

Kent Academic Repository

Full text document (pdf)

Citation for published version

Eid, Riyad and Badewi, Amgad and Selim, Hassan and El-Gohary, Hatem (2018) Integrating and Extending Competing Intention Models to Understand the Entrepreneurial Intention of Senior University Students. *Education + Training* . ISSN 0040-0912. (In press)

DOI

<https://doi.org/10.1108/ET-02-2018-0030>

Link to record in KAR

<https://kar.kent.ac.uk/71487/>

Document Version

Author's Accepted Manuscript

Copyright & reuse

Content in the Kent Academic Repository is made available for research purposes. Unless otherwise stated all content is protected by copyright and in the absence of an open licence (eg Creative Commons), permissions for further reuse of content should be sought from the publisher, author or other copyright holder.

Versions of research

The version in the Kent Academic Repository may differ from the final published version.

Users are advised to check <http://kar.kent.ac.uk> for the status of the paper. **Users should always cite the published version of record.**

Enquiries

For any further enquiries regarding the licence status of this document, please contact:

researchsupport@kent.ac.uk

If you believe this document infringes copyright then please contact the KAR admin team with the take-down information provided at <http://kar.kent.ac.uk/contact.html>



Integrating and Extending Competing Intention Models to Understand the Entrepreneurial Intention of Senior University Students

Journal:	<i>Education + Training</i>
Manuscript ID	ET-02-2018-0030.R4
Manuscript Type:	Research Paper
Keywords:	Entrepreneurial Intention, TPB, EEM, Personality, UAE

Integrating and Extending Competing Intention Models to Understand the Entrepreneurial Intention of Senior University Students

Abstract

Purpose- The growing interest in the development of Entrepreneurial Intention (EI) has increased the importance of theories that explain and anticipate the tendency among individuals to start a new business. However, most of these theories focus on the relationship between entrepreneurs perceptions and their intention and ignore the cognitive and psychological characteristics that might configure their perceptions. Therefore, the purpose of this study is to integrate the Theory of Planned Behavior (TPB) with the Entrepreneurial Event Model (EEM) and to extend the combined model to include the personality characteristics of an entrepreneur that might shape the perceptions and intentions.

Design/methodology/approach- This study uses a sample of 688 senior university students (Emirati nationals, 91.2% and expatriates, 8.8%) and employs positivist research with a quantitative approach, adopting a survey strategy through questionnaires, and structural equation modeling (SEM).

Findings- The results demonstrate the relevance and robustness of the suggested combined and extended model in the prediction of intention on the part of senior university students to become entrepreneurs (explained variance=73.3%) based on survey data (2017; n = 688).

Originality/Value- The main contribution of this paper lies not only in the integration of the TPB and the EEM but also in extending the two theories on which it is based through adding entrepreneurial personality characteristics and an explanation of the mechanism through which entrepreneurial perceptions and EI develop.

Keywords: EI, TPB, EEM, Personality, and UAE

Introduction

Modeling entrepreneurs' personality characteristics (Kautonen et al., 2015; de Pillis and Reardon, 2007; Lange, 2012; Shane and Nicolaou, 2015; Zhao et al., 2010), entrepreneurs' perceptions (Bae et al, 2014; Zhao et al., 2010), and entrepreneurs' behavioural intentions (Luarn and Lin, 2005; Dheer and Lenartowicz, 2017; Schlaegel and Koenig, 2014; Van Yperen et al., 2016) remains a common research interest in the field of Entrepreneurial Intention (EI). Scholars have begun to ask what factors strengthen the intention to become an entrepreneur. Certain factors in particular have been selected as responsible for arousing this intention (Langkamp Bolton and Lane, 2012). Zhao et al.,

1
2
3
4 2010 and Turker and Selcuk (2009) note that the current literature has established a link
5
6 between EI and personality traits, including autonomy, risk taking and creativity. For
7
8 example, autonomy as a determinant of intention has been discussed in other disciplines,
9
10 but with little focus on the entrepreneurship perspective (see, for example, Bray et al.,
11
12 2016). From the perspective of business students, Bröckling (2015) has empirically
13
14 shown that autonomous people have the desire to be self-regulated and build their own
15
16 systems whereas non-autonomous people need to live in a system controlled and
17
18 regulated by others. Similarly, Hull et al. (1980) have found, after surveying alumni, that,
19
20 business owners rated higher in creativity than those who preferred to become employees.
21
22 These findings from different disciplines show clearly that autonomy and creativity as
23
24 personality characteristics can determine students' perceptions of behaviour and ability
25
26 (Zhao et al., 2010). Therefore, this study will empirically give entrepreneurship
27
28 researchers and practitioners the opportunity to know whether autonomy and creativity
29
30 as personality traits are major determinants of business students' EI.
31
32
33
34
35
36
37
38

39 Undoubtedly, in light of the current global economic crises, it is useful to know that
40
41 entrepreneurial graduates can substantially change the business environment and which
42
43 factors affect students' attitudes to starting a small business enterprise (SBE) of their own.
44
45 Entrepreneurship researchers argue that developed and developing economies require
46
47 more entrepreneurs who are willing to innovate and create new ventures to facilitate
48
49 economic growth (Packham et. al., 2010); for example, the UAE government is working
50
51 very hard to encourage UAE higher education institutions to develop capable and talented
52
53 graduates with a wide variety of entrepreneurial and innovation skills to use in starting
54
55 up new businesses.
56
57
58
59
60

1
2
3
4 Furthermore, the Global Entrepreneurship Monitor (GEM) (2011) reports that, although
5 a very high proportion (51.9%) of UAE young people perceive opportunities for
6 entrepreneurial activity, few take the necessary steps to seize these opportunities.
7
8 Moreover, only a small proportion of young people engage in early-stage entrepreneurial
9 activities. In addition, research suggests that the intention to start a new business in the
10 UAE in the next three years is limited to a few people, only 2% (Horne et al., 2011). The
11 reasons for this low rate can be classified as (a) the economic cost of failure, which
12 indicates the loss that would be incurred by business failure in terms of monetary,
13 financial and other tangible resources; (b) the social cost of failure, which is related to
14 loss of reputation, shame to one's family and embarrassment; and (c) the personal cost of
15 failure, which indicates how individual business failure affects the level of motivation,
16 perception of one's personal abilities, capacity, skills and intelligence. Furthermore, a fear
17 of failure may result in part from the inadequacy of the UAE legislative framework and
18 the entrepreneurship ecosystem.
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38

39 The previous literature proposed the inclusion of personal psychological traits as
40 dimensions of EI, i.e., autonomy, and cognitive personal characteristics e.g., creativity in
41 entrepreneurs (Brough et al., 2013; Carsrud and Brännback, 2011; Hsu et al., 2017;
42 Krueger and Carsrud, 1993; Liñán and Chen, 2009), but few EI studies have investigated
43 autonomy and creativity as elements of EI. This omission, we believe, has occurred
44 because autonomy and creativity are not elements of the "original" dimensions of EI
45 Miller (1983) identified and Covin and Slevin (1991) developed.
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3
4 Therefore, the present research was planned to help fill this knowledge gap by extending
5
6 both TPB and EEM through integrating them with entrepreneurial personal
7
8 characteristics. Indeed, it is known that autonomy (Woo et al., 1991; Lee et al., 2011)
9
10 and creativity (Yar Hamidi et al., 2008) are two of the most frequently stated reasons for
11
12 choosing an entrepreneurial career (Kolvereid, 1996). What is unknown is whether they
13
14 are mediated by TPB perceptions. To sum up, the purpose of this research was to ask why
15
16 perceptions to entrepreneurship vary between students who are all taking the same
17
18 courses, and to examine perceptions as mediating factors between the cognitive and
19
20 psychological factors of entrepreneurship and EI.
21
22
23
24
25
26

27 The objective of this study is twofold: first, through a review of the relevant EI literature,
28
29 we respond to calls for a more systematic aggregation of the cumulative evidence in the
30
31 entrepreneurship literature (Frese et al., 2012). We follow the pioneering study of Krueger
32
33 et al. (2000), who were the first to compare and integrate the current theories of EI and
34
35 make our first contribution through suggesting an integrated conceptual model that uses
36
37 competing theories of EI and their respective constructs. Second, we examine the specific
38
39 mechanism that underlie the formation of EI, where earlier writers mainly focused on the
40
41 direct relationships between attitudes and EI. Hence little has emerged about the way in
42
43 which entrepreneurs' personal characteristics perceptions and intention influence each
44
45 other and encourage individuals to create a more positive intention to start a new business.
46
47
48 Based on personality models (Taylor, 1984), we integrate the entrepreneurial personal
49
50 characteristics, test this integrated model of EI using structural equation modeling, and
51
52 compare the results with earlier studies which relied on competing theories for their
53
54 predictive validity. By examining the mechanism through which both entrepreneurs'
55
56
57
58
59
60

1
2
3
4 personality characteristics and their perceptions are associated with EI, we provide an
5
6 augmented and more detailed picture of the process through which higher levels of EI are
7
8 achieved. Therefore, our second main contribution lies in the integration of the TPB and
9
10 the EEM. It also extends the two theories by adding entrepreneurs' personality
11
12 characteristics and explaining the mechanism through which entrepreneurs' perceptions
13
14 and EI develop.
15
16
17
18
19

20 **Literature Review**

21 **Theories of Entrepreneurship Behavioural Intention**

22
23 Two dominant behavioural intention models serve as frameworks in which to study and
24
25 understand EI. Those are Shapero and Sokol's (1982) entrepreneurial event model (EEM)
26
27 together with Ajzen's (1991) theory of planned behaviour (TPB). These two seem the
28
29 most complete and the most extensively and empirically tested models from which to
30
31 learn about EI (Fayolle and Liñán, 2014; Kautonen et al., 2015; Krueger et al., 2000;
32
33 Schlaegel and Koenig, 2014).
34
35
36
37
38
39
40

