Personal Motivations and Entrepreneurship Career Intentions: Testing Theory of Planned Behaviour

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***Abstract*: This study evaluates how personal attitudes, subjective norms, and perceived behavioural control can influence an individual's intentions to become an entrepreneur based on planned behaviour and individual innovative cognitive style framework. A sample of 246 students was surveyed in the Sultan Qaboos University (164 females & 82 males). Three models were constructed in which the variables were hierarchically presented into the regression equations. Firstly, the theory of planned behaviour model comprises only those variables stated by the theory. Secondly, the innovative cognitive style model comprised those extracted as the innovativeness style measurements. The third model combined those variables specified the and variables of the. The obtained results suggest a positive link between personal attitudes, subjective norms, individual behaviour control and entrepreneurial intentions, and the innovative cognitive style and entrepreneurial intentions, consequently supporting this research hypothesis.**

***Keywords:* entrepreneurship career intention; planned behaviour theory; the innovative cognitive style; personal attitudes; subjective norms; perceived behavioural control.**

I. INTRODUCTION

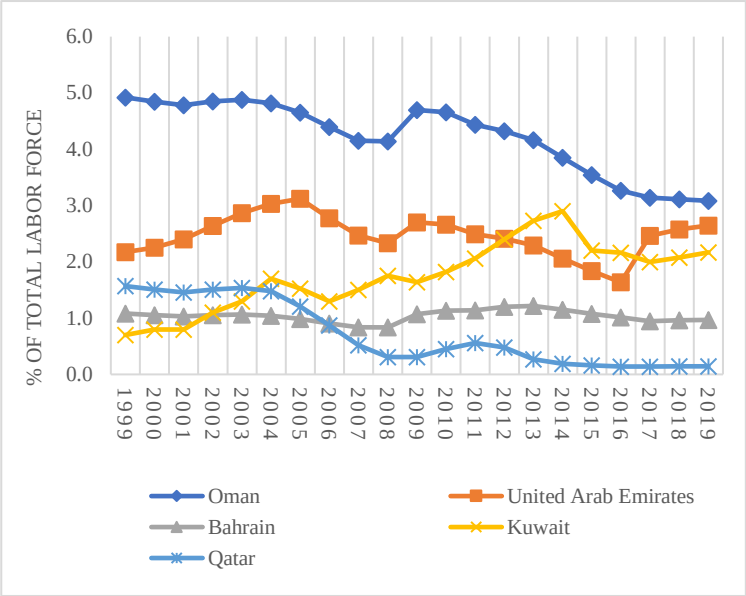
The Global economic growth in 2021 is estimated at 5.4 per cent. Generally, this would leave 2021 G.D.P. some 6.5 percentage points lower than in the pre-COVID-19 projections of January 2020 (I.M.F. 2020). These statistics indicate that countries' economies have the low capability to create sufficient jobs, improve employment quality in current jobs, and share economic growth gains. In many countries, an increasing number of university graduates do not find a job in the sector they were trained in (Rui *et al.,* 2020). Self-employment is undeniably the oldest approach through which people offer and sell their labour in a market economy (Parker 2004). The earliest influential economists expressed the entrepreneurs' role and their function in the economies of the day. Richard Cantillon, in 1755, highlighted the entrepreneur's importance as an arbitrageur or speculator, who conducts all exchanges and bears risk due to buying at specific prices and selling uncertain ones (Petur 2017). According to (Baumol 1968), the entrepreneur is one of the most fascinating and indefinable characters. He has long been considered the apex of the hierarchy that governs its behaviour and thus bears substantial responsibility for the free enterprise society's strength. Nevertheless, entrepreneurship has long been a well-thought-out crucial economic growth mechanism (Schumpeter 1912; Schumpeter 1934; Baumol 1968; Landes 1998; Zoltan 2010 and Premand et al. 2016).

According to the Oxford Business Group report (2016), the Middle East's most critical concern is its demographic structure's shifting composition. A large cohort of young people is challenging policymakers, with youth policy affecting security, education, the labour market, and welfare programs, amongst other areas. Assumed the comparative stability and wealth of the G.C.C. states, this issue is not often related to the region. Nevertheless, managing massive and increasing young inhabitants is just as much of a challenge in the Gulf as somewhere else in the Middle East. The states of G.C.C. are at changing phases of their demographic shifts and undergoing differing fertility and population growth rates. The population percentage of 25, known as the "youth bulge," diverges from 25% in Qatar to 50% in Oman. It is calculated at 34% in the U.A.E, whereas it is 35% in Bahrain, 40% in Kuwait, and 46% in Saudi Arabia.

1.1 Problem statement

The Sultanate population reached 4,645,249 people at the end of March 2020, including 2,708,419 Omanis, representing 58.3 per cent of the total population (ONA 2020). The share of unemployed youth of the total labour-power for the age cluster between 15 and 24 years from 2017 in Oman was 48.9 per cent (Statista, 2020). Oppositely, the share of unemployed youth as a portion of Qatar's total labour-power was merely 1.1 per cent. In contrast, the average youth unemployment rate in G20 countries is about 18.2 per cent. The unemployment trend is shown in Figure 1 in the G.C.C. from 1999 to 2019. In the year 2019, Oman was found to occupy the highest unemployment per cent (3.1%) compared to United Arab Emirates (2.6%), Kuwait (2.2%), Bahrain (1%), and Qatar (01%).

