intention and in general, they are small in magnitude. Only the effect of PSE on SN is significant. The model explains 44.2% of the variance in entrepreneurial intention based on SN, ATE and PBC. This result is satisfactory since most previous research using linear models typically explain less than 40%.

Table 6: Structural Model Results

Construct	(O)	(M)	STDEV	T Statistics	P Values	HYPOTHESIS
PBC -> EI	0.442	0.441	0.046	9.687	0.000	Accept
SN -> PBC	0.350	0.352	0.048	7.256	0.000	Accept
SN -> ATE	0.298	0.300	0.046	6.449	0.000	Accept
ATE -> EI	0.293	0.294	0.052	5.669	0.000	Accept
PEE -> PBC	0.072	0.073	0.040	1.800	0.072	Reject
GENDER -> SN	0.057	0.057	0.043	1.335	0.182	Reject
SN -> EI	0.057	0.058	0.039	1.462	0.144	Reject
PEE -> ATE	0.055	0.055	0.043	1.292	0.196	Reject
GENDER -> PBC	0.044	0.044	0.040	1.108	0.268	Reject
PSE -> ATE	0.030	0.031	0.040	0.745	0.457	Reject
GENDER -> ATE	0.016	0.016	0.040	0.394	0.694	Reject
PSE -> PBC	-0.000	0.001	0.041	0.011	0.992	Reject
PEE -> SN	-0.053	-0.053	0.041	1.302	0.193	Reject
PSE -> SN	-0.150	-0.150	0.041	3.635	0.000	Accept

Original Sample (O), Sample Mean (M), Standard Deviation (STDEV)

Figure 3: BOOSTRAPPING RUN

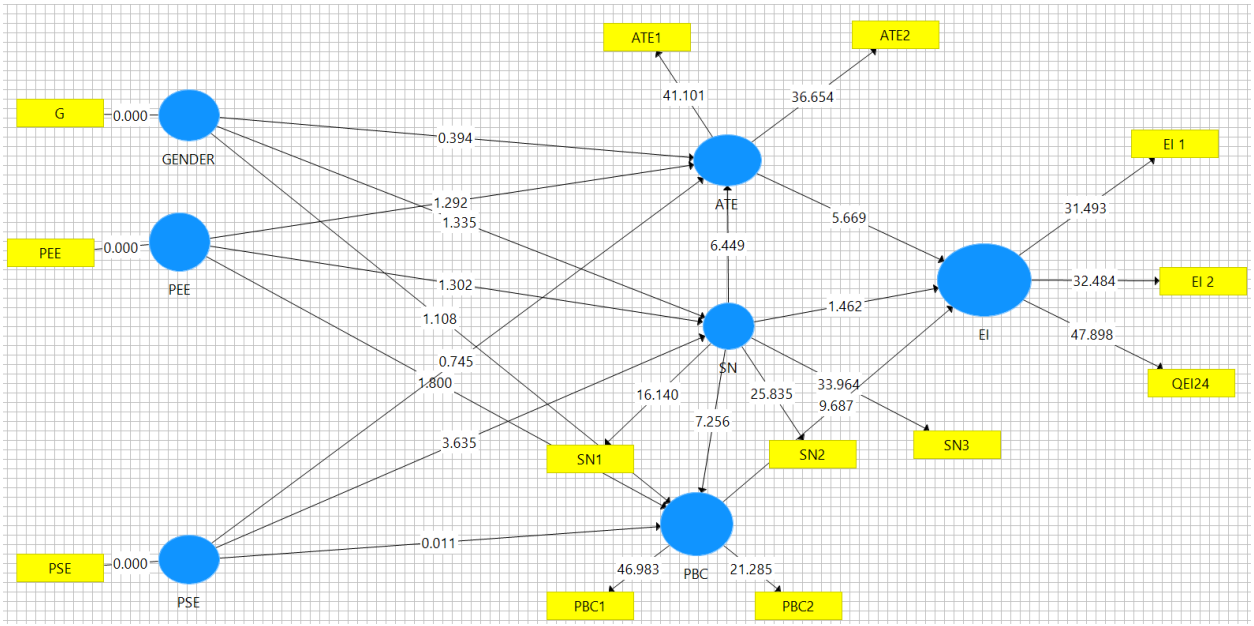
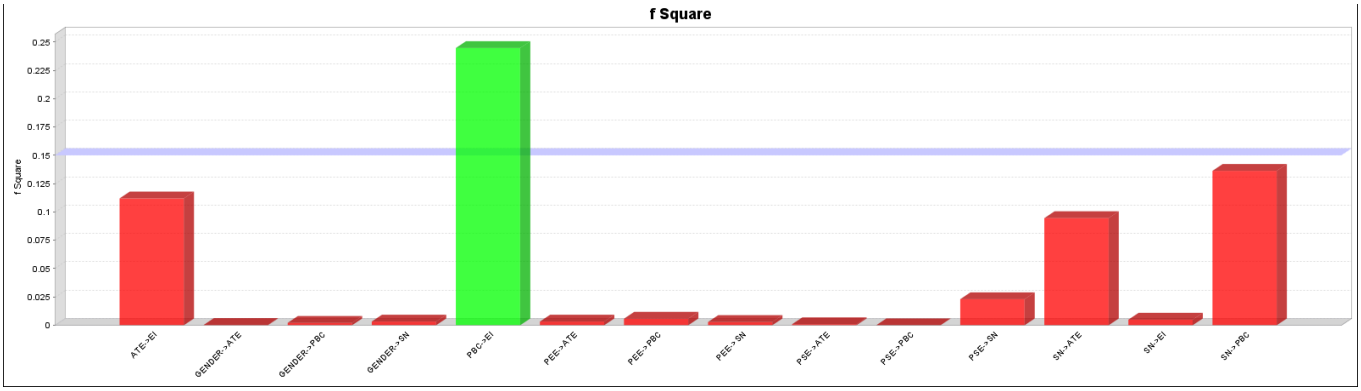


Table 7: F Square

	ATE	EI	GENDER	PBC	PEE	PSE	SN
ATE		0.112					
EI							
GENDER	**0.000**			**0.002**			**0.003**
PBC		**0.245**					
PEE	**0.003**			**0.006**			**0.003**
PSE	**0.001**			**0.000**			0.023
SN	0.095	**0.005**		0.136			

Figure 4: F Square



The effect size is assessed with a tool known as F Square indicated in table 7 and figure 4. Following Cohen (1988) an F Square value of above 0.35 is considered large effect size; values ranging from 0.15 to 0.35 are medium effect size; values between 0.02 and 0.15 is considered small effect and values less than 0.02 are considered NO effect size. From figure 4 it can be observed that the PBC-EI relationship is the highest i.e. 0.245. As can be inferred from the other relationship (i.e. SN-ATE, SN-PBC, PSE-SN and ATE-EI), their P-values were significant but going by the F Square rule, their significant effect is not a meaningful one. Regardless, the model has successfully explained more than 40% of the variance of entrepreneurial intention.

3.8 Discussion

Based on the findings presented in this article, support for the entrepreneurial intention model can be professed. The applicability of the TPB to entrepreneurship has received wide empirical support over the years (Kolvereid & Isaksen, 2006). Generally, the results are satisfactory since

most of the core hypotheses have been confirmed and the explained variance is moderately high (44.2%), compared to prior studies. In particular, 4 out of the 5 core-model relationships were significant. SN would exert its influence on both ATE and PBC (which in turn explain intention), but not significant on entrepreneurial intention.

According to Wyrwich (2015) socialization in a family of entrepreneurs enhances the development of positive values and attitudes towards entrepreneurship. Role models (e.g. parents) can be an influential force on PBC regarding the start-up of a business because wards can learn certain skills and behavior essential for an entrepreneurial venture by observing their role models or parents (Zellweger, Sieger & Halter, 2011), which has the propensity to increase PBC. According to Lazear (2005) individuals with a balanced set of skills provided by entrepreneurial education should possess a higher likelihood of being self-employed. The existence of direct relationships between demographic variables and entrepreneurial intention was tested, with all but one showing a non-significant relationship.

The results reveal that SN is not only insignificant but also the weakest link of entrepreneurial intention which is consistent with previous studies (Autio et al., 2001; Linan & Chen, 2009; Krueger et al., 2000). However, the results confirm previous empirical studies that found support for SN positively affecting antecedents of entrepreneurship intentions: attitude toward entrepreneurial behavior and perceived behavioural control (Linan & Chen, 2009; Mathews & Moser, 1996; Scherer et al., 1991). It is relevant to note that hypotheses 1, 2, 4 and 5 are confirmed hence, the robustness of the model seems to be confirmed. In fact, the research findings have shown that SN exerts influence on both ATE and PBC, which is consistent with previous studies (Linan, 2004; Linan & Chen, 2009). Thus the findings are in line with previous studies concerning the application of TPB as an important model in predicting entrepreneurial intentions of students (Engel et al., 2010; Gird & Bagraim, 2008; Iakovleva et al., 2011; Luthje & Franke, 2003; Souitaris et al., 2007). Previous testing of the TPB in the entrepreneurial research suggested that ATE, SN and PBC typically explain 30-45 per cent of the variance in intentions (Linan & Chen, 2009; Sutton, 1998). Contrary to most studies portraying ATE to be the strongest predictor of EI (Linan & Chen, 2009; Nabi & Linan, 2013), our study found PBC to be the strongest predictor of EI, which is consistent with a study by Karimi et al. (2017). In fact Schlaegel and Koenig's (2014) meta-analysis study found strong SN-EI and ATE-EI

relationships. These differences may be attributed to cultural differences. Besides, the turbulent economic conditions, political climate and self-efficacy can impact on entrepreneurial intention and behavior.

3.9 Conclusion

Taking into consideration TPB, three variables that make up this model were analysed: ATE, PBC and SN. The findings suggest that TPB is an important tool for predicting entrepreneurial intentions. However, the subjective norm predictor was not upheld as an antecedent of entrepreneurial intention. The importance of support from family, friends and other social groups fall in a state of limbo with respect to entrepreneurial intention. However, the other two antecedents of entrepreneurial intention (ATE and PBC) were validated, hence stakeholders in the technical universities should take the lead in preparing graduate for the changing needs of the job market by inculcating in them the 21st century skills such as technical, vocational education and training, critical and creative thinking and problem-solving skills.

3.10 Limitations of the study

One limitation of this study was the structural equations, which assume linearity of relationships between latent variables (Hair et al., 1998).

Secondly, as the study was carried out in a particular geographical context (Ghana), we must be cautious in the generalization of the results to include other jurisdictions. Besides, the generalizability of the findings may be constrained by the sample which comprises students from a single technical university. The potential for bias prevails inasmuch as the sample respondents may have had an intrinsically high orientation towards entrepreneurship. Therefore, there is a need to examine a more diverse population of students.

Moreover, the study is cross-sectional, hence we cannot claim causality in any of the relationships. For this reason, we have emphasized that the results support our hypotheses, but we cannot optimistically suggest that the causal correlations are as proffered until a longitudinal study is carried out.

Furthermore, the focus of this study is on the intention rather than on actual start-up decisions. A caveat is that there could be a gap between students' entrepreneurial intention and actual action. Entrepreneurial intention is only assessed at the current point in time, hence we are not certain that students' entrepreneurial intention may or may not be altered in the future, bearing in mind that a successful formulation of dreams or intentions may not necessarily lead to successful implementation.

3.11 Theoretical And Practical Implications

In spite of its limitations, this paper demonstrates some theoretical and practical implications. The theoretical implications of our study relate to evidence of the consistency of the theory of planned behavior in explaining entrepreneurial intention in the Ghanaian context. The robustness of entrepreneurial antecedents of the TPB was shown by the STU students. One of the reasons for the conversion of some polytechnics to technical universities is to promote entrepreneurship among the students, where unemployment is relatively high. Our knowledge of the antecedents of entrepreneurial intention and the factors affecting these antecedents is critical in the promotion of entrepreneurship among the technical university students. In view of this technical and vocational training programmes can be designed to change the mentality and attitudes of the students. There should be pragmatic measures to pull the students from the conventional career mentality to an entrepreneurial orientation by probably exposing them to entrepreneurial role models, a strong entrepreneurial culture, and the institution of an enabling environment among others. Another key proposition of the technical university concept is university-industry collaboration. In this current dispensation, educational institution of higher learning cannot afford to operate in isolation, hence they should collaborate with industry, community and government. Fortunately, this is one of the key ingredients in the technical university model, in which the students, lecturers and other stakeholders are expected to liaise with industry. In fact prominent among the aims of technical universities in Ghana is to remain focused on the application of Competency-Based Training to all teaching staff.

3.12 Directions for future research

Taking into consideration both the conclusions and the limitations of this paper, we propose the following lines of future research. This paper used cross-sectional data, though the variables under consideration shape a process that develops over time and whose impacts are only embraced in the long run. Future studies might delve into a longitudinal study that implements measures at different times to test the correlation in the framework. Furthermore, future research is needed to test the generalization of the findings, by covering more technical universities in Ghana and if possible beyond the boundaries of Ghana.

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CHAPTER FOUR (PAPER 2)

ENTREPRENEURIAL INTENTIONS AMONG MBA STUDENTS

4.1 Abstract

Increasing entrepreneurial activities in a country start with an intention that leads to increased innovative activities, wealth creation, industrialization, employment generation, economic growth, and development. This paper examines the effect of attitude towards entrepreneurship, subjective norm, locus of control, entrepreneurial self-efficacy, and environmental support on entrepreneurial intention of 159 MBA students from two private universities in Ghana. The study uses structural equation modeling (SEM) to analyze the data obtained from the participants. The results show that all the factors but entrepreneurial self-efficacy significantly affects students' entrepreneurial intentions. The study proffers policy-makers with the opportunity to nurture entrepreneurship in students as a foundation for transforming the intent into practice to address the huge employment gaps in emerging economies.

4.2 Introduction

Intensifying entrepreneurial activities in a country has the possibility of contributing to innovative activities, creating wealth, increasing competition, industrialization, employment generation, and economic growth (Dana, 2001; Paul & Shrivastava, 2015). For developing and emerging economies, entrepreneurial activities could alleviate unemployment especially the case of graduates. Youth unemployment is high in Ghana and quite pronounced among graduates. For example, the rate of graduate unemployment in Ghana rose from 14.7% in 1987 to 40% in 2011 (Baah-Boateng, 2015; Zakaria et al., 2014). The unemployment scenario is primarily due to lack of skills and entrepreneurial consciousness among the youth. Another reason for the high graduate unemployment situations is the heavy reliance on the government for employment into the public sector. In the words of Johnmark, Munene and Balunywa (2016, p.2), 'today's realities indicate that there is no government of any country that can absolutely provide jobs to absorb all graduates from her tertiary institutions. This means that, there is the need for a change in the mindset of graduates from the *look for a job syndrome* to *create a job mentality* in order to actualize their educational aspirations'.

In spite of extant research in the area of entrepreneurial intention, data from emerging economies is still insufficient. The majority of research on entrepreneurship has focused on developed countries (Nabi & Linan, 2011). For example, studies on entrepreneurial intention focus on developed countries such as Spain (Camelo-Ordaz, Diánez-González, & Ruiz-Navarro, 2016; Espíritu-Olmos & Sastre-Castillo, 2015), Poland (Nowiński & Haddoud, 2019), USA (Hsu et al., 2019). Thus research using data from emerging economies is lacking. What widens this research gap is the over-concentration on public universities to the neglect of private universities whose existence has bridged the access gap to university education tremendously. We address this context gap by focusing this study on two private universities in Ghana. The objective is to determine which factors influence the entrepreneurial intentions of MBA graduates. According to Abiodun and Oyejoke (2017) intention is seen as the best predictor of entrepreneurial behavior and intentionality is grounded on cognitive psychology that attempts to explain or predict human behavior. The main assumption guiding this paper is that, we believe the university environment is a fertile ground for breeding future and sustainable entrepreneurial activities needed for economic growth and national development. Hence, there is the need to identify, stimulate, and

sustain student entrepreneurial intentions because entrepreneurs are not only born, but are also made.

Motivations for this study stem from prior research that qualifications acquired in postgraduate education influence entrepreneurial prospects through the acquisition of employment-related skills (Greene & Sadridakis, 2008). According to Prodan and Drnovsek (2010) entrepreneurial intention is essential for entrepreneurial behavior in academia. Some private universities including those from emerging economies (such as Ghana) have taken up the challenge by offering business programmes. In Ghana, as at 2018, there were eighty-one (81) private universities (National Accreditation Board, 2018). Private universities in Ghana were established among other things, to augment the enrollment deficit in the public universities.

This study purposively selects two private universities to investigate the entrepreneurial intention among the MBA students. In a modified model, we complement the theory of planned behaviour with locus of control and environmental support as framework for the study after consulting extant literature (Abiodun & Oyejoke, 2017; Esfandiar, Sharifi-Therani, Pratt & Altinay, 2019; Maes, Leroy & Sels, 2014; Newman et al., 2019; Nowinski & Haddoud, 2019; Puni, Anlesinya & Korsorku, 2018; Salami, 2019). We follow the recommendations of researchers in the field of psychology (Read et al. 2013; Yazdanpanah & Farouzani, 2015) who propose the inclusion of supplementary constructs to advance the predictive power of the TPB models. The reasoning for the adoption of the Theory of Planned Behaviour is based on its ability to explain human attitude towards a behavior. Besides, entrepreneurship is a planned behavior and cannot be created without sufficient planning (Jena, 2020). According to Ajzen (1991) the intentions to perform behaviours of different kinds can be predicted with high accuracy from attitudes toward the behavior, subjective norms and perceived behavioural control (entrepreneurial self-efficacy). Some researchers, in predicting entrepreneurial intentions have replaced perceived behavioural control with entrepreneurial self-efficacy (Krueger, Reilly, & Carsrud, 2000; Miao, Qian, & Ma, 2016; Moriano et al., 2012). Our study therefore focuses on entrepreneurial self-efficacy instead of perceived behavioural control. Two other variables (Environmental Support and LOC) that influence entrepreneurial intentions were incorporated in the model. Locus of Control illustrates a closer effect on people's intention to act (Esfandiar, et al., 2019; Espiritu-Olmos & Sastre-Castillo, 2015). According to Obschonka, Hahn and Bajwa (2018) environmental support profoundly influence entrepreneurial intention.

From a structural equation modeling (SEM) approach, the paper reports that, locus of control, attitude towards entrepreneurship, environmental support and subjective norm significantly affect student entrepreneurial mentality. By way of contribution, the study provides a framework for addressing graduate unemployment through detection of students with entrepreneurial mentality. According to Obschonka, Silbereisen and Schmitt-Rodermund (2012) entrepreneurship seems to be the way of coping with massive unemployment and its attendant social vices among the youth. The study reinforces the Ghana government's efforts to address youth unemployment through various entrepreneurial-based flagship policies. Some of these interventions and institutions include Ghana Youth Employment Development (GYEEDA), National Youth Employment Programmme (NYEP), Youth Employment Agency (YEA), Youth Entrepreneurship Support (YES), National Entrepreneurship and Innovation Programme (NEIP). At the core of these programs is to nurture the entrepreneurial skills of the young Ghanaian by providing seed money and technical support to start new ventures.

The forgoing deliberations buttress the need to study the entrepreneurial intentions among MBA students among private university students. But unfortunately, no such rigorous study has been carried out among private university students to measure their entrepreneurial intentions. We believe this study may bridge the gaps in the literature and practice.

The organization of this article is as follows. The next section covers literature review and hypothesis development, a theoretical model to depict the various variables influencing entrepreneurial intention. The next section entails literature review and hypothesis development, research methodology, followed by results and discussion and lastly we draw the main conclusions and outline the implications and limitations of our research.

4.3 Literature Review and Hypothesis Development

Many authors (e.g. Autio, Keeley, Klofsten, Parker & Hay, 2001; Buli & Yesuf , 2015; Hisrich & Peters, 2002; Carayannis, Evans & Hanson, 2003; Esfandiar, Sharifi-Therani, Pratt & Altinay, 2019; Krueger, Reilly & Carsrud, 2000; Kickul & Gundry, 2002; Maes, Leroy & Sels, 2014; Nowinski & Haddoud, 2019; Salami, 2019) have examined factors influencing entrepreneurial intentions. Against this backdrop, we have reviewed literature on some of the popular

entrepreneurial intentions, using the Theory of Planned Behaviour as the base, to study as part of this paper.

4.3.1 Entrepreneurial Intention

Ajzen (2019) defines intention as 'a person's readiness to perform a given behavior'. Ajzen (1991) posits that intention is the immediate determinant of behavior, professing that, '…the stronger the intention to engage in (planned) behavior, the more likely should be its performance' (p. 181). Bird (1988) indicates that entrepreneurial intention is a state of an individual mind, which directs and guides them towards the development and the implementation of new business concept. Van Gelderen, Brand, Van Praag, Poutsma & Van Gils (2008) highlight entrepreneurial intention as the intentions of setting up one's business in the future. Prior research has established that entrepreneurial intent is the primary predictor of future entrepreneurs (Kruerger et al., 2000). Kruerger et al. (2000) suggest that entrepreneurial activity can be predicted more accurately by studying intention rather than personality traits or situational factors. Among the intention-based theories like the Theory of Entrepreneurial Event, Institutional Economic Theory and Theory of Planned Behaviour, the latter has more analytical capability (Diaz-Casero et al., 2012). The TPB is the most popular theory to explain the antecedent and consequences of entrepreneurial intention (Iakovlera, Kolvereid & Stephen, 2011). Besides, intention-based models contend that entrepreneurial venture creation must be preceded by the development of intentions to establish a start-up and by appreciating intentions we may be in better position to predict venture creation.

Ajzen (1991) propose that the intentions to perform behaviours of different kinds can be predicted with high accuracy from Attitudes Toward the behavior, subjective norms and perceived behavioural control (entrepreneurial self-efficacy). Some researchers, in predicting entrepreneurial intentions have replaced perceived behavioural control with entrepreneurial self-efficacy (Krueger, Reilly, & Carsrud, 2000; Miao, Qian, & Ma, 2016; Moriano et al., 2012). Our study therefore focuses on entrepreneurial self-efficacy instead of perceived behavioural control. Two other variables (Environmental Support and LOC) that influence entrepreneurial intentions were incorporated in the model (Esfandiar, et al., 2019; Obschonka, et al. 2018).

4.3.2 Attitude towards entrepreneurship and entrepreneurial intention

Attitude Towards Entrepreneurship (ATE) refers to the degree to which one holds a positive or negative personal valuation about being an entrepreneur (Ajzen, 2001; Autio, Pathak & Wennberg, 2013; Darren Lee-Ross, 2017; Krueger et al., 2000; Ozaralli & Rivenburgh, 2016). Previous studies by Autio et al. (2001) and Schwarz et al. (2009) have revealed that ATE was a major determinant in entrepreneurial intentions among respondents. Moriano, Gorgievski, Laguna, Stephan and Zarafshani (2012) asserted that a positive attitude towards entrepreneurship was the strongest antecedent of entrepreneurial intentions. Thus, ATE is dominant in determining one's success or failure to overcome challenges when faced with equivocal situations in life (Darren Lee-Ross, 2017). Aragon-Sanchez, Baixauli-Soler and Carrasco-Hernandez (2017) argued that an individual with a more positive attitude towards a given situation (e.g. entrepreneurial intention) is more likely to succeed as a person. Luthje and Franke (2003) observed that attitude toward entrepreneurship was the most important determinant of the intention to become self-employed and this attitude is influenced by the personality of the respondents. A number of authors (Aragon-Sanchez et al., 2017; Fini, Grimaldi, Marzocchi, & Sobrero, 2012; Moriano et al., 2012) have established that the relationship between attitude towards entrepreneurship and entrepreneurial intentions is significant and the linkage has been proved in different circumstances. For instance, the small business founder's attitude towards entrepreneurial behavior has been established to be the major factor of corporate entrepreneurial behavior (Fini et al., 2012). Armitage and Conner (2001) maintained that there is a positive relationship between attitude towards entrepreneurship and entrepreneurial intention. Ayalew and Zeleke (2018), in studying the entrepreneurial intentions among engineering students in Ethiopia also found that ATE has a positive influence on students' self-employment. However, Gultom, Dalle, Restu, Baharuddin, Hairudinor, Gultom (2020) established that attitude insignificantly influences intention among citizens of Indonesia, which was consistent with a paper by Zahid and Haji Din (2019).

From the forgoing, we hypothesize that:

H_1: Attitude Towards Entrepreneurship (ATE) has significant positive influence on entrepreneurial intentions.

4.3.3 Subjective Norm (SN) and entrepreneurial intention

Subjective Norm (SN) is the perceived social pressure to perform or not to perform an entrepreneurial behavior (Ajzen, 2001). Aragon-Sanchez et al. (2017) define SN as how an individual would behave in a particular setting. Entrepreneurship is associated with numerous changes and risks which may not be easily welcomed in an individual's lifestyle. This type of pressure could emanate from family members or the generality of society which forces an individual to do or not execute specific tasks. Hussain (2018) professed that a person would not desire to deviate from the norm and value held by close family members and even friends with whom one interacts on a regularly basis. The subjective norm has been perceived as traditionally weak, with respect to its role in the pattern of relationships in the TPB model, though this alleged weakness is not so clear. Nevertheless, some studies have simply omitted SN (Peterman & Kennedy, 2003; Veciana, Aponte & Urbano, 2005), while others found it to be non-significant (Autio et al., 2001; Krueger et al., 2000). Wijerathna (2015) showed that subjective norms and attitudes are the greatest factors that influence entrepreneurial intentions among agricultural students in Sri Lanka. However, Kankam and Abukari (2020) in their research in the eastern region of Ghana noted that attitude and subjective norms seem better predictors of intention than PBC. Linan and Chen (2009) report that, in the specific area of entrepreneurship research, only 7 out of the 16 studies previously reported included SNs in the analysis but two of them did not perform any regression analysis. Of the remaining five studies, three found SN to significantly explain EI (Kolvereid, 1996b; Kolvereid & Isaksen, 2006; Tkachev & Kolvereid, 1999), whereas the other two found SN to be nonsignificant (Autio et al., 2001; Krueger et al., 2000). Therefore, although there is support for the idea that a direct SN–EI relationship might be established, some controversy remains. Kuada (2015) professed that certain cultural traits have the tendency of influencing entrepreneurial intentions. Ghana is a highly collectivist country (Hofstede, 2012) and Gelaidan and Abdullateef (2017) suggest that relation support (eg emotional support or access to start-up capital from family and friends) is a fundamental ingredient in nurturing entrepreneurial intentions in people. However, in highly collectivist cultures, people's inclination to become entrepreneurs is less (Autio, Pathak & Wennberg, 2013; Takyi-Asiedu, 1993). Despite this assertion, collectivist values are necessary in nurturing entrepreneurship through the utilization of the requisite business resources (Lechler, 2001; Tiessen, 1997), the promotion of consumers' acceptance of entrepreneurs' innovations (Rauch et al., (2013). For instance, support

from family and friends would boost people's confidence in the engagement of entrepreneurial activities, but its absence would serve as a disincentive. Gelaidan and Abdullateef (2017) in examining the entrepreneurial intentions in Malaysia argue that role models, family members and friends can provide economic and emotional support to the prospective entrepreneur. Gultom et al. (2020) in a study in Indonesia found that subjective norms have significant and positive influence on intention.

Therefore, we hypothesize that:

H_2. Subjective norm significantly and positively influences entrepreneurial intention.

4.3.4 Locus of Control and entrepreneurial intentions

According to Rotter (1990) Locus of control (LOC) is the ability of individuals to control the events in life. Locus of control depicts the perception of one's ability to influence the outcome of a behavior (Hsiao, Lee & Chen, 2016). Locus of Control has proven its importance in affecting the level of aspiration for entrepreneurship (Luthje & Franke, 2003; Rauch & Frese, 2007b). The Locus of Control theory has two categories of control perceptions (Ng, Sorensen & Eby, 2006; Zigarmi, Galloway & Robert, 2018); internal or external and each has a differential influence on entrepreneurial intention. Bonte and Jarosch (2011) explored that an individual with a higher internal locus control is inclined towards self-employment because they are optimistic that their destiny is in their own hands. However, with external locus of control, their life is determined by external circumstances like chance, luck or fate. Khan, Ahmed, Nawaz and Ramzan in a study in 2011 indicated that students with internal locus of control will display a positive inclination towards entrepreneurial intention. Earlier accounts on internal locus of control and entrepreneurial intention produced inconsistent and conflicting results (Ferreira, Raposo, Rodrigues, Dinis & Paco, 2012; Gurol & Atsan, 2006; Rauch & Frese, 2007). Prior studies have revealed that students with higher internal locus of control are high in entrepreneurial behavior and entrepreneurial intention (Gurol & Atsan, 2006; Koh, 1996; Mazzarol, Volery, Doss & Thein, 1999; Thomas & Mueller, 2001; Vodă & Nelu, 2019). However, Ferreira et al. (2012) and Dinis et al. (2013) did not register any significant correlation with entrepreneurial intentions. Chaudary (2017) in a study of India University students observed that successful entrepreneurs have an internal locus of control compared to ordinary people. From the forgoing, and in the

wake of these contradictions, we expect that people with internal locus of control to have a positive inclination towards entrepreneurial career (Ajzen, 1991; Esfandiar et al., 2019).

H_3: Internal Locus of control is positively associated with entrepreneurial intentions

4.3.5 Entrepreneurial Self-efficacy (ESE) and Entrepreneurial Intention

Self-efficacy is 'an individual's belief in one's capacity to organize and execute courses of action required to produce given attainments' (Bandura, 1997, p.3). Chen, Greene and Crick (1998) define entrepreneurial self-efficacy as the strength of an individual's belief that he or she is capable of successfully performing the various roles and tasks of entrepreneurship. Entrepreneurial self-efficacy 'measures a person's belief in their ability to successfully launch an entrepreneurial venture' (McGee, Peterson, Mueller & Sequeira 2009, p.965) and calls for success in activities like innovation, marketing, management and finance which are relevant to the creation of an entrepreneurial venture (Chen et al., 1998; Hsu, Wiklund & Cotton, 2017). Entrepreneurial self-efficacy is an important antecedent of entrepreneurial intention (Bird, 1998; Krueger et al., 2000; Newman, Obschonka, Schwarz, Cohen & Nielsen, 2018; Salami, 2019). Newman et al. (2019) argued that there is significant positive relationship between ESE and entrepreneurial intentions of students and working people alike.

Subsequent to the emergence of Ajzen's Theory of Planned Behaviour, a crucial line of research emerged to assess the link between ESE and entrepreneurial intention (Kickul, Gundry, Barbosa & Whitcanack, 2009; Engle et al., 2010; Hsu et al., 2018). This is probably due to the fact that empirical studies shown a significant positive relationship between ESE and Entrepreneurial Intentions (Chen et al., 1998; Barbosa, Gerhardt & Kickul, 2007). Prodan and Drnovsek (2010) emphasized that self-efficacy is the most significant variable in the explanation of academics' entrepreneurial intentions as compared with other predictors. In conceptual terms, there is no difference between perceived behavioural control and self-efficacy (Ajzen, 2019). Authors like Ajzen (1991), Schwarz, Wdowiak, Almer-Jarz and Breitneceker (2009) and Trivedi (2016) perceive that PBC and Entrepreneurial Self-efficacy constructs as interchangeable. But, Terry (1993) has proposed that ESE and PBC are not entirely synonymous. For instance, Bandura (1992) has argued that PBC and ESE are quite dissimilar concepts. That is Self-efficacy is more concerned with cognitive perceptions of control based on internal control factors whereas PBC is more generally an external factor. Bandura (1997) sees Self-efficacy as close to the 'perceived

behavioral control' in Ajzen's model. Perceived Behavioural Control bear a resemblance to the Theory of Perceived Self-Efficacy (Moriano et al., 2012) and for this study PBC is substituted with ESE. This is not uncommon since some researchers (Hockerts, 2017; Tran & Von Korflesch, 2016) have applied one or more of the exogenous constructs in the TPB-based model. Armitage and Conner (2001) see Self-efficacy as a stronger predictor of entrepreneurial intentions. There is overwhelming empirical evidence to support a positive relationship between ESE and Entrepreneurial Intentions (Aragon-Sanchez et al., 2017; Chen et al., 1998; Krueger et al,. 2000; Luthje & Frank, 2003). Some researchers (Krueger & Brazeal, 1994; Luthje & Frank, 2003; Pittaway, Rodriguez-Falcon, Aiyegbayo & King, 2010) have opined that, the greatest the belief that the individual has in their abilities, the greater the entrepreneurial intention. Gielnik, Bledow and Stark (2020)'s paper on Tanzanian and Rwandan students showed that variability and the average in entrepreneurial self-efficacy participants displayed during an entrepreneurial training were positively related to business ownership in the succeeding year. In line with the preposition that self-efficacy helps people to generate the motivation to enhance their intentions, entrepreneurial research has found that nascent entrepreneurs are more likely to start and successfully manage a business when their entrepreneurial self-efficacy is high.