41 The TPB, which is built upon reasoned action theory (RAT) (Ajzen and Fishbein, 1975)
42
43 takes account of both personal and social factors (Rueda et al., 2015). The theory has
44
45 three main specifications of intention, namely, attitude (referring to the degree to which
46
47 individuals perceive the attractiveness of the behaviour in question), subjective norm
48
49 (referring to the perceived social pressure from significant others; such as family, friends,
50
51 role models, and others to exhibit the behaviour) and perceived behavioural control (PBC)
52
53 (referring to the self-evaluation of one's own competence with regard to a task or action)
54
55 (Ajzen, 1991). In TPB, the three main specifications represent individuals' experiences
56
57
58
59
60

1
2
3
4 and observations, which in turn form a foundation on which to develop three different
5
6 kinds of “salient” belief: behavioural beliefs, normative beliefs and beliefs drawn from
7
8 experience (Engle et al., 2010). It is argued that the more favourable the attitude and
9
10 subjective norm and the greater the PBC of the behaviour, the stronger is the intention to
11
12 perform that behaviour (Ajzen, 1991; Autio et al., 2001; Matlay et al., 2012; Nishimura
13
14 and Morales, 2011). Moreover, according to the theory, PBC can be used along with
15
16 intention, to predict behaviour (Ajzen, 1991) directly.
17
18
19
20
21

22
23 The EEM, on the other hand, has three differently defined specifications: perceived
24
25 desirability (PD):referring to the degree to which an individual feels attracted to becoming
26
27 an entrepreneur and reflecting individual preferences for this behaviour; perceived
28
29 feasibility: referring to the degree to which individuals are confident they are personally
30
31 able to start their own business and propensity to act upon opportunity: refers to an
32
33 individual’s disposition to act on a decision. This depends on individuals’ perceptions of
34
35 control as well as a preference for acquiring control by taking appropriate action
36
37 (Schlaegel and Koenig, 2014; Shapero and Sokol, 1982). It is argued that the higher the
38
39 perceived feasibility and PD, the higher the tendency to engage in entrepreneurial events
40
41
42
43
44 (Krueger et al., 2000; Matlay et al., 2012).
45
46
47

48 Some researchers argue that there is an overlap between the specifying definitions of the
49
50 two models. EEM’s “perceived desirability” appears to resemble TPB’s “attitude and
51
52 subjective norm factors”, while EEM’s “perceived feasibility” seems like TPB’s “PBC
53
54 factor” (Kautonen et al., 2015; Krueger et al., 2000; Matlay et al., 2012). However, other
55
56 researchers emphasize that the two models represent distinct specifications, with different
57
58
59
60

1
2
3
4 effects on EI, and the terms should not be used interchangeably (Schlaegel and Koenig,
5
6 2014).
7
8
9

10
11 To enhance the explanatory power, clarity and robustness of EI models, some researchers
12 recommend integrating the competing models (TPB and EEM) (Matlay et al., 2012;
13 Schlaegel and Koenig, 2014). This integration is suggested to help understand the
14 interrelationship of intention between the two models and to advance EI-related theories
15 (Schlaegel and Koenig, 2014). In their study, Solesvik et al. (2012) were able to enhance
16 the explanation of variance in the EI dependent variable to 60% when using an integrated
17 conceptual model (ICM) of both EEM and TPB, instead of 40% when using the EEM
18 model or 55% when using the TPB model independently (Matlay et al., 2012). The same
19 finding was reached by Schlaegel and Koenig (2014), who discovered that the integrated
20 model of both EEM and TPB explained more variance in EI. Thus, before choosing one
21 of the two models, it is important to consider the cost of not gaining a full and complete
22 understanding of the factors affecting EI and their interrelationship (Schlaegel and
23 Koenig, 2014).
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42

43 **Personality Characteristics**

44
45 Entrepreneurs Personality characteristics have been demonstrated to be intriguing but
46 imperfect determinants of different aspects of entrepreneurship, including intending to
47 start a new business, starting a new business and succeeding in running a new business
48 (Shaver and Scott, 1991; Zhao et al., 2010). In this study, we test the predictive value of
49 two personality characteristics frequently associated with entrepreneurs: psychological
50
51
52
53
54
55
56
57
58
59
60

1
2
3
4 traits measured through autonomy and cognitive traits measured through creativity
5
6 (Baron, 2000).
7
8
9

10 11 **Psychological Characteristics**

12
13 Psychological models are based on social cognition and the perceptual
14 comprehensiveness of the “person-in-context” (Taylor, 1984). In other words, one
15 perceives the world from different angles which interact and formulates one’s attitudes,
16 motivations and behaviour accordingly (Brough et al., 2013). In entrepreneurs
17 psychological reasons are seen to be main drivers of entrepreneurship intention (Carsrud
18 and Brännback, 2011). Psychological factors can be seen as the way in which one
19 perceives oneself – called self-perception (e.g., Krueger and Carsrud, 1993; Liñán and
20 Chen, 2009); how society perceives one (Linan 2008), how someone perceives the
21 process of starting up an enterprise and the personality traits which affect perceptions of
22 things (Hsu et al., 2017; Zhao et al., 2010).
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38

39 The distinguishing psychological factor among entrepreneurs is the perception of their
40 ability to leave their group and start up a new business alone (Schjoedt, 2009), called
41 **autonomy**. The concept of autonomy literally refers to the preference for creating
42 regulations by and for oneself, which is the opposite of heteronomy, the preference for
43 depending on well established and controlled regulation (Ryan and Deci, 2006).
44 Autonomous people want to be self-regulated and build their own systems, whereas
45 heteronomous people need to live in systems controlled and regulated by others
46 (Bröckling, 2015). Thus, autonomous people are always dissatisfied by working for other
47 organisations (Schjoedt, 2009). They feel restricted by the systems that they grew up in
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3
4 (Schein and Schein, 1978). Accordingly, they actively try to build their own systems
5 which can conflict with existing ones (Lumpkin & Dess, 1996, p. 140). Moreover, they
6 are more prone to be independent and not in any sense reliant on others (e.g., financial or
7 social) (Bolino, 2000). Unlike heteronomy, which is perceived to be correlated negatively
8 with the satisfaction of running a business and positively with the intention to stop
9 running a business (Benz and Frey, 2008), autonomy is associated with the intention to
10 be an entrepreneur (Schein and Schein, 1978 ; Woo et al., 1991; Lee et al., 2011).
11 Additionally, it has been perceived in the literature that autonomy can be one of the main
12 reasons for leaving one's employment and starting up a business of one's own (Van
13 Gelderen and Jansen, 2006). Moreover, business owners rate themselves as high in work-
14 related autonomy that they have (Lange, 2012).
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31

32 **Cognitive characteristics**

33
34 Entrepreneurs are also different from non-entrepreneurs in their cognitive dimensions
35 (Bullough et al., 2014). The cognitive dimension is connected with the ability to imagine
36 a different future (Tumasjan and Braun, 2012), that is, to have a perception of current
37 reality which is different from the desired one (Haynie et al., 2012); and to see how
38 current solutions can be further developed to produce new solutions for future problems
39 (Dheer and Lenartowicz, 2017). One of the most distinctive cognitive characteristics of
40 successful entrepreneurs is **creativity** (Baron and Tang, 2011).
41
42
43
44
45
46
47
48
49
50
51

52 Creativity is the ability to see the world from a perspective which is not traditional
53 (Edwards-Schachter et al., 2015). Creative ability consists of the ability to understand the
54 environment (Lee et al., 2004) , learn about it from experience (Katz,2001), criticise it
55
56
57
58
59
60

1
2
3
4 and see new opportunities in it (Heinonen et al., 2011). Thus, creativity, defined as the
5 individual's ability to review and criticise current products, services, and business
6
7
8
9 models, is the main source of innovative and new ideas (Fillis and Rentschler, 2010) and
10
11 developing new business models (Puhakka, 2007). This is why creative people are more
12
13 innovative than others (Sarooghi et al., 2015). After surveying alumni, it was found that
14
15 business owners rated higher in creativity than those who preferred the path of
16
17 employment (Hull et al., 1980). Caird (1991) shows a similar result: that business owners
18
19 rated higher in creativity than others who drew relatively fixed salaries. Thus, creativity
20
21 is highly correlated with entrepreneurship intention (Eid and Trueman, 2002; Yar Hamidi
22
23 et al., 2008), entrepreneurship (Sternberg and Krauss, 2014) and success in
24
25 entrepreneurship (Baron and Tang, 2011).
26
27
28
29
30
31

32 **Entrepreneurs' Perceptions**

33
34 Based on TPB and EEM, three perceptions are proposed to influence the intention.
35
36 Therefore, this research focuses on how the one perceives himself in the ability to control
37
38 the environment, i.e. self-efficacy (Bandura, 1977), how the one perceives the desirability
39
40 of the opportunity, and how the one perceives the workload of being an entrepreneur.
41
42 First, according to prospect theory, the intention and behavior are determined mainly by
43
44 the person perceptions and future expectations (Eid, 2005). In other words, if the
45
46 perception towards the entrepreneurship as being again and have an impact on social and
47
48 financial position, the intention will be higher than those who perceive it as a useless
49
50 process (Hsu et al.,2017).
51
52
53
54
55
56
57
58
59
60

1
2
3
4 Second, perceived desirability is defined as the extent to which an individual perceives
5 the attractiveness of being an entrepreneur (Schlaegel and Koenig, 2014) and perceives
6 starting up a new business is a desirable option (Bullough et al., 2014). it has been
7 believed that the perceptions of desirability and feasibility are a primary antecedent to
8 any entrepreneurial action (Krueger et al., 2000).
9
10
11
12
13
14
15
16
17

18 Finally, if the perception towards the entrepreneurship as a difficult process and entails
19 many efforts, i.e. the workload, the intention may be affected negatively, especially if this
20 associated with the belief of inability to do, i.e. low perceived controllability. The belief
21 that “I can do” is the secret to many great achievements. In theory, it is called self-efficacy
22 (Bandura, 1977). Self-efficacy in entrepreneurship literature defined as the belief that the
23 one is able to perform the expected required tasks to be a successful entrepreneur (McGee
24 et al., 2009). The key here could be the locus of control (Begley and Boyd, 1987) or the
25 perception of the ease of activities. the entrepreneurs are found to have a higher internal
26 locus of control than non-entrepreneurs (Shaver and Scott 1991). Regardless being an
27 internal locus of control or perception of the ease of activities, perceived controlled
28 behavior is a perception of being able to control the surrounding environment for
29 successful starting up a new business.
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