Figure 1: Unemployment as a percentage of the total labour force in some of the G.C.C. States



Source: Data from World Bank (2020) - https://data.worldbank.org/indicator/.

Like other countries in the G.C.C., Oman has concentrated on diversifying its economy, consolidating the private sector, and implementing policies to empower the local people to start their businesses. Generally, this awareness is rather most across the region did not traditionally do. Statistics about the Gulf's native population employments show a high rate of working in the public sector. However, in Oman, that is gradually altering. Royal Decree established the Public Authority for Small and Medium Enterprises Development (PASMED) (36/2013) mandated to enhance the role and development of S.M.E.s in Oman, which was later re-branded as 'RIYADA.' In 2013, there were only 323 national Omanis who had registered their businesses. In contrast, that number went up to 4,300 in 2015 (David 2018).

In the last few years, youth joblessness rates have been an important issue. Roughly 50% of the Omanis youths are jobless (Export Enterprises S.A. 2020). Oman witnessed an 800% rise in government employees in four decades. According to the NCSI, nearly 250,000 (84.5%) people were employed by the public sector by the end of 2018 (Times of Oman 2019). Consequently, the saturated public sector in Oman is the leading cause of the high unemployment rate. Subsequently, it was the core incentive toward self-employment. Despite the challenges in the public sector, leaving a private-sector job is typical for Omanis, with most youths preferring government jobs - for job security and retirement benefits - despite the numerous opportunities offered by private sector establishments (Al Haremi 2015). Currently, graduated students search for entrepreneurship education, capable of equipping them with the required entrepreneurial skills and knowledge to succeed in running a business or creating a job, taking advantage of the current entrepreneurial opportunities (Keat 2011 found in Tsordia et al. 2015).

Entrepreneurship education is one of the critical tools that accelerate entrepreneurial attitudes. However, the factors that govern the individual's decision to start a project are still not fully understood in the Omani context. There is a need to explain which elements play the most significant role in determining the personal decision to start a firm. Therefore, it is vital to study entrepreneurial motivation and intention for its importance to economic development and a better living standard. In this background, this study aims to explore the entrepreneurial intentions of university students, more specifically Sultan Qaboos University students in Colleges of Engineering, Economics and Political Sciences, Agriculture and Marine Sciences, Science, and Art in the Sultanate of Oman. This research implements the Theory of Planned Behavior (TPB) and the individual innovative cognitive style (I.C.S.) model to determine students' entrepreneurial motivation and entrepreneurship career intention. More specifically, to examine the influence of personal attitudes toward entrepreneurship, subjective norms, and perceived behavioural control, as three intention antecedents recognized by the theory of planned behaviour and the innovative cognitive style, on an individual's entrepreneurial intentions.

II. LITERATURE REVIEW AND HYPOTHESES

2.1 Entrepreneurial concept

As self-employment and entrepreneurship become increasingly crucial in our modern economies (Parker 2004). The concepts of entrepreneurship and entrepreneurs lack a clear and unique definition. An entrepreneur creates a new business in the face of risk and uncertainty to realize profit and growth by identifying significant opportunities and assembling the necessary resources to capitalize on them (Scarborough et al., 2016). Ajzen (1991) and Shapero (1982) define entrepreneurship as "an attitude that reflects an individual's motivation and capacity to identify an opportunity and to pursue it to produce new value or economic success." Shapero-Sokol (1982) argues that entrepreneurship has a passive and active element to induce changes in oneself.

Similarly, the ability to welcome and support innovation carried by exterior influences, by accepting change, taking responsibility for one's actions - positive or negative - to accomplish what we start, recognize where we are going to set objectives, and realize them have the inspiration to succeed. Moreover, Shapero-Sokol (1982) summarized entrepreneurship's main characteristics as identifying one's strengths and weaknesses, displaying proactive behaviour, being unique and creative, understanding risk, responding positively to changes, and the disposition to show initiative. Entrepreneurship needs time, including mutually substantial planning and a high degree of cognitive processing.

Buera (2009) describes an entrepreneur as an individual who invests his or her capital and allocates his or her total labour to produce output using an agent-specific technology and reports having a definite amount of business equity. While Evans (1989) considers an entrepreneur as a person who organizes,

manages, and supervises manufacturing issues to supply goods and services. Concerning Anu (2007), "entrepreneurs are self-employed people running their own company" and are the primary development source. Several studies argue that individuals' main determinants when choosing to become self-employed are age, gender, education, family background, wealth, and financial resources (Carroll and Mosakowski, 1987; Bates, 1995; Parker, 2004; Georgellis et al., 2005).

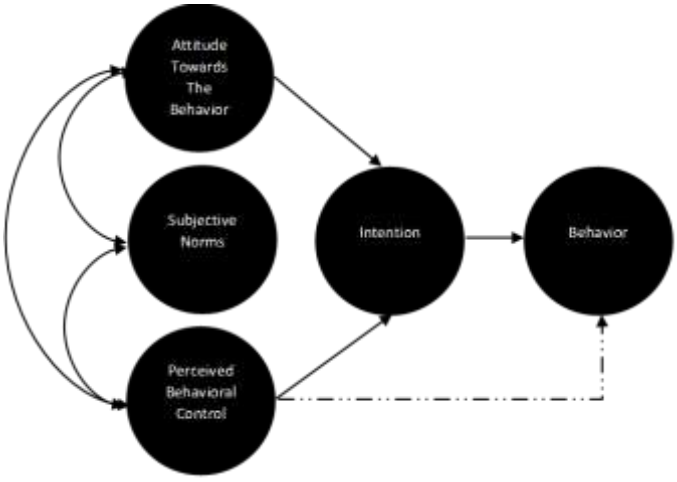
2.2 Theory of Planned Behavior and Entrepreneurial Intentions