Thus, we posit that:

H_4: Entrepreneurial Self-efficacy is positively related to entrepreneurial intention

4.3.6 Entrepreneurial intention and Environment Support

The Eurobarometer Survey on Entrepreneurship reports that a lack of business experience, the challenge of raising start-up capital, red tape, the poor economic environment and an innate fear of failure were to be blamed for inhibiting more of Europe's potential entrepreneurs from venturing into entrepreneurship. Stephen, Urbano & Hemmen (2005) points out government support measures and processes as fundamental in the decision to start a firm. According to Van de Ven (1993), entrepreneurial research without reference to the environment should be considered as insufficient and incomplete. Environmental forces can be a major inhibitor to the creation of an entrepreneurial venture. Prior studies have revealed that significant environmental antecedents of entrepreneurial intentions include access to capital (Luthje & Franke, 2003; Ozen Kutanis, Bayraktaroglu & Bozhurt, 2006; Schwarz et al., 2009), knowledge of potential business

sector (Kristiansen & Indarti, 2004) and social networks (Sequeira et al., 2007). Luthje and Franke (2003) emphasized that a student might be prepared to establish a company, notwithstanding his relatively bad inclination towards entrepreneurship, because he perceives the founding conditions as very favourable. On the other hand, graduates with a positive attitude towards entrepreneurship may not decide to venture into their own business due to negative perception of critical factors in the environment. Thus one of the fundamental challenges facing students with an entrepreneurial intention and activities is lack of enabling and supportive environment (Indarti, Rostiani & Nastiti, 2007; Khan, Yusoff & Khan, 2014). These scholars assert that the correlation between environment and entrepreneurial intention is worth researching into. Access to capital, as a variable of the environment, is undoubtedly one of the important determinants in establishing a new business (Kim, Aldrich & Keister, 2006; Kristiansen & Indarti, 2004). A considerable numbers of people have forsaken their nascent entrepreneurial careers because of an inability to access capital (Marsden, 1992; Meier & Pilgrim, 1994) and in Ghana the situation is even pathetic due to, among other causes the high interest rates financial institutions charge for loan acquisition. Start-up capital can be procured from personal savings, family, friends, and bank loan or via partnership with an investor (Cetindamar, Gupta, Karadeniz & Erican, 2012). Prior studies in some developing countries propose that the availability of institutional support enhances growth of entrepreneurial firms (Amankwah-Amoah & Debrah, 2017; Donbesuur, Boso, & Hultman, 2020; Nakku et al., 2020). Urbano, Audretsch, Aparicio and Noguera (2020) in a sample of 14 developing countries came out that access to bank credit has a positive effect on entrepreneurship in developing countries. However, Ge Stanley, Eddleston & Kellermanns, 2017) suggest that institutional support might not necessarily lead to successful entrepreneurial outcomes. Cetindamar et al. (2012) have emphasized that regardless of gender, financial capital is a crucial force for any subsequent entrepreneurial activities. Indarti, Rostiani and Nastiti (2007) and Wennberg, Yar Hamidi, & Berglund, (2008) found in their study that environment is a significant factor in influencing entrepreneurial intentions.

From the abovementioned empirical discussion and evidence from prior studies of various researchers in entrepreneurial intention and environment support, the succeeding hypothesis is framed as follows:

H_5: Environment support is positively related to entrepreneurial intention

4.4 Research Methodology

The research design is exploratory research, where the researchers focused on investigating and examining factors influencing students' entrepreneurial intention. We adopted quantitative research approach to measure constructs, model the relationships between the variables. The data collection technique is the use of questionnaire. The respondents completed a set of 7 items influencing entrepreneurial intentions. With the exception of the demographic characteristics, the entire responses format was a 5-point Likert-type scale. The items included entrepreneurial self-efficacy, perceived behavioural control, subjective norm, attitude towards entrepreneurship, locus of control, environmental support and risk-taking propensity. The 7 items constituted the independent variables and the dependent variable was entrepreneurial intention. However, the principal component analysis reduced the independent variables items to five.

4.4.1 Measures

This research adopted items from previous TBP-based studies (e.g. Chen et al., 1998; Greeene & Rice, 2007; Krueger et al., 2000) to measure the constructs due to their established construct reliability and validity, as well as their relevance to the purposes of this study. In exploratory studies, values ranging from 0.60 to 0.70 are considered acceptable (Hair, Hult, Ringle & Sarstedt, 2017). But according to Feldt and Kim (2008), a cut-off value of 0.70 is recommended. We followed Eddleston and Powell (2012) and Powell and Eddleston (2013) and performed confirmatory factor analysis (CFA), which provides a more rigorous test of validity (Cheung & Lau, 2008)). The application of a multi-item scale is highly recommended over less reliable single-item measures (Armitage & Conner, 2001), hence the variables had more than one item. The instruments used for soliciting information from the participants are described in the following section.

Entrepreneurial intention was measured with two items and based on the proposals of Autio, et al. (2001), Linan and Chen (2009), Miranda, Chamorron-Mera and Rubio (2017) and Obschonka et al. (2015). Miranda et al. (2017)'s Cronbach Alpha was 0.891. The Cronbach Alpha value for Entrepreneurial Intention is 0.700 as depicted on Table 1.

Attitude towards Entrepreneurship was measured with adapted questionnaire by Kolvereid (1996). The Cronbach Alpha value for Attitude towards Entrepreneurship is 0.720 as depicted on

Table 1, compared to Kolvereid's (1996) values which ranged from 0.68 to 0.90, though he used a 7-point Likert-type scale.

Entrepreneurial Self-efficacy was measured with items from Wilson et al. (2007). The respondents were asked to rate their capabilities against their peers (1=much worse, 5=much better) in regards to solving problems, managing money, being creative, getting people's agreement, being a leader, and making decisions. Wilson et al. (2007) reported a Cronbach's alpha of 0.79. For this study, the scale yielded a Cronbach's alpha of 0.785. It is relevant to state that Perceived Behavioural Control was removed from the model after the running of the Principal Component Analysis. Thus PBC was dropped because of insignificant contribution to prediction of intentions and because of problems with estimation (low reliability). Other empirical studies have also been unable to test this variable (e.g. Kolvereid & Isaksen, 2006; Lortie & Castogiovanni, 2015; Simon & Kim, 2017).

Locus of Control was measured with a ten-item developed by Mueller and Thomas (2001) and some of the items were reverse-coded. A sample of the items are 'when I get what I want, it is usually because I am lucky (Internal Locus of Control) and 'success in business is mostly a matter of luck' (External Locus of Control). The Cronbach Alpha value for Locus of Control is 0.843 as depicted on Table 1.

Subjective Norm was measured with previous research by Kolvereid (1996), Krueger et al. (2000), Obschonka et al. (2015). Miranda et al. (2017)'s Cronbach Alpha was 0.819. Autio et al. (2001) reported a Cronbach's alpha value of 0.70. The Cronbach Alpha value for Subjective Norm is 0.720 as depicted on Table 1.

To measure Environmental Support, we adopted scales from Autio, Keeley and Klofsten (1997) on a five point Likert-scale (1=strongly disagree to 5=strongly agree). The Cronbach Alpha value for Environmental Support is 0.803 as depicted on Table 1.

Entrepreneurial intentions served as the dependent variable and ATE, SN, ESE, LOC and ES were the independent variables. Prior studies by Zahid and Haji Din et al. (2019) and Dalle et al. (2020) have reported and empirically investigated intentions as a dependent variable. Following prior studies (e.g. Abiodun & Oyejoke, 2017; Esfandiar, Sharifi-Therani, Pratt & Altinay, 2019; Maes, Leroy & Sels, 2014; Jena, 2020; Newman et al., 2019; Nowinski & Haddoud, 2019; Puni, Anlesinya & Korsorku, 2018; Salami, 2019) we applied Likert-scale for the dependent and independent variables. Likert scale is used to measure psychological attitude, perception or

opinion in a mathematical manner. This provides a more objective approach in measuring constructs, hence its choice in this research.

4.4.2 Sample and data collection

The population of this study was the students of Valley View University (the first private university in Ghana to charter, Techiman campus (VVU-TC) in the Brong Ahafo region of Ghana and Catholic University College of Ghana (CUCG), Sunyani in the Brong Ahafo region of Ghana. CUCG is affiliated to the Ghana's premier university (University of Ghana). The population of VVU-TC MBA students was 126 whereas that of CUCG was 76 as at the period of data collection. The respondents were Master of Business Administration (MBA) students with specialization in Banking and Finance, Strategic Management, Human Resource Management and Accounting. According to Krueger et al. (2000) and Shinnar, Giacomin and Janssen (2012) a student sample (e.g. master level students) is appropriate to study entrepreneurial intentions since students face immediate career choices and selecting an entrepreneurial career path is a viable alternative. Besides, relying on a student sample provides variation in terms of entrepreneurial intentions and attitudes (Shinnar et al., 2012). Thus some students' entrepreneurial propensity will be positive whereas others will be negative.

The sample size was 159 out of the total 202 MBA student population from the two universities representing about 79% response rate. The study adopts simple random sampling technique thus giving every student equal chance of being selected. Data for the present study was collected via a self-administered questionnaire. The questionnaire was divided into 8 sections. The first section (demographic variables) had 8 questions i.e. gender, age, level, marital status, employment status, sector, programme and educational background of respondent' parents. The response rate was 96% because the respondents answered the questions there and then (in their various lecture halls). Before administering the questionnaire to the students, they were briefed on the survey's objectives. To avoid bias in the responses, the students were assured of anonymity and confidentiality. Variables measured on a 1 to 5 scale with strongly disagree to strongly agree were used with respect to entrepreneurial intention.

Initially, seven thematic areas of entrepreneurial intention were developed in the questionnaire. In order to reduce these variables, we performed principal component analysis to extract uncorrelated factors for further analysis (Cohen, Cohen, West & Aiken, 2003) and to validate the

scale after the data collection (Saunders, Lewis & Thornhill, 2009). However, before we performed the principal component analysis, we recoded some items (e.g. LOC) to obtain an empirical summary of the data set (Pallant, 2010). The PCA reduced the seven thematic areas to five.

4.4.3 Method of data analysis

The data collected were analysed using SPSS and Structural Equation Modelling (SEM) AMOS 7.0. To test the hypotheses and the proposed conceptual model, we used structural equation modelling (SEM), a tool that provides the appropriate and most efficient estimation technique for a series of separate multiple regression equations estimated simultaneously (Hair et al. (2014). These authors posit that SEM is an appropriate technique for our study because it enables the usage of multi-item latent variables for an independent or dependent variable. SEM also has superior advantage of addressing measurement errors prevalent in such studies. There was no attrition, no missing data in all the variables. There were no outliers.

4.4.4 Model specification

The study aims to examine the factors influence student entrepreneurial intention, using TPB as the foundation. We formulate a general regression model for entrepreneurial intention.

$$Z_i = \beta_0 + \beta_1 X_1 + \cdots \beta_n X_n \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Where Z_i represents the dependent variable

$X_1 \ldots X_n$ are sets of explanatory variables and

$\beta_0 \ldots . \beta_n$ are parameters to be estimated

We introduce our variables into the general model as:

$$EI_s = \alpha_0 + \beta_1 ATE + \beta_2 ESE + \beta_3 LOC + \beta_4 SN + \beta_5 ES + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Where; EI_s = 1 if a student has entrepreneurial intention

ATE = Attitude towards Entrepreneurship

ESE = Entrepreneurial Self-efficacy

LOC = Locus of Control

SN = Subjective Norm

ES= Environmental Support

ε = Error term

Due to the complex nature of the constructs, we used several questions in order to avoid the danger of not covering key concepts of the variables. We employed factor analysis to reduce the number of items into their uncorrelated structures.

4.5 Results

The analysis of results covers a description of the demographic characteristics of respondents, factor analysis to reduce the number of constructs to their unobserved structures and analysis of the structural model showing which factors influence student entrepreneurial intention.

4.5.1 The Current Situation of MBA Student's Entrepreneurial Intentions

This research used two items (*I love to create something different & I am determined to have my own business in the future*) to measure Entrepreneurial intentions. The respondents' responses were divided into 5 grades (5=strongly agree, 4=agree, 3=neither agree nor disagree, 2=disagree, 1=strongly disagree). On the item, *I love to create something different,* 47.8% and 40.3% went for *Agree* and *Strongly Agree* respectively. On the item, *I am determined to have my own business in the future* 32.1% and 61.0% chose *Agree* and *Strongly Agree* respectively. From these two items we can say that the percentage of students with entrepreneurial intention is relatively high.

4.5.2 Demographic Characteristics of Respondents

The respondents were sampled from two private universities in the Brong Ahafo region of Ghana. Approximately 63% of the respondents were sampled from Valley View University-Techiman campus and the remaining 37% were from the Catholic University College of Ghana. Approximately 70% of the respondents were males and the remaining were females. This major disparity in gender at that level of education is not uncommon in Ghana. The highest age category was 30-39, representing 43% whilst the lowest stood at 3% for respondents who were

50years and over. Approximately 65% of the respondents are married, whereas 35% were single. Approximately 90% of the respondents were Christians. This is understandable because in Ghana, Christianity is the dominant religion in Ghana. Ninety-four percent of the respondents are employed. This is justifiable because one of the entry requirements for most MBA programs in Ghana is work experience. That is, an applicant may be refused admission due to lack of work experience. Approximately 47% of the respondents were in Administration and Managerial positions and 60% were in the public sector. A significant percentage-33% of the respondents' parents had no formal education.

4.5.3 Factor Analysis

Following previous studies (Hoque & Awang, 2016; Hoque, Awang, Jusoff, Salleh & Muda, 2017; Nguyen, Do, Vu, Dang & Nguyen, 2019), we employed exploratory factor analysis using principal component factoring to reduce the number of questions suitable for the model. The dimension reduction resulted in two items for attitude towards entrepreneurship and three questions each for the other constructs. The exploratory factor analysis uses the rotated component matrix for varimax to select variables with loadings above 0.7. The results show five components with Eigen values above 1 which explains total variance of 72.81%. We performed reliability analysis for the selected items to check internal consistency of the constructs using the Cronbach alpha values and the results show that all the constructs meet the threshold criteria of above 0.7 (Nunnally & Bernstein, 1994). The results can be seen in Table 1.

Table 1: Exploratory factor analysis for factors influencing entrepreneurial intention

		Variance	Number of components				
	Reliability	**explained**	**1**	**2**	**3**	**4**	**5**
EI	0.700						
LC2	0.843	22.96	.847				
LC3			.920				
LC4			.840				
ES1	0.803	17.30		.811			
ES2				.881			
ES3				.808			
SN1	0.720	11.98			.786		
SN2					.809		
SN3					.745		
ESE3	0.785	11.41				.828	
ESE5						.849	
ESE6						.793	
ATE4	0.720	9.16					.895
ATE5							.843
Total Variance		*72.81*					
KMO		*0.700*					
Bartlett test of sphericity		*761.046 (Sig=0.000)*					

Table 1 shows the construct measurement in the exploratory factor analysis covering the five variables used in the model. Apart from attitude towards entrepreneurship which was measured by two questions, all other variables have three questions. Using principal components extraction approach of factor analysis, the items were reduced to five uncorrelated components. The variances explained by each factor can be seen in the second column with a cumulative variance of 72.81%. The results for the measurement of internal consistency can be seen under the reliability column. Each variable has scores above 0.7, therefore indicating good constructs. The factor loadings from the rotated components (Varimax rotation method) shows that each item is above 0.7

Having reduced the dimensions of the constructs by exploratory factor analysis, we developed the model for predicting entrepreneurial intention among MBA students in emerging economies. Expanding the equation to include all the variables in the model, we have;

$$EI_s=\alpha_0 + \beta_1 ATE4 + \beta_2 ATE5 + \beta_3 ESE3 + \beta_4 ESE5 + \beta_5 ESE6 + \beta_6 LOC2 + \beta_7 LOC3 + \beta_8 LOC4 + \beta_9 SN1 + \beta_{10} SN2 + \beta_{11} SN3 + \beta_{12} ES1 + \beta_{13} ES2 + \beta_{14} ES3 + \varepsilon \ldots\ldots\ldots(3)$$

Where *ATE4 = Starting a business will provide me with Independence*

ATE5 = Starting a business will provide me with opportunity to be my own boss

ESE3 = Being creative

ESE5 = Being a leader

ESE6 = Making decisions

LOC2 = My life is controlled by accidental happenings

LOC3 = When I get what I want, it is usually because I am lucky

LOC4 = SUCCESS in business is mostly a matter of luck

SN1 = My parents are positively oriented towards my future career as an entrepreneur

SN2 = My friends see entrepreneurship as a logical choice for me

SN3 = I believe that people who are important to me, think that I should pursue a career as an entrepreneur

ES1 = There are not sufficient subsidies available for new companies

ES2 = It is hard to find capital providers in my country

ES3 = Banks do not readily give credit to start-up companies

EI = I love to create something different & I am determined to have my own business in the future

4.5.4 Structural Model

We measured the structural model using structural equation modeling (SEM) with the AMOS software. For the path model, we employed the maximum likelihood estimation technique for SEM-AMOS to generate the coefficients for the measured and latent variables. We performed several goodness of fit analyses to ensure confidence in the structural model.

4.5.1 Measurement of Goodness of Fit

The formulation of the model was developed using the AMOS 16.0 software package. This analytical technique permit the evaluation of the overall fit of the proposed model and estimation of all corresponding coefficients simultaneously (Hair et al. 2017).

In order to check absolute model fit, the root mean square error of approximation (RMSEA) and the goodness of fit index (GFI) were checked. The results show that GFI (0.932) is greater than 0.9 whilst RMSEA (0.029) is within the acceptable range. Ideally, acceptable RMSEA which indicates good fit should be < 0.08. Our results indicate a good model with root mean square error of approximation (RMSEA) less than 0.08 (Bryne, 2010). We performed further model fit analyses to check incremental model fit and parsimonious model fit. Apart from AGFI and NFI which are approximately 0.9 (acceptable limit), CFI and TLI are above 0.9 thus indicating that the model passed the incremental fit. The parsimonious model fit result is acceptable. The overall model fit diagnosis shows that the model is good and acceptable.

Table 2: Goodness of fit measurement

Measurement		Value
Absolute model fit	Chi-Square (CMIN)	99.532
	RMSEA	0.029
	GFI	0.932
	AGFI	0.894
Incremental model fit	CFI	0.986
	NFI	0.897
	TLI	0.981
Parsimonious model fit	CMIN/DF	1.131

Table 2 reports results on the goodness of fit of the SEM model. The results show good fit for the entire three model's fit tests. The Chi-Square value is not significantly different from the degrees of freedom and their ratio passes the parsimonious model fit test (1.131).

With the exception of entrepreneurial self-efficacy, all the constructs show significant relation with entrepreneurial intention. The results show that locus of control has significant but negative relation with entrepreneurial intention

Table 3: Regression weights for SEM

Constructs/Factors	**Estimates**				
	Standardized	**Unstandardized**	**Std Error**	**CR**	**P-value**
EI---ESE	.124	.123	.088	1.402	0.161
EI---LoC	-.183	-.098	.041	-2.361	0.018
EI---SN	.301	.250	.090	2.784	0.005
EI---ES	.186	.107	.048	2.207	0.027
EI---ATE	.678	.575	.102	5.613	0.000

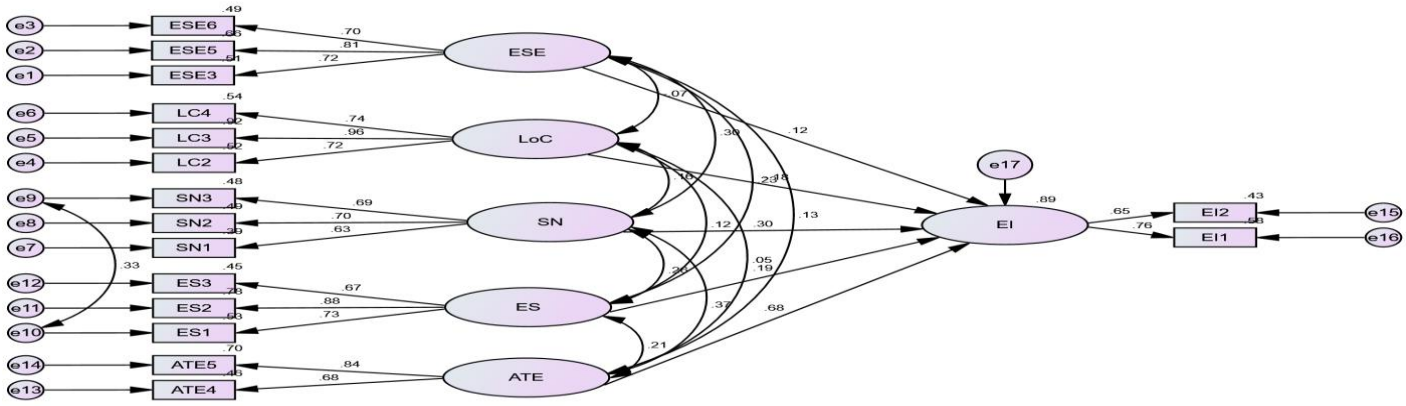
Table 3 shows standardized and unstandardized coefficients for the constructs. The results show very significant relation between attitude towards entrepreneurship, subjective norm, locus of control and environmental support. Entrepreneurial self-efficacy does not significantly predict student entrepreneurial intention.

We measured five latent constructs on entrepreneurial intention using the questionnaire carefully developed after reviewing several literatures on the subject. The results show that attitude towards entrepreneurship is the construct that significantly contributes most (68%) in explaining variations in student entrepreneurial intention. This is followed by subjective norm (30%) and environmental support (19%). Interestingly, locus of control shows significant negative relationship with entrepreneurial intention. Overall, the model (all the five constructs) explains 89% of variations in student entrepreneurial intention and this is higher than similar and previous studies. This can be seen in the path model found in Figure 1. In Trivedi's study in 2016 the adjusted R for the regression of ATB, SN, PBC and university environment and support on entrepreneurial intention was 0.69 which indicated that the model was highly significant since more than 69 per cent of variation in entrepreneurial intention could be explained by the four predictors.

4.6 Discussion

This present study analyzed the entrepreneurial intention among the MBA students by reviewing literature on factors influencing Entrepreneurial Intention in line with the Theory of Planned Behaviour as the basic framework and two other variables; Locus of Control and Environmental Support. The results of the present study answer three (3) hypotheses and reject two (2) hypotheses.

Figure 1: Path Model



The data for the study was obtained from MBA students from two of Ghana's private universities and the results are revealing.

4.6.1 Attitude towards Entrepreneurship and entrepreneurial intention

From the results it can be said that Attitude towards Entrepreneurship influence the entrepreneurial intention among the MBA students. These results mirror other studies by Armitage and Conner (2001) and Kim and Hunter (1993) whose studies have revealed a positive

relationship between attitude towards entrepreneurship and entrepreneurial intention. Attitude Towards Entrepreneurship has statistically positive influence on entrepreneurial intentions among tertiary students (Buli & Yesuf, 2015; Ferreira et al., 2012). Trivedi (2016) also saw a strong and highly significant relationship between attitude and entrepreneurial intention. Surprisingly, Zhang, Wang and Owen (2015) study which was conducted in the USA failed to generate a significant impact on entrepreneurial intention. In fact, we found a high score in the attitude toward entrepreneurship which incidentally happens to be the highest contribution to the entrepreneurial intentions in our model. Thus, this result showed that the influence of attitudes on intention has high explanatory power and extremely important for increasing entrepreneurial intention. Hence, we can argue that the MBA students are more independent and desire to be their own bosses in the near future with respect to their career path, which has the potential of curbing the problem of unemployment in the long run. Bosma and Kelley (2018) recognize that whenever employment opportunities and well-trodden career paths are scarce, creating a business is one of the few available avenues toward economic prosperity. They posit that the rate of people with the intention to start a business can exceed 60% in developing countries.

4.6.2 Locus of Control and Entrepreneurial Intention

According to this study, LOC registered a significant but negative impact on the entrepreneurial intention among the MBA students. This finding sharply contradicts a study by Kristiansen and Indarti (2004) who reported a positive but insignificant relationship between LOC and entrepreneurial intentions among Indonesian students. The authors however, in the same study established a negative and insignificant relationship between LOC and EI among Norwegian students. According to Vodă and Nelu (2019), prior empirical research studying the relationship between LOC and EIs in European countries has produced contradictory results. For example Rajh et al. (2016), in studying the entrepreneurial intentions of 1200 respondents from some European countries, found a positive but insignificant connection between LOC and entrepreneurial intention. Also, Popescu et al. (2016) in examining undergraduate and master students in Romania found a positive but insignificant relationship between LOC and entrepreneurial intention. Luthans, Avey, Avolio, Norman and Combs (2006) asserted that individuals with an internal locus of control are likely to positively face challenges and

hindrances and they resolve those inhibitors by seeking productive solutions by displaying achievement motivation.

4.6.3 Entrepreneurial Self-efficacy and Entrepreneurial Intention

In spite of the overwhelming empirical evidence to support a positive relationship between ESE and Entrepreneurial Intentions (Krueger et al., 2000; Luthje & Frank, 2003; Puni, Anlesinya & Korsorku, 2018), this study revealed that Entrepreneurial Self-efficacy has no effect on the entrepreneurial intention among the MBA students. This is contrary to Sesen's (2012) study that entrepreneurial self-efficacy has a significant impact on entrepreneurial intentions. Laguna (2013) stated that self-efficacy is positively related to entrepreneurial intention. Also, Douglas and Fitzsimmons (2013) established a strong relationship between ESE and the intrapreneurial intentions of MBA students. However, some authors (e.g. Kolvereid & Isaksen, 2006; Boukamcha, 2015) found no evidence of such a relationship. In our study, 60% of the respondents were in the public sector as reported in the descriptive section of the analysis. In Ghana, job security in the public sector is normally guaranteed which inhibit the propensity to venture into entrepreneurial activities. According to Nowinski and Haddoud (2019) a positive attitude towards entrepreneurship is a necessary but not sufficient in fostering entrepreneurial intentions and they further emphasized that a positive a positive attitude towards entrepreneurship needs to be supported by ESE and inspiring role models. According to McGee and Peterson (2017) people who believe in their ability to undertake certain activities are more likely to be successful in those activities.

4.6.4 Environmental Support and Entrepreneurial Intention

It came out from the study that Environmental Support shows a significant relation with Entrepreneurial Intention. According to Sesen (2012) environmental forces (e.g. access to capital) has a significant impact on entrepreneurial intentions. According to Luthje and Frank (2003) if students realize a hostile environment for business founders due to perhaps the banks do not readily provide loans or because they perceive the state laws as being overly restrictive, they are less likely to venture into entrepreneurship. In Ghana particularly, the hostile and turbulent nature of the environment at times poses a challenge not only to nascent entrepreneurs but even to the existing ones. This is because entrepreneurial finance accessibility is a critical

ingredient for success and one of the most important challenges facing entrepreneurial ventures is access to capital at realistically optimal interest rates. According to Jena (2020), the support entrepreneurs get from the environment (e.g. Mentor, Government and Financial institutions) could influence entrepreneurial intentions.

4.6.5 Subjective Norm and Entrepreneurial Intention

The study revealed that Subjective Norm has positive relationship with EI, which contradicted the findings of other researchers (Autio et al., 2001; Krueger et al., 2000; Linan & Chen, 2009; Maes et al., 2014) which reported a non-significant relationship. Hiatt, Sine and Tolbert (2009) established that social norms that inspire regulations can strongly affect organizational formation and failure. However, this study extends Ferreira et al. (2012)'s studies on the effect of Subjective Norm, who established that SN has a significant relationship. Interestingly, Nguyen et al. (2019) did not find the linkage between social norms and entrepreneurial intentions when they examined the factors affecting EIs among the youths in Vietnam. According to Moriano et al. (2012) subjective norms were significantly related to intentions in only two out of the six countries in their study.

4.7 Implications for Theory and Practice

This study was able to apply other operational measures than proposed by Ajzen (1991, 2002) to test the robustness of the model in predicting entrepreneurial intentions as suggested by previous studies (Engle et al., 2010).

This study highlighted ATE as one of the important determinants of our framework; hence entrepreneurial attitudes may be influenced by educators, policy makers and successful business owners.

As the adage goes, 'every organization is as good as the people in the organisation', hence the selection and socialization of leaders (especially top management) and most importantly lecturers who share and endorse the idea that entrepreneurs make the difference in every society is very crucial for the continued relevance of private universities. We believe that by virtue of the superior-subordinate power relationship in Ghana, top management in the academic institutions

can inspire entrepreneurial intentions and behaviours among their subordinates (e.g. lecturer) which will eventually cascade down to the students.

Since almost all of our respondents fall within the category of the working class, there are practical implications for private, public and voluntary businesses and industries. It is important for management in the various organisations to instill the entrepreneurial spirit and proclivity in the workers to cause transformation and a turnaround in their respective institutions. This orientation is important not only for the incumbent employees but also for prospective ones in their recruitment and selection.

According to Abadi, Mahdavian and Fattah (2021, p.3), 'people are influenced by norms as they go through and interact with those who are around them in social circumstances, the extent to which people face advocating or inhibiting norms determine the likelihood that they take an action or not'. To the extent that SN has proved an important and significant determinant of entrepreneurial intention is refreshing. The positive effect of subjective norms on entrepreneurial intention is probably due to the prevalence of favorable reactions that the students give to the influences of important people, giving rise to positive intentions. We believe these influences have the potential of creating businesses in Ghana to curb the problem of unemployment in Ghana. According to Asiedu and Donkor (2018), respect for the views of elders and people in one's close circles is considered an important virtue in Ghanaian culture. These authors emphasize that, it is a belief in Ghana that family leaders, community leaders and religious leaders are a repository of great knowledge and wisdom and their counsel is normally held in high esteem. Hence if family associates encourage the respondents to move into entrepreneurial venture, they are most likely to concede to such an advice (pursuing a career as an entrepreneur). We can infer from the proposition of Asiedu and Donkor (2018) that societal norms can be institutionalized when they are accepted by individuals and groups and the motivation for the transition into entrepreneurial venture can be enhanced, all other thing being equal.

For policy makers, the findings indicate that high interest rate is counterproductive and serve as a disincentive in the encouragement of entrepreneurship. Most especially for these category of respondents (MBA students) who are already in gainful employment and feel 'safe' in their comfort zones, higher cost of capital can further push them away from an entrepreneurial dream. Probably, the government and other policy makers can collaborate with the private universities to

institute start-up incentives in order to improve the students' entrepreneurial inclination. In recent times, private universities in Ghana have been lamenting over government's negligence.

4.8 Conclusion

The paper examined the entrepreneurial intentions among MBA students of two private universities in the Brong Ahafo region of Ghana. Specifically, we analyzed how locus of control, entrepreneurial self-efficacy, environmental support, subjective norm and attitude determine students' entrepreneurial intention.

We confirm that TPB-based variables can be adopted in an area in Ghana's educational sector which seems to be 'forgotten' with respect to entrepreneurial intentions research; thus contributing and deepening to previous TPB-based research on EI.

This study registered statistically significant explanatory power of 89% of the variations in Entrepreneurial Intention, due to ATE, SN, ESE/PBC, ES and LOC which is considered to be more robust given most research fall short of this number. Our study adds to existing literature in an area which has barely produced literature in universities in Ghana (particularly private universities) and the overreliance on the developed countries, through empirically testing of Azjen's TPB-based variables in the context of private universities in Ghana.

This study revealed that the Entrepreneurial Intentions of MBA students are influenced by ATE. This implies that pragmatic strategies and tools should be incorporated in the private MBA curriculum to promote student's attitudes towards job creation. Unfortunately, the total number of entrepreneurship courses taught in each of the two institutions surveyed is not more than two subjects. Tesseman (2012) criticized the current educational system for mainly focusing on teaching students how to be managers or become employees. According to Bogatyreva et al. (2019), on the average, students with entrepreneurial intention during schooling are approximately three times more likely to start a business after school, as compared to students without intention. Besides, Entrepreneurial Intentions are the most proximal predictor of individual academics' engagement in entrepreneurship. However, the universities in Ghana offer few courses related to entrepreneurship. The findings can be used to guide universities in Ghana,

government and other stakeholders on how to stimulate entrepreneurial intentions among students.

