



**Post-materialistic values and entrepreneurial intention-The
Case of Saudi Arabia**

Journal:	<i>Journal of Small Business and Enterprise Development</i>
Manuscript ID	JSBED-12-2017-0386.R3
Manuscript Type:	Research Paper
Keywords:	Post-materialistic Values, entrepreneurial intention, self-efficacy, materialistic Values

SCHOLARONE™
Manuscripts

Post-materialistic values and entrepreneurial intention - The Case of Saudi Arabia

Purpose – The paper investigates how cultural values influence the entrepreneurial process. It conceptualises the relationship between post-materialistic values and entrepreneurial intention to explain low entrepreneurial activity.

Design/methodology/approach – The study was conducted in Saudi Arabia with non-entrepreneurs. An online survey returned 405 valid questionnaires, representing a 27% response rate. The data were analysed using Partial Least Structural Equation modelling.

Findings – The paper identifies key factors that explain the influence of changing cultural values on entrepreneurial activity. The results show that post-materialistic values influence entrepreneurial intention by decreasing desirability and entrepreneurial self-efficacy.

Limitations/implications – The study conceptualises the interplay between cultural values and entrepreneurial intention in Saudi Arabia. Further insights can be developed by comparing Saudi Arabia with other countries. The study was conducted as a “snapshot” of the current situation of entrepreneurship in Saudi Arabia with a cross-sectional survey design.

Practical implications – The paper holds important implications for entrepreneurship educators when addressing unsupportive cultures for entrepreneurial activity. Cultural and motivational approaches are suggested. While the former focuses on aspects that encourage the desire and confidence to start a business, the latter involves encouraging setting venture creation as a goal.

Originality/value – Previous studies indicated that post-materialistic values negatively influence entrepreneurship, this paper contributes further by exploring how this relationship manifests by exploring the intervening factors between post-materialistic values and entrepreneurial intention. It advances entrepreneurship research by investigating deep assumptions underlying the formulation of entrepreneurial intentions. It also responds to the need to understand the difference in the levels of entrepreneurial activity across countries.

1. Introduction

Entrepreneurship is a process of venture creation (Balan and Metcalfe, 2012) which is important within countries and societies for several reasons. First, it enables nations to deal with global challenges such as economic recession (Sowmya et al., 2010). Second, it supports societies to address difficulties such as unemployment (Koe et al., 2014). Third, it enhances the development of countries through innovation (Setiawan, 2014). To secure these advantages, countries and societies require more entrepreneurs (Campbell, 2012). However, the Global Entrepreneurship Monitor (GEM) reports (2009, 2010 and 2016) consistently show that the entrepreneurial activity score of some countries is far below the average of comparable countries. The advantages of venture creation to the socio-economy are not therefore fully available (Freytag and Thurik 2007; Van Gelderen et al., 2015).

Stenholm et al. (2013, p.177) argued that “the rate of entrepreneurial activity varies widely across countries, yet we struggle to explain precisely why”. Traditionally, the key explanation for differences in entrepreneurial activity across countries is economic condition (Blau, 1987; Evans and Leighton, 1989). Persistence of cross-country variations indicates that economic condition might not be the only reason behind this phenomenon (Grilo and Thurik, 2005) and it has been argued that differences in entrepreneurial activity across countries can be attributed to culture (Wennekers et al. 2007; Koenig et al., 2007). Studies have implemented Hofstede’s cultural dimensions as measures in examining the relationship between culture and entrepreneurship (Mitchell et al., 2002; Thomas and Mueller, 2000; Mueller and Thomas, 2001) with dimensions including individualism, power-distance, uncertainty avoidance, and masculinity (Thomas and Mueller, 2000). However, Hofstede’s dimensions have been criticised as being too broad and irrelevant to entrepreneurship (Hayton et al., 2002).

Uhlaner and Thurik (2007) articulated that cultural values are deeply rooted within countries and may better predict the differences in entrepreneurial activity among countries with similar policies. They explored the influence of post-materialism values on entrepreneurial activity across 27 countries and found that post-materialism values negatively affect total entrepreneurial activity. Post-materialism is defined here as “the degree to which a society places immaterial life-goals such as personal development and self-esteem above material security” (Uhlaner and Thurik, 2007, p.162). Morales and Holtschlag (2013) argued that studies at country level cannot explain the decision to become an entrepreneur at the individual level. One of the main reasons is that values are individual characteristics (Rohan,

1
2
3 2000). Morales and Holtschlag (2013) found that post-materialism values negatively
4 influence the likelihood and decision to become an entrepreneur at the individual level.
5
6 Uhlaner and Thurik (2007) found evidence of a direct relationship between post-materialistic
7 values and Total Entrepreneurial Activity (TEA), with Morales and Holtschlag (2013) finding
8 a direct relationship between post-materialistic values and self-employment. However,
9 whether this is actually an indirect relationship, with mediating variables playing a key role,
10 has not been addressed. The question of why post-materialistic culture causes low
11 entrepreneurship remains unanswered (Morales and Holtschlag, 2013; Stenholm et al., 2013).
12
13
14
15

16
17 The problem of unsupportive cultural values is a major concern because it may subsequently
18 inhibit the performance of entrepreneurial activity (Tomlinson, 2007; Skoko, 2011; Hamid,
19 2012). Although policy makers establish institutions and initiatives to promote and secure the
20 advantages of entrepreneurship (Kuratko, 2005; GEM, 2009, 2010; Carree and Thurik, 2010;
21 Campbell, 2012), these interventions could be “overshadowed” by post-materialistic values
22 (Morales and Holtschlag, 2013). Post-materialistic values can therefore limit the effectiveness
23 of different policy interventions that aim to promote entrepreneurship (Uhlaner and Thurik,
24 2007).
25
26
27
28
29

30
31 Consequently, there have been explicit calls for understanding and managing the negative
32 influence of post-materialism so that policy responses can be more effective. Uy (2011)
33 argued that understanding entrepreneurs’ values is crucial to unleash their full potential and
34 inform government interventions. Uhlaner and Thurik (2007) articulated that although
35 societies with post-materialism values might have fewer entrepreneurs, there is still a need to
36 address the “puzzle” of why post-materialism negatively influences entrepreneurial activity.
37 Morales and Holtschlag (2013) stated that there is a need to address the variables explaining
38 the relationship between post-materialistic values and entrepreneurship at the individual level.
39 There is a need to integrate individual variables with cultural dimensions. Further, there is a
40 need to investigate the influence of post-materialistic values on likelihood to be an
41 entrepreneur in different contexts (Morales and Holtschlag, 2013). There is a scarcity of
42 research into the impact of post-materialism values in entrepreneurship, and “if research into
43 the determinants of entrepreneurship is scarce as far as cultural issues are concerned, it is
44 even scarcer when it comes to the role of post-materialistic values play in entrepreneurship”
45 (Ibid, 2013, p.269).
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 Following the argument that studying the entrepreneurial process and gaining insights about
4 its origin is crucial to foster the gains of entrepreneurship (Freytag and Thurik, 2007; Alfonso
5 and Cuevas, 2012), this paper examines the mechanism underlying the influence of post-
6 materialistic values on entrepreneurial intention. Although determinants of entrepreneurial
7 intention are a well-researched subject in the entrepreneurship discipline (Krueger, 1993;
8 Krueger et al., 2000; Van Gelderen et al., 2008; Liñán and Chen, 2009; Almobaireek and
9 Manolova, 2013; Schlaegel and Koenig, 2014; Kautonen et al., 2015), looking at the direct
10 and indirect relationships between post-materialistic values and entrepreneurial intention will
11 inform research from two perspectives. First, it develops understanding of the deep-rooted
12 assumptions that inhibit entrepreneurial intention and entrepreneurial activity. Second, it the
13 relationships between underlying factors that support concrete entrepreneurial intention
14 formation that then leads to entrepreneurial activity. This can enhance the effectiveness of
15 entrepreneurship promotion programmes and secure advantages of entrepreneurship for
16 unsupportive cultures (Haddoud et al., 2017). For example, entrepreneurship education can
17 cultivate students' entrepreneurial intention (Liñán, 2008; Newbery et al., 2016, 2018).