The entrepreneurship literature applying the Theory of Planned Behavior (TPB) has increased noticeably over the last two decades. The TPB has grown to be one of the most applied theories in describing and forecasting individuals' behaviours (Lortie and Castogiovanni 2015). The TPB theory is an extension of the theory of reasoned action made necessary by the original model's limitations in dealing with behaviours over which people have incomplete volitional control (Ajzen 1991). The TPB has been used to explain and predict intentions and behaviours in all sorts of research fields, such as health sciences (Godin and Kok 1996), psychology (Austin and Vancouver 1996), leisure studies (Hagger et al. 2003), and marketing (Pavlou and Fygenson 2006). Also, the TPB has been utilized to explain and predict planned behaviours in entrepreneurship.

According to Ajzen (1991), TPB's key concurrences are that behaviour is led by one's intentions to achieve the behaviour and perceived control over the behaviour. Additionally, attitudes determine the individuals' intentions toward the behaviour, subjective norms, and perceived control over the behaviour. Commonly, lots of human behaviour is intended; according to Krueger et al. (2000), it is challenging to envision starting a business where the emerging firm is launched merely as a conditioned response to a stimulus. Therefore, entrepreneurship is an intentional process in which individuals cognitively plan to carry out opportunity recognition, venture creation, and venture development.

Because of the TPB applicability, many entrepreneurship research has used Ajzen's (1991) model. The TPB's basic assumption is that some intentionality towards the behaviour leads to any planned behaviour, as explained in Figure 2. Intentions are recognized as capturing the motivational factors that influence behaviour. They indicate how complex an individual is willing to try and how much effort an individual is planning to exert to perform the behaviour (Lortie and Castogiovanni 2015). Therefore, the behaviour that an individual will perform is strongly correlated to achieve behaviour. This relationship amongst intentions and consequent behaviours has been verified by Armitage and Conner (2001) and Schlaegel and Koenig (2014) general and entrepreneurship specific meta-analysis. As Kolvereid (1996) explained, attitudes or beliefs do not directly predict behaviours; instead, these factors are either fully or partially captured by intentions. These mediated relationships between intentions, attitudes, subjective norms and perceived behavioural control are displayed in Figure 2.

Figure 2: Theory of Planned Behavior



Source: Ajzen 1991

Ajzen (1991) described the attitude one holds towards a behaviour as "the extent to which a person has a positive or negative evaluation or appraisal of the behaviour in question." Depending on how positive people evaluate behaviours, their consequent intentions will be established. The attitude construct was initially based on the Expectancy-Value Model of Fishbein and Ajzen (2008), which clarified that a provided outcome's subjective value affects the attitude directly proportional to the belief's strength (Armitage and Conner 2001).

Attitudes about the existing subjective norms for a particular behaviour are linked to the perceptions that individuals have about how positively or negatively others view the behaviour in question (Ajzen 1991). Which shows how essential referent others or groups approve or disapprove of performing a given behaviour. Essential referent others typically represent family members, other influential, and close friends. Subjective norms are essentially a function of salient normative beliefs (Armitage and Conner, 2001).

Perceived behavioural control indicates the perceived simplicity or complexity of performing the behaviour by an individual (Ajzen 1991); it results from past experiences, anticipated obstacles, and other factors impeding the behaviour's performance. The stronger the control, the more likely to develop consequent intentions to perform an individual's behaviour. Jointly, attitudes, subjective norms, and the P.B.C. have an additive influence on an individual's intentions, suggesting that it is likely for individuals to have high intentions. However, one or two of the antecedents preceding their intentions may be negligible.

2.3 Entrepreneurial Motivation

The importance of motivation is that it is the core of biological, cognitive, and social regulation and is the energy source,

direction, perseverance, and intention. Entrepreneurs tend to be more energetic than the average person; they tend to dream big and are motivated by achievement. Human behaviour is influenced by goals and motives, which indicates a strong linkage between motivations, intentions, and behaviour (Kim-Soon et al., 2014). Krueger and Carsrud (1993) studied that criticism on entrepreneurship intentions studies claimed a lack of basis to support intention-action linkage, although intentions have been centred as predictors of future action. The link has been misused as inferred or assumed. They argued that motivation provides the connection between intension-action, which implies that entrepreneurial motivation's underlying attitudes and goals should give rise to entrepreneurship intention (Kim-Soon et al. 2014). Edelman et al. (2010) assert that incentives could be the impetus to transmute a hidden intention that drives entrepreneurship and reaffirmed that it could be the missing link between intentions and action. It indicates that the necessary attitudes and goals of entrepreneurial motivation should give rise to entrepreneurship intention.

An investigation of the entrepreneur's factors and entrepreneurial motivation, Shook et al. (2003) developed a complicated dynamic entrepreneurship model which was built on the research result from Learned (1992) and Venkatraman (1997) and Shane (2003) works. In this model, they studied the influence of the entrepreneurial individuals, individual psychological characteristics, social characteristics, and cognitive characteristics on the entrepreneurial intentions, opportunities search, evaluation, and development. However, Edelman et al. (2010) restated secondary research in this area, and further research effort is needed.