Entrepreneurial self-efficacy is one of the most important determinants of entrepreneurial intention but this study revealed non-significant relationship, hence it is recommended that policy makers should allocate resources in a manner that promotes the entrepreneurial self-efficacy of MBA students in the private universities. According to Nguyen et al. (2020, p.19), 'intervention programmes like critical thinking, negotiation, presentation, time management, networking, cross-cultural awareness skills, or even down-to-earth activities related to business skills like basic golf, professional dining, and grooming' can propel entrepreneurial self-efficacy.

4.9 Limitations and Future Research

Our data was based purely on quantitative and cross-sectional data. For instance, the cross-sectional nature of this study may not give room for stronger causality inferences. We therefore suggest that future research should apply both quantitative and qualitative research approaches, and also, the application of longitudinal research designs, as it can make significant contributions.

We examined the MBA students' perceptions in relation to their future entrepreneurial intentions, but not actual behaviours. Since intentions may not necessarily lead to actions, further longitudinal studies about the factors associated with entrepreneurial intentions and to establish whether the respondents actually 'walk the talk'. In fact, entrepreneurial intentions, however, are only a first step toward entrepreneurial action and eventual business ownership. According to Krueger et al. (2000), intention-based models examine the intent, but not the timing of venture creation. Interestingly, it may take time after intent metamorphoses before a new venture opportunity is even recognized.

The respondents in our study were primarily students from only two private universities in Ghana, which may render our findings less generalizable to other higher institutions of learning. However, our framework can be adopted and applied in different context for future studies in order to verify the authenticity of the model.

Entrepreneurial education undoubtedly is one of the critical to the success in the development of entrepreneurial competences, hence the need for policy makers to integrate entrepreneurship

education in the MBA programs of private universities, since a number of these courses have the potential of enhancing entrepreneurial intention and propensity. According to Puni et al. (2018), due to the rising rates of unemployment in Sub-Saharan Africa and its attendant economic and social problems, stakeholders are embracing the concept of entrepreneurship education as a major conduit in shaping the quality of human capital for full employment.

Lastly, the constructs used in this study are not the only variables in the determinants of entrepreneurial intentions. Future studies might integrate broader constructs to measure entrepreneurial intentions among university students.

Declaration of interest

The authors declared no potential conflicts of interests with respect to the research, authorship, and/or publication of this paper

4.10 References

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CHAPTER FIVE (PAPER 3)

ENTREPRENEURIAL INTENTIONS: THE MODERATING ROLE OF PARENTAL SELF-EMPLOYMENT

5.1 Abstract

Purpose

Using the entrepreneurial intention model, we examine how parental self-employment/role models moderates (using Multi-Group Analysis) the relationship between the antecedents of entrepreneurial intention (EI) and Social Valuation (SV), Closer Valuation (CV), Entrepreneurial Skills (ES), and Environmental Support (ENSUP).

Design/methodology/approach

The data of three hundred and nineteen respondents were analysed by structural equation modelling (SEM). Thus, SEM was used to examine the structure model of developing entrepreneurial intentions and bootstrap confidence intervals were estimated to test the mediation role. Multi-Group Analysis was used to test the moderating role of parental self-employment (PSE) to determine whether there is a significant relationship between respondents with PSE and respondents without PSE.

Findings

Consistent with prior studies, ATE and PBC have a positive effect on EI. The results prove that entrepreneurial skills influence ATE, PBC, and SN. Regarding the influence of perceived environmental knowledge (ENSUP) and ATE, the relationship was insignificant, though the impact of ENSUP on PBC and SN was significant. With respect to the correlations between SV and CV and the antecedents of TPB respectively, all the hypotheses were accepted except CV→ATE and SV→PBC relationships. This study revealed that respondents with parental self-employment perceive a higher attitude towards entrepreneurship, PBC, entrepreneurial skills, entrepreneurial support, and entrepreneurial intention than those without PSE. However, the MGA established that the formation of entrepreneurial intentions is similar for respondents with parental self-employment and respondents without PSE. Thus, there was no significant relationship between respondents with PSE and respondents without PSE.

Research limitations

A limitation of this study is the missing link between intentions and actual behavior.

Research implications

The results of this paper indicate that entrepreneurial intention is explained by the three antecedents (ATE, SN, and PBC) of the TPB. This study adds empirical support to the robustness and reliability of the TPB in entrepreneurial research. This study has implications for the content of entrepreneurial intentions, especially with the incorporation of culture, motivations, skills, and knowledge of the entrepreneurial environment within a higher educational institution. Thus, this study moves a step further by analyzing other variables that are considered critical to the antecedents of entrepreneurial intentions.

Originality/value

This study is perhaps one of the pioneering works to conduct an MGA to assess the relationship between respondents with parental self-employment and respondents without PSE, using the entrepreneurial intention model.

Keywords: TPB, entrepreneurial intention, role models/PSE

Paper type: Research paper

5.2 Introduction

Given the global reach of entrepreneurship, its impact on economic growth and employment generation is unavoidably and understandably visible. Entrepreneurship accounts for the reduction in unemployment, enhancement in the productivity of people and resources, and the subsequent increase in one's income (Lang & Fink, 2019). Data from Eurostat (2020) suggest unemployment, as the biggest challenge for young people. Besides, at European Union level and other settings, unemployment among the youth is two to three times higher than the overall unemployment. According to Georgescu and Herman (2020), an increase in employment through entrepreneurial activity among young people from different countries could among other things, address Goal 8- 'promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all' of the UN 2030 Agenda for Sustainable Development (UN Transforming Our World, 2020).

There is a connection between entrepreneurship and economic growth (Stoica, Roman, & Rusu, 2020), and one of the variables that influence entrepreneurship are institutions (Acs, Estrin, Mickiewicz, & Szerb, 2018; Bosma, Content, Sanders, & Stam, 2018; Boudreaux, Nikolaev, & Klein, 2019; Elert & Henrekson, 2017; Galindo-Martín, Méndez-Picazo, & Castaño-Martínez, 2019; Urbano, Aparicio, & Audretsch, 2019; Urbano et al., 2019). Institutions can both constrain and promote self-employment and entrepreneurship (Fayolle & Liñán, 2014; Feldman, Feller, Bercovitz, & Burton, 2002; Grimaldi, Kenney, Siegel, & Wright, 2011). For example, institutions have the capacity to provide support to entrepreneurs to expand their activities (Bosma et al., 2018; Dilli, Elert, & Herrmann, 2018). The link among institutions, entrepreneurship and economic growth (Acs et al., 2018; Bosma et al., 2018; Galindo-Martín et al., 2019; Urbano et al., 2019), implies that the institutions would foster sustained growth over time, directly and indirectly, through entrepreneurship. According to Galindo-Martín, Castaño-Martínez, and Méndez-Picazo (2021) there is positive correlation between social climate and entrepreneurship.

This paper follows the cognitive approach and applies an Entrepreneurial Intention model, adapted from the theory of planned behavior. With the development of the theory of reasoned action, the TPB was introduced, and the main constructs of the theory include attitude, subjective norms, and behavioural control, which have the capacity to predict behavioural intentions and behaviour (Ajzen, 2015). According to Henry, Hill and Leitch (2003) a cognitive approach is important because it symbolizes an attempt to appreciate the formation of new ventures and the

underlying structures and processes. The upsurge of entrepreneurial intention is influenced by a number of personal and environmental variables, among which the factors connected to education and training in entrepreneurship is prominent (Fayolle & Gailly, 2015). This perhaps explains why students' entrepreneurial intentions have become a major research topic in recent times (Badri & Hachicha, 2019).

This paper contributes to literature on entrepreneurship by focusing on the moderating effect of parental self-employment/role model on the relationship between the antecedents of the Theory of Planned Behaviour (TPB) (ATE, PBC and SN), and ES, ENSUP, SV, CV with respect to entrepreneurial intention of students. Few studies have conducted moderation analysis regarding the relationship between the TPB constructs and intentions (Carfora, Caso, Sparks, & Conner, 2017). According to Barbera and Ajzen (2020) evaluating moderating variables can promote a broader appreciation of people's intentions. We examine the extent to which students possess the attitudes, subjective norms, PBC, *SV, CV, ES and ENSUP* considered critical ingredients of becoming an entrepreneur. We add to literature by investigating not only the direct effects of these constructs but in treating them as moderators of the antecedents of TPB and SV, CV, ES and ENSUP relationships. Authors like Maresch, Harms, Kailer, and Wimmer-Wurm (2016)and Georgescu and Herman (2020) have conducted similar studies in the past. We seek to enhance the knowledge in this field by investigating role model differences in entrepreneurial intention.

Although previous studies acknowledge the importance of role models for prospective entrepreneurs, there is no common understanding of the effect of role models on entrepreneurship, and research in this field is rather fragmented (Bosma, Hessels, Schutjens, Praag, & Verheul, 2012). According to BarNir, Watson, and Hutchins (2011) exposure to role models has a positive relationship with entrepreneurial intentions by providing specific guidance and support or by creating an environment that triggers entrepreneurial behavior. Role model theory expounds on the process of learning by emulating the action of other persons through observation. This theory has been applied to entrepreneurial research to explain why individuals whose parents are entrepreneurs become entrepreneurs (Arenius & Minniti, 2005).

As early role models, parents can either have a positive or negative impact on entrepreneurship intentions (Pablo-Lerchundi, Morales-Alonso, & González-Tirados, 2015). Abbasianchavari and Moritz (2020) suggest that entrepreneurial intentions and behavior are affected by exposure to role models. Previous studies (e.g., Geldhof, Weiner, Agans, Mueller, & Lerner, 2014; Chlosta et

al., 2012; Laspita, Breugst, Heblich, & Patzelt, 2012; Criaco, Sieger, Wennberg, Chirico, & Minola, 2017; Andersson & Hammarstedt, 2011; Zapkau, Schwens, Steinmetz, & Kabst, 2015) have suggested that entrepreneurial parents impact the probability of entrepreneurial intentions. Professional networks, personal networks, and family environment can encourage individuals to have higher entrepreneurial intentions (Foo, Knockaert, Chan, & Erikson, 2016; Tartari & Breschi, 2012). Some researchers found that social influence (e.g., parents) is an important determinant of entrepreneurial career decisions. Thus parental roles, from an early stage, influence 'the children's attitude towards becoming self-employed themselves' (Chlosta, Patzelt, Klein, & Dormann, 2012, p.122).

Though a lot of studies have been conducted to better understand the factors affecting entrepreneurial perceptions and intentions, there is still the need to develop more adequate, reliable, and valid instruments (Liñán & Chen, 2009). According to Sok, Borges, Schmidt, and Ajzen (2020), the main concerns of data analysis in research with the TPB are the model's predictive validity and the relative effect of attitude, subjective norm and perceived behavioural control on intention. And multiple regression and structural equation modelling (SEM) are the most popular methods used in contemporary research. The entrepreneurial intention instrument will be used on samples from students from a university in Spain. Data thus will be used to test the entrepreneurial intention model using structural equation techniques (SMART-PLS).

Another aim of this paper is to draw some of the strands in TPB-based intention models, as cited by Liñán, Nabi, & Kueger (2013). Liñán (2008) in his paper, tested the extent to which percieved social valuation of entrepreneurship and percieved personal skills impacted entrepreneurial skills, either directly or through the motivational factors. Santos, Roomi, and Liñán (2016) researched the gender differences and social environment in the development of entrepreneurial intentions. Contrarily, this paper looks into the differences in parental self-employment or role models in entrepreneurial intentions in individual perceptions and environmental influences. Liñán (2008) developed and tested an entrepreneurial intention model on a Spanish sample, by incorporating social valuation (SV), closer environment valuation (CV) and entrepreneurial skill perceptions, which are important for any entrepreneurial venture. However, scholars have noted the significance of two other variables (Ajzen, 2020; Bosma, Acs, Autio, Coduras & Levie, 2008; Liñán et al., 2013; Liñán, Battistelli, & Moriano, 2008). The first is the importance of greater knowledge of the entrepreneurial environment. The second is the importance of a cross-

sectional perspective to better appreciate the effect of cultural environments on entrepreneurial motivation and intention (Liñán et al., 2013). However, this study will focus on the former. A plethora of studies (e.g., Herman & Stefanescu, 2017; Franco, Haase, & Lautenschläger, 2010; Pruett, Shinnar, Toney, Llopis, & Fox, 2009) have established that EIs of individuals can be determined by different forces (environmental or contextual factors and personal background factors), which can have a positive or negative influence, a direct or indirect influence, respectively. This paper is motivated mainly by the studies of Liñán (2008) and Liñán et al. (2013), but as a novelty, we treat parental self-employment/role model (an integral part of CV) as an antecedent of the variables of the TPB and also as a moderator. Thus, we will treat PSE as a direct variable of the antecedents of the TPB and a moderator.

This study will hopefully extend literature, as a confirmation of the applicability of the cognitive model to the entrepreneurial decision. It will also contribute to clarifying the specific pattern of relationships among the intention antecedents. Also, the effects of culture and/or entrepreneurial intentions will be tested. According to Liñán, Santos, and Fernández (2011) a positive perception about entrepreneurial cultural values, such as perceived social legitimation, will exert a positive influence on the entrepreneurial intention. Also, relevant implications for educators and policy makers could be realized.

The organization of the paper is as follows. The next section reviews literature and development of hypotheses. The third section describes the methodology. The fourth section presents the results of the study. The fifth section includes a discussion and the paper ends with a brief conclusion.

5.3 Theory and Hypotheses Development

5.3.1 Entrepreneurial Intention defined and its antecedents

An entrepreneurial intention is a state of mind that aims actions towards behaviour (López-Núñez, Rubio-Valdehita, Aparicio-García, & Díaz-Ramiro, 2020). It is a desire to start a business (Krueger, Reilly, & Carsrud, 2000) or a disposition to complete an act (Liñán & Fayolle, 2015). Research on EIs is necessary because students are potentially enterprising (Bird, 2015; Krueger et al., 2000). In recent years, there has been a tremendous surge in usage and applicability of the Theory of Planned Behaviour (TPB) (Ajzen, 2019). There are a number of

studies conducted with the help of TPB in different fields and continents (Kumar, Prakash, & Kumar, 2021; Prakash et al., 2019; Spence, Stancu, Elliott, & Dean, 2018; Taufique & Vaithianathan, 2018; Verma & Chandra, 2018).

The TPB proposes that human behavior is guided by three types of considerations: beliefs about the likely implications of the behaviour (behavioural beliefs), beliefs about the normative expectations of others (normative beliefs), and beliefs about the presence of factors that may aid or hinder performance of the behavior (control beliefs). On the whole, behavioural beliefs produce a favourable or unfavourable attitude toward the behaviour; normative beliefs result in perceived social pressure or subjective norm; and control beliefs give rise to perceived behavioural control or self-efficacy. The effects of attitude toward the behavior and subjective norm on intention are moderated by perception of behavioural control. Basically, the more favourable the attitude and subjective norm, and the greater the perceived control, the stronger the person's intention to perform the behavior in question. Also, given an ample measure of actual control over the behavior, people are expected to carry out their intentions when the opportunity arises. Thus intention is assumed to be the immediate antecedent of behavior (Bosnjak, Ajzen, & Schmidt, 2020).

In TPB, attitude plays a vital role in predicting the behavioural intentions of an individual (Kuo, Tseng, Lin, Wang, & Lee, 2018). Attitude is defined as favourable or unfavourable assessments of cognitive beliefs about an idea, people, objects, events, or behavior in question (Miao, Haddock & Verplanken, 2018).

Subjective norms refer to a person's beliefs or perception that significantly emerges from peers, society, or family (Bong Ko & Jin, 2017). In TPB, the subjective norm is an essential component to predict behavioral intention (Nguyen, Nguyen, & Nguyen, 2019).

Perceived behavior control (or self-efficacy) can be defined as an individual's perception or individual's beliefs that control over the ability to carry out the behavior (Mishal, Dubey, Gupta, & Luo, 2017; Sreen, Purbey, & Sadarangani, 2018). Self-efficacy helps entrepreneurs feel confident about their future. Thus entrepreneurs with greater self-efficacy are likely to develop entrepreneurial identities, which are crucial to successful new venturing (Brändle, Berger, Golla, & Kuckertz, 2018). Attitude and PBC have a significant impact on intention (Abadi, Mahdavian, & Fattahi, 2021; Dalila, Latif, Jaafar, Aziz, & Afthanorhan, 2020; Soorani & Ahmadvand, 2019).

Some scholars (Liñán, Urbano, & Guerrero, 2011; Rueda, Moriano, & Liñán, 2015) have provided evidence of the validity of the TPB for Spanish universities. Fayolle, Gailly and Lassas-Clerc (2006) and Fayolle and Gailly (2015) show that the TPB is valid for French business and engineering schools. The TPB has also been confirmed in other settings; the US (Krueger et al., 2000), Norway (Kolvereid, 1996), Ghana (Amofah & Saladrigues, 2020; Amofah et al., 2020) and the Netherlands (Van Gelderen et al., 2008).

Attitude and PBC are predictors of entrepreneurial intention (Aloulou, 2016; Fayolle & Gailly, 2015; Liñán & Chen, 2009; Youssef, Boubaker, Dedaj, & Carabregu-Vokshi, 2020), though Youssef et al. (2020) found attitude to have a stronger effect than PBC. An entrepreneurial mindset is an important variable in entrepreneurship studies (Allen, 2020) and the foundation of entrepreneurial intention reclines adaptability (Haynie, Shepherd, Mosakowski, & Earley, 2010).

5.3.2 Parental Self-employment/Role model differences in entrepreneurial intentions

Individuals are more likely to opt for an entrepreneurial career when their parents have owned businesses. This is because parents act as role models and those with entrepreneurial backgrounds tend to have a positive inclination towards entrepreneurial activities. Role models are individuals 'who can influence role aspirants' achievements, motivation, and goals by acting as behavioral models, representation of the possible, and/or inspirations' (Morgenroth, Ryan, & Peters, 2015, p.4). Both men and women can serve as role models (Porter & Serra, 2020). Role models are individuals that others identify with, who possess desirable qualities, and exemplify attitudes and behaviors that are considered worth emulating (Perry, 2009). Role models play an important part in the education of students and contribute to the development of skills, attitude, behaviors and identity (Nieuwenhuijze, Thompson, Gudmundsdottir, & Gottfreðsdóttir, 2020).

Prior studies have acknowledged a broad influence of parental self-employment on the EIs of children; modelling career options (Carr & Sequeira, 2007; Criaco et al., 2017) acquiring human capital (e.g., entrepreneurial knowledge and skills) (Eesley & Wang, 2017) and allocating financial and social capital to their children (Zellweger et al., 2011). Empirical research (Eesley & Wang, 2017, Sieger, Fueglistaller, Zellweger, & Braun, 2018; Laspita et al., 2012) underscored that children from families with entrepreneurial backgrounds are more likely to start their own businesses or to join the family business. According to Sørensen (2007), children with self-employed parents are twice as likely to become self-employed. Entrepreneurial intentions

can be indirectly influenced by the family business background (Peterman & Kennedy, 2003) which has implications for antecedents of entrepreneurial intention. Peterman and Kennedy (2003) established a significant positive relationship between prior exposure to family business and entreprenurership education, and the antecendents of EI. Furthermore, Carr and Sequeira (2007) established a significant, direct as well as indirect influence, by means of variables such as ATE, perception of family support, and entrepreneurial self-efficacy.

5.3.3 The influence of Social Environment

Following Liñán et al. (2013) our model incorporates the two specific factors of social valuation and closer environment valuations (Liñán, 2008). Fayolle, Basso and Bouchard (2010) emphasized the relationship between different strands of social influence in explaining entrepreneurial orientation. The social influence on entrepreneurial attitudes and behaviours is exerted at both the macro (social valuation) and micro levels (closer valuation) (Morris & Schindehutte, 2005).

5.3.3.1 Closer Valuation (CV)

Closer valuation refers to the way individuals perceive the entrepreneurial activity to be valued in their closer surroundings (e.g., family, friends, ethnic group, etc.). Family denotes the earliest and most immediate relational set in which graduates are embedded and its effects on entrepreneurship have been examined comprehensively in entrepreneurship literature (Meoli, Fini, Sobrero, & Wiklund, 2020). Through daily contact and interaction, the prospective entrepreneur is influenced by the valuation of entrepreneurship by their family members, friends and colleagues (Liñán, Santos, et al., 2011; Liñán, Urbano, et al., 2011). According to Rosado-Cubero, Freire-Rubio and Hernández (2021) there was evidence that the family environment influences the intention to establish a business. This influence contributes to the creation of more favourable perceptions towards start-up (Kim, Aldrich, & Keister, 2006). Parents can exert their influence directly on attitude towards the behavior as a result of the cognitive values and beliefs conforming individual's perception towards a career (Uphoff, 2000). Belonging to a closer environmental system will attract advice, support legitimacy, etc. (Hindle, Klyver, & Jennings, 2009). The importance allocated to entrepreneurship in this closer environment is likely to stimulate a more positive perception of personal support if the individual decides to start a

venture (subjective norm) (Neergaard, Shaw, & Carter, 2005). Also, perceived valuations may increase self-confidence in the ability to successfully start a venture (PBC) and the desirability towards the entrepreneurial career (ATE) (Rimal & Real, 2003). Kennedy, Drennan, Renfrow, and Watson (2003) suggested that expectations from family, friends, and significant others are key variables influencing students' responses and that closer environment expectations were related to attitude towards the behavior and subjective norms.

5.3.3.2 Social Valuation (SV)

In the process of making career choices, individuals are influenced not only by their closer circles, but also by the objective and perceived larger environment **(**Social valuation**)** (Meoli et al., 2020). Social valuation refers to the way individuals perceive the entrepreneurial activity as a result of macro-social values and culture (Liñán, Urbano, et al., 2011). Thus, SV refers to the wider cultural values in society which may encourage or discourage certain attitudes, personal traits, capacities, and shape normative perceptions towards entrepreneurial behavior (Zahra, Jennings, & Kuratko, 1999). The macro-social environment is made up of the social values and culture (Thornton, Ribeiro-Soriano, & Urbano, 2011). The value society places on entrepreneurship will manifest itself in the form of a higher social status of entrepreneurship or a greater admiration for entrepreneurs (Begley & Tan, 2001). The underlying system of values pertaining to a specific group or society shapes the development of personality perceptions (Zahra et al., 1999), modeling normative (SN), affective (ATE) and ability (PBC) perceptions towards the entrepreneurial activity (Thomas & Mueller, 2000). A more positive social valuation of entrepreneurship would make individuals consider this option as a viable career path, thus affecting perceptions (Fernández, Liñán, & Santos, 2009)

5.3.4 The role of Entrepreneurial skills

Since it is generally acknowledged in literature that entrepreneurs are made, and not born (Dana, 2001)), becoming an entrepreneur is also a learning process, which normally starts at the university level (Gieure, Benavides-Espinosa, & Roig-Dobón, 2020). Hence, educational programs aimed at transferring knowledge and developing entrepreneurial skills are important for the development of prospective entrepreneurs (Elmuti, Khoury, & Omran, 2012).

Entrepreneurial skills perceptions refer to the degree to which individuals are confident that they have adequately high levels of entrepreneurial skills (Liñán et al.. 2013). Prior studies have identified specific skills (e.g., opportunity recognition, creativity, entrepreneurial spirit and a propensity toward being independent) may be positively related to personal attitude and subjective norms (Gieure et al., 2020; Liñán, 2008).

Also, cultural variables could positively affect the self-perceptions of entrepreneurial skills through wider social valuation and closer valuation (Liñán, 2008; Thomas & Mueller, 2000). Throughout the literature on cognitive models of entrepreneurship, some scholars have examined directly as well as moderating effects of cultural values on entrepreneurship (Liñán & Chen, 2009; Liñán, Urbano, et al., 2011). Differences in cultural values of various societies produce various levels of entrepreneurial intentions and activities (Bruton, Ahlstrom, & Li, 2010; Turró, Urbano, & Peris-Ortiz, 2014).

5.3.5 Knowledge of Entrepreneurial Environment

Following Liñán et al. (2013), we integrate the knowledge of the entrepreneurial environment (ENSUP). This refers to the level of knowledge and awareness the individual has about the entrepreneurial environment and support systems (Liñán, Battistelli, & Moriano, 2008; Liñán, 2008). Thus knowledge of facts, concepts, and relationships concerning the environment (entrepreneurial and its major ecosystems (Lo & Fryxell, 2003). This may include awareness of associations, support bodies, training and support measures, and access to favourable loan conditions. Greater knowledge could contribute to more accurate awareness of, and attraction to the entrepreneurial career route and enhance social approval from significant others as a result of the support systems available (Liñán et al., 2013). The degree of perceived enviornmental knowledge has been established to be a vital ingredient of behavioural intention (Goh & Balaji, 2016; Kumar, Manrai, & Manrai, 2017; Wang, Liu, & Qi, 2014; Yadav & Pathak, 2016). A plethora of studies have proved the effect of perceived environmental knowledge on attitude formation (Jaiswal & Kant, 2018; B. Kumar et al., 2017; Maichum, Parichatnon, & Peng, 2016; Yadav & Pathak, 2016; Zhao, Gao, Wu, Wang, & Zhu, 2014).

Social and closer valuation influence the knowledge of the entrepreneurial environment (Liñán et al., 2013). According to Stephen (2008), the greater the ‘legitimation’ within society, the more attention there is to developing entrepreneurially aware individuals. Also, closer valuations could

exert their influence on encouraging or discouraging the acquisition of knowledge of entrepreneurial career paths.

From the foregoing, we hypothesize a direct impact of TPB constructs on EI, based on the findings of previous studies (as discussed above) and incorporate the role of culture, motivational skills, and knowledge of entrepreneurial knowledge. We add to the literature by proffering hypotheses on parental self-employment or role models of students as a moderator. Thus, this paper will test the following hypotheses;

H1: ATE positively influences EI

H2: PBC positively influences EI

H3: SN positively influences ATE

H4: SN positively influences PBC

H5: SV positively influences SN

H6: SV positively influences PBC

H7: CV positively influences ATE

H8: CV positively influences SN

H9: ES positively influences ATE

H10: ES positively influences SN

H11: ES positively influence PBC

H12: SV positively influences ES

H13: CV positively influences ES

H14: Entrepreneurial environment knowledge (ENSUP) positively influences ATE

H15: Entrepreneurial environment knowledge (ENSUP) positively influences SN

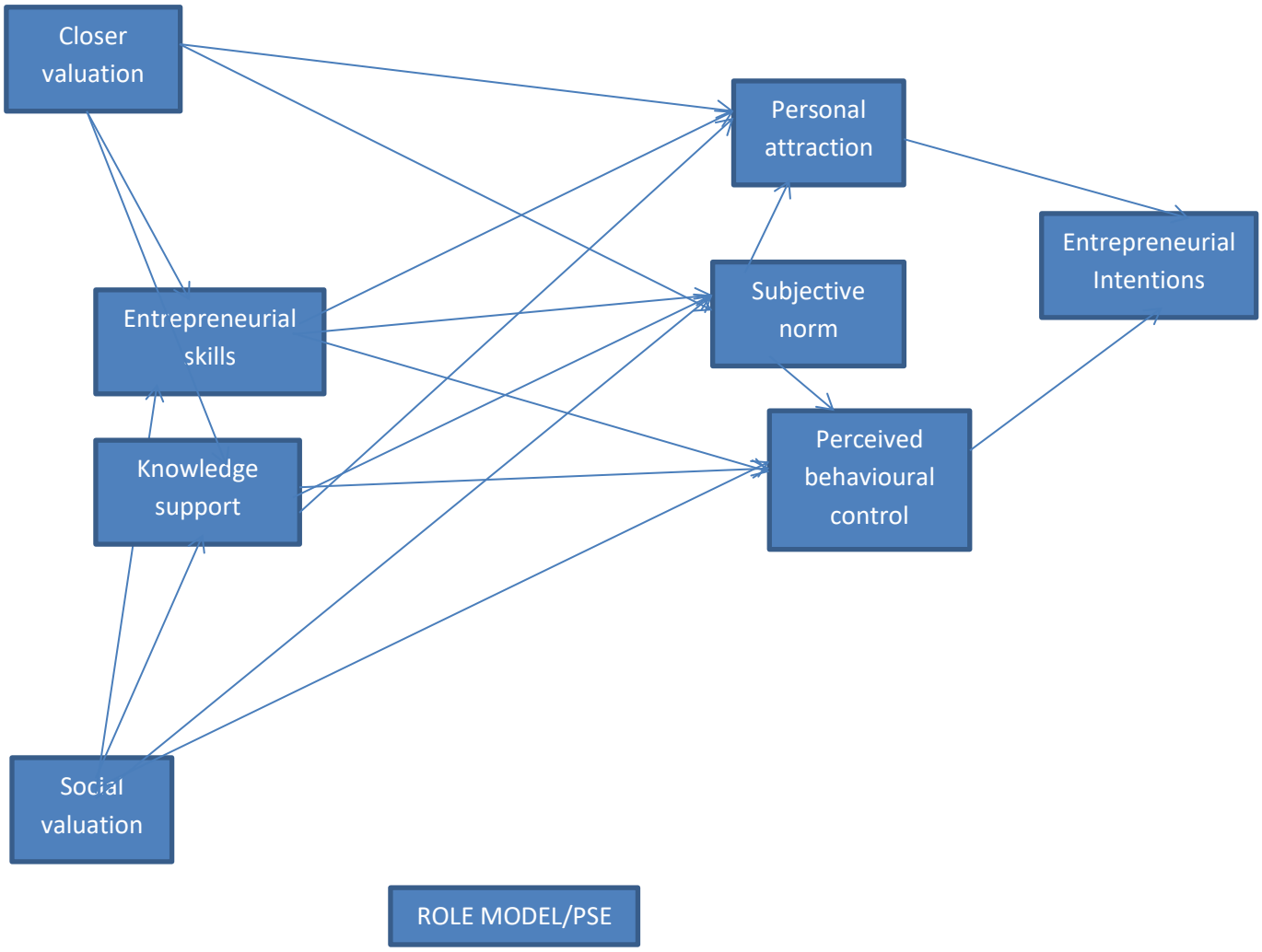
H16: Entrepreneurial environment knowledge (ENSUP) positively influences PBC

H17: CV positively influences Entrepreneurial environment knowledge (ENSUP)

H18: SV positively influences Entrepreneurial environment knowledge (ENSUP)

H19: Students with PSE exhibit greater entrepreneurial intentions than those without PSE

Figure 1 ENTREPRENEURIAL INTENTION MODEL



5.4 Methodology

5.4.1 Research design

The empirical research methodology was quantitative, based on a questionnaire applied to a sample of 319 students in a Spanish university. The questionnaire was developed based on the measurement scales used by (Liñán & Chen, 2009; Liñán et al., 2013) and the items were evaluated on a 5-point Likert scale. The questionnaire consisted of scales for entrepreneurial intentions, attitude, SN, PBC, ES, SV, SV. The questionnaire was written in English and Spanish and was completed by the students in both electronic and printed formats. The sample of the 319 students is made up of 174 male (54.5%) and 145 female (45.5%). Bird (2015) reviewed 78

articles and found that more than 80% of the studies on entrepreneurial intention surveyed were students. About 91.7% of the respondents were undergraduate students, 82.3% of whom were not in employment. The majority of the students fall within 20-24 ages (69.5%) category. A convenience sampling technique was used because it is a widespread instrument in entrepreneurial studies (Fayolle & Gailly 2005; Krueger et al., 2000).

We performed an analysis to validate the model and test hypotheses, which we based on theoretical arguments from literature. We used multivariate analysis to validate the model and test hypotheses. The analysis was based on structural equation modeling using the partial least squares algorithm in SMART PLS software. We used the SEM-PLS technique to examine the constructs of the paper and the relationship among them.

5.4.2 Measurement Instrument

Our study aimed to test the entrepreneurial intentions model on university students, where parental self-employment served as a moderator. We identified studies by (Liñán, 2008; Liñán et al., 2013) that have employed similar model in the past and subsequently used their scales to measure entrepreneurial intentions and the other constructs (social valuation, closer valuation, entrepreneurial skills, and knowledge of the entrepreneurial environment ENSUP). The constructs and their respective items are found in Appendix 1 (Questionnaire).