48 **Research Model and Hypotheses**

49
50 Entrepreneurs are perceived in the literature to be fully autonomous (Schein and Schein,
51 1978; Woo et al., 1991; Feldman and Bolino, 2000). Indeed, one of the main reasons for
52 being an entrepreneur is the desire for freedom and the avoidance of structured restrictions
53 (Lee et al., 2011; Schein and Schein, 1978). This is why Benz and Frey(2008) find that
54
55
56
57
58
59
60

1
2
3
4 employees with a high level of autonomy are less satisfied than those without.
5
6 Entrepreneurs generally feel a desire to be financially independent (Lee et al., 2004) and
7
8 perhaps socially as well (Schein and Schein, 1978). They have a strong desire to live
9
10 their lives as they wish (Feldman and Bolino, 2000). Previous studies suggest that one
11
12 key motivation in becoming self-employed is the desire for autonomy or some other
13
14 inborn reason (e.g., Brush, 1992).
15
16
17
18
19

20 The theory here shows that being autonomous and perception of co-existence alone is
21
22 highly correlated to being able to cope (Dworkin, 1988). In other words, one cannot leave
23
24 the group without the sense of being able to live and co-exist alone without its members.
25
26 If one has the desire to be autonomous and independent, but has a strong misgiving of
27
28 being “unable to cope”, one will reverse the decision and go back to the group (Skinner,
29
30 1971). If not, the perception of being able to control the environment, called the
31
32 ‘perception of controlled behaviour’, is one of the main antecedents of EI (Kautonen et
33
34 al., 2015; Liñán and Chen, 2009). Accordingly, the perception of being independent
35
36 enough is conditioned mainly by the perception of being able to control the environment
37
38 (Shapero and Sokol, 1982) and control destiny in the current project. Therefore, we
39
40 hypothesize that:
41
42
43
44
45

46 **Hypothesis 1:** Perceived behavioural control will mediate the relationship between autonomy
47
48 and entrepreneurship intention
49
50
51
52
53
54
55
56
57
58
59
60

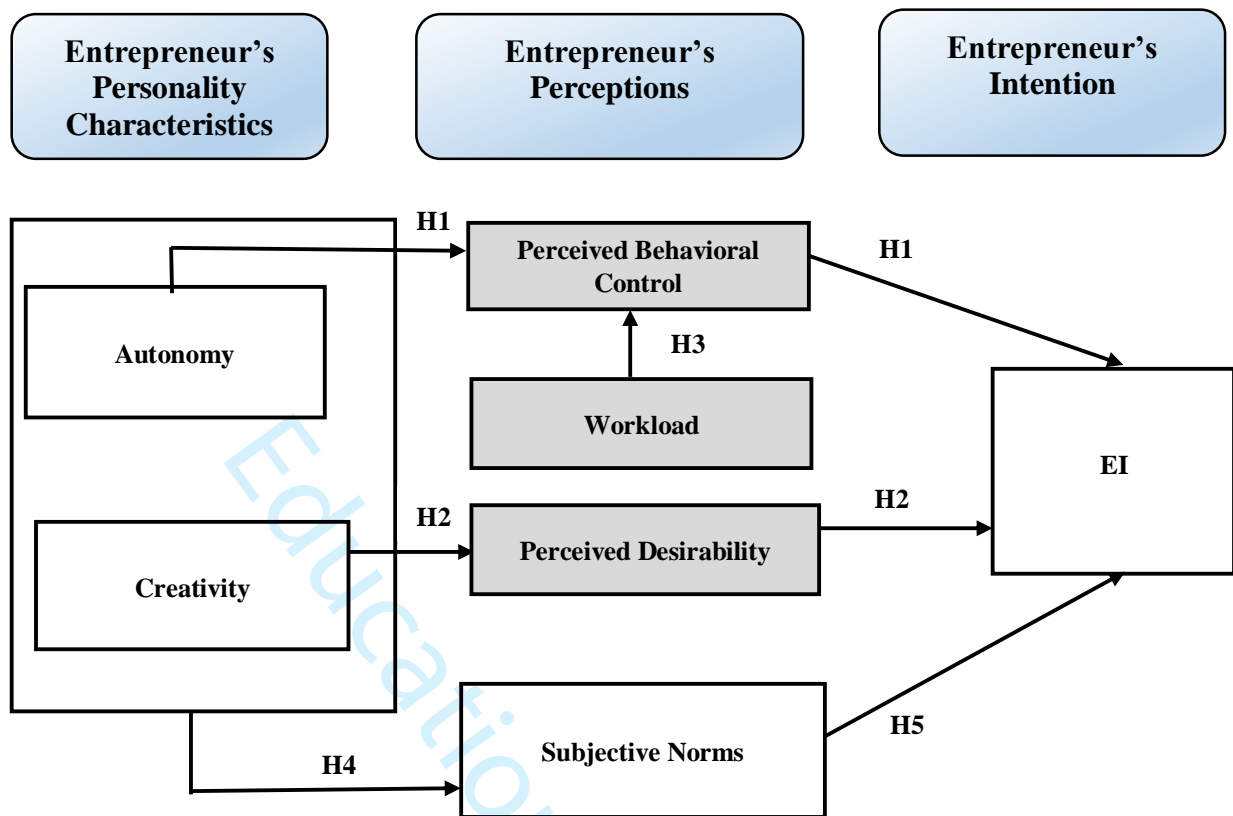


Figure 1: Research Model

Creativity and successful entrepreneurship have been widely covered in the literature (Yar Hamidi et al., 2008). The main reason for this is the ability to review and criticise current products, services, and business models (Katz, 2001). Thus, people with these qualities are more capable of delivering new products/services more effectively and efficiently than before (Heinonen et al., 2011) and discovering new market opportunities (Shane and Nicolaou, 2015). Creative people have more tendency to attempt challenging tasks than others have (Andrew, 1967). Likewise, creative entrepreneurs are found to be more risk-tolerant than other entrepreneurs (Block et al., 2015). Thus, they are more keen to see entrepreneurial opportunities as challenging and yet inviting (Shalley and Perry-Smith, 2008).

1
2
3
4 To connect these lines of theory, Creativity and EI are proposed to condition the
5 perception of the desirability of starting up a new business. The relationship between the
6 perception of the desirability of entrepreneurial action and the intention to engage in it is
7 apparent (Bullough et al., 2014; Schlaegel and Koenig, 2014). In other words, creative
8 people are highly paid in their organizations and especially if they are highly intrinsically
9 valued they can see that the opportunity cost of leaving the current state, while high, is
10 worth paying (Amit et al., 1995), (Carsrud and Brännback, 2011). Indeed, there is a
11 negative relationship between a successful academic record and EI, because of the
12 attractiveness of the employee market. Moreover, one experience of failure and lack of
13 desirability of starting up a new business is a turning-point for many creative people (Hsu
14 et al., 2017). Thus, without the clear desirability of new opportunities, creativity does not
15 translate into EI. Zampetakis (2008), in his study of 199 engineering students in Greek
16 universities, finds that the perception of desirability mediates the relationship between
17 creativity and EI. Therefore, we hypothesize that:

18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37 **Hypothesis 2:** Perception of desirability will mediate the relationship between creativity
38 and EI.
39
40
41
42
43

44 Workload is the perception of the amount of future work required for being an
45 entrepreneurs; thus, the higher the perception of the workload, the lower the desirability
46 of the work proposed and also the lower the PBC. Future workload and perceived
47 desirability are proposed as negative because the perception of the workload can be seen
48 by some as undesirable. Perception of future pain, as a visceral factor (Loewenstein,
49 1996), influences economic behaviour, decisions and preferences (Loewenstein, 2000).
50 In addition, the workload is perceived to be an important barrier, in a context of high
51
52
53
54
55
56
57
58
59
60

1
2
3
4 bureaucracy (Van Yperen et al., 2016). In other words, it can be seen as a cost which
5
6 needs to be compensated for. Thus, this also is proposed as a discouraging factor in the
7
8 choice of being an entrepreneur.
9

10
11
12
13 Since desire and pain are two contradictory states (Botti and Iyengar, 2004), the workload
14
15 is proposed to have a negative effect on perceived desirability. Likewise, the perceived
16
17 level of work and the ability to control the work are negatively correlated (Greenglass et
18
19 al., 2003) and the perceived workload affects the perception of controlled behaviour. But
20
21 the workload needs not be perceived as negative or painful; it can be perceived as a
22
23 challenge by intrinsically motivated people (Van Yperen et al, 2016) and those who seek
24
25 challenge. Thus, even without a clear perception of the workload as overwhelming or
26
27 even painful, the impact of the workload diminishes the intention to be an entrepreneur.
28
29 Accordingly, the following hypotheses are formulated:
30
31
32

33
34 **Hypothesis 3:** Workload will negatively influence perceived behavioural control and perceived
35
36 desirability.
37
38

39 40 41 **Subjective Norms**

42
43 Ajzen and Fishbein (1975) define Subjective Norms in the TRA as individuals'
44
45 perception of the importance of what others think about their engaging in a specific
46
47 behaviour (or not doing so, as the case may be). Furthermore, Lee et al. (2011) conclude
48
49 that subjective norms moderate the behavioural intention and the relationship between
50
51 autonomy and creativity . Similarly, Gumel and Othmam (2013) argue that the effect of
52
53 autonomy and creativity on behavioural intention will vary when subjective norms are set
54
55 to moderate the relationship. This is because less innovative and independent people are
56
57
58
59
60

1
2
3
4 less open to entrepreneurship initiatives than highly innovative and independent people
5
6 are. From the above discussion, the following hypothesis may be constructed:
7

8
9 **Hypothesis 4:** The two personality characteristics, autonomy and creativity, will positively
10 influence subjective norms
11

12
13
14
15 In the literature, families play a key role in influencing the EI and career choice of young
16 Emiratis. Moreover, in a collectivist culture such as that of the UAE, one's closest (or
17 immediate) family and one's extended family are suggested as having great influence
18 (Moriano et al., 2012). In addition, relevant groups in this context (close friends and
19 colleagues) represent significant others in measuring subjective norms (Jaén and Liñán,
20 2013).
21
22
23
24
25
26
27
28

29
30
31 Some studies using the Theory of Reasoned Action model (TRA) have found that both
32 attitude and subjective norm were the important determinants of people's intentions
33 (Karahanna, et al., 1999). In addition, a number of studies have investigated the influence
34 of subjective norms on various behaviours and situations, such as those involving
35 intelligence and security information technology (Luarn and Lin, 2005); blogging (Wang
36 et al., 2011); education (Robinson and Doverspike, 2006) and communication (Webster
37 and Trevino, 1995). These were found to have a direct effect on the behavioural intention
38 to adopt such behaviours. Moreover, Hossain and De Silva (2009) infer that the influences
39 of different peers has an effect on an individual's intention. Researchers, including Hsu et
40 al. (2017) and Liao et al. (2007), implement the TPB as a theoretical basis for the adoption
41 and use of ICT and find significant relationships between attitude, subjective norms,
42 perceived behavioural control and behavioural intention. On this basis, it was possible to
43 construct the following hypothesis:
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Hypothesis 5: Subjective norms will positively influence the EI.