18
19 Building on the notion of the negative influence of post-materialistic values on
20 entrepreneurship at the individual level, this study extends knowledge in the field by
21 exploring variables that mediate the relationship between post-materialistic values and
22 entrepreneurial intention. It contributes to entrepreneurship research by exploring the factors
23 that explain the negative influence of post-materialistic values on entrepreneurship. Further, it
24 examines inhibitors of entrepreneurial intention and the validity of the post-materialism
25 hypothesis in a developing country context. From a practical perspective, the research
26 informs intervention programmes to better focus on what it takes to reduce the negative
27 influence of post-materialistic values on potential entrepreneurs. This may enhance the
28 efficiency of these programmes and encourage the development of entrepreneurs.

29
30 Saudi Arabia, the context of this study, is a country where policy makers recognised the role
31 of entrepreneurship in responding to economic concerns such as economic diversification, a
32 growing young population, and increasing rate of unemployment (Porter, 2009). The
33 country's National Development Plans (2010-2014 and 2015-2019) have emphasised
34 entrepreneurship through strategy and institution building (Schwab and Sala-i-Martin, 2015;
35 Aloulou, 2016). However, despite interventions, the 2010 Global Entrepreneurship Monitor
36 (GEM) report showed that Saudi Arabia scored only 1% for entrepreneurial intentions rate
37 compared to a 42.6% average of comparable countries (GEM, 2010, p.17), the lowest

entrepreneurial intention score for any country. In addition, Saudi Arabia scored a low total entrepreneurial activity (TEA) of 9.4% compared to the average of 22.8% among comparable countries. Conversely, entrepreneurial perceptions including “perceived opportunity, capabilities, and high status to successful entrepreneurs” (GEM, 2010, p.22) were highly scored. Scholars have argued that a key reason for this discrepancy is that the “years of plenty” (specifically oil wealth in this context), have created an unsupportive culture for entrepreneurship (Skoko, 2011; Hamid, 2012). However, the mediating factors that explain the relationship between post-materialistic values and entrepreneurial intention remain unexplored, limiting the ability of policy-makers to intervene effectively.

This paper next highlights key theories and develops a conceptual model and hypotheses to be tested. Following this, survey data with a sample of 405 non-entrepreneurs are analysed to test the hypotheses. The paper concludes with a discussion of the findings along with policy and practical recommendations, limitations, and suggestions for further research.

2.0 Cultural Values and Entrepreneurial Intention

2.1. Culture and Values

Social cognitive theory articulates that there is a direct relationship between environment and human behaviours (Bandura, 1986; 2001; Wood and Bandura, 1989). Although environmental factors may include several aspects such as economic conditions and socioeconomic status (Bandura, 2001), this study focuses on culture as it can affect the way that people decide to choose entrepreneurship and it indicates how countries might differ in motivations, aspirations, and activities (Foreman-Peck and Zhou, 2013). To explore the effects of culture in this context, it is crucial to understand values which underlie cultures (Hundley and Hansen, 2012). As defined by Mueller and Thomas (2001, p.58), values are “powerful forces for controlling and directing human behaviour”. Values refer to embedded concepts and beliefs which developed in the early stages of life and may promote or inhibit behaviours (Uhlener et al., 2002; Inglehart, 2008). Values directly influence behaviours as people tend to choose alternatives that match the norm (Holland and Garrett, 2013). Reference groups, beliefs and traditions can influence people’s decisions and behaviours and people often think that doing something different might result in loss. Hence, they tend to prefer inaction or follow others’ actions to avoid such loss. This might result in an inability to

1
2
3 take action and inhibit a particular behaviour (Bandura, 2001; Uhlaner et al., 2002; Holland
4 and Garrett, 2013).

5
6
7 Previous psychological studies have proved that cultural values exert influence over
8 behaviour and that entrepreneurial behaviour is no exception (Mueller and Thomas, 2000;
9
10 Murphy and Anderson, 2004; Uhlaner and Thurik, 2007; Wennekers et al., 2007; Morales
11 and Holtschlag, 2013). Countries may have more entrepreneurs by having more individuals
12 with entrepreneurial values (Davidsson, 1995; Uhlaner and Thurik, 2007; Morales and
13 Holtschlag, 2013). This notion is consistent with the post-materialism hypothesis which
14 articulates that modern societies change their values from materialism that prefer materialistic
15 goals, such as economic and physical security, into post-materialism that prefer higher-order
16 goals, such as quality of life and self-actualisation (Inglehart, 1977; 1990; 2008; Kroh, 2009).
17
18 The change process starts in times of difficult economic conditions where people prioritise
19 materialistic goals. As the condition changes to prosperity e.g. the discovery of oil, their
20 values change to favour higher-orders goals. Later, the younger generation who have not
21 experienced economic insecurity replace the materialistic generation. As entrepreneurs have
22 been shown as predominately materialistic (Blais and Toulouse, 1990; Robichaud et al., 2001;
23 Uhlaner and Thurik, 2007), it is expected that societies with materialistic values have more
24 entrepreneurs. Researchers investigated the relationship between post-materialism and
25 entrepreneurship and found that post-materialistic values negatively influence entrepreneurial
26 activity among countries (Uhlaner and Thurik, 2007; Uhlaner et al., 2002). Further, Morales
27 and Holtschlag (2013) extended this result and found that post-materialistic values negatively
28 influence entrepreneurial activity at the individual level. Thus, post-materialist individuals are
29 less likely to be entrepreneurs.
30
31
32
33
34
35
36
37
38
39
40

41 *2.2. Entrepreneurial Intention*

42
43
44 Entrepreneurship scholars have focused on entrepreneurial intention to understand how and
45 why people start their business (Krueger et al., 2000; Alfonso and Cuevas, 2012; Sedigheh
46 and Noor, 2014). Entrepreneurial intention refers to readiness of an individual to become
47 involved in entrepreneurship (Goethner et al., 2012). Two main intention models have been
48 widely applied to the study of entrepreneurial behaviour – namely, the theory of planned
49 behaviour (TPB) (Ajzen, 1991) and the entrepreneurial event model (EEM) (Shapero and
50 Sokol, 1982). In a meta-analysis about determinants of entrepreneurial intent, Schlaegel and
51 Koenig (2014) identified 98 studies which employ TPB and EEM in the entrepreneurship
52
53
54
55
56
57
58
59
60

1
2
3 field. Intention models show that intention is the best predictor of action (Shapero and Sokol,
4 1982; Bagozzi et al., 1989; Ajzen, 1991; Krueger, 1993; Krueger et al., 2000). Several studies
5 supported the ability of the TPB intention model to predict *entrepreneurial action* (Kautonen
6 et al., 2013; Kautonen et al., 2015; Van Gelderen et al., 2015): For example, a longitudinal
7 study that used the full TPB model explains 39% of entrepreneurial action (Kautonen et al.,
8 2013).