Entrepreneurial intention is measured by the Entrepreneurial Intention Questionnaire developed by (Liñán & Chen, 2009). Though they used seven-point Likert scales, this study's measure consisted of statements rated on five-point Likert scales. The Cronbach's alpha is 0.94, giving us the confidence of reliability of our measure. The other constructs produced satisfactory results except for SV (see Table 1).

5.4.3 Data analysis

As already stated, data analysis was conducted using SMART-PLS 3.0 software. PLS is a second generation multivariate method based on structural equations. It avoids distribution assumption and possesses higher statistical power, even for small sample studies (Hair, Sarstedt, Ringle, & Mena, 2012).

5.5 Results

The structural equation modelling consists of two components (Henseler, Ringle, & Sarstedt, 2014; Henseler, Ringle, & Sinkovics, 2009): a) the structural model or inner model represents the constructs (circles) or latent variables and the relationship between exogenous and endogenous variables, and b) the measurement models or outer models of the constructs and the indicator variables (rectangles) (Hair, Ringle, & Sarstedt, 2011; Hair, Hult, Ringle & Sarstedt, 2016).

The model for this study was a reflective one, hence in the reflective model assessment, we considered Indicator reliability, internal consistency, convergent validity, and discriminant validity.

Outer loadings are checked employing a threshold of 0.708 (Hair, Risher, Sarstedt, & Ringle, 2019), finding that all indicators survive. The factor loadings in the measurement models must be 0.70, which is the level at which 50% of the indicator variance can be explained (Hair et al., 2016). Prior to this, a small number of items with lower loadings were deleted from the model and we re-run to arrive at the results in Table 1. Three of the Social Valuation items (Question number 27, 28, and 31) were reverse-coded but they were later deleted due to their poor loadings. The results also show that all constructs in this study are more than 0.70 in both composite reliability and Cronbach's alpha value (see Table 1). It indicates that the constructs are reliable.

The most frequently used measure of reliability is Cronbach's alpha coefficient (1951). This analysis is used to examine the level of internal consistency. Calculating the separate Cronbach's alpha for each factor fails to capture the effect of the other constructs on reliability. Therefore, Fornell and Larcker (1981) proposed the use of the composite reliability index and average variance extracted (AVE), which should be greater than or equal to 0.5. The study uses the standard value of composite reliability ≥ 0.60 (Nunnally & Bernstein, 1994), standard Cronbach's alpha $\alpha \geq 0.70$ (Allen & Yen, 2002), and average variance extracted (AVE) ≥ 0.50 (Hair Jr et al., 2016). The results are shown in Table 1 and Figure 2. Thus, Composite reliability values, Cronbach's alpha and average variance extracted (AVE) exceed 0.7, 0.7, and 0.5, respectively, and subsequently satisfying the conditions for these values (Fornell & Larcker, 1981). The Rho_A values for the constructs were also all approximately reliable (>0.70). Furthermore, correlations among all constructs were examined to confirm the discriminant

validity. The estimated values for corrections among constructs were below the squared threshold figure, hence confirming the presence of discriminant validity (Cheah, Sarstedt, Ringle, Ramayah, & Ting, 2018). Table 2 depicts the results, which means that the constructs are purely unrelated and valid to pursue further statistical tests.

For the structural model, we employed path coefficients, T values, P values, and R Square for the analysis to establish the causal relationship described in the hypotheses. Our aim was to test the entrepreneurial intention model used by (Liñán et al., 2013). Table 3 summarizes the hypotheses, and Figure 3 illustrates the relationships.

As shown in Table 3, we did confirm all other hypotheses except CV→ATE, ENSUP→ATE, SV→ES and SV→PBC relationships. Table 3 shows that the path coefficients for attitudes and PBC towards the intention to become an entrepreneur were both positive and significant. Thus hypotheses were therefore supported by the data.

We assessed the R^2 values of all the endogenous constructs as a measure of the model's predictive in-sample predictive power (Ringle, Sarstedt, Mitchell, & Gudergan, 2018). A rough rule of thumb is that R^2 values of 0.25, 0.50, and 0.75 are respectively weak, moderate, and strong (Hair et al., 2011). Table 4 depicts the R^2 values.

Table 1: Full-sample measurement model (reliability indicators)/Composites and Measures

Items	Loadings	Cronbach's Alpha	Composite Reliability	AVE	rho_A
ATE		0.897	0.928	0.765	0.900
ATE2	0.891				
ATE3	0.851				
ATE4	0.860				
ATE5	0.895				
EI		0.922	0.940	0.724	0.929
EI 1	0.717				
EI 2	0.873				
EI 3	0.912				

EI 4	0.893				
EI 5	0.811				
EI 6	0.886				
PBC		0.862	0.898	0.595	0.870
PBC 1	0.731				
PBC 2	0.841				
PBC 3	0.854				
PBC 4	0.709				
PBC 5	0.750				
PBC 6	0.731				
SN		0.882	0.927	0.808	0.890
SN 1	0.891				
SN 2	0.918				
SN 3	0.888				
SV		0.635	0.844	0.731	0.650
SV1	0.884				
SV4	0.825				
ES		0.689	0.827	0.614	0.693
ES1	0.779				
ES2	0.782				
ES5	0.790				
ENSUP		0.916	0.935	0.705	0.919
ENSUP1	0.796				
ENSUP2	0.814				

ENSUP3	0.868				
ENSUP4	0.836				
ENSUP5	0.884				
ENSUP6	0.836				
CV		0.831	0.894	0.738	0.893
CV1	0.825				
CV2	0.881				
CV3	0.871				

Figure 2: PLS ALGORITHM

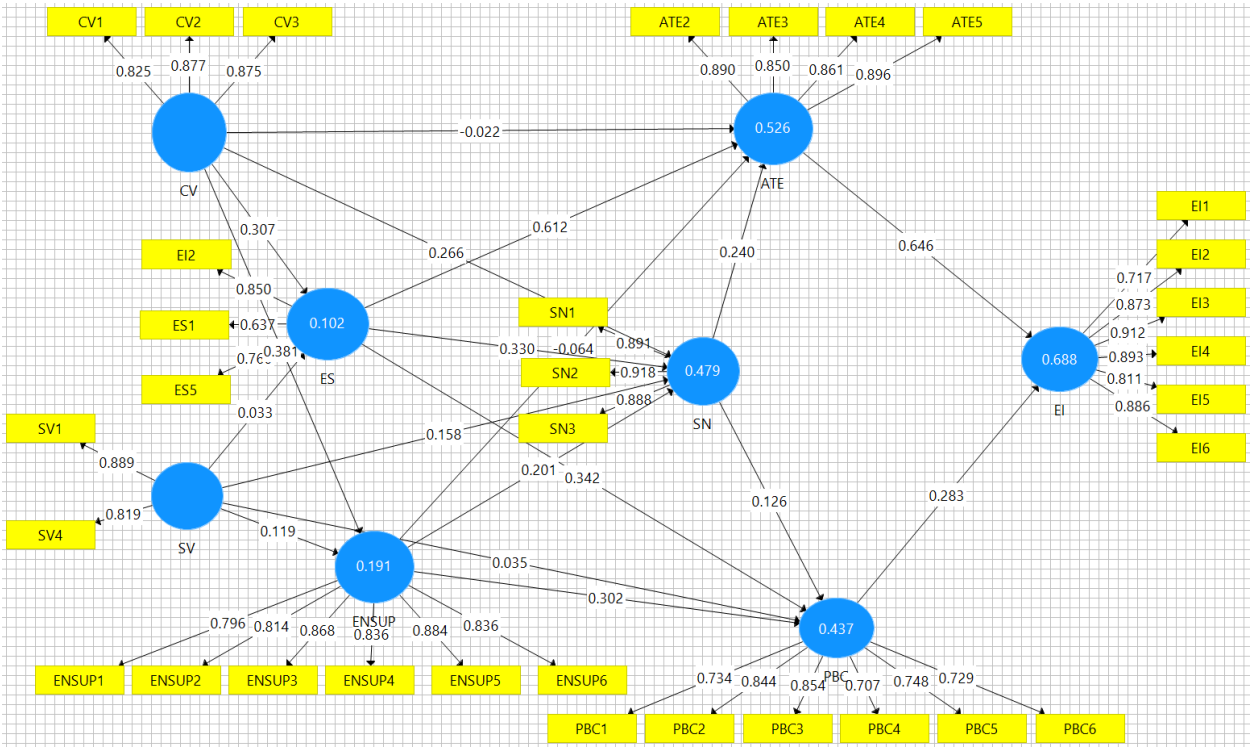


Table 2: Discriminant Validity

	ATE	CV	EI	ENSUP	ES	PBC	SN	SV
ATE	**0.874**							
CV	0.268	**0.859**						
EI	0.793	0.392	**0.851**					
ENSUP	0.389	0.424	0.530	**0.839**				
ES	0.442	0.240	0.428	0.468	**0.784**			
PBC	0.520	0.331	0.619	0.566	0.488	**0.771**		
SN	0.530	0.513	0.597	0.534	0.397	0.487	**0.899**	
SV	0.156	0.353	0.161	0.253	0.156	0.205	0.349	**0.855**

Figure 3: PLS BOOTSTRAP

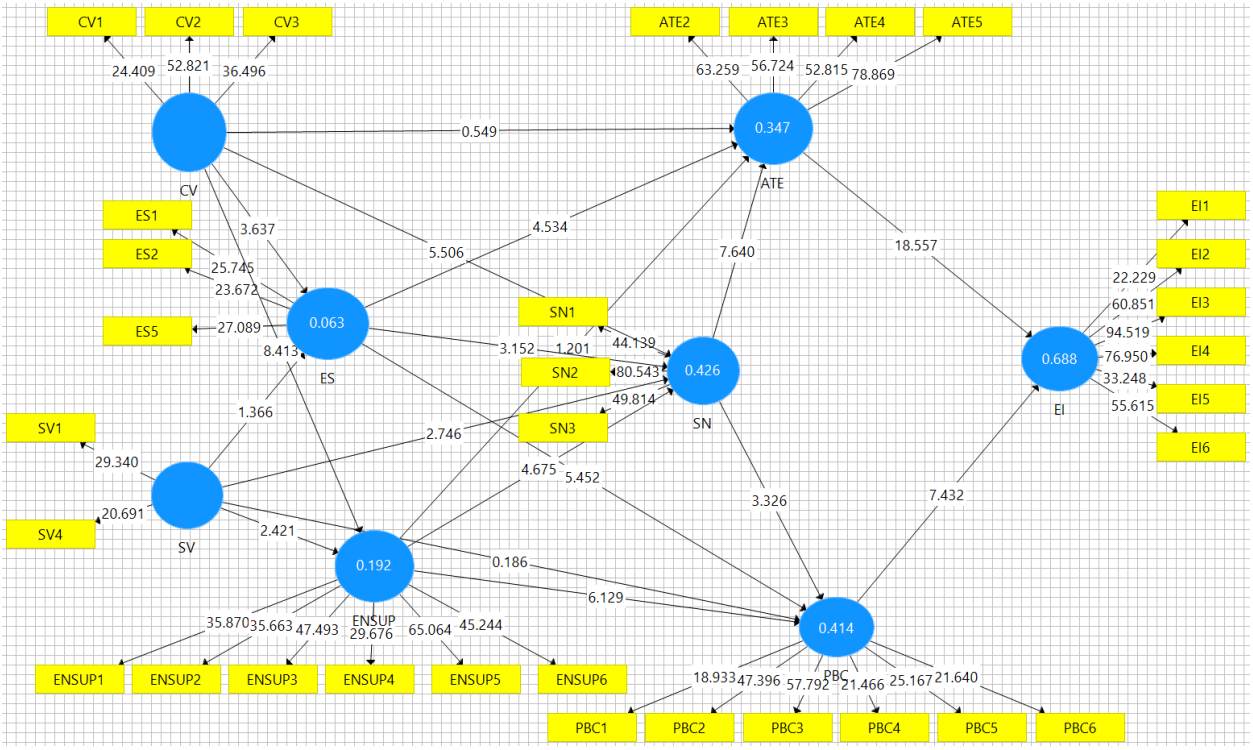


Table 3: Structural Model Results

Construct	(O)	(M)	STDEV	T Statistics	P Values	HYPOTHESIS
ATE -> EI	0.646	0.645	0.035	18.557	**0.000**	**ACCEPT**
CV -> ATE	-0.030	-0.030	0.055	0.549	**0.583**	REJECT
CV -> ENSUP	0.383	0.385	0.046	8.413	**0.000**	**ACCEPT**
CV -> ES	0.211	0.213	0.058	3.637	**0.000**	**ACCEPT**
CV -> SN	0.298	0.301	0.054	5.506	**0.000**	**ACCEPT**
ENSUP -> ATE	0.064	0.063	0.053	1.201	**0.230**	REJECT
ENSUP -> PBC	0.339	0.340	0.055	6.129	**0.000**	**ACCEPT**
ENSUP -> SN	0.293	0.290	0.063	4.675	**0.000**	**ACCEPT**
ES -> ATE	0.257	0.260	0.057	4.534	**0.000**	**ACCEPT**
ES -> PBC	0.247	0.250	0.045	5.452	**0.000**	**ACCEPT**
ES -> SN	0.166	0.170	0.053	3.152	**0.002**	**ACCEPT**
PBC -> EI	0.283	0.285	0.038	7.432	**0.000**	**ACCEPT**
SN -> ATE	0.409	0.407	0.054	7.640	**0.000**	**ACCEPT**
SN -> PBC	0.205	0.204	0.062	3.326	**0.001**	**ACCEPT**
SV -> ENSUP	0.118	0.118	0.049	2.421	**0.016**	**ACCEPT**
SV -> ES	0.082	0.081	0.060	1.366	**0.172**	REJECT
SV -> PBC	0.009	0.009	0.048	0.186	**0.852**	REJECT
SV -> SN	0.144	0.143	0.052	2.746	**0.006**	**ACCEPT**

Table 4: R Square

	R Square
ATE	0.526
EI	0.688
ENSUP	0.191
ES	0.102
PBC	0.437
SN	0.479

5.5.1 Collinearity Assessment

Collinearity assessment typically involves calculating each item's variance inflation factor (VIF). There are diverse criteria of acceptable VIF values, such as 10.00 (Sarstedt & Mooi, 2014), 3.33 (Diamantopoulos & Siguaw, 2006), and 5 (Hair et al., 2011). Generally, lower values are better, but following Hair et al. (2011), we can confirm that the issue of collinearity has been addressed in this study. Thus the models were not distorted by multicollinearity. Appendix 2 shows the VIF values.

5.5.2 Mediation Analysis

Sok et al. (2020) recommended two types of analysis to explore the role of background factors in the TPB. First, the fully mediated model predicted by the theory should be examined against a partially mediated model allowing direct effects on intention. Second, in the most conceptualization of the TPB, the effects of attitude and subjective norm are assumed to be moderated by behavioural control, as is the effect of intention on behaviour. These hypotheses require testing the relevant interaction terms.

The mediation testing procedure suggested by Henseler, Hubona, and Ray (2016) and Nitzl, Roldan, and Cepeda (2016) was adopted to test the mediating role of ATE, SNs, and PBC between SV, CV, ES, ENSUP, and entrepreneurial intentions. Also, a bootstrap procedure was used as means of inferential statistics to calculate the t-values for determining the significance of proposed mediating variables. In the bootstrapping stage, 5000 subsamples were created (with replacement) for the available study sample. Thus, following bootstrap inferential statistics on these sub-samples, the significance of mediating variables was estimated. Appendices 3 and 4 show the results for the PLS Algorithm Total Indirect Effects and PLS Algorithm Specific

Indirect Effects respectively. Appendices 5 and 6 depict the Bootstrapping Total Indirect Effects and Bootstrapping Specific Indirect Effects respectively.

The theoretical framework for this research necessitated multiple mediations. As shown on the table in Appendix 3, there are 15 total indirect effects. However, the Specific indirect Effects are 60 as found in table in Appendix 4. Appendix 3 and 4 reveal the running of the Consistent Algorithm. To delve into which of the relationships are significant we run the Consistent Bootstrapping. The results are found in the tables in Appendix 5 and 6, respectively. As indicated in Appendix 6, the following relationships are significant; CV→ES>ATE, CV→ES>ATE→EI, ES→ATE→EI, CV→ENSUP>PBC→EI, ENSUP>PBC→EI, SV>PBC→EI, CV→ENSUP→PBC, CV>ES→SN. Also, ES→PBC→EI AND CV→ES→PBC are partially significant. And the relationship of CV>ATE→EI is negative and partially significant.

5.5.3 Measurement Invariance of Composite Models (MICOM)

The MICOM (measurement invariance of composite models) procedure specifies the technique for analyzing the invariance before the multi-group analysis. Henseler et al. (2014) propose the use of the MICOM, suggesting a three-step approach to analyse: a) configural invariance b) compositional invariance, and c) the equality of composite mean values and variances. After confirming the existence of invariance, the next step is to apply the MGA, and comparing the explained variance for each group.

We analysed the measurement invariance before performing the MGA. However, we satisfy steps 1 and 2, which are sufficient conditions for the performance of MGA. Table 5 shows step 2 results. Step 3 was omitted from the results because it was not satisfied.

Table 5: MICOM Step 2

	Original correlation	Correlation permutation mean	5.0%	Permutation p-values
ATE	**1.000**	1.000	1.000	**0.430**
CV	**0.997**	0.999	0.995	**0.194**
EI	**1.000**	1.000	1.000	**0.672**
ENSUP	**1.000**	1.000	0.998	**0.330**
ES	**0.994**	0.998	0.992	**0.092**
PBC	**0.999**	0.999	0.996	**0.374**
SN	**1.000**	1.000	0.999	**0.188**
SV	**0.995**	0.994	0.975	**0.376**

5.5.4 Multi-Group Analysis

Multi-group analysis was performed to determine whether there were any statistically significant differences between respondents with parental self-employment and those without (i.e. testing hypothesis 19). In order to perform the multi-group analyses, the respondents were split to create a dichotomous variable (YES and NO). YES represents respondents whose parents are entrepreneurs and NO represents respondents whose parents are not entrepreneurs. The results are captured on Table 6.

Table 6: PLS-MGA Results

ITEMS	Path Coefficients-diff (YES - NO)	p-Value original 1-tailed (YES vs NO)	p-Value new (YES vs NO)
ATE -> EI	0.082	0.089	**0.178**
CV -> ATE	-0.040	0.669	**0.662**
CV -> ENSUP	0.122	0.122	**0.244**
CV -> ES	-0.222	0.985	**0.031**
CV -> SN	0.610	0.000	**0.000**
ENSUP -> ATE	0.149	0.044	**0.087**
ENSUP -> PBC	-0.151	0.918	**0.164**
ENSUP -> SN	-0.294	0.994	**0.011**
ES -> ATE	-0.005	0.522	**0.956**
ES -> PBC	0.098	0.210	**0.419**
ES -> SN	-0.254	0.995	**0.010**
PBC -> EI	-0.205	0.996	**0.008**
SN -> ATE	0.070	0.242	**0.484**
SN -> PBC	-0.004	0.514	**0.973**
SV -> ENSUP	-0.044	0.644	**0.711**
SV -> ES	0.158	0.113	**0.226**
SV -> PBC	0.215	0.037	**0.074**
SV -> SN	-0.015	0.579	**0.843**

5.6 Discussion

Investigating the impact of Role Model or Parental Self-employment on the antecedents of entrepreneurial intention of students, we classified PSE (part of Closer Valuation) as a moderating variable. Specifically, social and skills perceptions, combined with entrepreneurial environment knowledge were examined to see how they may affect the motivational antecedents of entrepreneurial intention.

In line with previous studies (Abadi, Mahdavian, & Fattahi, 2021; Barbera & Ajzen, 2020; Dalila, Latif, Jaafar, Aziz, & Afthanorhan, 2020; Soorani & Ahmadvand, 2019; Kumar et al., 2021; Mahfud, Triyono, Sudira, & Mulyani, 2020; Maresch et al., 2016; Rausch & Kopplin, 2021; Sher, Abbas, Mazhar, & Lin, 2020; Thelken & de Jong, 2020; Willis, Lee, Reynolds, & Klik, 2020; Youssef et al., 2020), the hypotheses regarding the original TPB model were supported, as either attitude and/or PBC predicted intentions. Thus ATE and PBC have a positive effect on EI. Personal attitude and behavioral content, as the main determinants of entrepreneurial intention, in the structural model, showed that they explain almost 69% of the total variance compared to 72.7% for Youssef et al. (2020). Regarding the studies by Liñán (2008), (Santos et al., 2016), and (Liñán et al., 2013), the total variance reported was 59.2%, 68.7%-men, 68.3%-women, and 65% respectively. This model also explains a substantial proportion of the variance in ATE and PBC (38.4% and 40.8% respectively), compared with 30.8% and 38.0%, respectively for Liñán (2008). Although in Ajzen's model, perceived behavioural control is an antecedent to intentions, a previous study failed to validate this construct (Gieure, Benavides-Espinosa, & Roig-Dobón, 2019). Personal attitudes negatively influence entrepreneurial intentions (Gieure et al., 2020). Our results show that PBC is the strongest predictor of intentions, which is inconsistent with studies by (Kumar et al., 2021), who reported attitude as the strongest predictor.

The results demonstrate that entrepreneurial skills have an influence on ATE, PBC, and SN, which corroborated prior research by Gieure et al. (2020) who reported a significant relationship between ES and ATE and SN. Entrepreneurial skills are a critical factor in the model, and the results are satisfactory. This finding also confirms the relevance of skills, because the correlations are high and the results are consistent with those reported by Liñán (2008), who also obtained satisfactory results when studying the TPB and entrepreneurial skills. Thus ES were significant predictors of the three motivational antecedents of intention. Hence, we can deduce

that having entrepreneurial skills exerts a significant impact on the formation of intentions. Thus, having entrepreneurial skills increases entrepreneurial intentions through the antecedents (attitudes and subjective norms) of intentions to become an entrepreneur. Prospective entrepreneurs can gain the requisite knowledge and skills to start their business in the university environment (Gieure et al., 2020). In fact, most entrepreneurship programmes, emphasize the development of PBC through acquiring the requisite entrepreneurial skills and competencies.

Following Liñán et al. (2013) we included entrepreneurial environment knowledge (entrepreneurial support) into the model, an extension of Liñán's (2008) work. Regarding the influence of perceived environmental knowledge (ENSUP) and ATE, the relationship was insignificant, which is inconsistent with prior studies (Rausch & Kopplin, 2021). The impact of ENSUP on PBC and SN was significant, consistent with a study by (Liñán et al., 2013). Moreover, it is a significant predictor of PBC, suggesting a consistent impact on greater knowledge of the entrepreneurial environment and support systems contributing to the sense of the capacity of venture creation. Thus, entrepreneurial knowledge directly contributes the engagement in entrepreneurial behavior and controllability of that behavior.

With respect to the correlations between SV and CV and the antecedents of TPB respectively, all the hypotheses were accepted except CV→ATE and SV→PBC relationships. Aspects of these findings (SV→PBC) are consistent with Liñán's (2008). The study registered a positive and significant relationship between CV and SN only but Liñán (2008) reported positive impact for both CV→ATE and CV→SN. Liñán (2008) reported an insignificant relationship for SV→SN and SV→PBC, contrary to our findings, where we reported a positive relationship between SV and SNs. According to Liñán et al. (2013), there is a positive and significant relationship between SV and SN and PBC respectively. In the same study, they found a positive influence of CV on attitude. Regarding the relationship between CV and ES, this study demonstrated a positive and significant impact respectively. This is in line with prior studies (Liñán, 2008). However, the relationship between SV and ES was insignificant. Our finding is noteworthy because perceived closer valuations of entrepreneurship contribute to raising awareness, knowledge, and skills which in turn, also contribute to the generation of more favourable motivational antecedents and, through them, higher intention. This implies that closer environment valuations of entrepreneurship contribute towards encouraging the acquisition of entrepreneurial skills, together with knowledge and consciousness of the entrepreneurial career

path, lending indirect support to the idea that students value informal than formal support systems (Tackey & Perryman, 1999). However, SV→ES was insignificant, though by attaining entrepreneurial skills, students will feel more capable to exercise control over entrepreneurial behaviour. Although research on entrepreneurship shows how supportive environmental influences are conducive to entrepreneurship in general, Meoli et al. (2020) propose that supportive environmental influences mean the presence of alternative job opportunities, which make, all other being equal, students with high entrepreneurial intention less likely to start a new venture.

This study revealed that respondents with parental self-employment perceive a higher attitude towards entrepreneurship, PBC, entrepreneurial skills, entrepreneurial support, and entrepreneurial intention than those without PSE (see Appendix 7 and 8). Interestingly, the results of the multi-group analysis (H19) show that majority of the relationships or hypotheses were not supported. This outcome is consistent with prior studies (Liñán et al., 2013; Santos et al., 2016), which reported a high number of insignificant relationships in the MGA. This result led to the rejection of H19. Thus, on the whole, there were no statistically significant differences among respondents with parental self-employment and respondents without parental self-employment with respect to path coefficients.

5.7 Research implications

The results of this paper indicate that entrepreneurial intention is explained by the three antecedents (ATE, SN, and PBC) of the TPB. This study adds empirical support to the robustness and reliability of the TPB in entrepreneurial research. Evidence can also be found in prior studies (Liñán, 2008; Liñán et al., 2013; Santos et al., 2016).

This study has implications for the content of entrepreneurial intentions, especially with the incorporation of culture, motivations, skills, and knowledge of the entrepreneurial environment within a higher educational institution. Thus, this study moves a step further by analyzing other variables that are considered critical to the antecedents of entrepreneurial intentions.

In relation to the aforementioned, the findings portray significant dependent relationships that exist among the three antecedents of the TPB. Consistent with TPB, attitude, and PBC emerged as significant positive predictors of entrepreneurial intentions. Also, the PBC exerted a stronger

influence (in comparison with attitude) on entrepreneurial intentions, which indicate that students have higher levels of volitional control over themselves so far as intentions are concerned.

5.7.1 Managerial and Policy Implications

Individuals surrounded by supportive relevant others are more likely to embark on entrepreneurial intentions by establishing a new venture. Students' proximal context, characterized by family, university peers, and mentors; serves as a way to overcome external barriers, providing cognitive resources needed to cope with such barriers. By showing how to access information, resources, and knowledge from important individuals may be conducive to an entrepreneurial career, these findings corroborate the importance of social context in promoting entrepreneurship (Audia & Rider, 2007; Dahl & Sorenson, 2009).

A more favourable environment towards entrepreneurship will contribute to people feeling more attracted and more supported to become entrepreneurs. Hence, for entrepreneurship support institutions, it is necessary to make information on business incentives and concessions accessible to students and other stakeholders. There is the need to coordinate the workings and visibility of institutions like role model entrepreneurs, mentors, coaches, banks, enterprise support agencies, in order to promote entrepreneurial intention among the students.

From a policy perspective, to arouse the entrepreneurial spirit of students, there is an urgency for a holistic and multifaceted approach. Thus, strategic policies and programmes are required to enhance entrepreneurial intention through beneficial regulations, cognitive and normative institutions for entrepreneurial venture creation. This is perhaps important due to the insignificant correlations between entrepreneurial support and ATE. Furthermore, despite the importance of entrepreneurial skills to business creation, the relationship between SV and ES was insignificant.

Our framework complements previous frameworks on the entrepreneurial intention literature. It is refreshing to note that social valuation impacts significantly on attitude towards entrepreneurship. Surprisingly, the relationship between closer valuation and attitude towards entrepreneurship was insignificant. This has implications for the family system in Spain since the country's culture is a collectivist one. Probably, the relevant stakeholders need to invent ways of positively impacting ATE at both the micro and macro levels. By virtue of the insignificant relationship between SV and PBC, the appropriate stakeholders should institute schemes like

business accelerators to facilitate the formation of managerial teams to address human capital dearth by bringing together entrepreneurs and investors (Papagiannidis, Li, Etzkowitz, & Clouser, 2009). Since Spain is a collectivist society, such networking within the environment can propel ATE and, subsequently entrepreneurial intentions.

5.8 **Limitations**

We would want to indicate some limitations that offer prospects for future research. A popular limitation of entrepreneurial intention research is the missing link between intentions and actual behaviour (Krueger et al., 2000). The fact that an individual possesses the intention to engage in a certain behaviour does not necessarily imply that this intention will metamorphose into action. Perhaps, future studies may focus on intentions and actual behavior, including opportunities for longitudinal studies.

Another limitation of our study is that we did not investigate if it makes any difference whether one or both parents were entrepreneurs. We also failed to look into whether the business was inherited one or actually started by their parents themselves. We believe all these dynamics may influence entrepreneurial intentions. Also, we did not distinguish between respondents with only one parent involved in an entrepreneurial venture.

5.9 Conclusion

This research has contributed to the literature on entrepreneurial intentions by testing an integrated version of the entrepreneurial intention model, which has received little attention in prior research. Our results exhibit the role of moderators in TPB-based studies and the importance of carrying out mediation and multi-group analyses. A significant majority of the hypotheses were confirmed and the model explained a highly satisfactory percentage of the variance in entrepreneurial intention and its motivational antecedents. Most of the hypothesized relationships were significant. The various conditions identified in this empirical study also yield significant managerial, research, and policy implications.