Research methodology

Data collection

It was decided to choose a study population from UAE National Business and Engineering undergraduate students. We excluded all 1st and 2nd-year undergraduates and sent the survey to all the Emirati 3rd and 4th year business and engineering students. The reason here is that the first and second year students may have been less inclined to think in entrepreneurial terms than those in the third and fourth years. To gain survey information, a self-administered questionnaire method and convenience sampling technique (Salaheldin and Eid, 2007; Eid et al., 2006; Saunders et al., 2007) were adopted. 1000 questionnaires in total were distributed in such UAE universities as Dubai, Abu Dhabi, Ajman, Fujairah, Ras Al Khaimah, Sharjah and Umm Al Quwain, of which 705 were returned. 17 questionnaires had to be eliminated as outliers. A total of 688 valid questionnaires thus remained for further analysis. The effective response rate was 70.5 % (705/1000). This high response rate was due to the fact that our survey was designed to be completed in only 10 minutes. Our sample size meets the recommendation of Bartlett et al. (2001) and El-Adly and Eid (2017) that the sample size for a Structural Equation Modelling (SEM) study is traditionally recommended as a least 10 questionnaires per independent variable. Since we have 7 variables, the number of questionnaires and size of the research sample were suitable for using SEM.

Table 1 summarized the sample characteristics. As shown in table 1, most of the respondents (91.2%) in this survey were Emirati nationals and only 8.8% of them were non-national. It is noteworthy that although the study targeted only the nationals, some

non-national responses were received. Their rarity comes from the fact that few outstanding non-national students are accepted by the targeted government universities. Table 1 shows also that nearly half of the respondents (51.3%) were males and 48.7% were females. This indicates that there was a balance between the males and females within the sample and reflects the government orientation in the UAE to support the equal opportunity policy.

Table 1: Sample characteristics

Age	%	National		District	%
18-20	12.6%	Nationals	91.2%	Abu Dhabi	62.1%
21-23	71%	Non-National	8.8%	Umm Al Quwain	2.3%
24-28	14.9%	University	%	Ajman	4.7%
More than 28	1.5%	United Arab Emirates University	46%	Dubai	7.5%
Gender	%	Zayed University	35.4%	Ras Al Khaimah,	4%
Male	51.3	Higher Colleges of Technology	18.6	Sharjah	3.1%
Female	48.7	College	%	Fujairah.	4.2
		Business College	72.2		
		Engineering	27.8		

Research Instrument Development—Measures

Wherever possible, this research used validated measures that had been applied before.

In conceptualizing entrepreneurs' personal characteristics, the literature shows that these include both autonomy and creativity. We followed Kolvereid (1996) and McNally et al. (2014) in defining them as two first-order constructs each measured by three items. We borrowed or adapted these items from Kolvereid (1996). Entrepreneurs' perceptions were conceptualized as a second-order construct consisting of three first-order components altogether. First, PBC was operationalized using seven items. We borrowed or adapted

1
2
3
4 these items from Jaén and Liñán (2013) and Liñán and Chen, (2009). Second, the
5
6 workload was measured using three items. We borrowed or adapted these items from
7
8 Kolvereid (1996) and McNally et al. (2014). Third, perceived desirability was
9
10 conceptualized as a first order construct that included nine items. We borrowed or adapted
11
12 these items from Ajzen (1991), Jaén and Liñán (2013) and Liñán and Chen (2009). The
13
14 original scale of subjective norms devised by Jaén and Liñán (2013) was used in this
15
16 study. However, on the basis of the literature review and the UAE context in mind, we
17
18 added some items and split the effect of parents and siblings to measure their effects
19
20 accurately and individually. Consequently, five items were used to measure the construct
21
22 of subjective norms. Finally, EI was measured using the original scale of Jaén and Liñán
23
24 (2013). Five items were used to measure it.
25
26
27
28
29
30
31

32 Next, our operationalized measures were purified by the work of a panel of four experts.
33
34 This consisted of two entrepreneurs and two academic professors who specialized in
35
36 entrepreneurship education. Tests of content validity were performed on each question
37
38 and on the overall scale. Finally, exploratory factor analysis (EFA), a reliability
39
40 assessment, and construct validity assessment were used to assess the reliability and
41
42 validity of the constructs (Salaheldin and Eid, 2007).
43
44
45
46
47

48 **Data Analysis**

49
50 Before examining a model which includes all the dimensions at once, it is critical to
51
52 highlight, that the methodology separated the analyses of every construct (measurement
53
54 model), in order to refine the items used in their measurement. Having developed the
55
56 dimensions, we made a confirmatory factor analysis (CFA). Thus we used both a
57
58
59
60

measurement model (in which each dimension has a separate model) and a structural model (which includes all the dimensions in one model) (Hair et al., 2006).

First, Cronbach's alpha reliability coefficient and items-to-total correlation were calculated to examine the psychometrical properties of our variables (Nunnally and Bernstein, 1994). This analysis led to the elimination of one item from the entrepreneurship intention scale, three items from the desirability scale and one item from the subjective norms construct, the inclusion of which reduced the value of the reliability coefficients. As can be seen in Table 2, all the scales have reliability coefficients ranging from 0.821 to 0.954, which all exceed the cut-off level of 0.65 set for basic research (Bagozzi, 1994, p. 96). The summary of reliability measures is in Table 2.

Table 2: Reliability Analysis

Constructs	N of Items	Mean	SD	Reliability %
Autonomy	3	3.990	1.001	83.2
Creativity	3	4.348	0.856	86.8
PBC	7	3.998	0.941	95.4
Workload	3	3.630	1.153	81.6
Perceived Desirability	6	4.536	0.711	82.6
Subjective Norms	4	4.396	0.770	82.1
Entrepreneurship Intention	4	4.076	0.994	89.6

Next, an exploratory factor analysis was conducted (see Appendix) on all of the items (using varimax rotation) to find whether the elements for a variable were suitable for making the Entrepreneurship Intention model [i.e. were unidimensional]. Elements which did not meet the following conditions were deleted: they had to have (1) dominant loadings greater than 0.5, and (2) cross-loadings less than 0.50 (Hair et al., 2006). Ten constructs were extracted (explaining more than 67.83% of the extracted variance) by using an eigenvalue of 1.0 as the cut-off point, and by a careful inspection of the scree

plot. The factor loadings were generally high; the lowest was equal to 0.637, while the result of the Kaiser-Meyer-Olkin test of factor analysis was substantial (0.853).

Measurement-Model Testing

Finally, to meet the requirements for satisfactory convergent and discriminant validity, confirmatory factor analysis was conducted to test the seven measures. Convergent validity describes the extent to which the items of a specific measure converge or share a high percentage of variance (Hair et al., 2006). Convergent validity can be met if the average variance extracted (AVE) for a construct is more than 0.50. Table 3 summarizes the results of the convergent validity analysis. All measures had an acceptable convergent validity. Table 3 shows that the variances extracted by construct (AVE) were more than any squared correlation among the variables; this implied that the constructs were empirically distinct (Fornell and Larcker, 1981).