9
10
11
12
13 However, the role of cultural values can affect intention determinants and their strength to
14 predict intention (Fayolle and Linan, 2014). The cultural dimensions such as collectivistic
15 and individualistic orientation can influence entrepreneurial intention and career choice
16 (Cassell and Blake, 2012). For example, subjective norms were found not to be related to
17 entrepreneurial intention for students in the USA (Krueger et al., 2000) whereas they were
18 found to be significantly related in Russia (Tkachev and Kolvereid, 1999). Although a
19 significant number of studies have been conducted in developed countries about
20 entrepreneurial intention (Krueger et al., 2000; Goethner et al., 2012; Kautonen et al., 2013;
21 Kautonen et al., 2015; Van Gelderen et al., 2015), Saudi Arabia is considered as collectivistic
22 developing country where social pressures can influence entrepreneurial intention (Aloulou,
23 2016). Social cognitive theory asserted that environment influences behaviours indirectly
24 through cognition (Bandura, 1986; 2001; Wood and Bandura, 1989). Cognition reflects
25 “frameworks through which individuals interpret information” (Stenholm et al., 2013, p. 181).
26 Thus, environment affects behaviours through people’s thoughts and decisions (Bandura,
27 2001) in either a positive way or a negative way (Kaze´n et al., 2008; Wieber et al., 2015).

38 **3. A Conceptual Model for Post-materialistic values and Entrepreneurial Intention**

39 *3.1. Post-materialistic Values and Entrepreneurial Intention: the direct link*

40
41
42
43
44 People often have many needs which influence the sequence of their motivation in
45 accordance with Maslow’s hierarchy of human needs (Locke, 1991). They acquire values to
46 satisfy these needs. Next, they set intentions that match their values and help them to fulfil
47 their needs. Thus, values determine intentions which in turn affect behaviour. Values may
48 change between materialistic and post-materialistic types as economic conditions change and
49 new generations replace old generations (Inglehart, 1977, 1990; 2008). The influence of
50 values on entrepreneurial behaviour is salient for several reasons. First, values drive actions
51 and represent effective forces enabling people to direct and control their behaviours (Halman
52
53
54
55
56
57
58
59
60

and De Moor, 1994; Mueller and Thomas, 2001). Thus, the “ultimate evidence for what a person values lies in their actions” (Lock, 1991, p. 291). Second, values affect entrepreneurial activities and actions on both macro and micro levels (Uhlaner et al., 2002; Inglehart, 2008; Morales and Holtschlag, 2013). Third, entrepreneurs are materialistic and thus a society with post-materialistic individuals will have fewer entrepreneurs (Uhlaner and Thurik, 2007).

Several studies explored the direct relationship between values and entrepreneurial behaviour and found that post-materialistic values act as inhibitors to entrepreneurial activity (Uhlaner et al., 2002; Inglehart, 2008; Morales and Holtschlag, 2013). Uhlaner and Thurik (2007) conducted a comparative study about the influence of post-materialistic values on total entrepreneurial activity, revealing that, at a country level, post-materialistic values are negatively related to Total Entrepreneurial Activity. Another study extended this result by looking at the effect of post-materialistic values on self-employment (Morales and Holtschlag, 2013), finding that post-materialistic values negatively influence the decision to be an entrepreneur. Consequently, this study expects to confirm that:

Hypothesis 1: Post-materialistic values are negatively related to entrepreneurial intention.

3.2. Post-materialistic Values and Entrepreneurial Intention: the indirect link

Post-materialistic Values

Although previous studies have informed the entrepreneurship field about the negative influence of post-materialistic values, the reasons remain to be identified (Morales and Holtschlag, 2013; Stenholm et al., 2013; Uhlaner and Thurik, 2007). According to the social cognitive theory, environment influences behaviours indirectly through cognition (Bandura, 2001). As stated by Bandura:

‘In social cognitive theory, sociostructural factors operate through psychological mechanisms of the self-system to produce behavioural effects. Thus, for example, economic conditions, socioeconomic status, and educational and family structures affect behaviour largely through their impact on people’s aspirations, sense of efficacy, personal standards, affective states, and other self-regulatory influences, rather than directly’ (2001, p. 15).

This indicates that cognition is not the only factor that could inhibit behaviour and it is also important to consider the interplay between culture and cognition. In addition, there is an

indirect relationship between culture and behaviour and culture may inhibit behaviour indirectly by influencing the way people formulate their intentions.

Previous studies have found that intention models are capable of predicting entrepreneurial intention (Krueger, 1993; Krueger et al., 2000; Van Gelderen et al., 2008; Liñán and Chen, 2009; Almobaireek and Manolova, 2013; Schlaegel and Koenig, 2014; Kautonen et al., 2015) and entrepreneurial action (Goethner et al., 2012; Kautonen et al., 2013; 2015). In order to understand the influence of post-materialistic values on entrepreneurship, there is a need to integrate individual variables with cultural dimensions (Uhlener and Thurik, 2007; Morales and Holtschlag, 2013). Although previous studies highlight that post-materialistic values *directly* influence total entrepreneurial activity and self-employment, the *indirect* relationship may explain the relationship more comprehensively. Mediators provide information about the significant relationship between variables (Hair et al., 2014). In a meta-analysis of determinants of entrepreneurial intent, Schlaegel and Koenig (2014) found that desirability, feasibility and entrepreneurial self-efficacy factors have been identified as determinants of entrepreneurial intention (Wang et al., 2002; Shook and Bratianu, 2010; Byabashaija and Katono, 2011; Solesvik et al., 2012). In this study, the mediation relationships are used to examine to what extent desirability, feasibility, and entrepreneurial self-efficacy can provide information about the relationship between post-materialistic values and entrepreneurial intention.

Desirability and Feasibility

Lazarus and Folkman (1984) argued that, in comparable environments, personal differences lead to different outcomes. Kaze'n et al. (2008) asserted that human differences in intention formulation suggest a need to understand the cognitive processes underling these variations. Formulating concrete intention is important in overcoming goal attainment difficulties (Gollwitzer, 1999; Sheeran et al., 2005; Wieber et al., 2010). Desirability and feasibility can “transform intention into a target goal intention leading the individual to be committed to the implementation of specific actions to achieve the pursued objective” (Ilouga et al., 2014, p. 720). Entrepreneurial *desirability* is defined as the extent of attractiveness for an individual to start a business whereas *feasibility* reflects the individual’s insight about their ability to start a business (Alfonso and Cuevas, 2012). Wieber et al. (2010) emphasised the roles of desirability and feasibility in formulating concrete goals with high commitment. This is consistent with the self-regulatory process (Kuhl, 1985) where the role of commitment is to

1
2
3 transform intention from a long-term memory to an actionable working memory. Armor and
4 Taylor (2003) argued that assessment of tasks and ability to perform them influences
5 performance. As such, in the context of achieving the desired goal, there is a need to examine
6 desirability and feasibility in greater depth (Armor and Taylor, 2003; Fujita et al., 2007;
7 Wieber et al., 2015).