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Appendix 1(Questionnaire)

1. **Gender** Male [ ] Female [ ] Prefer not to say [ ] Other [ ]
2. **How old are you?**

   [.] Less than 20 years [.] 20-24 years [.] 25-29 years

   [.] 30-34 years [.] 35 & over [.] No response
3. **Year** 1st [ ] 2nd [ ] 3rd [ ] 4th [ ]
4. **Programme** [ ] BUSINESS [ ] SCIENCE [ ] HUMANITIES
5. Are you currently self-employed? [ ]YES [ ]NO
6. Are your parents currently self-employed? [ ]YES [ ]NO

Based on your opinion, please indicate the most appropriate response with the scale given below. (1) SD = Strongly Disagree (2) D = Disagree (3) N = Neutral (4) A = Agree (5) SA = Strongly Agree						
ATTITUDE TOWARDS ENTREPRENEURSHIP						
7	Being an entrepreneur implies more advantages than disadvantages to me	1	2	3	4	5
8	A career as an entrepreneur is attractive for me	1	2	3	4	5
9	If I had the opportunity and resources, I'd like to start a firm	1	2	3	4	5
10	Being an entrepreneur would entail great satisfactions for me	1	2	3	4	5
11	Among various career options, I'd rather be an entrepreneur	1	2	3	4	5
PERCEIVED BEHAVIORAL CONTROL						
12	Start a firm and kept it working would be easy for me	1	2	3	4	5
13	I am prepared to start a viable firm	1	2	3	4	5
14	I can control the creation process of a new firm	1	2	3	4	5
15	I know the necessary practical details to start a firm	1	2	3	4	5
16	I know how to develop an entrepreneurial project	1	2	3	4	5
17	If I tried to start a firm, I would have a high probability of succeeding	1	2	3	4	5
	ENTREPRENEURIAL INTENTIONS					
18	I am ready to do anything to be an entrepreneur	1	2	3	4	5
19	My professional goal is to be an entrepreneur	1	2	3	4	5
20	I will make every effort to start and run my own enterprise	1	2	3	4	5
21	I am determined to create a firm in the future	1	2	3	4	5
22	I have very seriously thought of starting a firm	1	2	3	4	5
23	I have got the firm intention to start a company some day	1	2	3	4	5
	Measures of CV and SV					
24	My friends value entrepreneurial activity above other activities and careers	1	2	3	4	5
25	My immediate family values entrepreneurial activity above other activities and careers	1	2	3	4	5
26	The culture in my country is highly favourable towards entrepreneurial activity	1	2	3	4	5

27	The entrepreneur's role in the economy is generally undervalued in my country	1	2	3	4	5
28	Most people in my country consider it unacceptable to be an entrepreneur	1	2	3	4	5
29	In my country, entrepreneurial activity is considered to be worthwhile, despite the risks	1	2	3	4	5
30	My colleagues value entrepreneurial activity above other activities and careers	1	2	3	4	5
31	It is commonly thought in my country that entrepreneurs take advantage of others	1	2	3	4	5
SUBJECTIVE NORM						
32	My closest family members think that I should pursue a career as an Entrepreneur	1	2	3	4	5
33	My closest friends think that I should pursue a career as an entrepreneur	1	2	3	4	5
34	People who are important to me think that I should pursue a career as an entrepreneur	1	2	3	4	5
	How do you rate yourself on the following entrepreneurial abilities/skill sets? Indicate from 1 (no aptitude at all) to 5 (very high aptitude)					
35	Recognition of opportunity	1	2	3	4	5
36	Creativity	1	2	3	4	5
37	Problem solving skills	1	2	3	4	5
38	Leadership and communication skills	1	2	3	4	5
39	Development of new products and services	1	2	3	4	5
40	Networking skills, and making professional contacts	1	2	3	4	5
	Pleased indicate your level of knowledge about business associations, support bodies and other sources of assistance for entrepreneurs from 1 (no knowledge) to 5 (complete knowledge)					
41	Private associations (e.g. Chamber of Trade, Institute of Directors, etc.)	1	2	3	4	5
42	Public support bodies (e.g. Business Link, etc.)	1	2	3	4	5
43	Specific training for young entrepreneurs	1	2	3	4	5
44	Loans in specially favourable terms	1	2	3	4	5
45	Technical aid for business start-ups	1	2	3	4	5
46	Business centres	1	2	3	4	5

Appendix 2: Collinearity Assessment

ITEMS	VIF
ATE2	**2.886**
ATE3	**2.203**
ATE4	**2.365**
ATE5	**2.846**
CV1	**2.199**
CV2	**1.613**
CV3	**2.340**
EI1	**1.707**
EI2	3.185
EI3	4.229
EI4	3.490
EI5	**2.401**
EI6	3.586
ENSUP1	**2.460**
ENSUP2	**2.658**
ENSUP3	**2.921**
ENSUP4	**2.649**
ENSUP5	3.434
ENSUP6	**2.351**
ES1	**1.385**
ES2	**1.448**

ES5	**1.255**
PBC1	**1.888**
PBC2	**2.635**
PBC3	**2.565**
PBC4	**1.764**
PBC5	**2.096**
PBC6	**1.701**
SN1	**2.206**
SN2	**2.799**
SN3	**2.566**
SV1	**1.276**
SV4	**1.276**

Appendix 3: PLSc Algorithm TOTAL INDIRECT EFFECTS

	ATE	CV	EI	ENSUP	ES	PBC	SN	SV
ATE								
CV	0.540		0.359			0.290	0.250	
EI								
ENSUP	0.004		0.058			-0.008		
ES	0.040		0.844			-0.082		
PBC								
SN			0.029					
SV	-0.091		-0.024			-0.034	-0.043	

Appendix 4: PLSc Algorithm SPECIFIC INDIRECT EFFECTS

	SPECIFIC INDIRECT EFFECTS
CV -> ENSUP -> ATE	-0.027
SV -> ENSUP -> ATE	-0.005
CV -> ES -> ATE	0.523
SV -> ES -> ATE	-0.106
CV -> SN -> ATE	0.022
CV -> ENSUP -> SN -> ATE	0.002
ENSUP -> SN -> ATE	0.004
SV -> ENSUP -> SN -> ATE	0.000
CV -> ES -> SN -> ATE	0.021
ES -> SN -> ATE	0.040
SV -> ES -> SN -> ATE	-0.004
SV -> SN -> ATE	0.024

CV -> ATE -> EI	-0.128
CV -> ENSUP -> ATE -> EI	-0.021
ENSUP -> ATE -> EI	-0.045
SV -> ENSUP -> ATE -> EI	-0.004
CV -> ES -> ATE -> EI	0.409
ES -> ATE -> EI	0.761
SV -> ES -> ATE -> EI	-0.083
CV -> SN -> ATE -> EI	0.017
CV -> ENSUP -> SN -> ATE -> EI	0.001
ENSUP -> SN -> ATE -> EI	0.003
SV -> ENSUP -> SN -> ATE -> EI	0.000
CV -> ES -> SN -> ATE -> EI	0.017
ES -> SN -> ATE -> EI	0.031
SV -> ES -> SN -> ATE -> EI	-0.003
SN -> ATE -> EI	0.072
SV -> SN -> ATE -> EI	0.019
CV -> ENSUP -> PBC -> EI	0.048
ENSUP -> PBC -> EI	0.102
SV -> ENSUP -> PBC -> EI	0.009
CV -> ES -> PBC -> EI	0.037
ES -> PBC -> EI	0.070
SV -> ES -> PBC -> EI	-0.008
CV -> SN -> PBC -> EI	-0.010

CV -> ENSUP -> SN -> PBC -> EI	-0.001
ENSUP -> SN -> PBC -> EI	-0.002
SV -> ENSUP -> SN -> PBC -> EI	-0.000
CV -> ES -> SN -> PBC -> EI	-0.010
ES -> SN -> PBC -> EI	-0.018
SV -> ES -> SN -> PBC -> EI	0.002
SN -> PBC -> EI	-0.042
SV -> SN -> PBC -> EI	-0.011
SV -> PBC -> EI	0.055
CV -> ENSUP -> PBC	0.215
SV -> ENSUP -> PBC	0.042
CV -> ES -> PBC	0.167
SV -> ES -> PBC	-0.034
CV -> SN -> PBC	-0.045
CV -> ENSUP -> SN -> PBC	-0.004
ENSUP -> SN -> PBC	-0.008
SV -> ENSUP -> SN -> PBC	-0.001
CV -> ES -> SN -> PBC	-0.044
ES -> SN -> PBC	-0.082
SV -> ES -> SN -> PBC	0.009
SV -> SN -> PBC	-0.051
CV -> ENSUP -> SN	0.019
SV -> ENSUP -> SN	0.004

CV -> ES -> SN	0.231
SV -> ES -> SN	-0.047

Appendix 5: Bootstrapping (c) Total Indirect Effects

	Original	Sample	Standard	T Statistic	P Values
ATE -> EI		-0.000	0.000		
CV -> ATE	0.540	0.552	0.126	4.288	**0.000**
CV -> EI	0.359	0.371	0.094	3.804	**0.000**
CV -> ENSUP					
CV -> ES		-0.000	0.000		
CV -> PBC	0.290	0.294	0.064	4.523	**0.000**
CV -> SN	0.250	0.250	0.065	3.816	**0.000**
ENSUP -> ATE	0.004	0.008	0.019	0.194	**0.846**
ENSUP -> EI	0.058	0.045	0.103	0.564	**0.573**
ENSUP -> PBC	-0.008	-0.003	0.031	0.244	**0.807**
ENSUP -> SN		-0.000	0.000		
ES -> ATE	0.040	0.025	0.057	0.700	**0.484**
ES -> EI	0.844	0.865	0.113	7.477	**0.000**
ES -> PBC	-0.082	-0.090	0.067	1.213	**0.225**
ES -> SN		-0.000	0.000		
PBC -> EI					
SN -> ATE		0.000	0.000		
SN -> EI	0.029	0.014	0.109	0.270	**0.788**

SN -> PBC		0.000	0.000		
SV -> ATE	-0.091	-0.103	0.121	0.750	**0.453**
SV -> EI	-0.024	-0.036	0.107	0.225	**0.822**
SV -> ENSUP					
SV -> ES		0.000	0.000		
SV -> PBC	-0.034	-0.042	0.082	0.417	**0.677**

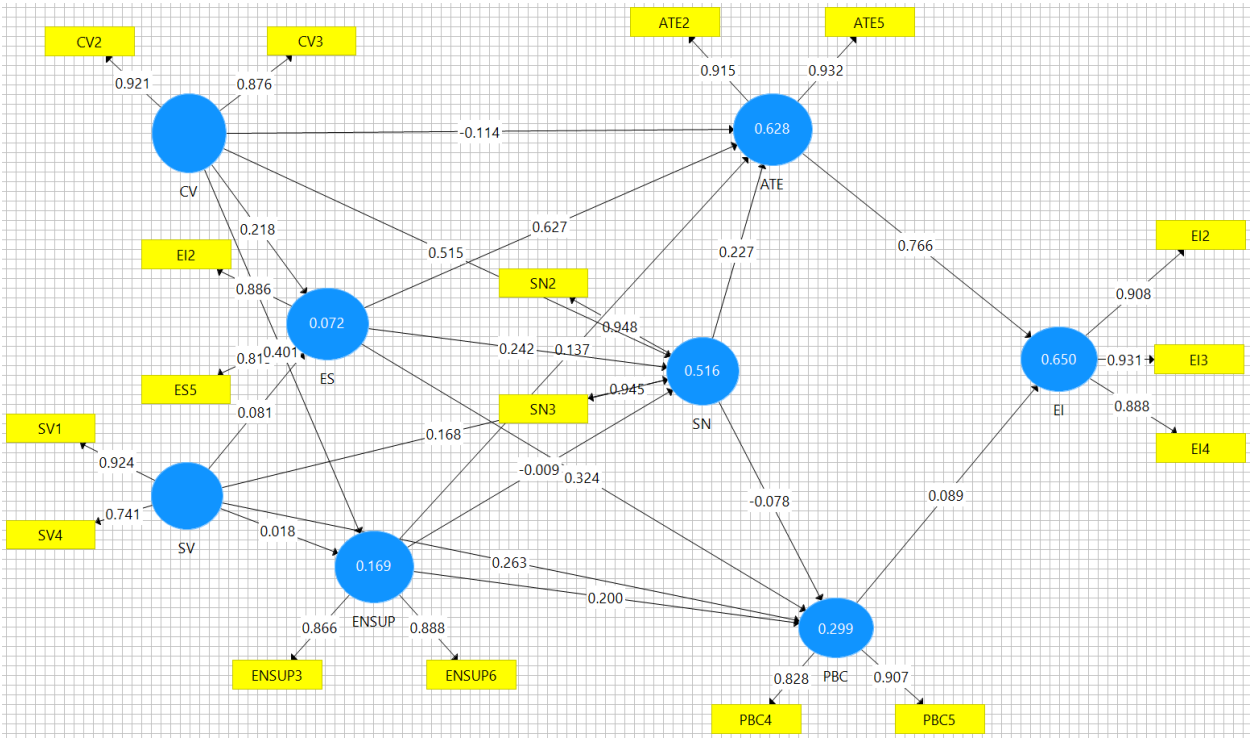
Appendix 6: Bootstrapping(c) Specific Indirect Effects

Items	Original	Sample	Standard	T Statistic	P Values
CV -> ENSUP -> ATE	-0.027	-0.038	0.062	0.437	**0.662**
SV -> ENSUP -> ATE	-0.005	-0.005	0.018	0.302	**0.763**
CV -> ES -> ATE	0.523	0.555	0.148	3.533	**0.000**
SV -> ES -> ATE	-0.106	-0.116	0.117	0.904	**0.366**
CV -> SN -> ATE	0.022	0.018	0.036	0.592	**0.554**
CV -> ENSUP -> SN -> ATE	0.002	0.004	0.009	0.184	**0.854**
ENSUP -> SN -> ATE	0.004	0.008	0.019	0.194	**0.846**
SV -> ENSUP -> SN -> ATE	0.000	0.001	0.003	0.121	**0.903**
CV -> ES -> SN -> ATE	0.021	0.013	0.032	0.655	**0.512**
ES -> SN -> ATE	0.040	0.025	0.057	0.700	**0.484**
SV -> ES -> SN -> ATE	-0.004	-0.003	0.010	0.427	**0.669**
SV -> SN -> ATE	0.024	0.021	0.034	0.729	**0.466**
CV -> ATE -> EI	-0.128	-0.128	0.074	1.719	**0.086**
CV -> ENSUP -> ATE -> EI	-0.021	-0.029	0.049	0.436	**0.663**
ENSUP -> ATE -> EI	-0.045	-0.061	0.096	0.468	**0.640**

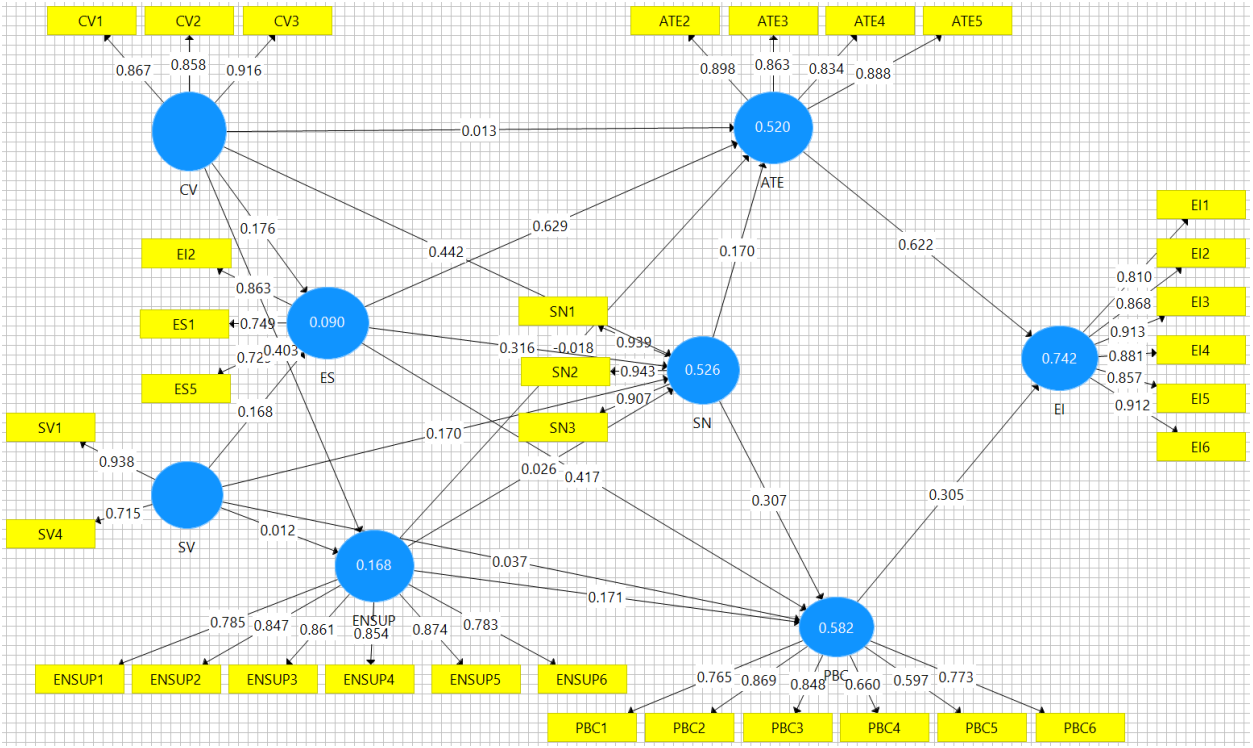
SV -> ENSUP -> ATE -> EI	-0.004	-0.004	0.014	0.301	**0.763**
CV -> ES -> ATE -> EI	0.409	0.435	0.121	3.367	**0.001**
ES -> ATE -> EI	0.761	0.792	0.133	5.717	**0.000**
SV -> ES -> ATE -> EI	-0.083	-0.091	0.093	0.892	**0.372**
CV -> SN -> ATE -> EI	0.017	0.014	0.029	0.584	**0.559**
CV -> ENSUP -> SN -> ATE -> EI	0.001	0.003	0.007	0.182	**0.855**
ENSUP -> SN -> ATE -> EI	0.003	0.006	0.015	0.192	**0.848**
SV -> ENSUP -> SN -> ATE -> EI	0.000	0.000	0.002	0.120	**0.905**
CV -> ES -> SN -> ATE -> EI	0.017	0.011	0.026	0.648	**0.517**
ES -> SN -> ATE -> EI	0.031	0.020	0.045	0.695	**0.487**
SV -> ES -> SN -> ATE -> EI	-0.003	-0.003	0.008	0.420	**0.675**
SN -> ATE -> EI	0.072	0.059	0.094	0.763	**0.446**
SV -> SN -> ATE -> EI	0.019	0.017	0.027	0.719	**0.472**
CV -> ENSUP -> PBC -> EI	0.048	0.048	0.017	2.775	**0.006**
ENSUP -> PBC -> EI	0.102	0.100	0.031	3.285	**0.001**
SV -> ENSUP -> PBC -> EI	0.009	0.008	0.011	0.822	**0.411**
CV -> ES -> PBC -> EI	0.037	0.040	0.024	1.579	**0.114**
ES -> PBC -> EI	0.070	0.073	0.041	1.711	**0.087**
SV -> ES -> PBC -> EI	-0.008	-0.008	0.010	0.723	**0.469**
CV -> SN -> PBC -> EI	-0.010	-0.011	0.010	1.032	**0.302**
CV -> ENSUP -> SN -> PBC -> EI	-0.001	-0.000	0.004	0.218	**0.828**
ENSUP -> SN -> PBC -> EI	-0.002	-0.001	0.007	0.234	**0.815**
SV -> ENSUP -> SN -> PBC -> EI	-0.000	-0.000	0.001	0.164	**0.870**

CV -> ES -> SN -> PBC -> EI	-0.010	-0.011	0.010	1.019	**0.308**
ES -> SN -> PBC -> EI	-0.018	-0.020	0.017	1.106	**0.269**
SV -> ES -> SN -> PBC -> EI	0.002	0.002	0.003	0.579	**0.562**
SN -> PBC -> EI	-0.042	-0.045	0.030	1.414	**0.157**
SV -> SN -> PBC -> EI	-0.011	-0.012	0.011	1.066	**0.286**
SV -> PBC -> EI	0.055	0.055	0.027	1.985	**0.047**
CV -> ENSUP -> PBC	0.215	0.218	0.064	3.364	**0.001**
SV -> ENSUP -> PBC	0.042	0.037	0.051	0.835	**0.404**
CV -> ES -> PBC	0.167	0.176	0.089	1.881	**0.060**
SV -> ES -> PBC	-0.034	-0.038	0.044	0.768	**0.443**
CV -> SN -> PBC	-0.045	-0.049	0.041	1.094	**0.274**
CV -> ENSUP -> SN -> PBC	-0.004	-0.001	0.016	0.225	**0.822**
ENSUP -> SN -> PBC	-0.008	-0.003	0.031	0.244	**0.807**
SV -> ENSUP -> SN -> PBC	-0.001	-0.000	0.004	0.172	**0.864**
CV -> ES -> SN -> PBC	-0.044	-0.050	0.040	1.091	**0.276**
ES -> SN -> PBC	-0.082	-0.090	0.067	1.213	**0.225**
SV -> ES -> SN -> PBC	0.009	0.010	0.015	0.588	**0.556**
SV -> SN -> PBC	-0.051	-0.052	0.044	1.144	**0.253**
CV -> ENSUP -> SN	0.019	0.010	0.059	0.315	**0.752**
SV -> ENSUP -> SN	0.004	0.002	0.016	0.223	**0.824**
CV -> ES -> SN	0.231	0.239	0.074	3.120	**0.002**
SV -> ES -> SN	-0.047	-0.050	0.051	0.912	**0.362**

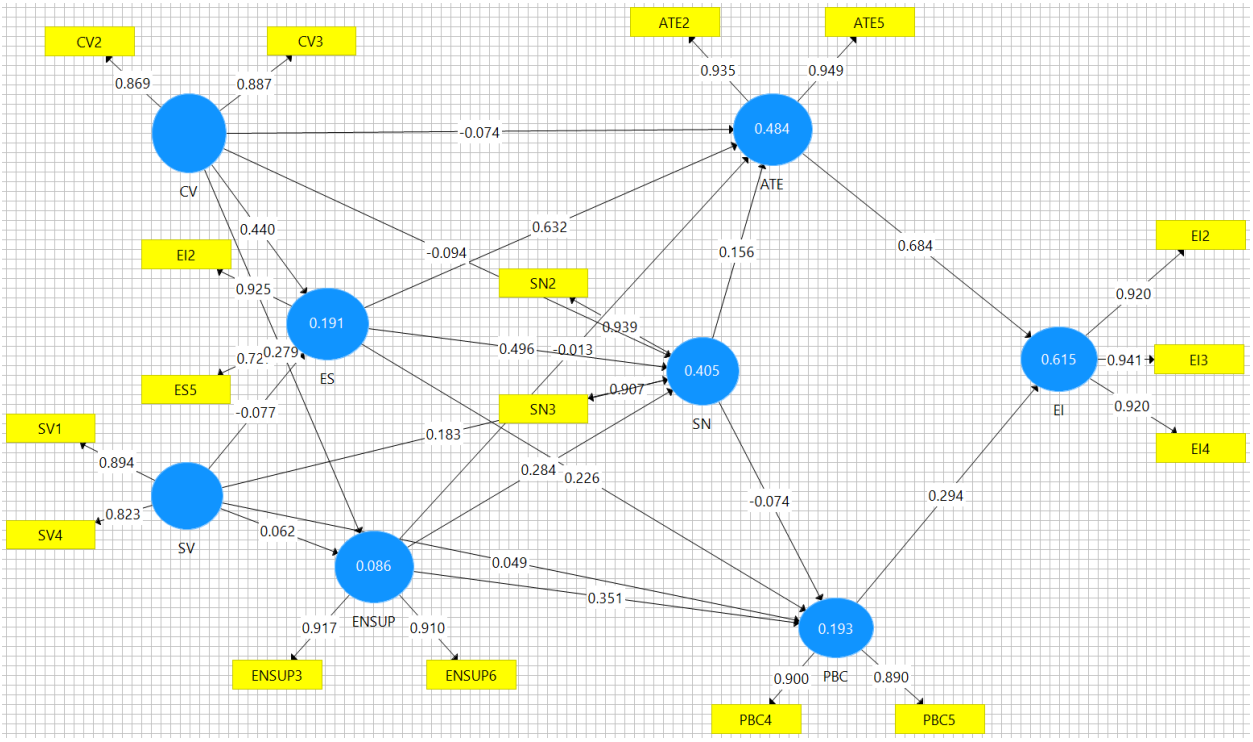
Appendix 7: YES-RESPONDENTS WITH PSE (A1)



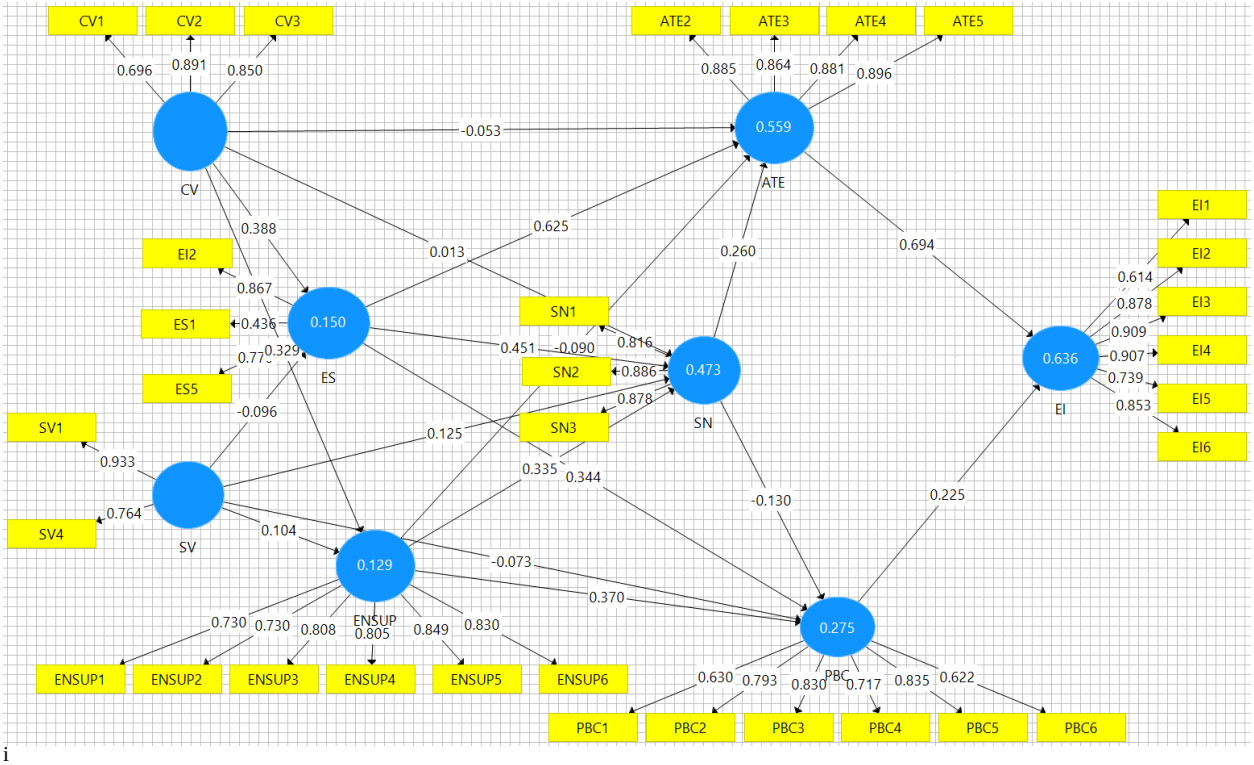
Appendix 7: YES-RESPONDENTS WITH PSE (A2)



Appendix 8: NO-RESPONDENTS WITHOUT PSE (B1)



Appendix 8: NO-RESPONDENTS WITHOUT PSE (B2)



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CHAPTER SIX (PAPER 4)

IMPACT OF ATTITUDE TOWARDS ENTREPRENEURSHIP EDUCATION AND ROLE MODELS ON ENTREPRENEURIAL INTENTION

6.1 Abstract

In this paper, we investigate entrepreneurial intention by applying the Theory of Planned Behavior by Ajzen (1991). We specifically examine the role of gender on entrepreneurial education and role models or parental self-employment, by carrying out a Multi-Group Analysis. We used a web-based questionnaire to collect information from 216 students at a Spanish university. Data are analysed with the help of Structural Equation Modelling (SEM) – Partial Least Square (PLS). We conducted a tripartite analysis on Complete, Male, and Female Models. Regarding the Complete and Male Models, all the primary hypotheses were accepted, compared with four for the Female Model. We recommend the institutionalization of traineeship, elective courses, conference and workshops on entrepreneurship to boost the entrepreneurial spirit of students. Though this study has confirmed the applicability of the TPB model to entrepreneurial intention, we did not find a significant relationship between Males and Females about their entrepreneurial intentions for some relationships. But this study suggests that the relationship between PSE and PBC is stronger for Males than Females Our results have implications for entrepreneurship education scholars, program evaluators, and policymakers.

Keywords: Theory of Planned Behaviour, Entrepreneurial intention, Students

6.2 Introduction

Entrepreneurship is an individual's ability to turn ideas into action (European Commission, 2020). The transformative power of entrepreneurship has been widely documented, but only 37% of Europeans aspire to be self-employed compared to 51% of people in the US and China respectively. The European Commission's initiative promoting entrepreneurship, as summarized in the January 2013 Entrepreneurship Action Plan aims to reignite Europe's entrepreneurial spirit by educating young people about entrepreneurship, highlighting opportunities for women and other groups, easing administrative requirements and making easier to attract investors. The European Commission (2020) professes that 'young people still struggle to find jobs but remain more in education and training'. The youth unemployment rate in Spain increased to 30.90% in February from 30.80% in January of 2020. Accordingly, a key action plan in the Spanish Strategy on Social Economy (2017-2020) revolves around the 'support for employment and entrepreneurship' (European Commission, 2020).

Over the years, researchers have established a link between entrepreneurship and economic growth and transformation (Audretsch, Horst, & Thurik, 2009; Stoica, Roman, & Rusu, 2020). Due to the positive outcomes associated with entrepreneurial activity, researchers and policymakers alike are motivated in the quest to acquire an in-depth knowledge of entrepreneurial intention. Thus, the relationship between university culture and student's entrepreneurial intentions needs to be examined (Liñán, Urbano, & Guerrero, 2011).

Entrepreneurship Education (EE) may interact with other factors to generate a more appropriate environment for entrepreneurship or it may have a moderation effect on the influence of other factors (e.g., gender) on the generation of entrepreneurial behavior (Entrialgo & Iglesias, 2016). According to Davidsson (1995), personal factors like age, gender, education, vicarious experience, and experiences of change to a variety of attributes influence conviction and entrepreneurial intentions.

Previous studies have examined student entrepreneurship and the impact of entrepreneurship courses. Universities are required to play an important role in the environment that propels entrepreneurship and boosts students to pursue career alternative. Some researchers have analysed the role played by entrepreneurship education in shaping entrepreneurial intentions of students, (Peterman & Kennedy, 2003; Souitaris, Zerbinati, & Al-Laham, 2007). But the role of universities as provider and enabler of an environment conducive to nurture entrepreneurial

intention, leading to new venture creation, has not been studied (Trivedi, 2016). Moreover, despite the proliferation of entrepreneurship courses, literature exploring the relationship between entrepreneurship education and entrepreneurial behavior remains limited (Kraaijenbrink, Groen, and Bos (2010); Lüthje & Franke, 2003). Furthermore, empirical studies exploring university support factors and entrepreneurship promotion among university students are limited (Walter, Auer, & Ritter, 2006). Turker and Selcuk (2009) posited that entrepreneurship education in general and university education in particular play a major role in shaping entrepreneurial intention among students. Kraaijenbrink et al. (2010) proposed that as universities support students in diverse means, it is necessary to understand the effect of such measures and the extent to which they could impact students' entrepreneurial careers.

Previous studies have provided much needed empirical evidence about entrepreneurial intention among students from various perspectives (Zhang, Duysters, & Cloodt, 2014;Trivedi, 2016). Some researchers argue that entrepreneurial motivation can be nurtured with specific entrepreneurship education (Souitaris et al., 2007) whereas others disagree, questioning whether teaching can propel entrepreneurial motivation (Colette, Hill, & Leitch, 2005).

This paper uses the theory of planned behavior (TPB) proposed by Ajzen (1991) as the basic framework to understand the entrepreneurial intention of students and then modified the same by integrating Attitude Towards Entrepreneurship Education (ATEE) and Role Models or Parental Self-Employment as antecedents of TPB to understand their influence on intention. Previous studies have used and supported the effectiveness of TPB in predicting entrepreneurial intention (Krueger, Reilly, & Carsrud, 2000; Moriano, Gorgievski, Laguna, Stephan, & Zarafshani, 2012).

From the foregoing, we advance some questions: What are the entrepreneurial intentions among university students? What is the relationship between PSE and ATE and PBC? What is the relationship between ATEE and ATE and PBC? To what extent do the relationships between Males and Females differ? Following Entrialgo and Iglesias (2017), we examine the indirect effect of PSE and ATEE on entrepreneurial intentions with the TPB and also analyse the role of gender in these relationships. Thus, the main objective of this study is to examine the role played by the attitude towards entrepreneurial education (ATEE) and Parental Self-Employment (PSE) in fostering entrepreneurial intention among students.

To test the validity of the model, samples were drawn from students from a university in Catalonia, Spain. According to Liñán, Urbano, and Guerrero (2011) Catalonia has a reputation for having a hard-working population, entrepreneurial spirit, and a dynamic economy.

To our best knowledge, this is a novel approach and may encourage future research in this area. A contribution of this paper is the provision of a better understanding of the role of Entrepreneurship Education and PSE and their impact on entrepreneurial intention. Moreover, the outcomes of this study could be beneficial to policymakers to understand not only the pattern of relationships among intention antecedents but also its implications for interventions and developing entrepreneurial intention. Our paper extends the studies of Trivedi (2016) by introducing Role Model or Parental Self-employment as an additional antecedent of the TPB and gender as a moderating variable.

The remainder of the paper is structured as follows. In the second part, the literature on entrepreneurial intention in line with TPB along with the university environment and support (which we operationalize as Attitude towards Entrepreneurship Education-ATEE) is outlined. The next section provides the methodology. Finally, the results of the study and their practical implications have been provided along with direction for future research and conclusion.

6.3 THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

6.3.1 Entrepreneurial Intention and the Theory of Planned Behaviour

Bird (1988, p.442) defined intention as 'a state of mind directing a person's attention toward a specific object (goal) or path in order to achieve something (means)'. Entrepreneurial intention is considered to be the most critical aspect for the future formation of entrepreneurial ventures (Nguyen, Do, Vu, Dang, & Nguyen, 2019). According to Bae et al. (2014) entrepreneurial intentions are the willingness to own or venture into a business. The concept of intention and its antecedents have received immerse attention in entrepreneurship research for its importance in predicting entrepreneurial behavior.