Table 3: Measurement Model Results: Confirmatory Factor Analysis

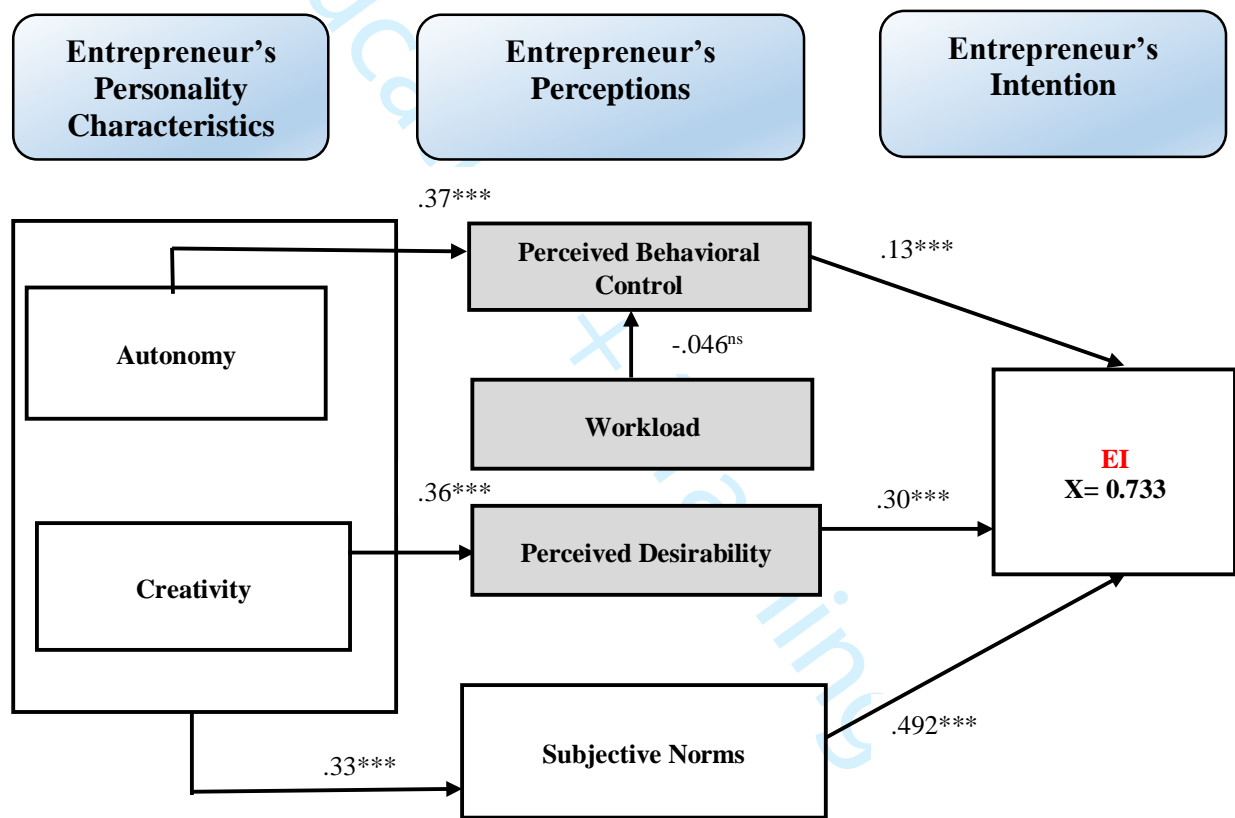
	Correlations						
	AUT	CRT	PBC	WLD	PDS	SN	EI
Autonomy	.770						
Creativity	.145**	.876					
PBC	.042**	.124**	0.757				
Workload	.029**	.002 ^{ns}	.003 ^{ns}	0.772			
Perceived Desirability	.062**	.158**	.107**	.005 ^{ns}	0.772		
Subjective Norms	.012**	.007*	.038**	.008*	.025**	0.716	
Entrepreneurship Intention	.071**	.132**	.080**	.001 ^{ns}	.219**	.008*	0.826
Coefficient Alpha	.832	.868	.954	.816	.826	.821	.896

* Correlation is significant at the 0.05 level (2-tailed); ** Correlation is significant at the 0.01 level (2-tailed); ns Correlation is insignificant.

The diagonals represent the average variance extracted (AVE) and the lower cells represent the squared correlations among the constructs.

Structural-Model Testing

Given that the main aim of the research was to test the hypothesized causal relationships among the constructs of the model, we used the structural equation modeling package, AMOS 23 (see Figure 2). The factor scores were used as single item indicators to carry out path analysis, implementing the maximum likelihood estimates (MLE) method, following the guidelines proposed by Joreskog and Sorbom (1982). A more detailed analysis of the outputs and indicators for model fit is reported in Table 4.



* Significant at 0.10, **Significant at 0.05, ***Significant at 0.01, ns not significant and * Squared Multiple Correlation

Figure 2: Results of Path Analysis

Since there is no definitive standard of fit, different indicators are provided, together with suggested guidelines. The Chi-square test was not statistically significant, which reflected

a good fit. The other fit indicators, along with the squared multiple correlations, reflect a good overall fit with the data (GFI = .998, AGFI = .975, CFI = .999, NFI = .998, RMSEA = .040). Since these indices confirm that the overall fit of the model to the data was good, it was decided that the structural model was an appropriate basis for hypothesis testing.

Table 4: Standardized Regression Weights

Predictor variables	Criterion Variables	Hypothesized relationship	Standardized coefficient	R ^{2a}
Autonomy	PBC	H1.1	0.369***	0.324
Workload	PBC	H3	-0.046^{ns}	
Creativity	PD	H2.1	0.360***	0.291
Autonomy	SN	H4	0.382***	0.355
Creativity	SN	H4	0.327***	
PBC	EI	H1.2	0.129***	
PD	EI	H2.2	0.301***	
SN	EI	H5	0.492***	
Statistics			Suggested	Obtained
Chi-Square Significance			≥0.05	0.119
Goodness-of-fit index (GFI)			≥0.90	0.989
Adjusted goodness-of- fit index (AGFI)			≥0.80	0.975
Comparative fit index (CFI)			≥0.90	0.999
Root Mean Square Residual (RMSEA)			≤0.08	0.040
			≤0.08	0.040

***P<0.01, ns is not significant

Undoubtedly, our findings generally support our conceptual model. The results give support to most of the hypotheses. Table 4 shows the estimated standardized parameters for the causal paths. First, apart from workload (**H3**) (Standardized Estimate=-**0.046**, P > 0.10), the suggested factor positively affects the perceived behavioural control, namely autonomy (**H1.1**) (Standardized Estimate=**0.369**, P< 0.001). Similarly, the suggested factor positively affects the perceived desirability, namely autonomy creativity (**H2.1**) (Standardized Estimate=**0.360**, P< 0.001).

Finally, the following suggested factors positively affect the EI to set up a business, namely, perceived behavioural control (**H1.2**) (Standardized Estimate=0.129, $P > 0.001$), perceived desirability (**H2.1**) (Standardized Estimate=0.301, $P < 0.001$) and subjective norms (**H7**) (Standardized Estimate= 0.492, $P < 0.001$).

Since the causal effects of the suggested factors (autonomy and creativity) may be either direct or indirect (i.e., mediated via the effects of other variable), or both, the total causal effects were computed. More specifically, the indirect effects are the multiplicative sum of the standardized path coefficients. The total effects are the sum of the direct effect and all the indirect effects. **Table 5** shows the direct, indirect and total effects of the suggested factors.

Table 5: Direct, Indirect and Total Effect

Criterion Variable	Predictor variables	Direct Effect	Indirect Effect	Total Effect
EI	Autonomy	0.071	0.317	0.388
	Creativity	0.097	0.307	0.404
	PBC	0.125	0.000	0.125
	PD	0.301	0.000	0.301
	SN	0.492	0.000	0.492

Discussion

The particular novelty of this study resides in examining how well integrating TPB, EEM and the entrepreneurial personality characteristics which have been developed and validated in the Western world explains the entrepreneurship intention in an Arab setting (UAE context). This study extends the literature into personal differences and EI by considering a relatively new but potentially important dimension (entrepreneurs' personality characteristics of autonomy and creativity). Further, this research expands on the theme that has emerged in the entrepreneurship literature that the personal traits,

1
2
3
4 attitudes and perceptions of entrepreneurs are considered important determinants of their
5 intentions. The results of this study suggest that the autonomous and creative personality
6 constructs may be a useful addition to the armament of entrepreneur's personality
7 characteristics that predict EI.
8
9
10
11
12
13
14

15
16 The empirical analysis shows that most hypothesized relationships, as expected, are
17 significant. The two suggested entrepreneurs' personal characteristics (autonomy and
18 creativity) and the combined TPB and EEM variables (PBC, workload, perceived
19 desirability and subjective norms) jointly explain 73.3% of the variance in the EI, which
20 far exceeds the 30–55% typical in previous studies of EI (Kolvereid, 1996; Liñán and
21 Chen, 2009; Matlay et al., 2012; Schlaegel and Koenig, 2014; Van Gelderen and Jansen,
22 2006). Taken together, our results support the relevance of the suggested model in the
23 context of EI. One major contribution of this study is thus to show that the two theories,
24 which hitherto have been applied in numerous studies with implicit assumptions made
25 about their capacity to predict subsequent intentions, can now be applied with
26 demonstrated validity.
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42

43 As expected, autonomy and creativity relate to a person's preference for self-employment
44 (Kolvereid, 1996; McNally et al., 2014). That is to say, creativity and autonomy appear
45 to have positive and direct effects on both PBC and the perceived desirability of a line of
46 action. The above result indicates that creativity is considered an important motivational
47 factor in attracting the UAE's young people to self-employment. This view is supported
48 by Majumdar & Varadarajan (2013), who find that creativity is an important personality
49 trait for EI (Majumdar & Varadarajan, 2013). Creativity is also suggested as one of the
50
51
52
53
54
55
56
57
58
59
60

1
2
3
4 important cultural factors in the Gulf region, which should relate closely to
5
6 entrepreneurial potential and success (Rice, 2003).
7
8
9

10
11 Workload, which indicates, in contrast, the preference for organizational employment, is
12 suggested to affect young Emiratis' EI negatively; it has been found to negatively affect
13 the PBC (Hypothesis 3) and the perceived desirability of starting a business (Hypothesis
14 4). This supports the finding of McNally et al. (2014) that workload has a significantly
15 negative effect on PCB and perceived desirability. Indeed, Autio et al.'s measurement for
16 EI (2001) indicates the time needed to start a new venture in the future, and whether the
17 consequent career will begin on a full-time or part-time basis. Accordingly, the effect of
18 workload – as an indicator of a person's preference for organizational employment – is
19 likely to be particularly clear in the UAE context, where there is a high tendency among
20 young people to combine employment with entrepreneurship, as noted above and in the
21 literature review (Horne et al., 2013).
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38

39 In line with the related literature, which argues that the more favourable the perceived
40 desirability and PBC of the behaviour, the greater the EI (Ajzen, 1991; Autio et al., 2001;
41 Matlay et al., 2012; Nishimura and Morales, 2011), the findings of this study suggest a
42 close relationship between PBC and perceived desirability of entrepreneurial behaviour
43 and the intention to engage in it.
44
45
46
47
48
49
50
51

52 Consistent with previous research findings, subjective norms (SN) were found to be a
53 significant predictor of EI. The results reveal that subjective norms were a significant
54 determinant of the use of EI in the research model. These results are in line with those of
55
56
57
58
59
60

1
2
3
4 previous studies (e.g. Karahanna, et al., 1999; Hsu et al., 2017; Wang et al., 2011;
5
6 Robinson and Doverspike, 2006; Liao et al., 2007). This means that the support of
7
8 parents, family members and friends will help people who may want to become an
9
10 entrepreneur. A person who gets such social support will probably have the intention and
11
12 is more likely to become an entrepreneur than one who does not get such support.
13
14 Therefore, social support is important in the development of entrepreneurship intention,
15
16 because it will increase the courage and confidence of would-be entrepreneurs (Turker
17
18 and Selcuk, 2009).
19
20
21
22
23
24