2.4 Inventive cognitive style and entrepreneurial intentions

Several authors have seen individual cognition as a potentially relevant field in explaining entrepreneurial behaviour (see Allinson, Chell, and Hayes, 2000; Mitchell et al., 2002; Krueger, 2007; Pihie et al., 2013). Cognition is a forward-looking form of intelligence that paves the way for an actor's belief about the connection between the choice of activities and the consequent impact of those activities on outcomes (Armstrong and Hird 2009). Goldstein & Blackman (1978) described that cognitive style is the usual way a person processes and assesses information, resolves problems, and makes decisions. At the same time, Messick (1996) considers that cognitive styles are hypothesized as stable attitudes, preferences, or habitual strategies defining an individual's characteristic mode of understanding, recalling, thinking, and problem-solving.

Consistent with the above, Mitchell et al. (2002) characterizes entrepreneurial cognition as the behaviours of assessments, judgments, or decisions concerning opportunity evaluation, project creation, and growth. The characteristics of cognition involve individual beliefs and values, cognitive style, and intellectual processes (Sánchez et al., 2011). It is considered that entrepreneurs think and do things differently. According to Vaghely and Julien (2010), a cognitive perception in entrepreneurship examines the cognitive style, several beliefs, values, and several intellectual procedures and models associated with information and knowledge assessment, for instance, decision-making, problem-solving, and others, that entrepreneur's practice in the recognition and manipulation of opportunities in their environment. Regarding the decision to become an entrepreneur, Pihie et al. (2013) underline that entrepreneurship cognition offers the method of thinking and building entrepreneurial knowledge that empowers persons to evaluate their capabilities to achieve entrepreneurial tasks and roles and choose whether to pursue an entrepreneurial career. In that meaning, some researchers use the term 'cognitive style' to define ways that entrepreneurs perceive, organize, and use environmental information in a different way than non-entrepreneurs do (Sánchez et al., 2011).

Theories of innovative cognitive styles have become gradually more relevant in organizational research. Evidence shows that these cognitive styles are essential factors determining corporate and individual behaviour (Mirjana et al., 2018). The adaption–innovation theory has influenced research in various areas, including entrepreneurship and leadership. Adaption–innovation theory shows that individuals differ in how they make decisions, construe change, and solve problems (Mirjana et al., 2018). Some researchers showed that cognitive orientation for analysis or intuition affects their attitudes towards their entrepreneurial self-efficacy and, consequently, influences their plans to become entrepreneurs in the future.

The innovative cognitive style affects creativity and the introduction of new opportunities positively. Innovation is a specific characteristic of entrepreneurs as they must see and seize opportunities where others do not recognize them and provides creative and innovative solutions (Mirjana et al., 2018). The study aims to analyze whether individuals with an innovative cognitive style will show more intention towards entrepreneurship.

2.5 The Variable Nature of Entrepreneurship

As stated by Stevenson et al. (1990), entrepreneurship has attitudinal and behavioural components. Attitudinally, it refers to the willingness, which is sometimes referred to as an "entrepreneurial orientation," of an individual or organization to adopt new opportunities and take responsibility for influencing creative change. While, behaviorally, it involves the set of activities mandatory to evaluate an opportunity, define a business idea, assess and obtain the essential resources, and then operate and harvest a project.

Core entrepreneurial attitudes and behaviours are three main components: innovativeness, risk-taking, and proactiveness (Miller, 1983; Morris and Paul, 1987; Covin and Slevin, 1989). Innovativeness implies seeking creative, unique, or novel solutions to problems and needs, which take the form of new technologies and procedures, including new products and services. Risk-taking requires the willingness to devote substantial resources to opportunities having a realistic chance

of failure. These risks are typically moderate and calculated. Pro-activeness is focused on implementation to get an entrepreneurial idea to fruition. It broadly includes significant perseverance, adaptability, and a willingness to accept some liability for failure (Morris et al. 1994).

III. THE CONCEPTUAL FRAMEWORK

Figure 3 describes the research's conceptual framework, in which the relationship between entrepreneurial self-efficacy and entrepreneurial intention by adopting the planned behavioural theory and self-efficacy theory were examined. Bandura (1989) argued that an individual's beliefs to achieve a specific task virtually strongly affects his/her intention and behaviour. Whereas Ajzen (1991) suggested that a person's control belief influences attitudes toward behaviour and perceived behavioural control, it also affects his/her intention and behaviour. Consequently, besides a direct relationship between entrepreneurial efficacy and entrepreneurial intention, entrepreneurial intention is indirectly influenced by entrepreneurial self-efficacy through attitudes towards entrepreneurship and perceived behavioural control. Besides, this study also investigates both direct and indirect effects of subjective norms on entrepreneurial intention. Based on the literature review, the conceptual framework was implemented to develop research hypotheses. This section discusses the entrepreneurial theories, entrepreneurial intention models (E.I.M.s), the research model, and the research hypothesis.

3.1 Entrepreneurship Theories

Underlining the significance of entrepreneurship to economic development, scholars concentrate on the decision to come to be an entrepreneur. Different theories have emerged in recent years. Early research in entrepreneurship used trait models (Cunningham & Lischeron, 1991; Herron and Robinson, 1993; Sexton Bowman, 1985), claiming that entrepreneurship's personality traits were significant overall model entrepreneurship. However, the trait models were criticized; instead, the entrepreneurship process should be understood by studying the individual activities, processes, and outcomes rather than personal characteristics (Van de Ven, 1984; Gartner, 1988). Accordingly, the research emphasis was moved to other perceptions. As Krueger et al. (2000) argued, entrepreneurship is planned; therefore, it is appropriate to investigate how the entrepreneurial decision is adopted. In that logic, it is customary to focus on entrepreneurial intention, which is the conjecturer of entrepreneurial behaviour.