The TPB (Ajzen, 1991, 2002) is perhaps one of the most popular models that has caught the attention of researchers in these contemporary times. Thus among the many models (e.g. Shapero & Sokol, 1982 and Bird, 1988) used to explain entrepreneurial intentions, none have had as much impact as Ajzen's theory of planned behavior (Ajzen, 1991; Krueger et al., 2000; Liñán &

Chen, 2009). As of April 2020, the theory of planned behavior (Ajzen, 2012) has been subject to empirical analysis in more than 4,200 papers referenced in the Web of Science bibliographical database, making it one of the popular theories in the social and behavioral sciences (Bosnjak, Ajzen & Schmidt, 2020). They further revealed that the TPB has gained enormous attention in disciplines like health sciences, environmental science, business and management, and educational research. The model explains how the cultural and social environment affects human behavior. In this study, the TPB is used as a basic framework to understand students' entrepreneurial intentions. The TPB model has often been used to study the intention to start a venture in a couple of research setting (Krueger, 1993; Trivedi, 2016) and it has proven that Ajzen's TPB was an appropriate research framework for assessing intentions in the choice of employment (Kolvereid, 1996; Iakovleva & Kolvereid, 2009). According to the TPB, human behavior is guided by three kinds of reflections, beliefs about the likely consequences of the behavior (behavioural beliefs), beliefs about the normative expectations of others (normative beliefs), and beliefs about the presence of factors that may ease or impede performance of the behavior (control beliefs) (Bosnjak, Ajzen & Schmidt, 2020).

6.3.2 Attitude towards Entrepreneurship (ATE)

Ajzen (1991) conceptualized attitude as the extent to which an individual has a positive or negative evaluation of the behavior in question. The attitude towards the behavior (entrepreneurship) is an important component concerning the perception of desirability that affects entrepreneurial intention. According to Santos, Roomi, and Liñán, 2016) and Liñán et al. (2011), attitude towards entrepreneurship has a positive impact on entrepreneurial intentions.

6.3.3 Subjective Norm (SN)

According to Ajzen (1991), the opinion of important reference groups such as parents, spouses, friends, and relatives may also influence the behavior of a person to perform or not perform certain actions. Social norms refer to the perceived social pressure from family, friends, or significant others to perform an entrepreneurial behavior (Ajzen, 1991). Social norms tend to contribute more weakly to intention (Kolvereid & Isaksen, 2006) for individuals with a strong internal inner locus of control (Ajzen, 2002) compared to those with a strong action orientation (Bagozzi, 1992). Some studies did not establish any significant direct correlation between

subjective norms and entrepreneurial intention (Krueger et al., 2000; Liñán & Chen, 2009; Santos et al., 2016). Most studies have established that subjective norms favorably affect ATE and the PBC (Entrialgo & Iglesias, 2016; Liñán & Chen, 2009; Liñán et al., 2011; Liñán & Santos, 2007; Trivedi, 2017). Some empirical studies (Scherer, Adams, Carley & Wiebe, 1989; Mathews & Moser, 1995); Trivedi, 2016; 2017) have asserted that social norms influence attitude and perceived behavioural control and thus indirectly entrepreneurial intention.

6.3.4 Perceived behavioral control (PBC)

The third and most important determinant identified by Ajzen (1991) is the perceived behavioural control. PBC examines the perceived feasibility of performing behaviour and its closely related to the perception of self-efficacy (Krueger et al., 2000). PBC is the perceived easiness or difficulty of becoming an entrepreneur (Ajzen, 1991). Although some researchers have considered PBC as similar to self-efficacy, Ajzen (2002) specifies that it is a wider construct, since it encompasses and perceived controllability of the behavior. According to Santos et al. (2016) and Liñán et al. (2011), PBC has a positive impact on entrepreneurial intentions. Generally, the more favorable the attitude and subjective norm, and the greater the perceived control, the stronger should be the individual's intention to perform the behavior in question (Bosnjak, Ajzen & Schmidt, 2020). The figure A below is a diagram illustration of the theory of planned behavior by Ajzen (2019).

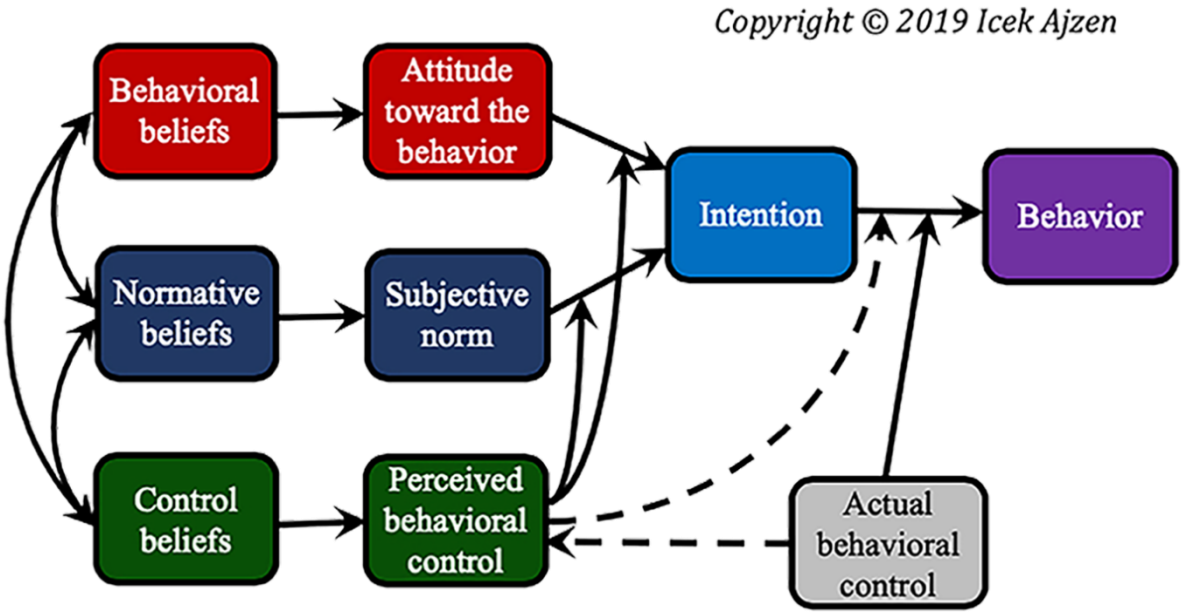
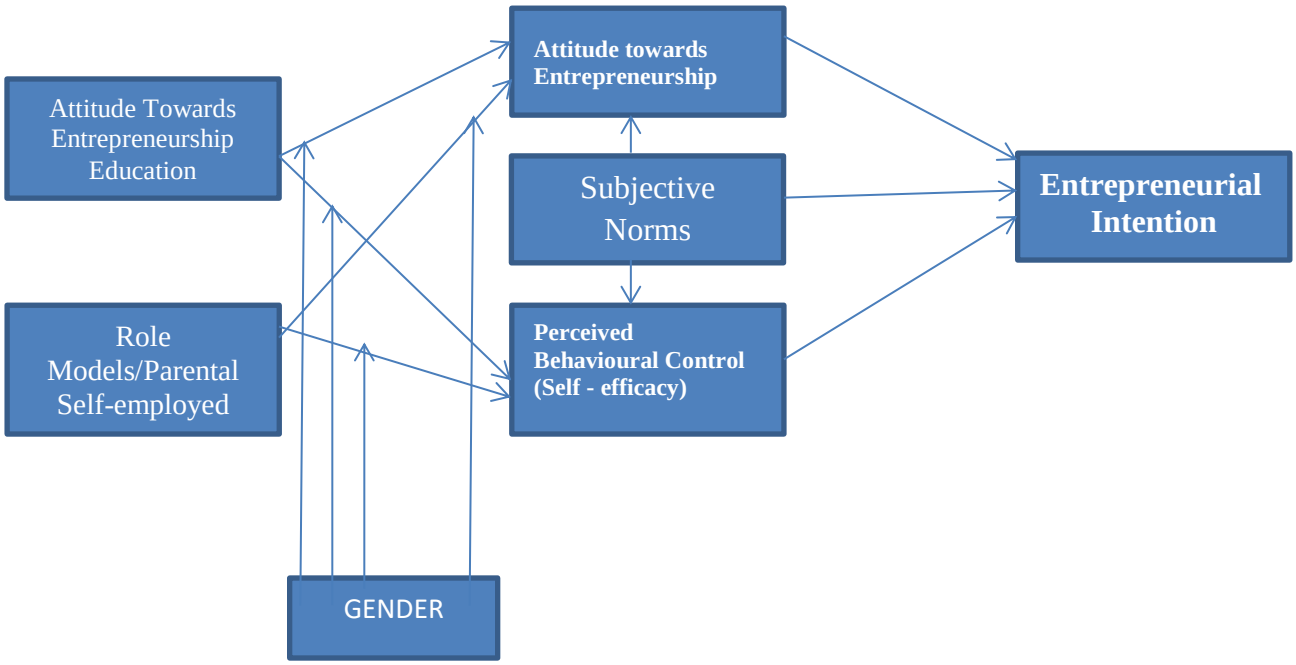


Figure A: Graphical depiction of the Theory of Planned Behavior (Ajzen, 2019b)

FIGURE 1: ENTREPRENEURIAL INTENTION-UNIVERSITY SUPPORT MODEL



6.3.5 Entrepreneurship Education and Support

Entrepreneurship education refers to education for entrepreneurial attitudes and skills (Bae et al., 2014). It consists of 'any pedagogical program or process of education for entrepreneurial

attitudes and skills (Fayolle, Gailly, & Lassas-Clerc, 2006, p.702). The debate about whether entrepreneurship can be promoted through education or not persist because of inconsistencies in previous studies. Whilst some empirical studies have found a positive impact from entrepreneurship education (Block, Hoogerheide, & Thurik, 2013; Souitaris et al., 2007; Walter & Dohse, 2012), others reported a statistically insignificant or negative relationship (Oosterbeek, van Praag, & Ijsselstein, 2010; von Graevenitz, Harhoff, & Weber, 2010).

Research shows that participation in entrepreneurship courses increase the possibilities of a career in entrepreneurship (Valliere, 2016; Iakovleva & Kolvereid, 2009; Kolvereid & Moen, 1997). According to Upton, Sexton, and Moore (1995), 40% of those who pursued entrepreneurship courses started their own businesses. Liñán (2008) posits that entrepreneurship education can nurture a student's attitudes and intentions, as well as the establishment of a new firm. Previous studies suggest that certain university support policies and practices can promote entrepreneurial activities among students, for example, technology transfer offices and faculty consultants (Mian, 1996); university incubators and physical resources (Mian, 1997); and university venture funds (Lerner, 2005). Entrepreneurship Education program and the entrepreneurial support provided by universities are effective ways of obtaining the requisite knowledge about entrepreneurship and motivating young people to seek an entrepreneurial career (Henderson & Robertson, 2000; Lin & Si, 2014). Bae et al. (2014) in their meta-analysis suggested that entrepreneurial education is positively related to entrepreneurial intentions. The impact of education and university environment on the creation of prospective entrepreneurs and the relationship between university assistance and support and the set of new businesses have gained attention in the academic circles (Trivedi 2014). Trivedi (2016) established that the university environment and support positively affect PBC. Zhang et al. (2014) found a positive correlation between entrepreneurship education and entrepreneurial intention among students. According to Urbano and Guerrero (2013), it is expedient to expand the scope of the university from the conventional or old-fashioned mode of knowledge to an entrepreneurial ecosystem leading to the concept of an entrepreneurial university.

6.3.6 Role Models/Parental Self-employment

Entrepreneurial family background refers to those people whose parent(s) or family member(s) is (are) involved in self-employment (Bae et al., 2014). According to Stephens (n.d.) parents play a

major role in how their children turn out. Parents are powerful role models for children and they can influence their children's entrepreneurial intentions. Zellweger, Sieger, and Halter (2011) argued that entrepreneurship education is less probable to promote entrepreneurial intentions of students who come from an entrepreneurial family background. According to Bae et al. (2014), entrepreneurship education may be less effective on entrepreneurial intentions for students from an entrepreneurial family compared to students without an entrepreneurial family background. In fact, they failed to support the hypothesis that, the positive link between entrepreneurship education and entrepreneurial intentions will be weaker in people from an entrepreneurial family background than for those who do not come from one.

6.3.7 The Role of Gender

Most studies claim that gender plays a major role in measuring entrepreneurial and self-employment career choice intentions (Verheul, Thurik, Grilo, & Van der Zwan, 2012). The presence of a gap between males and females in entrepreneurship has long been recognized, (de Bruin et al., 2007; Díaz-García & Jiménez-moreno, 2010; Hughes, Jennings, Brush, Carter, & Welter, 2012). Males have higher entrepreneurial intentions than females (Haus, Steinmetz, Isidor, & Kabst, 2013; Hindle, Klyver, & Jennings, 2009; Zhao, Hills, & Seibert, 2005). Bae et al. (2014) failed to support the hypothesis that the positive link between entrepreneurial education and entrepreneurial intentions will be weaker in males than females.

From the foregoing, the following hypotheses (see Table 1) are proposed.

Table 1 Hypotheses (Primary and Secondary)

No.	Description	
PRIMARY HYPOTHESES		
1	ATE positively influences entrepreneurial intention	ATE→EI
2	PBC positively influences entrepreneurial intention	PBC→EI
3	SN positively influences entrepreneurial intention	SN→EI
4	SN positively influences ATE	SN→ATE
5	SN positively influences perceived behavioral control	SN→PBC
SECONDARY HYPOTHESES		
6	ATEE positively influences ATE	ATEE→ATE
7	ATEE positively influences PBC	ATEE→PBC
8	ATEE is positively related to entrepreneurial intention.	ATEE→EI
9	PSE positively influences ATE	PSE→ATE
10	PSE positively influences PBC	PSE→PBC
11	PSE are positively related to entrepreneurial intentions.	PSE→EI
12	The relationship between PSE and ATE is stronger for Males than for Females	
13	The relationship between PSE and PBC is stronger for Males than for Females	
14	The relationship between ATEE and ATE is stronger for Males than for Females	
15	The relationship between ATEE and PBC is stronger for Males than for Females	

NB: The Primary hypotheses were analyzed along three thematic areas: Complete/Combined, Males and Females

6.4 Methodology

The empirical analysis of this survey was carried out among university students in a Spanish university in the Catalonia region. Thus, the study is developed in a single country, a single

institution, and a single culture. We used a structured on-line questionnaire. Convenience sampling technique was used because it is a popular tool in entrepreneurship research (Kolvereid, 1996; Krueger et al., 2000; Fayolle and Gailly 2005). Also, a study by Bosma, Jones, Autio and Levie (2008) established that young graduates (25-34 years) display the highest entrepreneurial propensity. We applied the SEM-PLS technique to examine the constructs of the paper and the relationship among them.

6.4.1 Sample size

We used a sample size of 216 because according to Hoyle (1995), 100 to 200 respondents is usually a good starting point in conducting path modelling. Also, Partial Least Squares (PLS) is suitable when exploratory studies are conducted and relatively small samples are used (Sánchez-Franco & Roldán, 2005).

6.4.2 Measurement Variables

The questionnaire was divided into the following sections: demographic, independent (ATE, SN, and PBC), dependents variables (entrepreneurial intention), and Attitude towards Entrepreneurship Education and Parental Self-employment. The study adopted the Entrepreneurial Intention Questionnaire (EIQ) proposed by Liñán and Chen (2009) to measure ATE, PBC, and SNs. Variables were tested using a five-point Likert scale from 'Strongly Agree' to Strongly Disagree. Attitude towards Entrepreneurship Education/University environment and support scale originally developed by Kraaijenbrink et al. (2009) and revised by Trivedi (2016) was also used in this study. Eighteen items make up the ATEE Scale and are classified into two categories; General Education Support (check items 38-44 on Appendix) and Targeted Cognitive and Non-cognitive Support (check items 27-37 on Appendix). ATE, SN, PBC, and ATEE constructs were measured through reflective indicators. The other constructs were measured by nominal scales due to their qualitative nature: Parental Self-employed (PSE) and gender. For PSE, we asked the respondents if their mothers or fathers were entrepreneurs. It was a binary YES/NO variable. Regarding Role Models, we asked the students if, at least, one of their parents was an entrepreneur. It was a binary Yes/No variable.

6.4.3 Data Analysis

Structural equation modeling (SEM) was used to test the proposed model which hypothesizes a relationship between entrepreneurial intention, ATE, SN, PBC, and ATEE. Hypotheses H12 to H15 were tested using Multi-Group Analysis (MGA).

6.5 Results

6.5.1 Profile of Respondents

The number of respondents was 216, out of which 110 (50.9%) were males and 106 (49.1%) were females. Regarding Parental Self-employment, 110 (50.9%) of the respondents' parents were business owners whereas 106 (49.1%) whereas 110 (50.9%) reported on the contrary. About 97.4% of the respondents were undergraduate students, 88.2% of whom were not in employment. The majority of the students fall within 20-24 ages (71.8%) category.

6.5.2 PLS-SEM Results

In this section, we present the results of the PLS-SEM analysis. According to Hair et al. (2010), a two-dimensional method can be applied for structural equation modelling (SEM); first, a measurement model analysis and second, a structural model analysis. This two-step process guarantees scale validity and reliability.

6.5.3 Measurement Model Assessment

According to Roldán and Sanchez-Franco (2012), the first stage of the measurement model assessment consists of observing the indicator loading values of the model (in our case, the three models: Complete, Male, and the Female). Table 2 depicts the parameters. It can be seen that Composite reliability, Cronbach's alpha, and Average Variance Extracted (AVE) exceed 0.7, 0.7, and 0.5, respectively, hence meeting the recommended values in literature (Fornell & Larcker, 1981). Though reliability analysis may be conducted using item loadings of above 0.707, Sánchez-Franco & Roldán, (2005) opined that for newly developed measures, a lower threshold of 0.6 may be accepted. Generally, the measurement model of this study was investigated following four criteria's, i.e. (a) Item reliability, (b) Internal consistency, (c) Convergent validity, and (d) Discriminant validity. As shown in Table 2, almost all the values

support the convergent validity of the composite scales for the Male and Female models, but fully for the Complete model. Prior to this, the analysis of the measurement model for the full sample found low loadings (check Appendix) for some items and were removed, and the PLS algorithm was run again. Scores regarding item reliability, construct reliability and convergent, and discriminant validity is satisfactory (see Tables 2 and 4).

Table 2: Full-sample measurement model (reliability indicators)/Composites and Measures

Items	Loadings			Composite Reliability			AVE			Cronbach's Alpha		
	Complete	M	F	Complete	M	F	Complete	M	F	Complete	M	F
ATE				0.928	0.913	0.933	0.764	0.724	0.779	0.874	0.872	0.905
ATE2	0.892	0.833	0.918									
ATE3	0.850	0.793	0.882									
ATE4	0.859	0.917	0.813									
ATE5	0.895	0.854	0.913									
EI				0.940	0.936	0.933	0.724	0.710	0.703	0.922	0.917	0.912
EI 1	0.716	0.784	0.613									
EI 2	0.871	0.847	0.878									
EI 3	0.912	0.895	0.926									
EI 4	0.893	0.898	0.873									
EI 5	0.810	0.728	0.845									
EI 6	0.886	0.889	0.858									
PSE	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
PBC				0.895	0.873	0.909	0.588	0.538	0.626	0.859	0.824	0.880
PBC 1	0.735	0.650	0.792									
PBC 2	0.832	0.847	0.805									
PBC 3	0.847	0.835	0.841									
PBC 4	0.709	0.638	0.784									
PBC 5	0.740	0.673	0.775									
PBC 6	0.729	0.729	0.747									
SN				0.914	0.931	0.882	0.780	0.817	0.714	0.859	0.888	0.801
SN 1	0.866	0.878	0.845									
SN 2	0.888	0.924	0.802									
SN 3	0.896	0.909	0.886									
ATEE				0.944	0.935	0.953	0.607	0.568	0.672	0.936	0.926	0.948
ATEE1	0.838	0.826	0.830									

ATEE2	0.824	0.737	0.900									
ATEE3	0.863	0.800	0.923									
ATEE5	0.799	0.803	0.825									
ATEE6	0.833	0.882	0.832									
ATEE7	0.715	0.765	0.754									
ATEE8	0.763	0.715	0.774									
ATEE9	0.674	0.626	0.715									
ATEE11	0.680	0.635	0.673									
ATEE12	0.787	0.749	0.845									
ATEE18	0.772	0.709	0.806									

Figure 2: COMPLETE

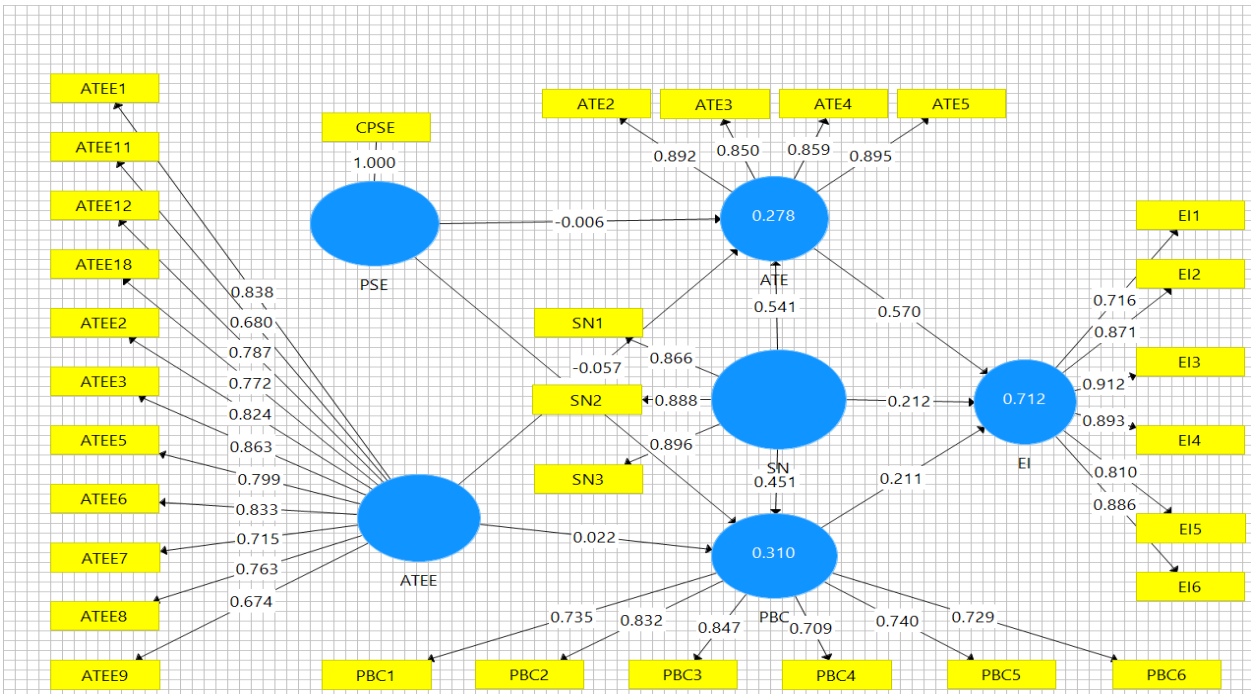


Figure 3: FEMALE

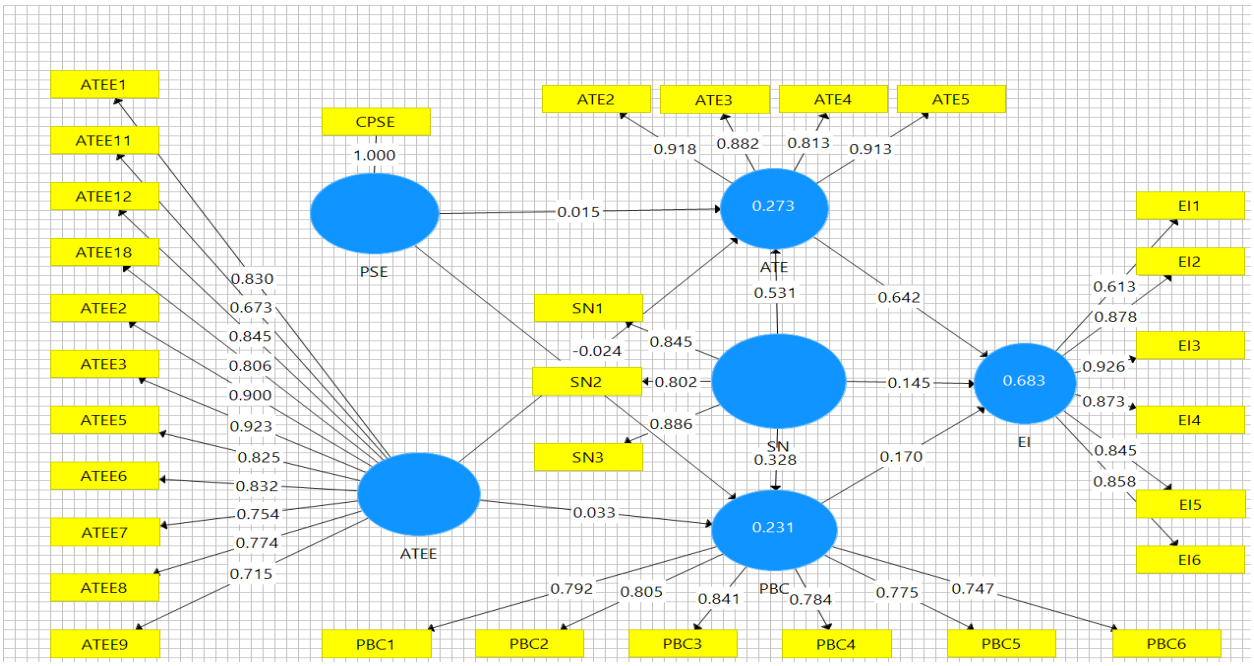
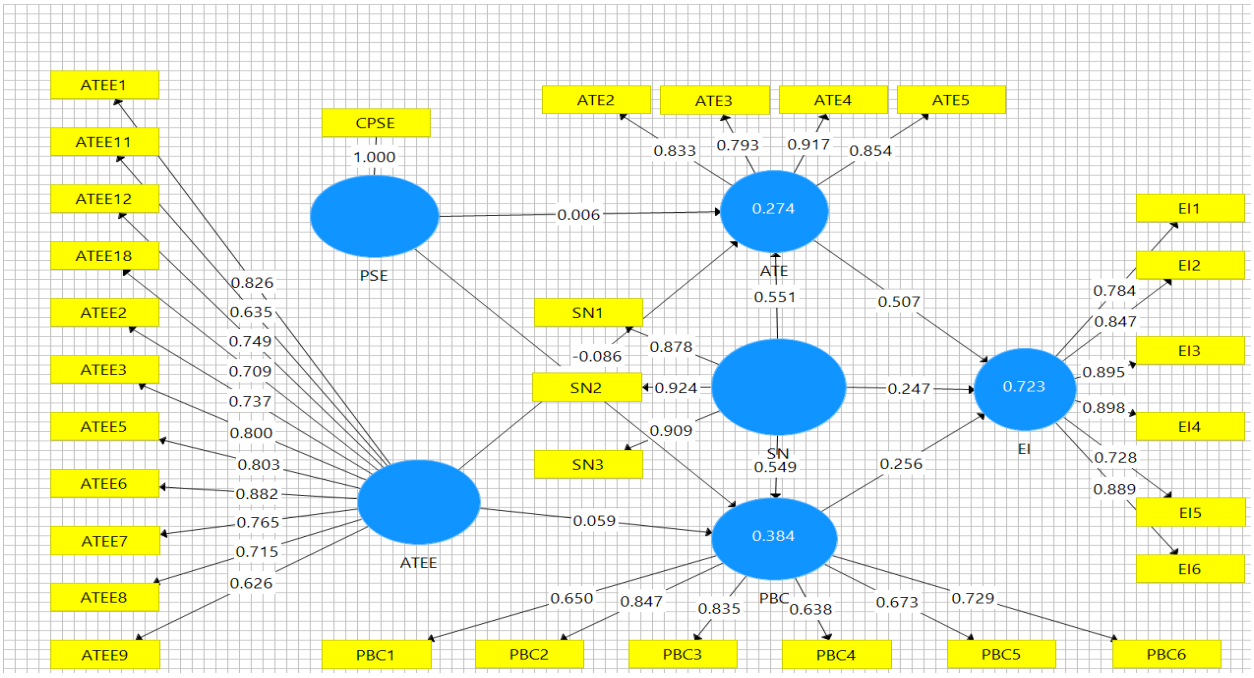


Figure 4: MALE



6.5.3.1 Explanation of target endogenous variable variance

The coefficient of determination R^2 is 0.712 for the EI endogenous latent variable for the Complete model. This implies that the three latent variables (ATE and PBC) explain 71.2% of the variance in EI as shown in Table 3. The coefficient of determination for Males and Females is also shown in Table 3. According to Höck and Ringle (2006) results above the cutoffs 0.67, 0.33, and 0.19 are 'substantial', 'moderate', and 'weak' respectively. Thus the results for the three models are 'substantial'. These findings are consistent with the study by (Trivedi, 2016) who found 69% of the variance in the explanation of entrepreneurial intention.

Table 3: R Square

	Complete	Male	Female
ATE	0.278	0.274	0.273
EI	0.712	0.723	0.683
PBC	0.310	0.384	0.231

Table 4: Discriminant Validity (COMPLETE)						
	ATE	ATEE	EI	PBC	PSE	SN
ATE	**0.874**					
ATEE	0.109	**0.779**				
EI	0.791	0.36	**0.851**			
PBC	0.517	0.188	0.615	**0.767**		
PSE	-0.137	-0.125	-0.189	-0..337	**1.000**	
SN	0.525	0.306	0.620	0.514	-0.295	**0.883**
FEMALE						
	ATE	ATEE	EI	PBC	PSE	SN
ATE	**0.882**					
ATEE	0.120	**0.810**				
EI	0.799	0.155	**0.838**			
PBC	0.480	0.108	0.535	**0.791**		
PSE	-0.086	0.049	-0.142	-0..347	**1.000**	
SN	0.522	0.271	0.546	0.390	-0.208	**0.845**
MALE						
	ATE	ATEE	EI	PBC	PSE	SN
ATE	**0.851**					
ATEE	0.114	**0.753**				
EI	0.767	0.127	**0.842**			
PBC	0.521	0.294	0.668	**0.734**		
PSE	-0.122	-0.275	-0.163	-0..289	**1.000**	
SN	0.518	0.367	0.663	0.604	-0.276	**0.904**

6.6 Structural model analysis

Using a two-tailed t-test with a significance level of 5%, the path coefficient is significant if the T-statistics is larger than 1.96. Regarding the Complete model, it can be observed that three out of the nine relationships are not significant as depicted in Table 6. For the Male model, five of

the hypotheses are accepted and four are rejected (see Table 8). Whereas, four of the hypotheses associated with the Females are accepted and five rejected as depicted in Table 7.

Figure 5 shows the variance explained (R Square) in the dependent constructs and the path coefficients (b) for the complete model. Consistent with Chin (1998), bootstrapping (5000 re-samples) was used to generate standard errors and T-statistics. Bootstrap represents a non-parametric approach for estimating the accuracy of PLS estimation. This helps in the assessment of the statistical significance of the path coefficients. The Complete model, Male model, and Female model explain 71.2%, 72.3%, and 68.3% respectively of the variance in entrepreneurial intention based on SN, ATE, and PBC. These results are encouraging since most previous research typically explains less than 40%.

6.7 Collinearity Assessment

Collinearity is a potential issue in the structural model and that variance inflation factor (VIF) value of 5 or above typically indicates such a problem (Hair et al., 2011). The collinearity assessment results for the Combined Model are summarized in Tables 5. It can be observed that all VIF values are lower than 5, signifying that there is no indicative collinearity between each set of predictor variables.