25 A major practical implication of this research is its contribution to university students'
26
27 EI, which is something that has not so far been well researched. It empirically assesses
28
29 the direct effects of key variables that are related to the intention of university students to
30
31 become entrepreneurs. The hypothesized direct and significant effects of PBC, workload,
32
33 subjective norms and perceived desirability on the business students' intention to become
34
35 entrepreneurs theoretically confirmed earlier research which has tested the TPB and EEM
36
37 from the perspective of EI (Iakovleva and Solesvik, 2014).
38
39
40
41
42

43 Second, because the subjective norm in this study appears to affect the EI strongly, there
44
45 is great need to include young people's families in any strategies or initiatives aimed to
46
47 enhance young people's EI. Family, in the UAE context, plays an important role in
48
49 shaping young people's career preferences. But if families are actively encouraging the
50
51 younger generation to work only in the public sector, educational institutions or policy
52
53 makers may have limited influence on such people's career choices and preference for
54
55 entrepreneurship. Thus, including the broader family may help to build a more
56
57
58
59
60

1
2
3
4 entrepreneurship-friendly culture that might favour young people's acceptance of self-
5 employment as a career choice. Such involvement could also enhance students'
6 confidence in their skill and ability to become successful entrepreneurs, activating the
7 role of education in this regard.
8
9
10
11
12

13
14
15
16 The strong effect of the entrepreneurial antecedents of the combined TPB and EEM
17 models were shown by senior university students in the UAE context. Since the findings
18 were consistent with those of previous studies, our understanding of the antecedents of
19 EI and of the factors affecting these antecedents is critical in improving the efforts to
20 promote entrepreneurship amongst students in the UAE. This issue would be enhanced if
21 education and training programmes could be designed to change the degree of
22 entrepreneurialism in students' personality characteristics, personal traits and mindsets
23 and would help them to consider entrepreneurship as a future career option. Such specific
24 programmes could build the entrepreneurial qualities and capacity of the UAE students
25 and expose them to entrepreneurial role models in order to enhance their autonomy and
26 creativity. Creating such autonomous and creative personality would increase the
27 university students' perception of behaviour control and attitudes to an entrepreneurial
28 career as desirable and feasible (e.g. Anosike and and Eid, 2011; Solesvik, 2012; Solesvik
29 et al., 2014).
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49

50 **Limitations of the Study and Directions for Future Research**

51 Building on existing conceptualizations of entrepreneurial personality characteristics,
52 entrepreneurial perceptions and entrepreneurial intentions, the study suggested and tested
53 a model linking two main entrepreneurial personality characteristics (namely: autonomy
54
55
56
57
58
59
60

1
2
3
4 and creativity); and entrepreneurial perceptions (namely: perceived behavioural control,
5 workload, perceived desirability and subjective norms) with EI. The results of the study
6
7 should, however, be interpreted with caution for a number of reasons. First, the study
8
9 focused on senior university students from the UAE. The UAE is a unique country in
10
11 many ways. It is a country with rich resources; it is also a fuel exporting country with
12
13 rapid economic growth. Therefore, it is not sufficient to test the suggested model in this
14
15 country alone. Future research should test the model in other countries with different
16
17 economic and cultural settings and at different stages of development. We believe that
18
19 conducting a cross-national study of EI would be a fruitful avenue for future research,
20
21 since it would allow for both testing the validity of the suggested model and for comparing
22
23 the prevalence of EI among senior university students in different Arab countries in the
24
25 Middle Eastern region.
26
27
28
29
30
31
32
33

34 Second, it would be worthwhile to explore further in future studies the measurement of
35
36 entrepreneurial personality characteristics. Entrepreneurs' personality characteristics are
37
38 a broad construct, and there is still no agreement about its dimensions and
39
40 operationalization. This research measured entrepreneurs' personality characteristics
41
42 along two dimensions. A more comprehensive construct and measurement of such
43
44 characteristics would be needed to discover other important personal traits such as the
45
46 need for achievement (Crant, 1996; Zhao et al., 2010), personal efficacy (de Pillis and
47
48 Reardon, 2007) and proactivity (Göksel and Belgin, 2011).
49
50
51
52
53
54

55 Third, in its investigations this study targets only government universities. Future
56
57 research is encouraged to target also private and other universities to strengthen the
58
59
60

1
2
3
4 generalizability of the research findings. Moreover, targeting other universities and
5
6 colleges to investigate the EI of senior students in different college majors is
7
8 recommended.
9

10
11
12
13 Finally, the generalisability of the research findings is another area of limitation. This
14
15 context of this research is Arabic young people studying business and engineering living
16
17 in the Emirates' it could have a different significance if it were replicated in another
18
19 context, such as Europe or Japan. Additionally, studying business and engineering could
20
21 play a role in improving the significance of entrepreneurial intention due to the nature of
22
23 the topics studied in these schools.
24
25
26
27
28

29 **ACKNOWLEDGMENT**

30
31 The authors sincerely thank the editor and the anonymous Journal of Education +
32
33 Training's reviewers for their constructive and valuable comments and suggestions. This
34
35 work was funded by UAEU Program for Advanced Research (UPAR) Grant (UPAR (5)
36
37 2014- G00001699).

38 **Reference**

- 39 Ajzen, I. (1991), "The theory of planned behavior", *Organizational Behavior and Human*
40
41 *Decision Processes*, Vol.50 No.2, pp. 179–211.
42 Ajzen, I. and Fishbein, M. (1975), "A Bayesian analysis of attribution processes",
43 *Psychological bulletin*, Vol. 82 No. 2, pp.261-278.
44 Amit, R., Muller, E., & Cockburn, I. (1995), "Opportunity costs and entrepreneurial
45
46 activity", *Journal of Business Venturing*, Vol. 10 No. 2, pp. 95-106.
47 Anosike, U.P. and Eid, R. (2011), "Integrating internal customer orientation, internal
48
49 service quality, and customer orientation in the banking sector: An empirical
50
51 study", *The Service Industries Journal*, Vol.31No. 14, pp. 2487-2505.
52 Autio, E., H. Keeley, R., Klofsten, M., GC Parker, G. and Hay, M. (2001),
53
54 "Entrepreneurial intent among students in Scandinavia and in the USA",
55
56 *Enterprise and Innovation Management Studies*, Vol. 2 No. 2, pp. 45-160.
57 Bae, T. J., Qian, S., Miao, C. and Fiet, J. O. (2014), "The relationship between
58
59 entrepreneurship education and EIs: A meta-analytic review", *Entrepreneurship*
60
Theory and Practice, Vol. 38 No. 2, pp. 217-254.
Bagozzi, R. P. (1994), "Measurement in marketing research: Basic principles of
questionnaire design", *Principles of marketing research*, Vol. 1, pp. 1-49.

- 1
2
3
4 Bandura, A. (1977), "Self-efficacy: toward a unifying theory of behavioral change",
5 Psychological review, Vol.84 No. 2, p. 191.
- 6 Baron, R. A. (2000), "Psychological perspectives on entrepreneurship: Cognitive and
7 social factors in entrepreneurs' success", Current directions in psychological
8 science, Vol. 9 No. 1, pp. 15-18.
- 9
10 Baron, R. A., and Tang, J. (2011), "The role of entrepreneurs in firm-level innovation:
11 Joint effects of positive affect, creativity, and environmental dynamism", Journal
12 of Business Venturing, Vol. 26 No. 1, pp. 49-60.
- 13 Begley, T.M. and Boyd, D.P. (1987), "Psychological characteristics associated with
14 performance in entrepreneurial firms and smaller businesses", Journal of business
15 venturing, Vol. 2 No. 1, pp. 79-93.
- 16 Bem, D.J. (1972), "Self-perception theory", Advances in experimental social psychology,
17 Vol. 6, pp. 1-62.
- 18 Benz, M. and Frey, B.S. (2008), "Being independent is a great thing: Subjective
19 evaluations of self-employment and hierarchy", *Economica*, Vol. 75 No. 298, pp.
20 362-383.
- 21
22 Block, J., Sandner, P. and Spiegel, F. (2015), "How do risk attitudes differ within the
23 group of entrepreneurs? The role of motivation and procedural utility", Journal of
24 Small Business Management, Vol. 53 No. 1, pp. 183-206.
- 25 Botti, S. (2004), "The psychological pleasure and pain of choosing: when people prefer
26 choosing at the cost of subsequent outcome satisfaction", Journal of personality
27 and social psychology, Vol. 87 No. 3, p. 312.
- 28
29 Bray, I., Kenny, G., Pontin, D., Williams, R. and Albarran, J. (2016), "Family presence
30 during resuscitation: validation of the risk-benefit and self-confidence scales for
31 student nurses", Journal of Research in Nursing, Vol. 21 No. 4, pp. 306-322.
- 32 Bröckling, U. (2015), *The entrepreneurial self: Fabricating a new type of subject*. Sage.
- 33 Brough, P., Timms, C., Siu, O.L., Kalliath, T., O'Driscoll, M.P., Sit, C.H., Lo, D. and Lu,
34 C.Q. (2013), "Validation of the Job Demands-Resources model in cross-national
35 samples: Cross-sectional and longitudinal predictions of psychological strain and
36 work engagement", *Human Relations*, Vol. 66 No. 10, pp. 1311-1335.
- 37
38 Brush, C.G. (1992), "Research on women business owners: Past trends, a new perspective
39 and future directions", *Entrepreneurship: Theory and Practice*, Vol. 16 No. 4, pp.
40 5-31.
- 41
42 Bullough, A., Renko, M. and Myatt, T. (2014), "Danger zone entrepreneurs: The
43 importance of resilience and self-efficacy for EIs", *Entrepreneurship Theory and
44 Practice*, Vol. 38 No. 3, pp. 473-499.
- 45 Caird, S. (1991), "The enterprising tendency of occupational groups", *International Small
46 Business Journal*, Vol. 9 No. 4, pp. 75-81.
- 47
48 Carsrud, A. and Brännback, M. (2011). "Entrepreneurial motivations: what do we still
49 need to know?", *Journal of Small Business Management*, Vol. 49 No. 1, pp. 9-26.
- 50 Covin, J.G. and Slevin, D.P. (1991), "A conceptual model of entrepreneurship as firm
51 behavior", *Entrepreneurship theory and practice*, Vol. 16 No. 1, pp.7-26.
- 52 Crant, J.M. (1996), "The proactive personality scale as a predictor of EIs", *Journal of
53 small business management*, Vol. 34 No. 3, pp. 42-49.
- 54
55 de Pillis, E. and Reardon, K.K. (2007), "The influence of personality traits and persuasive
56 messages on EI: A cross-cultural comparison", *Career Development
57 International*, Vol. 12 No. 4, pp. 382-396.
- 58
59
60