Consequently, intention-based models have recently been adopted to explain entrepreneurial behaviours (Shapero and Sokol, 1982; Ajzen, 1985; Bird, 1988; 1991; Boyd and Vozikis, 1994). The researchers consider that while manipulating a business opportunity, individuals need to focus on the cognitive processes that stimulate their insight into self-capability, control, and intentions. Besides, accordingly, the intention-based models can well clarify the entrepreneurship process than customary trait models do.

3.2 Entrepreneurial Intention models (E.I.M.s)

Previous research identifies TPB as an essential model to explain the intentions and behaviour of people. Moreover, the TPB model incorporated the concept of attitude. Attitude constructs have proven to describe a necessary part of the variance in widely varied behaviour and have been included in the latest entrepreneurial intentions' frameworks (Autio et al., 2001; Franke and Lüthje, 2004 cited from Duijn 2005). According to Bird (1988) and Krueger and Brazeal (1994), entrepreneurial behaviour is the outcome of entrepreneurial intention. Hence, entrepreneurial intention (E.I.) will convert business ideas into entrepreneurial actions in the entrepreneurial process. Examining entrepreneurial intention will provide significant understandings of the business foundation. The intention models have been the basis of many empirical and conceptual studies on entrepreneurship. There is no agreement on the definition of E.I. in literature. Still, the descriptions that consider appropriate in this study's framework are that E.I. is "*the intention to start a new business*," stated by de Pillis and Reardon (2007).

Furthermore, Bird (1988) defined it as "a state of mind that directs attention, experience and action toward a business concept, set the form and direction of organizations at their inception" (cited from Keong, 2008). In 1988, Bird introduced an entrepreneurial intention model (E.I.M.), based on the cognitive theory that explains human behaviour. He considered intention as "a state of mind directing a person's attention toward a specific object or path to achieve a goal." Therefore, Bird's model guides entrepreneurs to start and manage a business.

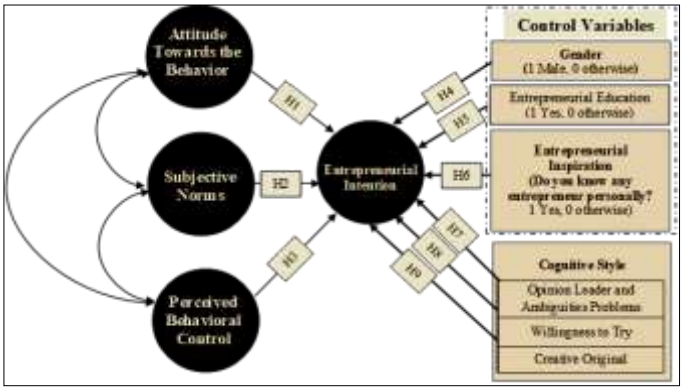
3.3 The Research Model

The model used in this research based on the framework presented in figure 3 brings together the Theory of Planned Behaviour (TPB) of Ajzen (1991), the Cognitive Theory (C.T.) that explains human behaviour, participation in entrepreneurship education, entrepreneurial inspiration, and gender type. The nine relationships identified in this model are formulated into hypotheses, assuming positive relationships between the constructs.

The Theory Planned Behaviour (TPB) was adapted to develop the entrepreneurial intention model (E.I.M.) that constricted the emphasis of the original model on entrepreneurial intention (Liñán et al., 2005; Liñán and Chen, 2009; Liñán et al., 2013; Mirjana et al., 2018, and Al-Jubari et al., 2019). In the E.I.M., the antecedents of entrepreneurial intention (E.I.) are known as "personal preference or attitude towards entrepreneurship; the perceived social norms concerning that career option; and, lastly, the perceived entrepreneurial self-efficacy." An Entrepreneurship Intention Questionnaire was used and tested to measure entrepreneurial intention. The demographic factors are also included in the E.I.M. Investigation. Therefore, they contribute to improving E.I. models literature by examining an untested integrated structural model in the field that offers the

potential to broaden the scope of TPB and C.T. models. The following section discusses these hypotheses and relationships.

Figure 3: Research model - Factors Affecting Entrepreneurial Intention and hypothesis



3.4 Research Hypothesis

TPB can predict various human behaviours, including entrepreneurship, and knowing that motivation is crucial in shaping people's attitudes and intentions toward actions, a deeper understanding of how motivations contribute to intention formation is necessary (Al-Jubari et al., 2019). The estimated dependent variable is the entrepreneurial intentions of students. This research uses TPB (Ajzen, 1991) as one of the most widely applied theoretical frameworks among undergraduate university students. The TPB regards the actual behaviour as a direct result of the intentions toward the behaviour. Thus, the following hypotheses are framed to be tested:

H1. The higher the subjective norms towards entrepreneurship behaviour, the higher entrepreneurial career intention.
H2. The higher the entrepreneurial inspiration, the higher the entrepreneurial career intention.
H3. The higher the perceived behavioural control, the higher entrepreneurial career intention.
H4. Opinion Leader and Ambiguity Problems influences entrepreneurial career intention positively.
H5. Willingness to try a new business affects entrepreneurial career intention.
H6. Creative Original stimulus entrepreneurial career intention.
H7. Gender positively affects the antecedents of entrepreneurial career intention.
H8. Entrepreneurial education positively stimulates the antecedents of entrepreneurial career intention.