8
9
10
11
12 The roles of desirability and feasibility as predictors of entrepreneurial intention are
13 emphasised in the entrepreneurial event model (EEM) (Shapiro and Sokol, 1982). Further,
14 Krueger et al. (2000) found that desirability and feasibility are good predictors of
15 entrepreneurial intention. Consequently, desirability and feasibility can formulate
16 entrepreneurial intention and this study hypothesises that:
17
18
19

20
21 **Hypothesis 2: Desirability mediates the relationship between post-materialistic values**
22 **and entrepreneurial intention.**

23
24
25 **Hypothesis 3: Feasibility mediates the relationship between post-materialistic values**
26 **and entrepreneurial intention.**

27 28 29 *Entrepreneurial Self-efficacy*

30
31
32 Another factor that leads to concrete intention is self-efficacy. Self-efficacy refers to a
33 person's belief in their capability to perform tasks required for achievement (Bandura, 2003;
34 McGee et al., 2009; Bullough et al., 2014). People who demonstrate high self-efficacy
35 alongside an intention are more able to overcome difficulty and pursue their goal (Lazarus
36 and Folkman, 1984; Kuhl, 1985; Carver and Scheier, 1990). According to Ajzen and
37 Madden (1986), people act on behaviour where they believe that they have a certain level of
38 control, believe it is desirable and are able to perform it successfully. The influences of self-
39 efficacy and goal setting are confirmed by Bandura and Locke (2003), who suggest that there
40 is compelling evidence that goal setting in parallel with self-efficacy can enhance action
41 enactment. People with high self-efficacy are more likely to take action (Bandura, 2003).
42
43
44
45
46
47
48

49 Within the entrepreneurial context, self-efficacy refers to the degree to which individuals
50 believe they are capable of performing the tasks required to start a business (Zhao et al., 2005;
51 McGee et al., 2009; Bullough et al., 2014). The effect of entrepreneurial self-efficacy is
52 salient, as Bandura (2003, p. 97) argued, "it is those of high perceived self-efficacy who are
53 most likely to start new business ventures" because they have established clear vision,
54
55
56
57
58
59
60

challenging goals, and concrete belief in their ability to accomplish them. Our final hypothesis is therefore that:

Hypothesis 4: Entrepreneurial self-efficacy mediates the relationship between post-materialistic values and entrepreneurial intention.

The suggested direct and indirect relationships between post-materialistic values and entrepreneurial intention are given in Figure 1.

Figure 1 here

4. Methods

A novel survey was implemented in Saudi Arabia, a country with a culture that has been reported as unsupportive to entrepreneurial action (Saudi Central Department of Statistics and Information (SCDS), 2015). This was then used to develop a Partial Least Squares Structural Equation Model (PLS-SEM) to test the hypotheses. The following sections explore the context, sample selection and measures chosen to test the conceptual model.

4.1. Saudi Arabian Context

GEM reports consistently show that more than 50% of countries in the study scored less than average on Total early-stage Entrepreneurial Activity (GEM, 2009; 2010). Saudi Arabia is an ideal context within which to explore the issue of unsupportive cultures for several reasons. First, because entrepreneurial intention and activity in Saudi Arabia is far below the average of comparable countries (GEM, 2009; 2010; 2016). Secondly, Saudi Arabia has experienced major change in its cultural values since the oil boom of the 1970s (Skoko, 2011). As a result preferences and priorities have changed from crafts and professions to employment and lifestyle, where 'years of plenty' have arguably created an unsupportive culture for entrepreneurship (Tomlinson, 2007; Skoko, 2011; Hamid, 2012). Finally, there is a stated policy need as articulated in the *Ninth Development Plan of Saudi Arabia* where "although there are many successful national businessmen, meeting the development aspirations of the country requires the presence of more entrepreneurs" (Ministry of Economy and Planning, 2010, p.162). Consequently, the country development plan expressed this issue through strategies and objectives for promoting entrepreneurship.

1
2
3 According to the Saudi Central Department of Statistics and Information (SCDS, 2015), the
4 total population in Saudi Arabia is 30 million (m). The total labour force (15 years and above)
5 in Saudi Arabia is 11.9m out of which nationals account for 5.6m. The number of Saudi
6 males working in the private sector is 1.0m (73%) compared to 0.4m (27%) females.
7 According to The Ministry of Labour (2013), the number of Saudi nationals working in the
8 private sector was 1.4m compared to 3.6m working in the public sector.
9
10
11

12 13 *4.2. Sampling and Procedures* 14

15
16 The study explores the influence of cultural values on entrepreneurial intention and, as such,
17 current business owners were excluded from the population. In addition, in Saudi Arabia it is
18 illegal for public sector employees to start their own business and so this sector was excluded
19 to remove potential bias. Finally, only Saudi nationals are permitted to own a private business;
20 hence, non-Saudi nationals were excluded.
21
22
23

24
25 To select a suitable representative sample, the study applies a random sampling approach. We
26 selected companies listed on the Saudi Stock Exchange¹ that spanned 13 administrative
27 regions. Invitations to participate in the survey were sent to 30 companies randomly selected
28 from the 169 listed companies in the Saudi stock market. Each company was then asked to
29 disseminate the questionnaire to a random sample of 50 employees. In total, the survey was
30 sent to a targeted sample of 1,500 private sector national employees in Saudi Arabia. A total
31 of 405 employees returned usable responses. This represents a 27% response rate of the
32 targeted sample; within the range of similar previous studies (Van Gelderen et al., 2008;
33 Pruett et al., 2009; Koe et al., 2014; Moghavvemi and Salleh, 2014).
34
35
36
37
38
39
40
41

42 *4.3. Measures* 43 44

45
46 There are several variables which constitute the research model; these are post-materialistic
47 values, desirability, feasibility, entrepreneurial self-efficacy, and entrepreneurial intention.
48 The exogenous variable for this research is post-materialistic values which might
49
50
51

52
53 ¹ In 2007, the Saudi government established the Saudi Stock Exchange Company (Tadawul) to
54 regulate the Saudi stock market. The three major initial conditions which qualify a company to be
55 listed in the market are a minimum of three years of trading under the same management; three
56 years' audited financial statements; and sufficient working capital for the next one year. The study
57 considers these conditions as a sign of well-established companies.
58
59
60

1
2
3 directly/indirectly affect the outcome variable, entrepreneurial intention. The endogenous
4 variables include desirability, feasibility, and entrepreneurial self-efficacy.
5
6

7 *4.3.1. Entrepreneurial Intention*

8
9 The study applied a six-item instrument for measuring entrepreneurial intention, following
10 Linan and Chen (2009). Examples of items are “I am ready to do anything to be an
11 entrepreneur” and “I have very seriously thought of starting a firm”.
12
13
14