- 1
2
3
4 Dheer, R.J. and Lenartowicz, T. (2018), Career decisions of immigrants: Role of identity
5 and social embeddedness”, *Human Resource Management Review*, Vol. 28 Vol.
6 2, pp.144-163.
7
8 Dworkin, G. (1988), *The theory and practice of autonomy*, New York: Cambridge
9
10 Edwards-Schachter, M., García-Granero, A., Sánchez-Barrioluengo, M., Quesada-
11 Pineda, H. and Amara, N. (2015), “Disentangling competences: Interrelationships
12 on creativity, innovation and entrepreneurship”, *Thinking Skills and*
13 *Creativity*, Vol. 16, pp. 27-39.
14 Eid, R. and Trueman, M. (2002), “The internet: New international marketing issues”,
15 *Management Research News*, Vol. 25 No. 12, pp. 54-67.
16 Eid, R. (2005), “International internet marketing: A triangulation study of drivers and
17 barriers in the business-to-business context in the United Kingdom”, *Marketing*
18 *Intelligence & Planning*, Vol. 23 No. 3, pp. 266-280.
19 Eid, R., Trueman, M. and Ahmed, A.M. (2006), B2B international internet marketing: A
20 benchmarking exercise”, *Benchmarking: An International Journal*, Vol. 13 No.
21 1/2, pp. 200-213.
22
23 El-Adly, M.I. and Eid, R. (2017), “Dimensions of the perceived value of malls: Muslim
24 shoppers’ perspective”, *International Journal of Retail & Distribution*
25 *Management*, Vol. 45 No. 1, pp. 40-56.
26 Engle, R.L., Dimitriadi, N., Gavidia, J.V., Schlaegel, C., Delanoe, S., Alvarado, I., He,
27 X., Buame, S. and Wolff, B. (2010), “Entrepreneurial intent: A twelve-country
28 evaluation of Ajzen's model of planned behavior”, *International Journal of*
29 *Entrepreneurial Behavior & Research*, Vol. 16 No. 1, pp. 35-57.
30
31 Fayolle, A., and Liñán, F. (2014). “The future of research on EIs”, *Journal of Business*
32 *Research*, Vol. 67 No. 5, pp. 663–666.
33
34 Feldman, D.C. and Bolino, M.C. (2000), “Career patterns of the self-employed: Career
35 motivations and career outcomes”, *Journal of Small Business Management*, Vol.
36 38 No. 3, pp. 53-68.
37
38 Fillis, I. and Rentschler, R. (2010), “The role of creativity in entrepreneurship”, *Journal*
39 *of Enterprising Culture*, Vol. 18 No. 1, pp. 49-81.
40
41 Fornell, C. and Larcker, D. (1981), “Evaluating structural equation models with
42 unobservable variables and measurement error”, *Journal of Marketing Research*,
43 Vol. 18 No. 1, pp. 39–50.
44
45 Frese, M., Bausch, A., Schmidt, P., Rauch, A. and Kabst, R. (2012), “Evidence-based
46 entrepreneurship: Cumulative science, action principles, and bridging the gap
47 between science and practice”, *Foundations and Trends in Entrepreneurship*, Vol.
48 8 No. 1, pp. 1-62.
49
50 GEM, Global Entrepreneurship Monitor, (n.d.), Retrieved December 9, 2016, from
51 <http://www.gemconsortium.org>.
52
53 Göksel, A. and Belgin, A. (2011), “Gender, business education, family background and
54 personal traits; a multi-dimensional analysis of their effects on entrepreneurial
55 propensity: Findings from Turkey”, *International Journal of Business and Social*
56 *Science*, Vol. 2 No. 13, pp. 35–48.
57
58 Greenglass, E. R., Burke, R. J. and Moore, K. A. (2003), “Reactions to increased
59 workload: Effects on professional efficacy of nurses”, *Applied psychology*, Vol.
60 52 No. 4, pp. 580-597.

- 1
2
3
4 Gumel, A.M. and Othman, M.A. (2013), "Reflecting customers' innovativeness and
5 intention to adopt islamic banking in Nigeria", *Business Management Quarterly*
6 *Review*, Vol. 4 No. 3, pp. 27-37.
7
8 Hair, J., Black, B., Babin, B., Ralph, A. and Ronald, T. (2006), *Multivariate Data*
9 *Analysis*, 6th edition, London: Prentice-Hall.
10 Haynie, J.M., Shepherd, D.A. and Patzelt, H. (2012), "Cognitive adaptability and an
11 entrepreneurial task: The role of metacognitive ability and feedback",
12 *Entrepreneurship Theory and Practice*, Vol. 36 No. 2, pp. 237-265.
13 Heinonen, J., Hytti, U. and Stenholm, P. (2011), "The role of creativity in opportunity
14 search and business idea creation", *Education+ Training*, Vol. 53 No. 8/9, pp.
15 659-672.
16
17 Horne, C. V., Huang, V. Z., and Awad, M. M. (2011), *GEM Report On United Arab*
18 *Emirates, Abu Dhabi, Khalifa Fund for Enterprise Development*.
19 Hossain, L. and de Silva, A. (2009), "Exploring user acceptance of technology using
20 social networks", *The Journal of High Technology Management Research*, Vol.
21 20 No. 1, pp. 1-18.
22
23 Hsu, D. K., Wiklund, J. and Cotton, R. G. (2017), "Success, Failure, and Entrepreneurial
24 Reentry: An Experimental Assessment of the Veracity of Self-Efficacy and
25 Prospect Theory", *Entrepreneurship Theory and Practice*, Vol. 41 No. 1, pp. 19-
26 47.
27
28 Hull, D. L., Bosley, J. J., and Udell, G. G. (1980), "Reviewing the Heffalump: Identifying
29 Potential Entrepreneurs by Personality Characteristics", *Journal of Small*
30 *Business Management*, Vol. 18, pp. 11-18.
31 Iakovleva, T. and Solesvik, M.Z. (2014), "EIs in post-Soviet economies", *International*
32 *Journal of Entrepreneurship and Small Business*, Vol. 21 No. 1, pp. 79-100.
33 Jaén, I. and Liñán, F. (2013), "Work values in a changing economic environment: the role
34 of entrepreneurial capital", *International Journal of Manpower*, Vol. 34 No. 8, pp.
35 939-960.
36
37 Joreskog, K. and Sorbom, D. (1982), "Recent Developments in Structural Equation
38 Modeling", *Journal of Marketing Research*, Vol. 19, pp. 404-416.
39 Karahanna, E., Evaristo, J.R. and Srite, M. (2006), "Levels of culture and individual
40 behavior: An integrative perspective", *Advanced Topics in Global Information*
41 *Management*, Vol. 5 No. 1, pp. 30-50.
42 Katz, H. (2001), *The relationship of intrinsic motivation, cognitive style and tolerance of*
43 *ambiguity and creativity in scientists*, Seton Hall University Dissertations and
44 *Theses (ETDs)*. Paper 1734.
45
46 Kautonen, T., Gelderen, M. and Fink, M. (2015), "Robustness of the theory of planned
47 behavior in predicting EIs and actions", *Entrepreneurship Theory and*
48 *Practice*, Vol. 39 No. 3, pp. 655-674.
49 Kolvereid, L. (1996), "Prediction of employment status choice intentions",
50 *Entrepreneurship: Theory and Practice*, Vol. 21 No. 1, pp. 47-58.
51 Krueger, N. F., Reilly, M. D. and Carsrud, A. L. (2000), "Competing models of
52 EIs", *Journal of business venturing*, Vol.15 No. 5, pp. 411-432.
53
54 Lange, T. (2012), "Job satisfaction and self-employment: autonomy or personality?",
55 *Small Business Economics*, Vol. 38 No. 2, pp. 65-177.
56 Langkamp Bolton, D. and Lane, M.D. (2012), "Individual entrepreneurial orientation:
57 Development of a measurement instrument", *Education+ Training*, Vol. 54 No.
58 (2/3), pp. 219-233.
59
60