Table 5: Outer VIF Values

Items	VIF
ATE2	2.898
ATE3	2.198
ATE4	2.358
ATE5	2.841
EI 1	1.689
EI 2	3.170
EI 3	4.258
EI 4	3.508
EI 5	2.410
EI 6	3.610
PSE	1.000
PBC 1	1.840
PBC 2	2.595
PBC 3	2.504
PBC 4	1.773
PBC 5	2.108
PBC 6	1,665
SN 1	1.889
SN 2	2.338
SN 3	2.608
ATEE1	3.597
ATEE2	4.051
ATEE3	4.705
ATEE5	2.817
ATEE6	3.724
ATEE7	2.154
ATEE8	2.124
ATEE9	2.368
ATEE11	2.189
ATEE12	2.793
ATEE18	2.325

Figure 5: Bootstrapping (Complete)

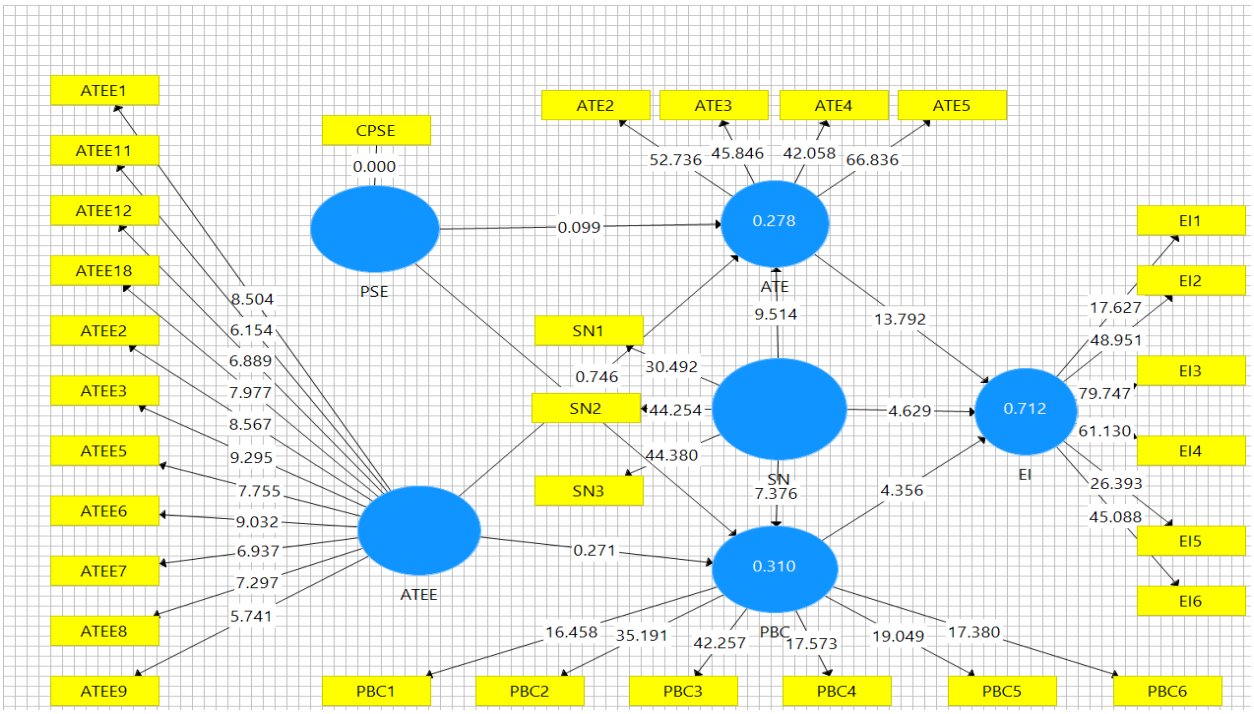


Table 6 (COMPLETE): Structural Model Results

Construct	(O)	(M)	STDEV	T Statistics	P Values	HYPOTHESIS
ATE -> EI	0.559	0.559	0.059	9.497	0.000	**ACCEPT**
ATEE-> ATE	-0.077	-0.060	0.116	0.662	0.508	REJECT
ATEE-> PBC	0.026	0.043	0.128	0.200	0.841	REJECT
PBC -> EI	0.219	0.220	0.073	2.991	0.003	**ACCEPT**
PSE -> ATE	-0.024	-0.023	0.084	0.287	0.774	REJECT
PSE -> PBC	-0.228	-0.218	0.084	2.699	0.007	**ACCEPT**
SN -> ATE	0.551	0.543	0.084	6.594	0.000	**ACCEPT**
SN -> EI	0.210	0.210	0.068	3.103	0.002	**ACCEPT**
SN -> PBC	0.423	0.423	0.092	4.589	0.000	**ACCEPT**

Original Sample (O), Sample Mean (M), Standard Deviation (STDEV)

Table 7: FEMALE: Structural Model Results

Construct	(O)	(M)	STDEV	T Statistics	P Values	HYPOTHESIS
ATE -> EI	0.610	0.605	0.087	7.045	0.000	**ACCEPT**
ATEE-> ATE	-0.077	-0.044	0.163	0.473	0.636	REJECT
ATEE-> PBC	0.108	0.059	0.254	0.424	0.672	REJECT
PBC -> EI	0.199	0.194	0.126	1.581	0.114	REJECT
PSE -> ATE	-0.034	-0.042	0.127	0.270	0.787	REJECT
PSE -> PBC	-0.285	-0.258	0.121	2.359	0.018	**ACCEPT**
SN -> ATE	0.517	0.502	0.124	4.171	0.000	**ACCEPT**
SN -> EI	0.141	0.154	0.094	1.500	0.134	REJECT
SN -> PBC	0.305	0.327	0.140	2.182	0.029	**ACCEPT**

Original Sample (O), Sample Mean (M), Standard Deviation (STDEV)

Table 8: MALE: Structural Model Results

Construct	(O)	(M)	STDEV	T Statistics	P Values	HYPOTHESIS
ATE -> EI	0.511	0.513	0.088	5.825	0.000	**ACCEPT**
ATEE-> ATE	-0.077	-0.040	0.154	0.502	0.615	REJECT
ATEE-> PBC	0.061	0.097	0.145	0.420	0.675	REJECT
PBC -> EI	0.249	0.258	0.105	2.378	0.017	**ACCEPT**
PSE -> ATE	0.028	0.043	0.131	0.213	0.831	REJECT
PSE -> PBC	-0.154	-0.143	0.130	1.185	0.236	REJECT
SN -> ATE	0.588	0.569	0.132	4.446	0.000	**ACCEPT**
SN -> EI	0.247	0.235	0.114	2.175	0.030	**ACCEPT**
SN -> PBC	0.507	0.492	0.125	4.059	0.000	**ACCEPT**

Original Sample (O), Sample Mean (M), Standard Deviation (STDEV)

6.8 Measurement Invariance of Composite Models (MICOM)

Measurement Invariance of Composite Models (MICOM) is a logically necessary step before conducting MGA. Hult et al. (2008, p.1028) posit that: 'failure to establish data equivalence is a potential source of measurement error (i.e., discrepancies of what is intended to be measured and

what is actually measured), which accentuates the precision of estimators, reduces the power of statistical tests of hypothesis, and provides misleading results'.

The MICOM procedure provides the method for studying the invariance before the multi-group analysis. After confirming the existence of invariance, the next is to apply the MGA, comparing the explained variance of each group. MICOM involves a three-step process:

a) Configural invariance,

b) Compositional invariance and

c) Scalar invariance (equality of composite means and variances).

According to Garson (2016), running MICOM in SmartPLS normally automatically establishes configural invariance. Thus, since statistical output does not apply to the first step, we did not show it. However, steps 2 and 3 are discussed below. It must be noted that in running the MICOM, outer loadings that were insignificant were deleted. This accounts for the difference in the Algorithm figure for the MGA.

6.8.1 Compositional invariance

Compositional invariance is a test of the invariance of indicator weights for measurement (outer) paths between groups (Garson, 2016). According to Henseler, Ringle and Sarstedt (2016), if the results of MICOM's Steps 1 and 2 (but not step 3) show that there is lack of measurement invariance, partial measurement has been established. This result allows for the comparison of the standardized path coefficients across the groups by performing a multi-group analysis. If the analysis and tests on different required levels do not support full measurement invariance, applied research typically focusses on the least partial fulfillment of measurement invariance (Hair et al., 2010). A result of non-significance means that compositional invariance may be assumed. This implies the correlations are not significantly lower than 1.0, as depicted in Table 9. Compositional invariance has been fulfilled because the Original Correlation is equal or greater than 5% quantile.

Table 9: MICOM Step 2

Items	Original Correlation	Correlation Permutation Mean	5.0%	Permutation p-Values
ATE	0.999	1.000	0.999	0.190
ATEE	0.981	0.956	0.820	0.371
EI	1.000	1.000	0.999	0.635
PBC	1.000	0.999	0.996	0.841
PSE	1.000	1.000	1.000	0.506
SN	0.999	0.999	0.996	0.396

6.8.2 Scalar invariance (equality of composite means and variances)

Following Henseler, Ringle and Sarstedt (2016), we tested for scalar invariance in a way comparable to that explained in Step 2. Permutation p-value tests for Male and Female differences in means and variances for each of the inner model constructs. As shown in Table 10, the permutations p-values for Mean Original Difference are significant. However, the permutations p-values for the Variance original difference are all non-significant. From the forgoing, we can assume Partial invariance.

Table 10: MICOM Step 3

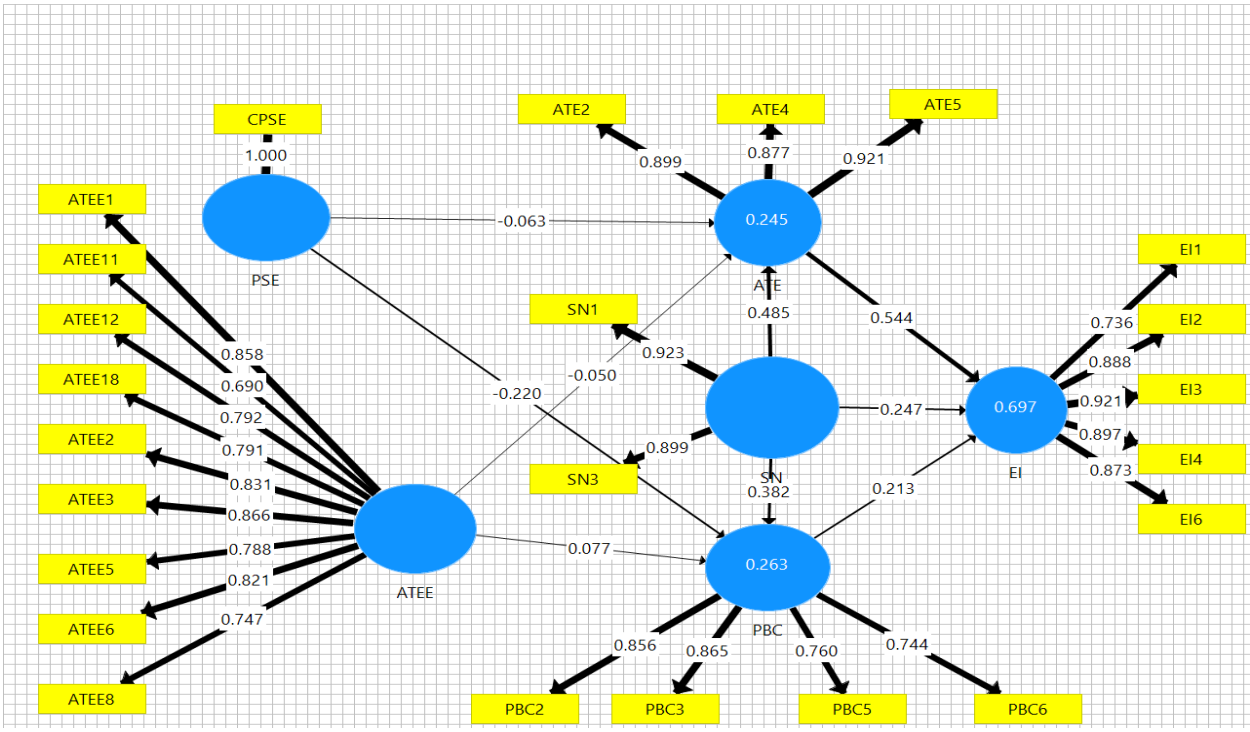
Items	Mean - Original Difference (MALE – FEMALE)	Mean - Permutation Mean Difference	2.5%	97.5%	Permutation p-Values	Variance - Original Difference (MALE - FEMALE)	Variance - Permutation Mean Difference (MALE - FEMALE)	2.5%	97.5%	Permutation p-Values
ATE	0.468	-0.004	-0.274	0.265	0.001	-0.286	0.005	-0.389	0.396	0.160
ATEE	0.171	-0.001	-0.266	0.266	0.218	-0.184	0.001	-0.437	0.434	0.415
EI	0.604	-0.005	-0.276	0.263		-0.029	0.005	-0.361	0.362	0.879
PBC	0.434	-0.002	-0.269	0.266	0.002	0.025	0.005	-0.393	0.403	0.906
PSE	-0.296	0.002	-0.259	0.260	0.036	-0.010	0.000	-0.008	0.011	0.055
SN	0.322	-0.001	-0.279	0.267	0.019	0.261	0.000	-0.364	0.367	0.162

6.9 Multi-Group Analysis (MGA)

Having established configural and compositional invariance in Steps 1 and 2, we could compare the path coefficients of Males and Females using a multi-group analysis. The multi-group analysis uses independent samples t-tests to compare paths between groups (Kiel et al., 2000). In this study, we considered Gender as a moderator (dummy variable). This process divides the sample into two groups: males (110) and females (106). This section presents the results of the MGA for the two groups (Males and Females). According to Becker, Rai, Ringle, and Völckner (2013) researchers who failed to consider this potential issue may draw incorrect conclusions.

We start by first running the PLS Algorithm to determine whether the results for the group's specific model estimation differ. Using the 'Use Relative Values', stronger path relationships have thicker lines and smaller path coefficients have thinner lines. As shown in the diagram below, we can apply this representation to compare the results for Males and Females. From the figure, we can see that the group specific PLS coefficients differ (e.g., ATE-EI, SN-ATE, PBC-EI). Since there are differences in the group specific PLS path model estimations, we need to find out if these differences are significant by running the PLS-MGA.

Figure 6: MGA ALGORITHM



Figures 7, 8 and 9 show the absolute values, outer loadings, path coefficients, and the R Square values of Males and Females. The MGA report provides path coefficients separately for the Male and Female groups, along with bootstrap-estimated standard deviations, t-values, and significance p-values as well as confidence intervals. From figures 7, 8 and 9, we can see differences in the regression weights or beta coefficients. However, to ascertain whether the differences are significant we have to apply the bootstrap t-test in the output section on the confidence intervals. From Table 12, it can be seen that the path from ATE – EI, SN – ATE, and SN – PBC confidence intervals overlap. This implies that at the 0.05 significance level, there is no difference in path coefficients between Male and Female samples. Thus, the paths in the structural model (ATE–EI, SN–ATE, and SN–PBC) are significant for both Males and Females, as depicted in the p-Values columns. However, for the MGA, we focus on Hypotheses H12, H13, H14, and H15. From Table 11, it can be noted that there is significant relationship between PSE and PBC but no significant relationship between the other variables; hence hypotheses H13 is accepted but H12, H14 and H15 are rejected. These results are confirmed by the output from the Parametric Test in Table 12, the Welch-Satterthwait Test in Table 13, the Bootstrapping Results on Table 14, and the Confidence intervals in Table 15.

According to H12, the relationship between PSE and ATE is stronger for men than women. However, there are no significant relationships between both groups, hence this hypothesis is rejected. According to H13, the relationship between PSE and PBC is stronger for men than women, hence this hypothesis is accepted. According to H14, 'The relationship between ATEE and ATE is stronger for Males than for Females'. From Table 14, it can be seen that the relationship is not significant for both groups, hence we reject this hypothesis. Regarding H15, the relationship between ATEE and PBC is stronger for Males than Females. However, results reveal that the relationship between the Male and Female groups was insignificant. Hence we reject this hypothesis.

Figure 7: MGA FEMALE

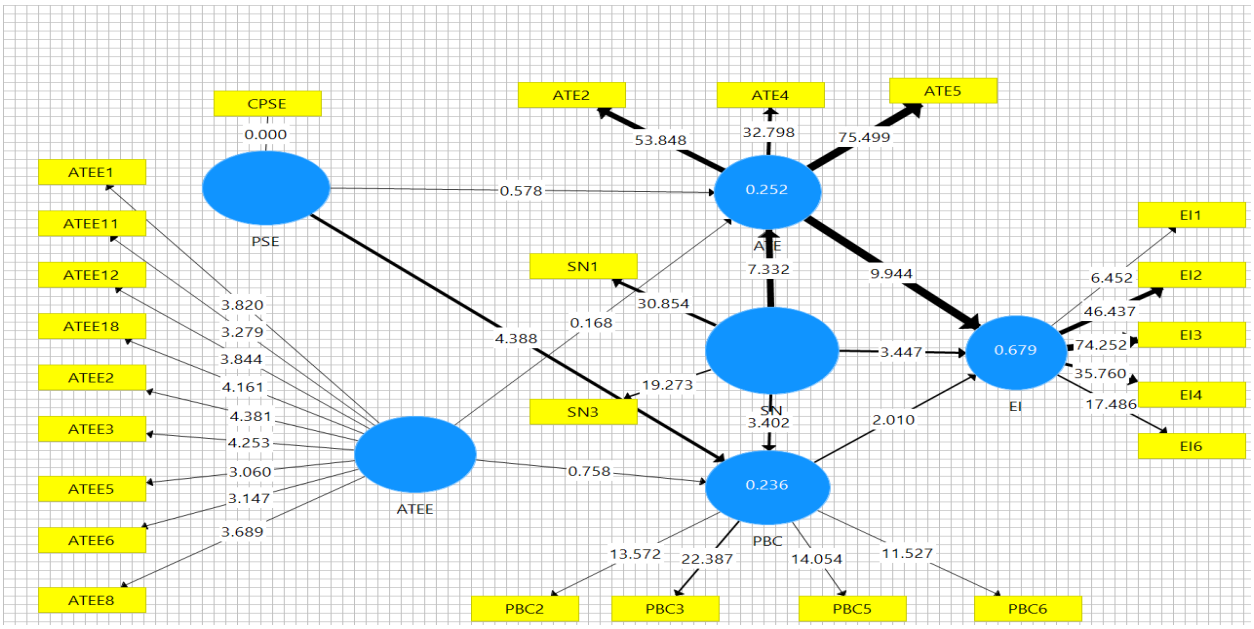


Figure 8: MGA MALE

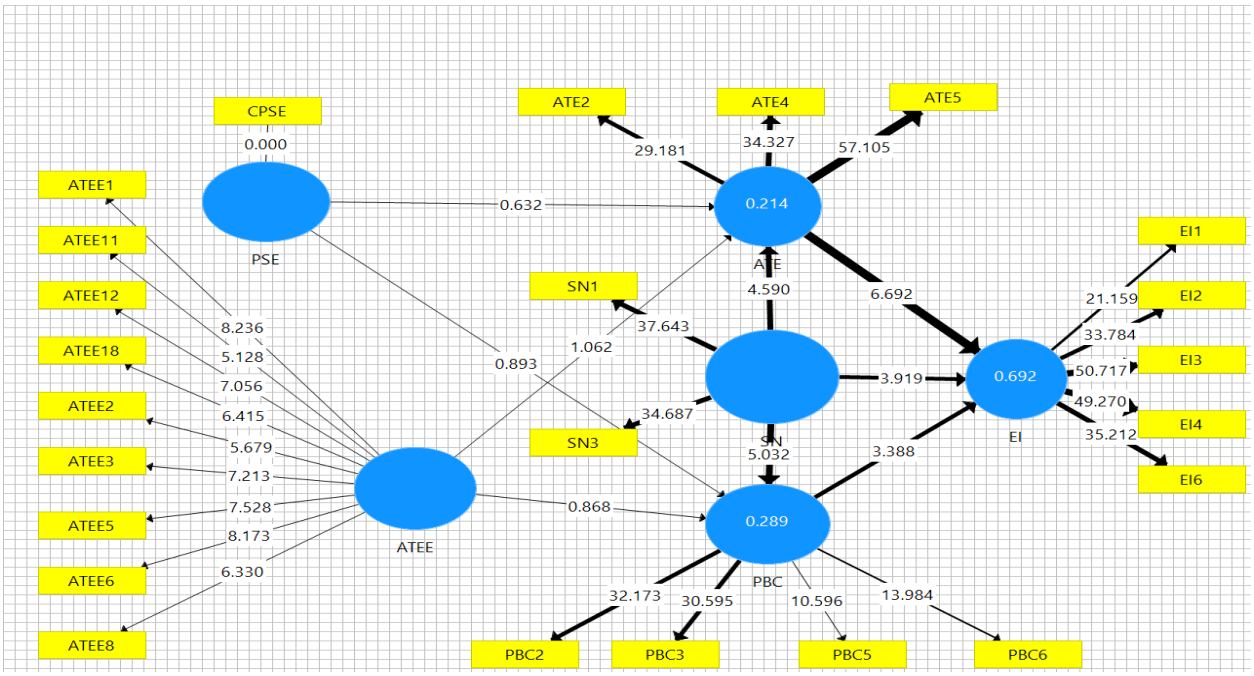


Figure 9 Complete

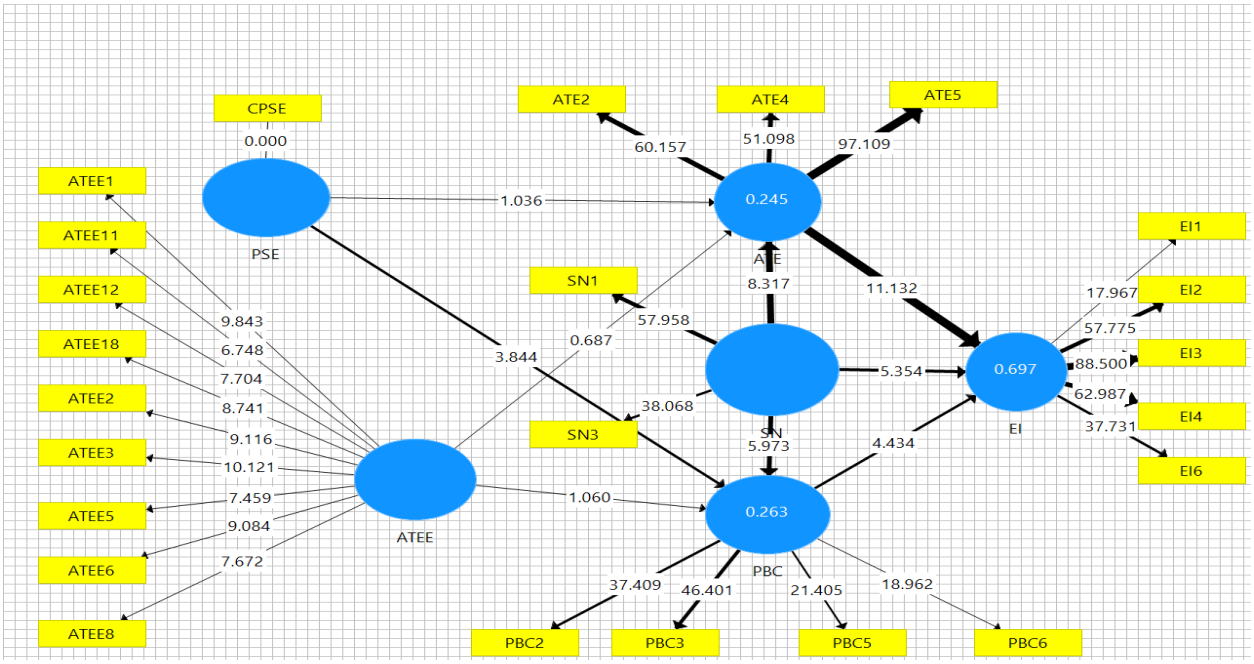


Table 11: PLS-MGA

Items	Path Coefficients-diff (MALE - FEMALE)	p-Value original 1-tailed (MALE vs FEMALE)	p-Value new (MALE vs FEMALE)
ATE -> EI	-0.156	0.947	0.105
ATEE -> ATE	-0.081	0.668	0.664
ATEE -> PBC	-0.048	0.651	0.697
PBC -> EI	0.116	0.131	0.263
PSE -> ATE	-0.011	0.537	0.927
PSE -> PBC	0.240	0.022	0.043
SN__ -> ATE	-0.023	0.564	0.872
SN__ -> EI	0.083	0.191	0.382
SN__ -> PBC	0.189	0.063	0.126

Table 12: Parametric Test

Items	Path Coefficients-diff (MALE - FEMALE)	t-Value(|MALE vs FEMALE|)	p-Value (MALE vs FEMALE)
ATE -> EI	-0.156	1.621	0.106
ATEE -> ATE	-0.081	0.420	0.675
ATEE -> PBC	-0.048	0.250	0.803
PBC -> EI	0.116	1.093	0.276
PSE -> ATE	-0.011	0.084	0.933
PSE -> PBC	0.240	2.032	0.043
SN__ -> ATE	-0.023	0.182	0.856
SN__ -> EI	0.083	0.866	0.387
SN__ -> PBC	0.189	1.541	0.125

Table 13: Welch-Satterthwait Test

Items	Path Coefficients-diff (MALE - FEMALE)	t-Value(|MALE vs FEMALE|)	p-Value (MALE vs FEMALE)
ATE -> EI	-0.156	1.625	0.107
ATEE -> ATE	-0.081	0.417	0.677
ATEE -> PBC	-0.048	0.248	0.805
PBC -> EI	0.116	1.095	0.276
PSE -> ATE	-0.011	0.084	0.933
PSE -> PBC	0.240	2.042	0.044
SN__ -> ATE	-0.023	0.184	0.855
SN__ -> EI	0.083	0.870	0.386
SN__ -> PBC	0.189	1.546	0.125

Table 14: Bootstrapping Results (for MGA)

Items	Path Coefficients Original (FEMALE)	**Path Coefficients Original (MALE)**	**Path Coefficients Mean (FEMALE)**	**Path Coefficients Mean (MALE)**	**STDEV (FEMALE)**	**STDEV (MALE)**	**t-Value (FEMALE)**	**t-Value (MALE)**	**p-Value (FEMALE)**	**p-Value (MALE)**
ATE -> EI	0.625	0.470	0.623	0.469	0.064	0.072	9.774	6.543	0.000	0.000
ATEE -> ATE	-0.028	-0.109	-0.003	-0.094	0.166	0.104	0.166	1.048	0.868	0.295
ATEE -> PBC	0.129	0.081	0.108	0.102	0.171	0.095	0.754	0.855	0.451	0.393
PBC -> EI	0.143	0.259	0.141	0.266	0.072	0.079	1.999	3.290	0.046	0.001
PSE -> ATE	-0.050	-0.060	-0.055	-0.049	0.085	0.095	0.580	0.634	0.562	0.526
PSE -> PBC	-0.324	-0.084	-0.313	-0.076	0.072	0.093	4.475	0.899	0.000	0.368
SN__ -> ATE	0.494	0.472	0.485	0.468	0.068	0.105	7.319	4.512	0.000	0.000
SN__ -> EI	0.203	0.286	0.206	0.278	0.060	0.075	3.371	3.818	0.001	0.000
SN__ -> PBC	0.279	0.467	0.291	0.461	0.081	0.092	3.440	5.069	0.001	0.000

Table 15: Confidence intervals (Bias Corrected)

Items	2.5% (FEMALE)	97.5% (FEMALE)	2.5% (MALE)	97.5% (MALE)
ATE -> EI	0.490	0.740	0.319	0.600
ATEE -> ATE	-0.390	0.224	-0.326	0.077
ATEE -> PBC	-0.305	0.331	-0.217	0.237
PBC -> EI	-0.011	0.272	0.128	0.433
PSE -> ATE	-0.214	0.123	-0.243	0.126
PSE -> PBC	-0.459	-0.185	-0.265	0.092
SN__ -> ATE	0.353	0.613	0.239	0.655
SN__ -> EI	0.085	0.319	0.139	0.428
SN__ -> PBC	0.091	0.414	0.273	0.631

6.10 F Square

The f-square equation expresses how large a proportion of unexplained variance is accounted for by R^2 change (Hair et al., 2014). The effect size is assessed with a tool known as F Square indicated in table 16 and figure 8. Following Cohen (1988) an F Square value of above 0.35 is considered large effect size; values ranging from 0.15 to 0.35 are medium effect size; values between 0.02 and 0.15 are considered small effect and values less than 0.02 are considered NO effect size. From figure 4 it can be observed that the ATE-EI relationship is the highest i.e. 0.724. This is followed by SN – ATE and SN – PBC respectively.

Figure 10: F Square

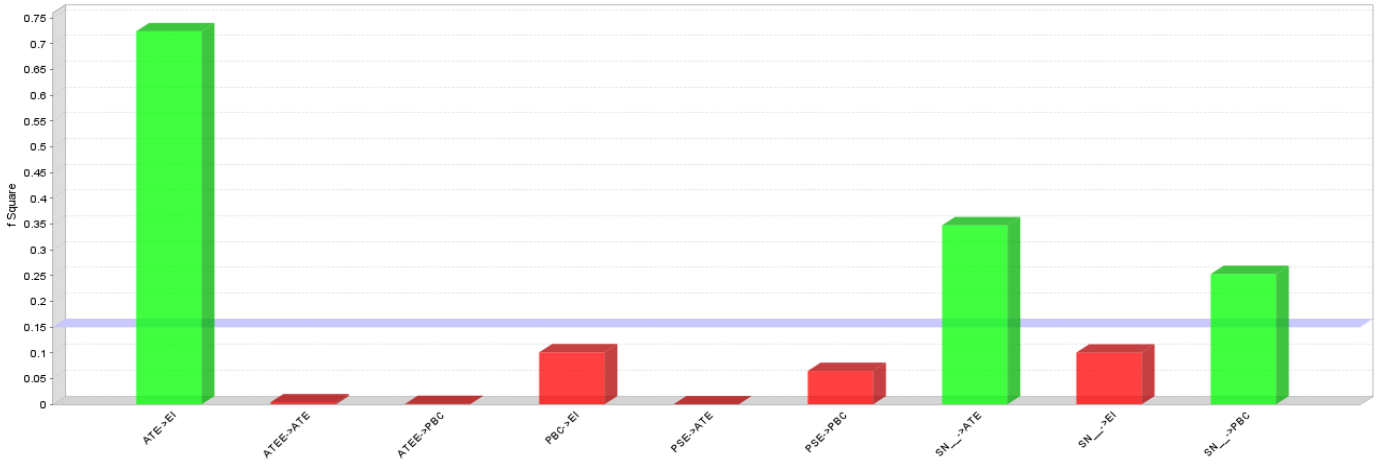


Table 16: F Square

	ATE	ATEE	EI	PBC	PSE	SN
ATE			0.724			
ATEE	0.004			0.001		
EI						
PBC			0.101			
PSE	0.000			0.065		
SN	0.348		0.101	0.253		

6.11 Mediation Analysis

According to Aguinis et al. (2017), mediation refers to the presence of an intermediate variable or mechanism that transmits the effect of an antecedent variable to an outcome. The framework (figure 1) for this study called for multiple mediation analysis. As shown in Table 17, there are three Total Indirect Effects. However, the Specific Indirect Effects were six as depicted in Table 18. Tables 17 and 18 reveal the running of the Consistent Algorithm. To identify which of the variables were significant we run the Consistent Bootstrapping. The results are found in Table 19 and 20. As shown in Table 20 it can be seen that SN->ATE->EI and SN->PBC->EI are significant.

Table 17: PLSc Algorithm TOTAL INDIRECT EFFECTS

	ATE	ATEE	EI	PBC	PSE	SN
ATE						
ATEE			-0.028			
EI						
PBC						
PSE			-0.050			
SN			0.404			

Table 18: PLSc Algorithm SPECIFIC INDIRECT EFFECTS

	SPECIFIC INDIRECT EFFECTS
ATEE->**ATE->EI**	-0.032
PSE->**ATE->EI**	-0.003
SN->**ATE->EI**	0.308
ATEE->**PBC->EI**	0.005
PSE->**PBC->EI**	-0.046
SN->**PBC->EI**	0.095

Table 19: Bootstrapping (c) TOTAL INDIRECT EFFECTS

	Original	**Sample**	**Standard**	**T Statistic**	**P Values**
ATE->**EI**					
ATEE->**ATE**					
ATEE->**EI**	-0.037	-0.026	0.080	0.466	0.642
ATEE->**PBC**					
PBC->**EI**					
PSE->**ATE**					
PSE->**EI**	-0.063	-0.062	0.060	1.047	0.295
PSE->**PBC**					
SN->**ATE**					
SN->**EI**	0.400	0.397	0.067	6.008	0.000
SN->**PBC**					

Table 20: Bootstrapping (c) SPECIFIC INDIRECT EFFECTS

	Original	Sample	Standard	T Statistic	P Values
ATEE->ATE->EI	-0.043	-0.033	0.066	0.650	0.516
PSE->ATE->EI	-0.013	-0.013	0.047	0.286	0.775
SN->ATE->EI	0.308	0.303	0.056	5.535	0.000
ATEE->PBC->EI	0.006	0.007	0.030	0.187	0.852
PSE->PBC->EI	-0.050	-0.049	0.027	1.825	0.068
SN->PBC->EI	0.093	0.094	0.040	2.310	0.021

6.12 DISCUSSION

The main claim of the TPB is that intention is influenced by three variables, i.e. ATE, SNs, and PBC. This exposition of the Ajzen model lays the foundation for the hypotheses which tested the validity of the model in the present paper. Specifically, we investigated the moderating effect of gender on ATEE and Role Models by applying the theory of planned behavior (1991). Though empirical studies in entrepreneurship have produced contradictory results, we proceeded to apply the TPB to examine students' entrepreneurial intention because it is probably one of the most tried and tested theories in entrepreneurial research. We explored the extent to which Parental

Self-employment and entrepreneurship education impact entrepreneurial intentions. We formulated two categories of hypotheses; primary and secondary and conducted a tripartite analysis for Complete, Male and Female models.