15 *4.3.2. Mediating Factors*

16
17 The mediating factors include desirability, feasibility, and entrepreneurial self-efficacy. The
18 desirability scale has five items such as “I would work somewhere else only long enough to
19 make another attempt to establish my business” (Kolvereid and Isaksen, 2006). The
20 feasibility measure has six items and was adopted by Krueger et al. (2000) and Peterman and
21 Kennedy (2003). An example of measures includes “It will be feasible to start my own
22 business”. The scale for entrepreneurial self-efficacy includes ten questions such as “I have
23 confidence in my ability to grow a successful business” (Cox et al., 2002).
24
25
26
27
28
29

30 *4.3.3. Post-materialistic Values*

31
32 Post-materialistic value is the independent variable which is expected to influence
33 entrepreneurial intention directly or indirectly. The study implemented a five-item scale of
34 post-materialistic values which was adopted by the World Values Survey and several studies
35 (Inglehart and Abramson, 1994, 1999; MacIntosh, 1998; Uhlaner et al., 2002; Morales and
36 Holschlag, 2013).
37
38
39
40

41
42 To reduce potential biases arising from endogeneity and omitted variables issues, the study
43 controlled for three factors likely to influence individuals’ Self-Regulation. Papies et
44 al. (2016) suggest that endogeneity problems can be largely solved by the insertion
45 of relevant control variables. Previous studies argue that individuals’ gender (Gupta, et al.,
46 2009), age (Quan, 2012) and education (Ozgen and Minsky, 2013) are likely to affect their
47 entrepreneurial perceptions. While gender was measured using a dummy variable, age and
48 education were both assessed through ordinal scales. In line with the suggestion that
49 controlling for relevant variables can largely solve potential biases due to omitted variables
50 and endogeneity (Papies et al., 2016), the study controlled for three factors. These factors are
51
52
53
54
55
56
57
58
59
60

likely to influence an individual's entrepreneurial perceptions and comprise gender (Gupta et al., 2009), age (Quan, 2012) and education (Ozgen and Minsky, 2013). Age and education were measured through ordinal scales whereas gender was assessed using a dummy variable.

5. Analysis and Results

The study applies a regression-based Partial Least Squares Structural Equation Modelling (PLS-SEM) using Smart PLS 3.26. In this study, the variance-based approach is more appropriate than the covariance-based (CB-SEM) one for several reasons. It involves theory development (Sarstedt et al., 2014) where the role of culture is conceptualised to understand the influence of post-materialistic values on entrepreneurship. The variance-based approach satisfies the aims of exploring and predicting constructs, and explaining the variance of the dependent variables (Henseler et al., 2009; Reinartz et al., 2009; Henseler and Sarstedt, 2013; Hair et al., 2014; Sarstedt et al., 2014). This study explores the direct and indirect relationships between post-materialistic values and entrepreneurial intention, explaining the effect of values change in the entrepreneurship domain. The PLS algorithm has been recommended to handle complex models (Henseler et al., 2009). Sarstedt et al. (2014) argued that PLS-SEM is more applicable in models with various constructs, several items per construct and many relationships. The present study involves five constructs and both direct and indirect relationships between post-materialistic values and entrepreneurial intention.

5.1. Sample Characteristics and Measurement Bias

Most participants fall into two age groups: 31-40 (39.8%) and 41-50 (35.1%). The majority of participants were male, accounting for 95% of participants compared to only 5% of females. This difference was due to two main reasons: first, the number of Saudi males working in the private sector is 1.0m (73%) compared to 0.4m (27%) females (Ministry of Labour, 2013). Second, due to gender segregation, the researchers had limited accessibility to female divisions in the private sector companies in Saudi Arabia. We argue that the unbalanced sample reflects the current situation in the private sector working force in Saudi Arabia. The study controls for age, education level, and gender. The sample characteristics are represented in Table 1.

Table 1 here

To reduce common method bias, the researcher has tested for the possibility of ambiguous items in the questionnaire by conducting the pilot study. Further, the statistical remedy using the Harman single-factor test revealed that the single factor accounted for 16.78% of the variance, which is less than 50%. This result suggested that common method bias is not a major issue in this study (Andersson and Bateman, 1997; Aulakh and Gencturk, 2000; Podsakoff et al., 2003). Additionally, a more robust test for common method bias proposed by Liang et al. (2007) was applied. Here, a PLS model with a common method factor including all items of the study and estimated each item's variances that explained its principle construct and common method factor was run. The results showed that the average variance of the items was 0.58 compared to the average method-based variances of 0.02. This confirms that common method bias is unlikely to be a significant issue in this study (Liang et al., 2007; Obadia, 2013; Haddoud et al., 2017).

5.2. Measurement Model

Applying the PLS-SEM evaluation procedure, the evaluation criteria for reflective models include indicators' reliability, internal consistency reliability (composite reliability), convergent validity and discriminant validity (Hair et al., 2014; Sarstedt et al., 2014).

Items with outer loadings of higher than 0.70 are retained and items with outer loadings of less than 0.40 are omitted to ensure indicator reliability (Hair et al., 2014). Applying this rule to the study revealed that several indicators have been omitted from different constructs. Although some items have a reliability measure greater than 0.40 but less than 0.70, they are retained as deletion would not increase the associated constructs' validity as shown in the Appendix.

For composite reliability, the Appendix shows that the Cronbach's alpha for all the study constructs is more than 0.70 except for the construct of feasibility. However, the associated composite reliability is 0.77 which indicates reliable variance on the composite score. The convergent validity test of constructs shows that Average Variances Extracted (AVE) values for all constructs are greater than 0.50 indicated the validity of all measures. Further, a discriminant validity test revealed that items load highest with the associated construct compared to other constructs, hence establishing discriminant validity (Table 2).

Table 2 here

Given that the measurement model evaluation is satisfactory and the measures quality acceptable, the second stage is to conduct structural model analysis.

5.3. Structural Model and Hypotheses Testing

Following the PLS-SEM Evaluation Procedure, the evaluation criteria for structural model include collinearity, predictive relevance (R^2 and Q^2) and significance relevance of path coefficients. As far as collinearity evaluation is concerned, the constructs of post-materialistic values, desirability, feasibility, and entrepreneurial self-efficacy are a set of predictors for entrepreneurial intention. Each predictor construct's tolerance (VIF) value should be higher than 0.20 and lower than 5 (Hair et al., 2014, p.186). As given in the Appendix, all VIF values are within the threshold of $5.0 > VIF > 0.20$. There is no collinearity among all predictors' constructs in the model.

As far as the predictive relevance is concerned, the coefficient of determination (R^2) of the model outcome variable, entrepreneurial intention, is 0.54. This indicates that desirability, feasibility, and entrepreneurial self-efficacy account for 51% variance of entrepreneurial intention which is within the range of some entrepreneurship studies (Krueger, 1993; Krueger et al., 2000; Zhao et al., 2005; Solesvik et al., 2012). The Q^2 value of greater than zero indicates that the model has predictive relevance. The Q^2 value of entrepreneurial intention is 0.355, indicating the predictive relevance of the path model.