- 1
2
3
4 Lee, L., Wong, P. K., Der Foo, M. and Leung, A. (2011). "EIs: The influence of
5 organizational and individual factors", *Journal of Business Venturing*, Vol. 26 No.
6 1, pp. 124–136.
- 7
8 Lee, S.Y., Florida, R. and Acs, Z. (2004), "Creativity and entrepreneurship: a regional
9 analysis of new firm formation", *Regional studies*, Vol. 38 No. 8, pp. 879-891.
- 10 Liao, C., Chen, J.L. and Yen, D.C. (2007), "Theory of planning behavior (TPB) and
11 customer satisfaction in the continued use of e-service: An integrated model",
12 *Computers in human behavior*, Vol. 23 No. 6, pp. 2804-2822.
- 13 Liñán, F. and Chen, Y.W. (2009), "Development and Cross-Cultural application of a
14 specific instrument to measure EIs", *Entrepreneurship theory and practice*, Vol.
15 33 No. 3, pp. 593-617.
- 16
17 Loewenstein, G. (1996). "Out of control: Visceral influences on behavior",
18 *Organizational behavior and human decision processes*, Vol. 65 No. 3, pp. 272-
19 292.
- 20
21 Loewenstein, G. (2000). "Emotions in economic theory and economic behavior", *The*
22 *American Economic Review*, Vol. 90 No. 2, pp. 426-432.
- 23 Luarn, P. and Lin, H.H. (2005), "Toward an understanding of the behavioral intention to
24 use mobile banking", *Computers in human behavior*, Vol. 21 No. 6, pp. 873-891.
- 25 McGee, J.E., Peterson, M., Mueller, S.L. and Sequeira, J.M. (2009), "Entrepreneurial
26 self-efficacy: refining the measure", *Entrepreneurship theory and Practice*, Vol.
27 33 No. 4, pp. 965-988.
- 28
29 McNally, J., Martin, B., Honig, B., Bergmann, H. and Piperopoulos, P. (2014),
30 "Assessing Kolvereid's (1996) Measure of Entrepreneurial Attitudes", In
31 *Academy of Management Proceedings* (Vol. 2014, No. 1, p. 12621). *Academy of*
32 *Management*.
- 33 Miller, D. (1983), "The correlates of entrepreneurship in three types of firms",
34 *Management science*, Vol. 29 No. 7, pp. 770-791.
- 35 Moriano, J.A., Gorgievski, M., Laguna, M., Stephan, U. and Zarafshani, K. (2012), "A
36 cross-cultural approach to understanding EI", *Journal of career development*, Vol.
37 39 No. 2, pp. 162-185.
- 38
39 Packham, G., Jones, P., Miller, C., Pickernell, D. and Thomas, B. (2010), "Attitudes
40 towards entrepreneurship education: a comparative analysis", *Education+*
41 *Training*, Vol. 52 No. 8/9, pp. 568-586.
- 42 Puhakka, V. (2007), "Effects of opportunity discovery strategies of entrepreneurs on
43 performance of new ventures", *The Journal of Entrepreneurship*, Vol. 16 No. 1,
44 pp. 9-51.
- 45 Rice, G. (2003), "The challenge of creativity and culture: a framework for analysis with
46 application to Arabian Gulf firms", *International Business Review*, Vol. 12 No. 4,
47 pp. 461-477.
- 48
49 Robinson, R.P. and Doverspike, D. (2006), "Factors predicting the choice of an online
50 versus a traditional course", *Teaching of Psychology*, Vol.33 No. 1, pp. 64-68.
- 51 Rueda, S., Moriano, J.A. and Liñán, F. (2015), "Validating a theory of planned behavior
52 questionnaire to measure EIs. A. Fayolle, P. Kyrö yF. Liñán (Eds.), *Developing,*
53 *Shaping and Growing Entrepreneurship*, pp.60-69.
- 54
55 Ryan, R. M. and Deci, E. L. (2006), "Self-regulation and the problem of human
56 autonomy: does psychology need choice, self-determination, and will?", *Journal*
57 *of Personality*, Vol. 74 No. 6, pp. 1557-1586.
- 58
59
60

- 1
2
3
4 Salaheldin, S. and Eid, R. (2007), "The implementation of world class manufacturing
5 techniques in Egyptian manufacturing firms: An empirical study", *Industrial*
6 *Management & Data Systems*, Vol. 107 No. 4, pp. 551-566.
- 7 Sarooghi, H., Libaers, D., & Burkemper, A. (2015), "Examining the relationship between
8 creativity and innovation: A meta-analysis of organizational, cultural, and
9 environmental factors", *Journal of business venturing*, Vol. 30 No. 5, pp. 714-731.
- 10 Schein, E.H. and Schein, E. (1978), *Career dynamics: Matching individual and*
11 *organizational needs*, Reading, MA: Addison-Wesley.
- 12 Schjoedt, L. (2009), "Entrepreneurial job characteristics: an examination of their effect
13 on entrepreneurial satisfaction", *Entrepreneurship theory and practice*, Vol.33
14 No. 3, pp. 619-644.
- 15 Schlaegel, C. and Koenig, M. (2014), "Determinants of entrepreneurial intent: a meta-
16 analytic test and integration of competing models", *Entrepreneurship Theory and*
17 *Practice*, Vol. 38 No. 2, pp. 291-332.
- 18 Shalley, C.E. and Perry-Smith, J.E. (2008), "The emergence of team creative cognition:
19 the role of diverse outside ties, sociocognitive network centrality, and team
20 evolution", *Strategic Entrepreneurship Journal*, Vol. 2 No. 1, pp. 23-41.
- 21 Shane, S. and Nicolaou, N. (2015), "Creative personality, opportunity recognition and the
22 tendency to start businesses: A study of their genetic predispositions", *Journal of*
23 *Business Venturing*, Vol. 30 No. 3, 407-419.
- 24 Shapero, A. and Sokol, L. (1982), *Social dimensions of entrepreneurship*, In C.A. Kent,
25 D.L. Sexton, & K.H. Vesper (Eds.), *The encyclopedia of entrepreneurship* (pp. 72-
26 90). Englewood Cliffs, NJ: Prentice-Hall.
- 27 Shaver, K.G. and Scott, L.R. (1991), "Person, process, choice: The psychology of new
28 venture creation", *Entrepreneurship theory and practice*, Vol. 16 No. 2, pp. 23-45.
- 29 Skinner, B., F. (1971), *Beyond freedom and dignity*, New York: Knopf
- 30 Solesvik, M.Z., Westhead, P., Kolvereid, L. and Matlay, H. (2012), "Student intentions
31 to become self-employed: the Ukrainian context", *Journal of Small Business and*
32 *Enterprise Development*, Vol. 19 No. 3, pp. 441-460.
- 33 Sternberg, R. and Krauss, G. (Eds.). (2014), *Handbook of research on entrepreneurship*
34 *and creativity*, Edward Elgar Publishing.
- 35 Taylor, S.E., Lichtman, R.R. and Wood, J.V. (1984), "Attributions, beliefs about control,
36 and adjustment to breast cancer", *Journal of personality and social psychology*,
37 Vol. 46 No. 3, p. 489.
- 38 Tumasjan, A. and Braun, R. (2012), "In the eye of the beholder: How regulatory focus
39 and self-efficacy interact in influencing opportunity recognition", *Journal of*
40 *Business Venturing*, Vol. 27 No. 6, pp. 622-636.
- 41 Turker, D. and Sonmez Selçuk, S. (2009), "Which factors affect EI of university
42 students?", *Journal of European Industrial Training*, Vol. 33 No. 2, 142-159.
- 43 Van Gelderen, M. and Jansen, P. (2006), "Autonomy as a start-up motive", *Journal of*
44 *Small Business and Enterprise Development*, Vol. 13 No. 1, pp. 23-32.
- 45 Van Yperen, N. W., Wörtler, B. and De Jonge, K. M. (2016), "Workers' intrinsic work
46 motivation when job demands are high: The role of need for autonomy and
47 perceived opportunity for blended working", *Computers in Human Behavior*, Vol.
48 60, pp. 179-184.
- 49 Wang, W., Lu, W. and Millington, J.K. (2011), "Determinants of EI among
50 collegestudents in China and USA", *Journal of Global Entrepreneurship*
51 *Research*, Vol. 1 No. 1, pp. 35-44.
- 52
53
54
55
56
57
58
59
60

- Webster, J. and Trevino, L.K. (1995), "Rational and social theories as complementary explanations of communication media choices: Two policy-capturing studies", *Academy of Management journal*, Vol. 38 No. 6, pp. 1544-1572.
- Woo, C.Y., Cooper, A.C. and Dunkelberg, W.C. (1991), "The development and interpretation of entrepreneurial typologies", *Journal of business venturing*, Vol. 6 No. 2, pp. 93-114.
- Yar Hamidi, D., Wennberg, K. and Berglund, H. (2008), "Creativity in entrepreneurship education", *Journal of Small Business and Enterprise Development*, Vol. 15 No. 2, pp. 304-320.
- Zampetakis, L. A. (2008), "The role of creativity and proactivity on perceived entrepreneurial desirability", *Thinking Skills and Creativity*, Vol. 3 No. 2, pp. 154-162.
- Zhao, H., Seibert, S. E. and Lumpkin, G. T. (2010), "The relationship of personality to EIs and performance: A meta-analytic review", *Journal of management*, Vol. 36 No. 2, pp. 381-404.

Table 6 - Appendix. Scale items, factor loadings, and sources

Construct/Items	Factor Loading	Source
Autonomy: [variance extracted: 5.937%] 5		Adopted from
Q16_AUTONOMY1	.768	Kolvereid
Q16_AUTONOMY2	.857	(1996) and
Q16_AUTONOMY3	.820	McNally et al. (2014).
Creativity: [variance extracted: 3.892%] 7		
Q16_CREATIVITY1	.792	Adopted from
Q16_CREATIVITY2	.842	Kolvereid (1996).
Q16_CREATIVITY3	.813	
Perceived Behavior Control: [variance extracted: 25.057%] 1		
Q19_PBCONTROL1	.650	Adopted from
Q19_PBCONTROL2	.760	Jaén and
Q19_PBCONTROL3	.809	Liñán (2013)
Q19_PBCONTROL4	.797	and Liñán and
Q19_PBCONTROL5	.754	Chen, (2009).
Q19_PBCONTROL6	.804	
Q19_PBCONTROL7	.816	
Workload: [variance extracted: 5.726%] 6		
Q16_WORKLOAD1	.860	Adopted from
Q16_WORKLOAD2	.866	Kolvereid
Q16_WORKLOAD3	.795	(1996).
Perceived Desirability: [variance extracted: 10.310%] 2		
Q13_DESIRABILITY3	.735	Adopted from
Q13_DESIRABILITY4	.693	Ajzen (1991),
Q13_DESIRABILITY5	.696	Jaén and
Q13_DESIRABILITY7	.742	Liñán (2013)
Q13_DESIRABILITY8	.637	

1			
2			
3			
4	Q13_DESIRABILITY3	.677	and Liñán and
5			Chen (2009)
6	Subjective Norms: 7.769%] 4		
7	Q18_SUBJECTIVENORMS1	.688	Adopted from
8	Q18_SUBJECTIVENORMS2	.775	Jaén and
9	Q18_SUBJECTIVENORMS4	.829	Liñán (2013).
10	Q18_SUBJECTIVENORMS5	.772	
11			
12	Entrepreneurship Intention: [variance extracted:		
13	9.148%] 3		
14	Q12_ENTINTENTION1	.863	Adopted from
15	Q12_ENTINTENTION2	.839	Jaén and
16	Q12_ENTINTENTION4	.856	Liñán (2013).
17	Q12_ENTINTENTION5	.748	
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			