This study underscored ATE as one of the important determinants of our framework, exhibiting a strong and highly significant relationship between ATE and entrepreneurial intention. This confirms the findings of Krueger et al. (2000) and Mahfud, Bruri, Sudira, and Mulyani (2020) who reported that ATE has a significant direct relationship with entrepreneurial intention.

Regarding the Complete and Male Models, all the primary hypotheses were accepted. However, with the Female Model four out of the primary hypotheses were accepted. These results are in line with previous studies which found that SNs have a significant positive correlation with ATE and PBC (Entrialgo & Iglesias, 2016; Liñán & Santos, 2007; Liñán et al., 2011).

The relationship between ATEE and EI, and PSE and EI were both insignificant. Bae et al. (2014), in their paper, reported a statistically significant but small positive relationship between entrepreneurship education and entrepreneurial intentions.

With regards to the relationship between PSE/Role Models, the results points out that having a parent who is an entrepreneur positively influence a student's PBC (for the Complete and Female models), most probably increasing one's knowledge, mastery, or general set of ability with regard to engaging in tasks required for becoming an entrepreneur (BarNir, Watson & Hutchins. 2011). Interestingly, there was an insignificant relationship between PSE/Role Models and PBC for the male respondents.

According to this study the relationship between PSE and PBC is stronger for Males than Females, hence H13 is accepted. According to Wilson, Marlino and Kickul (2004) women tend to shy away from entrepreneurial activity more frequently than men due to a lower perception of perceived self-efficacy in carry out entrepreneurial tasks. Verheul, Uhlaner and Thurik (2003) buttress this by emphasizing that females less frequently perceive themselves as entrepreneurs.

However, this study fails to certain support certain aspects of previous studies on how exposure to entrepreneurial education and role models impact on Males and Females. Thus hypotheses H12, H14 and H15 were not supported hence there was no significant relationship between Males and Females. The influence of ATEE on PBC was not significant. These findings are

consistent with those of Entrialgo and Iglesias (2017). We established non-significant impacts on gender and parental self-employment. These results are in line with a paper by Bae et al. (2014).

This study has confirmed the applicability of the TPB model to entrepreneurial intention and the moderating role of gender. However, we did not find a significant relationship between Males and Females concerning their entrepreneurial intentions for H12, H14 and H15. Therefore gender had no significance on the path coefficients. That means the gender of a student doesn't affect the link between attitude towards entrepreneurship education and EI. The finding further revealed that gender has no influence on the relationship between attitude and intention, which was supported by Nowinski et al. (2019) and (Jena, 2020). These results are inconsistent with those of Santos et al. (2016) who found that Males display higher entrepreneurial intentions than Females.

6.13 Implications and Direction for future research

This study has some interesting implications. First, ATE came out as the most important variable of the model and this implies that entrepreneurial attitudes may be influenced by the relevant stakeholders in academic circles. Though we did not establish a positive correlation between PSE and ATE, influential role models can support nascent entrepreneurs. We recommend the institutionalization of traineeship, elective courses, conference and workshops on entrepreneurship to boost the entrepreneurial spirit of students. Also, policy-makers can motivate students by providing some fiscal incentives to allow individual and business angel investments in the seed stage of their entrepreneurial activities (European Commission, 2020).

Our paper extends the studies of Trivedi (2016) by introducing Role Model or Parental Self-employment as an additional antecedent and gender as a moderating variable. This study also proximately mirrors the study by Entrialgo and Iglesias (2017), though our study used a Likert scale to measure entrepreneurial education instead of a dichotomous variable.

Though we found no significant relationship for ATEE on EI, we suggest that educators and the relevant stakeholders focus on how to stimulate entrepreneurial intentions through education.

Notwithstanding the importance of entrepreneurship education in the development of entrepreneurial intentions, this paper revealed that ATEE has no significant impact on ATE and

PBC. This will probably call for early engagement of the students to expose them to entrepreneurial education (Entrialgo & Iglesias, 2017).

The findings contribute to research on parental self-employment (PSE). The results indicate that role model or parental self-employment impact on PBC for the Complete and the Female models. However, there was an insignificant relationship between parental self-employed and PBC for the Male model.

6.15 Limitations

In considering the generalizability of this paper, it is important to highlight some limitations. First, the respondents were sampled from a single university in Spain. It will be exciting to replicate the study with a multi-country sample to identify the dynamics of ATEE and Role Models in those countries.

Also, the majority of the students were from the Faculty of Law and Business Administration, leading to skewness of the sample characteristics.

Furthermore, the insufficient number of samples in the subgroups (Male and Female) has the potential of reducing the power of analysis, leading to sampling error (Hunter & Schmidt, 2004).

6.16 Conclusions

The paper has contributed to the existing literature on the multi-group analysis of gender on entrepreneurial intentions among university students. Although the differences between Males and Females were not significant for three of the relationships, the applicability of the TPB to measure entrepreneurial intentions has been supported.

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Competing Interests

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Appendix

1. **Gender** Male[ ] Female[ ] Prefer not to say[ ] Other[ ]
2. **How old are you?** [ ]Less than 20 yrs [ ]20-24 yrs [ ]25-29 yrs [ ]30-34 yrs [ ]35 & over [ ] No response
3. **Are your parents currently self-employed?** [ ]YES [ ]NO

Based on your opinion, please indicate the most appropriate response with the scale given below. (1) SD = Strongly Disagree (2) D = Disagree (3) N = Neutral (4) A = Agree (5) SA = Strongly Agree

ATTITUDE TOWARDS ENTREPRENEURSHIP						
4	Being an entrepreneur implies more advantages than disadvantages to me	1	2	3	4	5
5	A career as an entrepreneur is attractive for me	1	2	3	4	5
6	If I had the opportunity and resources, I'd like to start a firm	1	2	3	4	5
7	Being an entrepreneur would entail great satisfactions for me	1	2	3	4	5
8	Among various career options, I'd rather be an entrepreneur	1	2	3	4	5
PERCEIVED BEHAVIORAL CONTROL						
9	Start a firm and kept it working would be easy for me	1	2	3	4	5
10	I am prepared to start a viable firm	1	2	3	4	5
11	I can control the creation process of a new firm	1	2	3	4	5
12	I know the necessary practical details to start a firm	1	2	3	4	5
13	I know how to develop an entrepreneurial project	1	2	3	4	5
14	If I tried to start a firm, I would have a high probability of succeeding	1	2	3	4	5
	ENTREPRENEURIAL INTENTIONS					
15	I am ready to do anything to be an entrepreneur	1	2	3	4	5
16	My professional goal is to be an entrepreneur	1	2	3	4	5
17	I will make every effort to start and run my own enterprise	1	2	3	4	5
18	I am determined to create a firm in the future	1	2	3	4	5
19	I have very seriously thought of starting a firm	1	2	3	4	5
20	I have got the firm intention to start a company some day	1	2	3	4	5
	ATTITUDE TOWARDS ENTREPRENEURSHIP EDUCATION					

21	My university helps students to build required network for starting a firm	1	2	3	4	5
22	My university has well-functioning infrastructure to support the new start-up firms	1	2	3	4	5
23	My university arranges for mentoring and advisory services for would-be entrepreneurs	1	2	3	4	5
24	My university uses its reputation to support students that start a new business	1	2	3	4	5
25	My university provides creative atmosphere to develop ideas for new business start-ups	1	2	3	4	5
26	My university provides students with ideas to start a new business firm	1	2	3	4	5
27	My university provides students with the financial means needed to start a new business	1	2	3	4	5
28	My university motivates students to start a new business	1	2	3	4	5
29	My university provides students with the knowledge needed to start a new business	1	2	3	4	5
30	My university arranges lectures of successful entrepreneurs for experience-sharing	1	2	3	4	5
31	My university creates awareness of entrepreneurship as a possible career choice	1	2	3	4	5
32	My university brings entrepreneurial students in contact with each other	1	2	3	4	5
33	My university offers project work focused on entrepreneurship	1	2	3	4	5
34	My university offers traineeship study in entrepreneurship	1	2	3	4	5
35	My university offers elective courses on entrepreneurship	1	2	3	4	5
36	My university offers a bachelor or master study in entrepreneurship	1	2	3	4	5
37	My university arranges conferences and workshops on entrepreneurship	1	2	3	4	5
38	My university organizes business plan competitions and case teaching for entrepreneurship	1	2	3	4	5
	SUBJECTIVE NORM					
39	My closest family members think that I should pursue a career as an Entrepreneur	1	2	3	4	5
40	My closest friends think that I should pursue a career as an entrepreneur	1	2	3	4	5
41	People who are important to me think that I should pursue a career as an entrepreneur	1	2	3	4	5

CHAPTER SEVEN

GLOBAL DISCUSSION OF RESULTS

7.1 Introduction

The focal point of this chapter is a global discussion of the four papers in the context of international comparisons of entrepreneurial intention. That is, a discussion of the core elements in the TPB in an international context. This section will specifically focus on the Comprehensive Conceptual Framework in chapter one. The reason for this attention is that all the four papers fundamentally dwell on the TPB. According to Lortie and Castogiovanni (2015) the entrepreneurship literature that has used the TPB has grown considerably over the last twenty years. Furthermore, the TPB is the preferred model for this study because of its advantages when applied to the academic environment (Goethner, Obschonka, Silbereisen, & Cantner, 2012; Obschonka, Goethner, Silbereisen, & Cantner, 2012; Obschonka, Silbereisen, Cantner, & Goethner, 2015). Wahidmurni, Zuhriyah, Efiyanti and Abdussakir (2020) sampled twenty articles of research conducted in 19 countries and 5 continents (Asia, Africa, Australia, America and Europe) that tested 117 hypotheses. They stressed that demographic variable (e.g. education, gender, age, working experience) cannot be used to predict entrepreneurial intention well due to inconsistency in the test results. Similar findings were made by Genty, Idris, Wahizat, Wahat and Kadir (2015). Hence, the researcher's decision to concentrate mainly on the core TPB variables in the global discussion, notwithstanding the presence of other constructs in the various conceptual frameworks. According to Ajzen (1991), attitudes, subjective norms, and perceived behavioural control have proved to be highly accurate predictors of behavioural intentions. Yusof and Jain (2010) examined 72 articles on entrepreneurship in the university context, classifying them into three categories: entrepreneurial university, technology transfer in the university and academic entrepreneurship. They identified 16 papers published between 1989 and 2006 and what stood out were the main factors affecting entrepreneurial intention of students.

Liñán and Fayolle (2015) identified five classes of papers on entrepreneurial intentions, with no conflict emerging between the categorizations made by each researcher. Group 1 addressed the core model, methodological and theoretical issues. The second category revolved around the influence of personality traits, psychological factors, demographics or experience on entrepreneurial intention. The third group discussed the relationship between education programs and entrepreneurial intention. The fourth group of papers focused on the influence of regional, cultural or institutional environments on entrepreneurial intentions. The fifth group examined the relationship between entrepreneurial process and intention-behaviour. Though Liñán and Fayolle (2015) proposed a sixth category, this thesis covers at least category 1-4.

The subsequent section of this thesis will seek to compare the entrepreneurial intentions among tertiary students in the two countries and place the discussion in a global context.

7.2 Application of Theory of Planned Behavior to explain Entrepreneurial Intentions in Spain and Ghana

The results from the four papers indicate the usefulness of the TPB in the explanation of the variance of entrepreneurial intentions. With respect to the first paper (Going down memory lane in the application of Ajzen's Theory of Planned behavior to measure entrepreneurial intention: An SEM-PLS approach), it reported 44.2% of the variance of entrepreneurial intention and the second paper (entrepreneurial intentions among MBA students) registered 89%. Regarding the Spanish students, the third paper (Entrepreneurial Intentions: The Moderating role of Parental Self-employment) and fourth paper (Impact of attitude towards entrepreneurship education and role models on entrepreneurial intention) reported 68.8% and 71.2% respectively for the variance of entrepreneurial intention. The findings indicate support for the TPB as a model for predicting entrepreneurial intentions in Spain and Ghana. According to Engle et al. (2010), TPB's explanatory power varies greatly from one country to another, with an adjusted R square fluctuating between 0.09 in Egypt and 0.42 in the USA and Spain. Thus, Engle et al.'s (2010) results submit that the TPB successfully predict entrepreneurial intent in each of the 12 countries

they studied, though the significant contributing model element differ by country as does the percent of the variance explained by the model. A study conducted among South African students indicates TPB's usefulness as it explains 27% of the variance of entrepreneurial intention (Gird & Bagraim, 2008). Rueda, Moriano and Liñán (2015) surveyed 3223 Spanish university graduates and reported that attitude, subjective norm, and self-efficacy positively correlated with entrepreneurial intentions. Miranda, Chamorro-Mera and Rubio (2017) examined 1,178 Spanish university academics in 82 universities. Miranda, Chamorro-Mera and Rubio's (2017) study reported 56.8% of the variance of entrepreneurial intention, which was higher than previous on academic entrepreneurship (Fernández-Pérez, Alonso-Galicia, Fuentes-Fuentes, & Rodriguez-Ariza, 2014; Goethner, Obschonka, Silbereisen, & Cantner, 2009) of 35-45% respectively. The 2015/2016 GEM report (Kelley, Singer, & Herrington, 2016) places Spain with 5.6% entrepreneurial rate, which is below the mean of European countries (12.8) or of the USA (12.4). The entrepreneurial intentions' average for the African region is 33.4%, according to the GEM Global Report for 2017. Giacomin et al. (2011) surveyed students from five countries (United States, China, India, Spain and Belgium) of 2,093 students and found that American, Asian and European students do not share the same entrepreneurial intentions. Thus, differences existed among the students with respect to their entrepreneurial intention and dispositions as well as motivation and perceived barriers to business startup. For instance the study claimed that, Chinese students were more interested in public administration career compared to the other four countries. However, Spanish students, compared to the other four nations, displayed a strong entrepreneurial intention and occupational aspirations of working in their own business. Giacomin et al.'s (2011) finding was inconsistent with the GEM report that revealed Spain as one of the countries with the weakest entrepreneurial intention (Bosma, Jones, Autio, & Levie, 2007).

7.3 Antecedents of Entrepreneurial Intentions

All the four papers reported a positive correlation between ATE and EIs. In a study of university students in Puerto Rico and Catalonia, it came out that majority of the students showed a positive perception towards new venture desirability (92.2% in Puerto Rico and 74.0% in Catalonia)

(Veciana et al., 2005). Harris and Gibson (2008) examined the entrepreneurial attitudes of students enrolled in several universities in the USA and found that the majority of the students studied possess entrepreneurial attitudes.

Regarding the relationship between PBC/ESE and entrepreneurial intention, three of the papers reported significant relationship between them. The second paper (Entrepreneurial Intentions among MBA students) showed an insignificant relationship between entrepreneurial self-efficacy and entrepreneurial intentions. At least the undergraduate students in both counties have positive and significant relationship PBC and entrepreneurial intentions. Spanish undergraduates exhibit that the perception of feasibility is a predictor of entrepreneurial intention (Lanero, Vázquez, Gutiérrez, & García, 2011; Rosado-cubero, Freire-rubio, & Hernández, 2021).

According to the TPB, values shared within a culture would impact on the motivational intention antecedents. Etzioni (1987) suggests that supportive culture would help in legitimating entrepreneurship. Since SN reflects the perceived social pressure to start a firm, the impact of cultural values might be stronger on this antecedent (Ajzen, 2001; Begley & Tan, 2001). Subjective norm tends to play a stronger role in explaining intention in collectivist cultures and weaker in individualistic societies (Indarti & Kristiansen, 2003). The US ranks high on individualism (Fernandez, Carlson, Stepina, & Nicholson, 1997; Hofstede, 1980), Spain ranks moderately and China ranks low (Hofstede, 1980). There is a connection between individualism and entrepreneurial activity (Hayton, George, & Zahra, 2002), which implies ceteris paribus; Spain is likely to have high and positive inclination towards entrepreneurship than Ghana because Ghana is a typical collectivist society. The general collectivist nature of most sub-Saharan culture is associated with lower levels of extraversion (Hofstede & McCrae, 2004). Rashid (2019) suggests that entrepreneurial activities in sub-Saharan might need the fostering of alternative sets of soft skills, thus training and education approaches, compared with stable, western countries. However, the relationship between subjective norms and entrepreneurial intentions was positive for three of the papers. A study conducted in Germany, India, Poland, Spain, and the Netherlands confirms that subjective norms in certain countries do not explain entrepreneurial intention (Moriano et al., 2012). In a sample of Spanish students, it came out that

subjective norms are not significant in explaining entrepreneurial intention while attitudes and PBC are (Liñán & Chen, 2009; Liñán et al., 2011).

Subjective norms impacted positively on ATE and PBC respectively for the papers under discussion. Peng, Lu and Kang (2012) surveyed 2,010 university students from 9 universities in China and reported that subjective norm has significant positive impact on their entrepreneurial attitude and entrepreneurial self-efficacy.

7.4 Entrepreneurship Education and Entrepreneurial Intentions

Entrepreneurship education has been acknowledged as one of the important variables that impact students' career choices (Fayolle, 2013; Franke & Lüthje, 2004; Wei et al., 2019). A study by Wahidmurni et al. (2020) emphasized that entrepreneurship education was the only external factor that had the greatest support in predicting entrepreneurial intention of students. Some scholars (Basu & Virick, 2008; Misoska, Dimitrova, & Mrsik, 2016) profess that entrepreneurship education has an impact on SNs, ATE and PBC. This results means that a higher level of readiness for entrepreneurship through education, show a more positive ATE, perceive that entrepreneurship is valued higher by their significant others and perceive that they can be more successful entrepreneurs. Prior research asserts that higher education impact on ATE, intention and actions (Lanero et al., 2011; Rosado-cubero, Freire-rubio, & Hernández, 2021).

One of the relationships that Paper 1 investigated was the impact of entrepreneurship education on the antecedents of entrepreneurial intentions. Though we applied a T-statistics value of 1.96 to reject all the relationships (PEE→SN, PEE→ATE and PEE→PBC), a moderate significant relationship can be inferred. For instance, with PEE→PBC, the relationship is moderately significant. Same can be said about PEE→SN and PEE→ATE. The introduction of entrepreneurship in higher education can affect students' attitude towards entrepreneurship and entrepreneurial career (Kassean et al., 2015; Kubberød & Pettersen, 2017). And universities can serve as a breeding ground for increasing entrepreneurial spirit and culture. Schwarz, Wdowiak,

Almer-Jarz, & Breitenecker (2009) found stated that educational environment had a significant impact on entrepreneurial intentions. Attitude towards entrepreneurship education and supportive environment impact on entrepreneurial intention (Obschonka, Hahn, & Bajwa, 2018). The relationship between entrepreneurship education and ATE was insignificant for the Spanish students as reported in the fourth paper. But the relationship between entrepreneurship education and PBC was positive but insignificant. Packham, Jones, Miller, Pickernell and Thomas (2010) compared students' attitudes toward entrepreneurship in three European countries and found that while entrepreneurship education is an important factor for entrepreneurial intentions in France and Poland, it has a negative impact on German male students. Gieure, Benavides-Espinosa Roig-Dobón (2020), in their study of students enrolled in 74 universities across 34 countries indicated that the university's role in the development of the entrepreneurial process is central. University is where majority of students develop and foster an entrepreneurial spirit, which gives them an inclination to venture into an entrepreneurial business. This spirit is ignited when students are surrounded by the right environmental variables such as access to knowledge, training, mentoring, advice, and work experience. Hence, university can enhance students' vocation and transform them into future entrepreneurs.

Using data from almost the entire population of Italian university graduates Meoli, Fini, Sobrero, & Wiklund (2020) suggested that universities, by facilitating the exchange of information and acquisition of knowledge, support graduates in the process of new venture creation. They argued that graduates who have high entrepreneurial intention and are exposed to high organizational support toward entrepreneurship are more likely to create a new venture compared to those exposed to low organizational support. Furthermore, they observed that for low level of organizational toward entrepreneurship, intention never translate into new venture creation. Therefore, university's support is critical for graduates making career choices, and in particular for those who have the intention to pursue an entrepreneurial career. Though this thesis used different scales to measure the entrepreneurship education construct, there is the need to take national differences into considerations when developing entrepreneurship education programmes (Carayannis, Evans, & Hanson, 2003; Lee, Chang, & Lim, 2005; Lee & Peterson, 2000; Lüthje & Franke, 2003; Mitchell, Smith, Seawright, & Morse, 2000; Pittaway & Cope, 2007). Some scholars propose that theories conceived and tested in economically developed

countries are used on a large scale in countries with emerging countries without any attempt of adaptation (Bruton, Ahlstrom, & Obloj, 2008). They suggest that occasionally, important differences among countries require adapting or proposing new and more useful for those different environments.

7.5 Parental self-employment/Role Models and Entrepreneurial Intentions

According to Rosado-cubero, Freire-rubio and Hernández (2021), family environment positively impacts on entrepreneurship. Parental self-employment boosts graduates' confidence (Puri & Robinson, 2013) and entrepreneurial interests (Luis-Rico et al., 2020; Schmitt-Rodermund, 2004). Fellnhofer and Puumalainen (2017) suggest that there is significant positive influence of exposure to entrepreneurial role models on both entrepreneurial desirability (ATE) and feasibility (PBC). Thus entrepreneurial role models inspire entrepreneurial attitudes. Building on Ajzen's (1991) TPB and Bandura's (1977) social learning theory, this thesis extends current theory by examining the power of entrepreneurial role models on entrepreneurial desirability (attitude) and feasibility (self-efficacy). Bandura's (1977) social learning theory profess that individuals learn from each other through observation, imitation and modelling. This thesis reports that exposure to entrepreneurial role models has a significant but negative effect on SN. According to Bandura (1982), self-efficacy can be enhanced through exposure. And this is applicable to families or close relatives, close friends and contacts. Pruett et al. (2009) examined over 1,000 students at universities in the USA, Spain, and China and revealed that exposure to personal entrepreneurial role models is positively related to entrepreneurial intention. All other things being equal, access to role models should have a positive impact on an individual's entrepreneurial intentions by helping to overcome fear, lack of experience, and various practical challenges like funding, bureaucracy, networking etc. According to Veciana et al. (2005), students in the Catalonia region whose family members are entrepreenurs have a higher inclination to create a new venture.

7.6 Gender differences on entrepreneurial intentions

According to Rosado-cubero, Freire-rubio and Hernández (2021), males have a greater propensity for entrepreneurship. The GEM (2018/2019) Spanish report indicated that women scored lower in perceptions that encourage entrepreneurial behavior (perception of business opportunities, confidence in skills to be entrepreneurial and knowledge of other entrepreneur). Out of the new companies established in Spain in 2019, 53.1% were founded by males and 46.9% by females (Ruiz-navarro, Ramos-rodríguez, & Lechuga-sancho, 2019). Espíritu-Olmos and Sastre-Castillo (2012) found similar findings. In the Catalonia region, males exhibit higher desirability and intention to create new firm. In the same study (Veciana et al., 2005). Paper four investigated gender differences in entrepreneurial intentions among Spanish students. We did not find a significant relationship between Males and Females about their entrepreneurial intentions for some relationships. But this study found that the relationship between PSE and PBC is stronger for Males than Females.

7.7 Entrepreenurial Intentions of Spanish and Ghanaian Students Compared

This section attempts to use a 'simple' descriptive analysis to compare the entrepreenurial intentions of the two countries. We termed the method as 'simple' because the measurement instruments used to measure the entreprenurial intention construct in the two countries were somehow similar but not necessarily the same. Under this section, we focus primarily on papers 1 and 4.

For paper 1, all the respondents were undergraduates and over 90% for paper 4. The study used 4 items to measure entrepreneurial intention for the first paper i.e.; I am determined to have my owen business in the future, I have always wanted to work for myself, If I have the opportunity I will start my own business venture, and Do you plan to be self-employed in the foreseeable future after your graduation? Regarding, 'I am determined to have my own business in the future, 392 (68.3%) and 150 (26.1%) chose 'Strongly Agree' and 'Agree' respectively. With respect to, 'I have always wanted to work for myself', 317 (55.2%) and 183 (31.9%) chose

‘Strongly Agree’ and ‘Agree’ respectively. With regards to, ‘If I have the opportunity, I would start my own business venture, 342 (59.6%) and 189 (32.9%) chose ‘Strongly Agree’ and ‘Agree’ respectively. On the question of, ‘Do you plan to be self-employed in the foreseeable future after your gradaution?, 458 (79.8%) responded YES and 116 (20.2%) responded NO.

For paper 4, the study used six items to measure entrepreenurial intention. Concerning item 1 (I am ready to do anything to become an entrepreneur), 27 (8.5%) and 97 (30.4%) responded Totally Agree and Agree respectively, whilst 115 (36.1%) were neutral (neither agree nor disagree). In respect to 2 (My professional goal is to be an entrepreneur), 27 (8.5%) and 48 (15.0%) responded Totally Agree and Agree respectively, whilst 160 (50.2%) were neutral (neither agree nor disagree). In reference to item 3 (I will make every effort to start and run my own enterprise), 24 (7.5%) and 86 (27.0%) responded Totally Agree and Agree respectively, whilst 107 (33.5%) were neutral (neither agree nor disagree). Pertaining to item 4 (I am determined to create a firm in the future), 50 (15.7%) and 78 (24.5%) responded Totally Agree and Agree respectively, whilst 122 (38.2%) were neutral (neither agree nor disagree). Regarding item 5 (I have serious thought of starting a firm), 47 (14.7%) and 108 (33.9%) responded Totally Agree and Agree respectively, whilst 83 (26.0%) were neutral (neither agree nor disagree). Relating to the last item (I have got the firm intention to start a company some day), 47 (14.7%) and 107 (33.5%) responded Totally Agree and Agree respectively, whilst 90 (28.2%) were neutral (neither agree nor disagree).

We can infer from the analyis from the two countries that students from Ghana, seem to display a higher entreprenurial intention than their counterparts in Spain. This is because the respondents responded ‘positively’ to the construct on entreprenurial intention, whereas the students from spain seems to exhibit a ‘negative’ inclination towards entrepreneurial career. If fact, majority of the respondents from Spain seems to be undecided with respect their entrepreeneurial intentions. From the foregoing, we say that there are differences between the Spanish and Ghanaian students with repect to their entreprenurial intentions. This finding is in line with prior studies (Davey, Plewa, & Struwig, 2011; Iakovleva, Kolvereid, & Stephan, 2011) that compared the EIs of tertiary students in developed and developing countries and established that students in developing countries had stronger intentions for entrepreneurship than those in developed ones.

However, authors like Estay (2004) and Paul, Hermel and Srivatava (2017) share contrary views. Thus, they suggest that respondents from developing countries do not have stronger entrepreneurial intentions than those from developed countries. According to Paul et al. (2017), respondents from developing countries score higher on the antecedents of entrepreneurial intentions: attitudes, SNs, and PBC than those from developed countries. Nguyen et al. (2009) surveyed three countries; Vietnam, Taiwan and USA and found out that the Vietnam sample had higher scores on intention to create new venture than both the US and Taiwan. The Vietnam sample was also higher than Taiwan on the confidence in creating new ventures.

7.8 Other Variables (Social Valuation, Closer Valuation & Entreprenurial Skills)

Estay (2004) offers a cross-cultural analysis of the entrepreneurial envorinment in France and USA and found that the USA has experienced a greater level of entrepreenurship than France. He argued that the relative lethargy in France is mainly due to two reasons; financial challenges faced by small businesses and differing perceptions of the entrepreenurial environment. In the opinion of Teixeira, Casteleiro, Rodrigues and Guerra (2018) government policy refers to entrepreneurial practice targeted at encouraging entrepreneurship by providing a conducive environment for entrepreneurs. They argued that government policies, among other factors as the most important variables affecting entrepreneurial intentions of 22 European Union countries. Obaji and Olugu (2014) argue in favour of government policy, by emphasizing that government should lead the entrepreneurial development by providing the much needed resources within its capacity. The resources may include the provision of the right environment for businesses in order to promote entrepreneurship. However, as claimed by Teixeira et al. (2018) government support and policies do not positively impact entrepreneurial intention. One of the relationships studied in the second paper (Entrepreneurial intention among MBA students) is environmental support and entrepreneurial intention of Ghanaian students, and the relationship was positive and significant. The third paper (Entrepreneurial Intentions: The Moderating Role of Parental Self-Employment) also examined some environmental factors on the antecedents of entrepreneurial

intentions of Spanish students. Apart from SV→PBC and CV→ATE, all the other relationships were significant.

CHAPTER EIGHT

FINAL CONCLUSIONS

This study sought to examine the entrepreneurial intentions among developed (Spanish) and developing (Ghanaian) tertiary students. Specifically, the thesis examined the entrepreneurial intentions of technical university students in Ghana; the entrepreneurial intentions of MBA students in Ghana; the moderating role of parental self-employment/Role Models on entrepreneurial intentions among Spanish students, and the role of gender on the relationship between attitude towards entrepreneurship education and role models and the antecedents of entrepreneurial intentions. The main research design applied in all the four papers was the quantitative type and data are analysed with the help of Structural Equation Modelling (SEM).

This thesis aimed to contribute to understanding of entrepreneurial intentions of students from Spain and Ghana. Similarities between students' intentions and perceptions of entrepreneurship and entrepreneurs were clear in the findings and motivators for employment/self-employment were similar across the samples. For instance, all the four papers confirm the TPB. However, some differences emerged indicating higher entrepreneurial intentions among the respondents from Ghana, though we used a 'simple descriptive analysis' for this comparison.

It noteworthy to indicate that each of the four papers that make up the thesis has an element of novelty characteristic in them. For instance, the first paper study is one of the pioneering studies to adopt the TPB and structural equation modelling (SEM) to the technical university system in Ghana after conversion of the nation's public polytechnics into a technical one. Also, the second paper also applied the core TPB constructs and modified it by introducing two additional constructs (Locus of Control and Environmental Support). This modified version of the TPB is a novelty used in this thesis to examine the entrepreneurial intentions of private university students. Further, the third paper follows the cognitive approach and applies an Entrepreneurial Intention model, adapted from the TPB to examine how parental self-employment/role models affect the relationship between the antecedents of EI and social valuation, closer valuation, entrepreneurial skills, and environmental support. This study is one of the pioneering works to

carry out a Multi-Group Analysis (MGA) to assess the relationship between respondents with parental self-employment and respondents without role models, using the entrepreneurial intention model. The last paper examined the role of gender on entrepreneurial education and role models by carrying out an MGA, and this is also a novelty.

It is important to emphasise that all the four papers in this thesis used positivist methodology. However, humanistic approaches may be considered as a revealing alternative way in designing and conducting research on entrepreneurial intentions, where wider and qualitative methods are required (O'Neill & McGuirk, 2014). It would have been interesting for this study to strike a balance positivism and humanism, and this provides an opportunity for further studies. Also, this study only examined entrepreneurial intentions and not behavior. Intentions are strong predictors of behaviors associated with a single action (e.g., voting); that are under strict volitional control (e.g., eating healthy); that are simple as opposed to complex (e.g., choosing a healthy menu option); where ultimate outcomes occur soon after the act (e.g., voting in an election); and where there is little uncertainty regarding the link between actions and outcomes (e.g., a blood donation) (Ajzen 1985). As a context for intentional action, this thesis did not satisfy the aforementioned condition. Therefore, focusing on entrepreneurial intentions only, or using intentions as a proxy for action, represents a limitation to the insights into entrepreneurial action (Adam & Fayolle 2015). This implies that the time-lag problem has not been discussed in this thesis. Therefore future studies should design that cover time in longer perspectives.

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[i] Appendix 7 (A1) and 8 (B1) were as a result of deletions of loadings that didn't meet the MICOM run. Thus, some of the items on Appendix 7 (B1) and 8 (B2) were deleted before running MICOM. However, the results were consistent with respect to ATE, PBC, ES, ENSUP and EI, when we were comparing respondents with PSE and respondents without PSE as depicted on the figures.