IV. RESEARCH METHODOLOGY

4.1 Method and participants

To exam, the research specified hypothesis, an Entrepreneurial Intention Questionnaire (E.I.Q.) survey was conducted on a sample of Sultan Qaboos University students at the bachelor level in five colleges. To justify the students' selection, students represent an extremely appropriate population, since soon they will have to choose their professional careers. They present a heterogeneous group concerning preferences and intentions, and it is likely to examine their intentions before the fulfilment of that behaviour (Liñán 2004). Based on these explanations, it is assumed that investigating college students' entrepreneurial intentions will make available valuable results for the Omanis situation.

The E.I.Q. consists of 7 main parts; these are Entrepreneurial Knowledge, Professional Attraction, Social Valuation, Entrepreneurial Capacity, Entrepreneurial intention, Entrepreneurial objectives, and Entrepreneurship education. The sample size was 246 students from the College of Economics and Political Science (20.2%), college of Art (19.8%), college of Agriculture and Marine Sciences (20.6%), college of Engineering (20.2%), and college of Sciences (19%). The sample characteristics indicate female students' gender distribution (66.7%) and male students (33.3%). A 7-point Likert-Scales were used to measure personal attitude, subjective norms, perceived behaviour control, opinion leader and ambiguities problems, willingness to try a new project, creative original by asking the survey participants the relevant questions as it has been commonly used before by many studies in the literature (Krueger et al. 2000; Mortan et al., 2014; and Sánchez 2009).

The three antecedents of intentions recognized by the theory of planned behaviour involve personal attitudes (consisting of five items), subjective norms (consisting of three items), and perceived behavioural control (consisting of 5 items) following Mirjana et al. (2018). In contrast, the innovative cognitive style is measured using the global innovativeness scale, which was developed by Hurt et al. (1977) and later refined by Goldsmith (1991) and Mirjana et al. (2018). Based on Goldsmith's (1991) propositions, four dimensions of innovativeness; willingness to try, creative–original, opinion–leader, and ambiguities–problems were extracted (Table 1). Therefore, the innovativeness scale in this study consists of four dimensions: willingness to try (consisting of five items), creative-original (consisting of six items), and opinion–leader, and ambiguities–problems (consisting of eight items).

Table 1: Research instrument description

Dependent variable	Mean	Std. Dev.
Entrepreneurial Intention	4.2	1.9
Independent variables		
Theory of planned behaviour (T.P.B.)		
Construct Personal attitudes (Consisting of 5 items)	4.8	1.5
Subjective norms (Consisting of 3 items)	5.2	1.5
Perceived behavioural control (Consisting of 5 items)	3.7	1.3
The Innovative cognitive style (I.C.S.)		
Willingness to try (Consisting of 5 items)	4.8	1.5
Creative–original (Consisting of six items)	4.6	1.4
Opinion-leader & ambiguities–problems (Consisting of 8 items)	4.7	1.7
For all measures used in the research instrument, we asked participants to indicate the extent to which a particular statement applies to them using a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree).		

4.2 Statistical methods

The statistical software package SPSS 20.0 was used to analyze the data. Numerous statistical techniques were engaged in analyzing the collected data. Firstly, the descriptive statistics and reliability data analysis was conducted, followed by a validity analysis to check the instrument validity. Thirdly, to check for potential problems in data due to validity, the non-parametric correlation analyses were conducted, which could be concluded based on negative or low correlations, according to de Vaus (2001). Lastly, estimated linear hierarchical regression models were used to determine the significance of specific research hypotheses, parameters, and model reliability.

V. RESULT AND DISCUSSION

5.1. Internal Consistency Reliability Analysis

Cronbach's Alpha is a technique used to assess the internal consistency reliability of multiple-item scales. Alpha is typically used when several Likert-type items are assumed to make a composite score or summated scale. Alpha is based on each item's mean or average correlation in the scale with every other item (Leech et al. 2005). According to Nunnaly (1978), Cronbach's Alpha is an index of reliability connected with the variation accounted for by the actual score of the "underlying construct" and can only be measured for variables, which have more than one measurement question. Following Feldt and Kim (2008) proposition, the cut-off value of 0.70 was used for this study. Cronbach's Alpha's coefficients were computed for the seven items used in this research to test the scale items' internal consistency. Cronbach's Alpha is found to be 0.859 (Table 2), which indicates a high level of internal consistency for our scale with this specific SQU-students sample.

Table 2: Reliability Statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.859	0.859	7

Those variables containing several measurement questions that needed reliability statistics to check are listed in Table 3, displaying Cronbach's alpha statistics for the ultimate dependent variable, entrepreneurial intentions, and the other variables for each item on the scale. The correlated-item-total correlation coefficients show each specific item's correlation with the sum or total of the other items in the scale. The correlation coefficients are high for all variables except the one related to "Willingness to Try" (0.38), below 0.40.