In the case of the significant relevance of path coefficients, Figure 2 provides several major indicators about the relationships between constructs. The study found that post-materialistic values have no direct effect on entrepreneurial intention. Hence, hypothesis H1 is rejected. In order to examine the mediation effect of desirability, feasibility, and entrepreneurial self-efficacy, indirect relationships should be significant (Hair et al., 2014). The indirect relationship between post-materialistic values and entrepreneurial intention is significant ($p=0.009$). This indirect influence was found to take place through desirability and entrepreneurial self-efficacy only. Hence, H2 and H4 are supported whereas H3 is rejected. This indicates a full mediation effect, meaning that the negative influence of post-materialistic values on entrepreneurial intention takes place through decreasing desirability and entrepreneurial self-efficacy.

Figure 2 here

6. Discussion

Post-materialistic values can be unsupportive for entrepreneurship (Uhlener and Thurik, 2007; Morales and Holtschlag, 2013), and may subsequently inhibit the performing of entrepreneurial activity (Tomlinson, 2007; Skoko, 2011; Hamid, 2012). This study responds to the need for a detailed understanding of the relationship between post-materialistic values and entrepreneurial behaviour (Freytag and Thurik, 2007; Uhlener and Thurik, 2007; Uy, 2011; Alfonso and Cuevas, 2012; Morales and Holtschlag, 2013). Understanding this enables policy-makers to focus on factors that formulate concrete entrepreneurial intention and lead to increased entrepreneurial activity.

The first finding shows that post-materialistic values have no direct effect on entrepreneurial intention (H1). This is not consistent with the motivation sequence framework where values influence intentions (Locke, 1991). Further, it is not consistent with the arguments of negative influence of post-materialism on entrepreneurial activity (Uhlener and Thurik, 2007) as well as on the decision to become an entrepreneur (Morales and Holtschlag, 2013). However, the first study used total entrepreneurial activity to measure entrepreneurship whereas the second study used self-employment decision.

The findings of the mediation analysis in turn show that desirability and entrepreneurial self-efficacy explain the relationship between post-materialistic values and entrepreneurial intention (H2 and H4, respectively). This result is in accordance with social cognitive theory which postulates that environment influences thoughts and decisions. It supports the notion that cultures affect behaviours indirectly through aspirations and sense of efficacy (Bandura, 2001). Looking at the relationship between post-materialistic values and factors that underlie the formulation of entrepreneurial intention enabled the study to identify a rationale for the low entrepreneurial activity.

Post-materialistic values reduce desirability and therefore negatively affect the personal attractiveness of entrepreneurial activity. This supports the thesis where post-materialist individuals appreciate higher-order life goals more than economic security goals (Inglehart, 1977, 1990, 2008). Consequently, they have low entrepreneurial intention and behaviour. Entrepreneurship is also a complex phenomenon that involves long time lags between intention and action (Krueger et al., 2000; Shook et al., 2003) and a lack of desirability may lead people to disengage more easily.

1
2
3 Post-materialistic values also reduce the degree to which individuals believe they are capable
4 of performing the tasks required to start a business. This induces people to set simple goals
5 rather than challenging ones (Locke and Latham, 2006). Consequently, they might avoid
6 setting entrepreneurial activity as a concrete goal. Self-doubt also lowers the belief that
7 people can control outcomes and so they accept that threatening situations may exceed their
8 coping ability. As such they become unable to cope and they experience negative emotions
9 such as fear (Lazarus and Folkman, 1984; Schwarzer, 1998). Self-doubt raises unfavourable
10 expectations where individuals are pessimistic about the expected outcomes of
11 entrepreneurial activity (Carver and Scheier, 1990; Urbig and Menson, 2012). As a result,
12 low desirability and entrepreneurial self-efficacy can lead to an inability to formulate strong
13 intention. Weak entrepreneurial intention will stay in the memory without clear goals about
14 performing entrepreneurial activity in the future (Kuhl, 1985; Ilouga et al., 2014). Thus, the
15 likelihood of translating such intention into entrepreneurial activity is minimal.
16
17
18
19
20
21
22
23
24

25 This paper informs entrepreneurship literature in two ways, through a contribution to culture
26 and intention. It responds to a scarcity of studies about post-materialistic values and
27 entrepreneurship and answers the calls to explain the negative relationship between them. It
28 testifies to utility of values change theory in a developing context with a collectivist culture.
29 Although the entrepreneurship field is dominated by the prediction of the determinants of
30 intention (Krueger, 1993; Krueger et al., 2000; Van Gelderen et al., 2008; Liñán and Chen,
31 2009; Almobaireek and Manolova, 2013; Schlaegel and Koenig, 2014; Kautonen et al., 2015),
32 this study looks at how an unsupportive culture inhibits entrepreneurial intention. In doing so
33 it fosters a process approach to entrepreneurship rather than a discrete view (Brannback et al.,
34 2007). Looking at entrepreneurship-as-process engages research to investigate
35 entrepreneurial behaviour deeply and comprehensively. The process approach gives an
36 understanding of entrepreneurship as a complex phenomenon that involves prerequisites,
37 stages, interactions, influencers, and decisions (Noorderhaven et al., 2004). It reflects the
38 argument that entrepreneurship is a lifelong learning journey where researchers can
39 investigate different stages starting from the early stage of formulating entrepreneurial
40 intention. Hence, it answers the calls for achieving a greater understanding of the deep
41 assumptions that underlie entrepreneurial behaviour which can result in significant progress
42 in the field (Brannback et al., 2007; Hayton & Cholakova, 2012; Kautonen et al., 2013;
43 Fayolle and Linan, 2014).
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3 In terms of policy recommendations, this study identifies how cultural values negatively
4 influence entrepreneurial intention in Saudi Arabia. It responds to the influential GEM report
5 which indicates that Saudi Arabia consistently scores below the average of comparable
6 countries in both entrepreneurial intention and entrepreneurial activity (GEM, 2009, 2010,
7 2016). It contributes to the ongoing debate regarding the dominant explanation for low
8 entrepreneurial activity in Saudi Arabia, the cultural values embedded through the “years of
9 plenty” (Tomlinson, 2007; Skoko, 2011; Hamid, 2012). The study found that the
10 unsupportive culture in Saudi Arabia affects individuals’ desirability and confidence to
11 become entrepreneurs. Hence, it encourages institutions that support entrepreneurship in
12 Saudi Arabia to consider two main approaches simultaneously, motivational and cultural.
13
14
15
16
17
18
19

20
21 The motivational side focuses on desirability and confidence to be an entrepreneur (Krueger
22 et al., 2000; Alfonso and Cuevas, 2012; Ilouga et al., 2014). The cultural side focuses on the
23 contexts which appreciate immaterial life-goals such as lifestyle and embed in the formative
24 years (Inglehart, 1977, 1990, 2008; Morales and Holtschlag, 2013). For example, in highly
25 post-materialistic cultures, it is suggested that venture creation is promoted using immaterial
26 life-goals such as personal development, autonomy, and creativity (Uhlener and Thurik,
27 2007). We suggests that policy-makers focus on individuals in their pre-adult years. At pre-
28 adulthood, people establish their preferences, priorities, and values that then last for a life
29 time and are slow to change. Previous research shows that entrepreneurship education may
30 nurture students’ entrepreneurial intention (Liñán, 2008) and enhance entrepreneurial
31 desirability and self-efficacy (Bae et al., 2014). Finally, in high in-group collectivistic
32 countries such as Saudi Arabia (Aloulou, 2016), entrepreneurship education positively
33 influences entrepreneurial intention (Bae et al., 2014). In summary, as this study found that
34 the unsupportive culture in Saudi Arabia mainly affects individuals’ desirability and
35 confidence to become entrepreneurs, the suggested initiative of nurturing entrepreneurship at
36 the early stages of life can target motivating and building entrepreneurial confidence. Thus,
37 presenting entrepreneurship at this early stage as a key potential future life choice, may help
38 to mitigate the problem of unsupportive culture.
39
40
41
42
43
44
45
46
47
48
49
50

51 **7. Conclusion**

52
53
54 Entrepreneurship is important for countries to deal with global challenges and acquire
55 economic development and growth (Sowmya et al., 2010; Koe et al., 2014; Setiawan, 2014;
56
57
58
59
60

1
2
3 Van Gelderen et al., 2015). However, some countries experience low entrepreneurial activity
4 which can discourage beneficial outcomes from entrepreneurship (Freytag and Thurik 2007;
5 Van Gelderen et al., 2015). Previous studies indicated that culture can inhibit entrepreneurial
6 activity and the question of why post-materialistic values reduce entrepreneurial activity is
7 still unanswered (Morales and Holtschlag, 2013; Stenholm et al., 2013). This research shows
8 that post-materialistic values reduce desirability and entrepreneurial self-efficacy, in-turn
9 exerting an influences on entrepreneurial intention. Low levels of desirability and
10 entrepreneurial self-efficacy may lead to consequences that inhibit entrepreneurial behaviour.
11 By exploring the effects of post-materialistic values in the Saudi Arabian context, this study
12 encourages policy makers to focus their interventions to reduce the influence of unsupportive
13 culture and hence safeguard the advantages of entrepreneurship.
14
15
16
17
18
19
20
21
22

23 The research has some limitations as it is limited to one country, broader insights can be
24 added by expanding the research to other countries. The study was conducted as a “snapshot”
25 of the current situation of entrepreneurship in Saudi Arabia with a cross-sectional survey
26 design, a longitudinal approach would may offer greater robustness.
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

References

- Acs, Z. J., Arenius, P., Michael, H., and Minniti, M. (2005), *Global entrepreneurship monitor report*. London, GB: London Business School, and Wellesley, MA: Babson College.
- Acs Z.J., Audretsch, D.B., and Evans, D.S. (1994), "The determinants of variations in self-employment rates across countries over time". Discussion paper 871. Centre for Economic Policy Research, London.
- Ajzen, I., Czasch, C. and Flood, M.G. (2009), "From Intentions to Behavior: Implementation Intention, Commitment, and Conscientiousness". *Journal of Applied Social Psychology*, Vol. 39 No. 6, pp. 1356-1372.
- Ajzen, I. (1991), "The theory of planned behaviour". *Organizational Behavior and Human Decision Processes*, Vol. 50 No. 2, pp.179–211.
- Ajzen, I. and Madden, T.J. (1986), "Prediction of goal directed behavior: Attitudes, intentions, and perceived behavioral control". *Journal of Experimental Social Psychology*, Vol. 22 No. 5, pp. 453-474.
- Alfonso, C.G. and Cuevas, J.G. (2012), "Entrepreneurial intention models as applied to Latin America". *Journal of Organizational Change Management*, Vol. 25 No. 5, pp.721–735.
- Almobaarek, W.N. and Manolova, T.S. (2013), "Entrepreneurial motivations among female university youth in Saudi Arabia". *Journal of Business Economics and Management*, Vol. 14 No. 1, pp.56-75.
- Aloulou, W.J. (2016), "Predicting entrepreneurial intentions of final year Saudi university business students by applying the theory of planned behaviour", *Journal of Small Business and Enterprise Development*, Vol. 23 No. 4, pp. 1142-1164.
- Andersson, L. M., and Bateman, T. S. (1997), "Cynicism in the workplace: Some causes and effects". *Journal of Organizational Behavior*, Vol. 18 No. 5, pp. 449-469.
- Audretsch, D.B., Thurik, R., Verheul, I., and Wennekers, S. (2002), *Entrepreneurship: determinants and policy in a European-US comparison*, Springer, New York.
- Aulakh, P. and Gencturk, E. (2000), "International principal-agent relationships: control, governance and performance", *Industrial Marketing Management*, Vol. 29 No. 6, pp. 521-38.
- Armor, D.A. and Taylor, S.E. (2003), "The effects of mindset on behavior: Self-regulation in deliberative and implemental frames of mind", *Personality and Social Psychology Bulletin*, Vol. 29 No. 1, pp. 86-95.
- Bae, T. J., Qian, S., Miao, C., and Fiet, J. O. (2014), "The relationship between entrepreneurship education and entrepreneurial intentions: A meta-analytic review", *Entrepreneurship: Theory and Practice*, Vol.38 No.2, pp. 217–254
- Bagozzi, R.P. (1992), "The self-regulation of attitudes, intentions, and behaviour". *Social Psychology Quarterly*, Vol. 55 No. 2, pp.178–204.
- Bagozzi, R.P., Baumgartner, J., and Youjae, Y. (1989). "An investigation into the role of intentions as mediators of the attitude-behavior relationship". *Journal of Economic Psychology*, Vol. 10 No. 1, pp. 35–62.
- Balan, P. and Metcalfe, M. (2012), "Identifying Teaching Methods that Engage Entrepreneurship Students". *Education and Training*, Vol. 54 No. 5, pp. 368-84.
- Bandura, A. (1986), *Social Foundation of Thought and Action: A Social Cognitive Theory*, Prentice Hall, Englewood Cliffs, NJ.