Table 3: Reliability Analysis: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Entrepreneurial Intention	27.1602	40.027	0.742	0.627	0.822
Personal Attitude	26.5805	44.056	0.717	0.537	0.826
Subjective Norms	26.1756	46.333	0.595	0.409	0.844
Perceived Behavior Control	27.6797	46.227	0.723	0.598	0.828
Opinion Leader and Ambiguities Problems	26.7484	44.866	0.590	0.368	0.846
Willingness to Try	27.3577	52.633	0.376	0.176	0.869
Creative Original	26.7858	46.713	0.670	0.488	0.835

5.2. Research Hypothesis Testing Results

The linear hierarchical regression analysis was used to test if this research hypothesis is reinforced in a specific analyzed context using factor scores as dependent variables. The linear hirerical regression is a different form of a multiple linear regression analysis in which additional variables are added to the model in separate steps called "blocks;" is frequently done to statistically "control" for specific variables to see whether adding variables improves a model's ability to predict the criterion variable and investigate a variable's moderating effect (Frey, 2018).

Three models were constructed based on Mirjana et al. (2018) to test the research hypothesis in which the variables were hierarchically presented into the regression equations. The T.P.B. model comprises only those variables stated by the theory of planned behaviour (*personal attitudes towards entrepreneurship, subjective norms, and perceived behavioural control*). Secondly, the I.C.S. model comprised those factors extracted as the innovativeness style measurements (*willingness to try, creative–original, opinion–leader, and ambiguities–problems*). The third model combined those variables specified the theory of planned behaviour (T.P.B.) and the innovative cognitive style (I.C.S.).

Table 4 depicts the results of the three specified linear hierarchical regression equations. The theory of planned behaviour model reliability measure of $\mathbf{R^2}$ indicates that the specified variables by the T.P.B. model were successful in explaining 64% of the variance of the entrepreneurial intention; with the positively statistically significant influence of gender (1 Male, 0 otherwise), Entrepreneurial Education (1 Yes, 0 otherwise) and a positive impact of personal attitudes, subjective norms, and perceived behavioural control variables.

The results of the second regression equation $\mathbf{R^2}$ indicates that 50.2% of the variance of the entrepreneurial intention were successfully explained by only those variables specified by the

I.C.S. model, and with a significant positive effect of gender (1 Male, 0 otherwise), Entrepreneurial Education (1 Yes, 0 otherwise) and a positive influence of creative–original, opinion–leader and ambiguities–problems variables.

The previous two models' results are confirmed by the third combined model of T.P.B. and I.C.S. concerning the influence of explanatory variables with a slight rise in the variance explanation over the T.P.B. model (ΔR^2 = 0.04), but with a more considerable increase in the variance explanation over the I.C.S. model (ΔR^2 = 0.32).

The presented results show that all defined variables by the theory of planned behaviour (T.P.B.) and the innovative cognitive style (I.C.S.) positively affect entrepreneurial intentions. On the other hand, the innovative cognitive style is found to weakly influence the entrepreneurial intentions when it is compared to the variables specified by the theory of planned behaviour, which proved to have a more substantial positive effect on the entrepreneurial intentions when it is taken as the only explanatory influence.

Implement the theory of planned behaviour to envisage entrepreneurial intentions strengthened by the models, approving empirically the statistically significant impact of attitudes towards behaviour, subjective norms, and perceived behavioural control on entrepreneurial intentions. Moreover, it approves the effect and significance of the innovative cognitive style. Accordingly, the results show the strong positive causality between the attitudes towards behaviour, subjective norms and perceived behavioural control, and the innovative cognitive style levels, which provide strong evidence of the likelihood of becoming an entrepreneur. Based on the discussed results, it can be accepted all the research hypothesis except the "H2", where the entrepreneurial inspiration supposed to positively influences the entrepreneurial career intention, however, is found to be insignificant.

Table 4: Estimated Linear Hierarchical Regression Models

Dependent Variable: Entrepreneurial intention						
Variables	Model Theory of Planned Behavior (T.P.B.)		Model Innovative Cognitive Style (I.C.S.)		Model Theory of Planned Behavior and Innovative Cognitive Style (T.P.B. + I.C.S.)	
Dependent Variables	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.
(Constant)	-0.750** (-3.180)	0.016	-0.496 (-1.237)	0.217	-1.006*** (-2.931)	0.004
Personal Attitude (Index)	0.269*** (5.146)	0.000			0.241*** (3.921)	0.000
Subjective Norms (Index)	0.121*** (2.507)	0.013			0.081 (1.622)	0.106
Perceived Behavior Control (Index)	0.478*** (9.634)	0.000			0.393*** (7.223)	0.000
Opinion Leader and Ambiguities Problems (Index)			0.338*** (6.366)	0.000	0.167*** (3.560)	0.000
Willingness to Try. (Index)			0.083* (1.722)	0.086	-0. 022 (-0.520)	0.603
Creative Original (Index)			0.353*** (6.661)	0.000	0.069 (1.307)	0.192
Age (Years)	-0.028 (-.714)	0.476	-0.067 (-1.454)	0.147	-0.042 (-1.082)	0.280
Gender (1 Male, 0 otherwise)	0.150*** (3.720)	0.000	0.187*** (4.003)	0.000	0.154*** (4.000)	0.000
Entrepreneurial Education (1 Yes, 0 otherwise)	0.082** (1.979)	0.049	0.119*** (2.474)	0.014	0.067* (1.669)	0.097
Entrepreneurial Inspiration (*Do you know any entrepreneur personally?* 1 Yes, 0 otherwise)	-0.053 (-1.352)	0.178	-0.033 (-0.720)	0.472	-0.059 (-1.523)	0.129
Graduation Year (1 Graduates in 2020, 0 otherwise)	-0.032 (-0.814)	0.416	-0.042 (-0.917)	0.360	-0.032 (-0.837)	0.403
Model reliability						
R	0.800		0.709		0.814	
R^2	0.640		0.502		0.663	
Adj. R^2	0.629		0.488		0.649	
n observations	246		246		246	

*****, **, and *** indicates statistically significant at 1%, statistically significant at 5%, and statistically significant at 10%, respectively.

=VI. CONCLUSIONS

This study examines the determinants of entrepreneurial intentions based on planned behaviour theory and individual innovative cognitive style framework. Mainly assess how personal attitudes, subjective norms, and perceived behavioural control can influence an individual's intentions to become an entrepreneur. Furthermore, the innovative cognitive style is examined as a possibly significant determining factor of entrepreneurial intentions. To exam, the specified hypothesis, an Entrepreneurial Intention Questionnaire (E.I.Q.) survey was conducted on a sample size of 246 Sultan Qaboos University students at the bachelor level in five colleges. The sample characteristics indicate female students' gender distribution (66.7%) and male students (33.3%). The hypothesis was examined applying linear hierarchical regression analysis. The obtained results suggest a positive link between personal attitudes, subjective norms, individual behaviour control and entrepreneurial intentions, and the innovative cognitive style and entrepreneurial intentions, consequently supporting this research hypothesis. This research study contributes to the following; firstly, the results have shown that the students' entrepreneurial intentions are positively associated with the personal attitudes towards entrepreneurial behaviour, subjective norms enforced by the external environment, and perceived behavioural control. In line with the previous studies (*e.g., Ibrahim et al., 2017; Sharma, 2018; Bakheet, 2018; Iwu, Muresherwa, Nchu, and Eresia-Eke 2020*), the results provide significant support for all of these components, showing that they are significantly related to intentions. This study conducted in the largest university in Oman indicates that the entrepreneurial intention model can be applied to the Omani context. Moreover, the analysis confirms that the theory of planned behaviour (TPB) and three different antecedents concerning entrepreneurship may be considered a good interpreter of an individual's entrepreneurial intention regarding S.Q.U. students' sample.

Furthermore, this research throws new light on the link concerning the innovative cognitive style and entrepreneurial intentions to analyze additional intentionality development perceptions by integrating the innovative cognitive style (I.C.S.). When including the innovative cognitive style in the analysis, the relationship's positive nature has been found. Reasonably more considerable predictability has been attained, which shows that innovative cognition can affect meaningfully entrepreneurial intentions. Thus, its influence should not be ignored. Nevertheless, the results designate that an innovative cognitive style has a weak impact on entrepreneurial intentions when taken into account as an exclusively explanatory influence. This is following the previous research appealing what has been stated by Krueger et al. (2000) that '*predicting entrepreneurial activities by only situational or personal factors usually resulted in disappointingly small explanatory power and even smaller predictive validity*.' Another contribution of this study is the using the scale developed by Hurt et al. (1977) and upgraded by Goldsmith (2011) for the measurement of the innovative cognitive style, in comparison to similar research that used the Kirton Adaption-Innovation Inventory (K.A.I.).

Lastly, as this research was conducted using an Omani sample and the scale's validity has been verified, this research contributes by validating the scale for measuring the innovative cognitive style, which mainly used the U.S.A samples. On the other hand, Goldsmith (2011) has recognized four innovativeness factors. The current research identified only three elements, willingness to try, creative–original, and opinion-leader and ambiguities–problems, which opens the ground for the upcoming examination.

VII. FINDINGS IMPLICATIONS AND POLICY RECOMMENDATIONS

The expected beneficiaries of this study's findings are the academicians and the practitioners who can benefit from ensuring a better general insight into how intentions are developed and directed. The findings reinforce and endorse the further use of intention-based models of the entrepreneurial process, particularly concerning individuals' cognitive style on entrepreneurial intentions. Moreover, the research findings are essential for educators. This study has revealed that the innovative cognitive style does not significantly impact an individual's decision to become an entrepreneur, even though this effect is weakly positive. This finding contradicts the widespread belief that innovators are typically also entrepreneurs (Knight, 1989). Consequently, the personal attitudes to entrepreneurial behaviour, the subjective norms imposed by the external environment, and the perceived behavioural control are still considered the most critical factors for driving an individual's aspiration to become an entrepreneur.

The educational system can be viewed as a primary initiator and foundation for young people regarding entrepreneurial knowledge and skill development. In general, the Omani society and particularly the education system can play a significant role by providing programs that inspire young individuals to become entrepreneurs. However, entrepreneurship and entrepreneurship education has got increased consideration in Oman. However, in delivering entrepreneurship education, the policymakers and educators faced four significant challenges concentrated on the education systems, the availability of courses and programs related to the market, quality of educators and the curricula, and faulty foundation (Eric et al., 2018). Therefore, the recommended solution lies in introducing and teaching entrepreneurship education to students of all disciplines in a tertiary institution in the Sultanate of Oman. The entrepreneurial education system in Oman had better be designed to deliver applicable information and applied experience that can support building personal knowledge and skills and subjective feelings of self-confidence to engage in entrepreneurial activities and form broader social consciousness and endorsement. Thus, the conventional teaching methods have to be substituted by contemporary ones that promote entrepreneurship development

and create a more dynamic entrepreneur profile. Furthermore, the economic environment must be focused on boosting innovation and entrepreneurial behaviours. This is particularly valid for Oman, and other G.C.C. countries, where their economic progress is dependent on depleted oil resources.

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