- 1
2
3 Baron, R. A. (1998), "Cognitive mechanisms in entrepreneurship: Why and when
4 entrepreneurs think differently than other people", *Journal of Business Venturing*,
5 Vol. 13 No. 4, pp. 275–294.
- 6 Bandura, A. (2001), "Social Cognitive Theory: An Agentic Perspective". *Annual Review of*
7 *Psychology*, Vol. 52 No. 1, pp. 1-26.
- 8 Bandura, A. (2003), *Self-efficacy: The Exercise of Control*, Freeman, New York.
- 9 Bandura, A. and Locke, E.A. (2003), "Negative self-efficacy and goal effects revisited",
10 *Journal of Applied Psychology*, Vol. 88 No. 1, pp. 87–99.
- 11 Bird, B. (1988), "Implementing entrepreneurial ideas: The case for intention". *The Academy*
12 *of Management Review*, Vol. 13 No. 3, pp. 442-453.
- 13 Blais R.A. and Toulouse, J. (1990), "National, regional or world patterns of entrepreneurial
14 motivation? An empirical study of 2,278 entrepreneurs and 1,733 non-entrepreneurs
15 in fourteen countries on four continents". *Journal of Small Business and*
16 *Entrepreneurship*, Vol.7 No. 2, pp. 3-20.
- 17 Blanchflower, D.G. (2000), "Self-employment in OECD countries". *Labour Economics*,
18 Vol. 7 No. 5, pp. 471–505.
- 19 Blau, D. (1987), "A time series analysis of self-employment", *Journal of Political Economy*,
20 Vol. 95 No. 3, pp. 445-467.
- 21 Brannback, M., Krueger, N., Carsud, A., Kickul, J., and Elfving, J. (2007), "Trying to be an
22 entrepreneur?" A goal-specific challenge to the intentions model", paper presented at
23 Babson College Entrepreneurship Research Conference, June 2007, Madrid, Spain,
24 available at: <https://core.ac.uk/download/pdf/7302353.pdf> (accessed 20 January 2018).
- 25 Bryant, P. (2009), "Self-regulation and moral awareness among entrepreneurs", *Journal of*
26 *Business Venturing*, Vol. 24 No. 5, pp. 505–518.
- 27 Bullough, A., Renko, M., and Myatt, T. (2014), "Danger zone entrepreneurs: The importance
28 of resilience and self-efficacy for entrepreneurial intentions", *Entrepreneurship*
29 *Theory and Practice*, Vol. 38 No. 3, pp. 473-499.
- 30 Busenitz, L. W., Gomez, C., and Spencer, J. W. (2000), "Country institutional profiles:
31 Unlocking entrepreneurial phenomena", *Academy of Management Journal*, Vol. 43
32 No. 5, pp. 994-1003.
- 33 Byabashaija, W. and Katono, I. (2011), "The impact of college entrepreneurial education on
34 entrepreneurial attitudes and intention to start a business in Uganda", *Journal of*
35 *Developmental Entrepreneurship*, Vol. 16 No. 1, pp. 127-44.
- 36 Campbell, N.D. (2012), "Entrepreneurial action and the rules of the game: An editorial to
37 introduce the Journal of Entrepreneurship and Public Policy", *Journal of*
38 *Entrepreneurship and Public Policy*, Vol. 1 No. 1, pp. 4-11.
- 39 Carree, M. and Thurik, R. (2010), "The impact of entrepreneurship on economic growth". In
40 Acs, Z. J., Audretsch, D. B. (Eds.), *Handbook of entrepreneurship research*, Springer,
41 New York, pp. 557-594.
- 42 Carver, C.S. and Scheier, M.F. (1990), "Origins and functions of positive and negative affect:
43 A control-process view", *Psychological Review*, Vol. 97 No. 1, pp. 19-35.
- 44 Cassell, M. A., and Blake, R. J. (2012), "Analysis Of Hofstede's 5-D Model: The
45 Implications Of Conducting Business In Saudi Arabia", *International Journal of*
46 *Management & Information Systems*, Vol. 16 No. 2, pp. 151–160.
- 47 Cox, L., Mueller, S. L. and Moss, S.E. (2002), "The impact of entrepreneurship education on
48 entrepreneurial self-efficacy", *International Journal of Entrepreneurship Education*,
49 Vol. 1 No. 2, pp. 229-247.
- 50 Davidsson, P. (1995), "Culture, structure and regional levels of entrepreneurship",
51 *Entrepreneurship and Regional Development*, Vol. 7 No. 1, pp. 41-62.
- 52
53
54
55
56
57
58
59
60

- 1
2
3 Duch, R.M. and Rusk, J.G. (1993), "Postmaterialism and the economic condition", *American*
4 *Journal of Political Science*, Vol. 37 No. 3, pp. 747-779.
- 5 Evans, D. S. and Jovanovic, B. (1989), "An estimated model of entrepreneurial choice under
6 liquidity constraints", *Journal of Political Economy*, Vol. 97 No. 4, pp. 808-827.
- 7 Fayolle, A. and Liñán, F. (2014), "The future of research on entrepreneurial intentions",
8 *Journal of Business Research*, Vol. 67 No. 5, pp. 663-666.
- 9 Foreman-Peck, J. and Zhou, P. (2013), "The strength and persistence of entrepreneurial
10 cultures", *Journal of Evolutionary Economics*, Vol. 23 No. 1, pp. 163-87.
- 11 Freytag, A. and Thurik, R. (2007), "Entrepreneurship and its determinants in a cross-country
12 setting", *Journal of Evolutionary Economics*, Vol. 17 No. 2, pp. 117-131.
- 13
14 Fujita, K., Gollwitzer, P.M. and Oettingen, G. (2007), "Mindsets and pre-conscious open-
15 mindedness to incidental information", *Journal of Experiential Social Psychology*,
16 Vol. 43 No. 1, pp. 48-61.
- 17 Gielnik, M.M., Barabas, S., Frese, M., Namatovu-Dawa, R., Scholz, F.A., Metzger, J.R. and
18 Walter, T. (2014), "A temporal analysis of how entrepreneurial goal intentions,
19 positive fantasies, and action planning affect starting a new venture and when the
20 effects wear off", *Journal of Business Venturing*, Vol. 29 No. 6, pp. 755-72.
- 21 Global Entrepreneurship Monitor (2009), Global report, available at:
22 <https://www.gemconsortium.org/report> (Accessed 20th March 2017).
- 23 Global Entrepreneurship Monitor (2010), Global report, available at:
24 [http://entreprenorskapsforum.se/wp-content/uploads/2011/02/GEM-2010-Global-](http://entreprenorskapsforum.se/wp-content/uploads/2011/02/GEM-2010-Global-Report.pdf)
25 [Report.pdf](http://entreprenorskapsforum.se/wp-content/uploads/2011/02/GEM-2010-Global-Report.pdf) (Accessed 15th March 2017).
- 26 Global Entrepreneurship Monitor (2016), Global report, available at:
27 <http://gemconsortium.org/report/49812> (Accessed 15th April 2017).
- 28 Goethner, M., Obschonka, M., Silbereisen, R.K., and Cantner, U. (2012), "Scientists'
29 transition to academic entrepreneurship: Economic and psychological determinants",
30 *Journal of Economic Psychology*, Vol. 33 No. 3, pp. 628-641.
- 31 Gollwitzer, P.M., Heckhausen, H. and Steller, B. (1990), "Deliberative and Implemental
32 Mind-Sets: Cognitive Tuning Toward Congruous Thoughts and Information",
33 *Journal of Personality and Social Psychology*, Vol. 59 No. 6, pp. 1119-1127.
- 34 Gollwitzer, P.M. (1993), "Goal achievement: The role of intentions", *European Review of*
35 *Social Psychology*, Vol. 4 No. 1, pp. 141-185.
- 36 Gollwitzer, P.M. (1999), "Implementation intentions", *American Psychologist*, Vol. 54 No. 7,
37 pp. 493-503.
- 38 Gollwitzer, P. and Sheeran, P. (2006), "Implementation intentions and goal achievement: A
39 meta-analysis of effects and progress", *Advances in Experimental Social Psychology*,
40 Vol. 38 No. 6, pp. 69-119.
- 41 Gollwitzer, P.M. and Brandstätter, V. (1997), "Implementation intentions and effective goal
42 pursuit", *Journal of Personality and Social Psychology*, Vol. 73 No. 1, pp. 186-199.
- 43 Grilo, I. and A. R. Thurik (2005b), "Entrepreneurial engagement levels in the European
44 Union", *International Journal of Entrepreneurship Education*, Vol. 3 No. 2, pp. 143-
45 168.
- 46 Gupta, V.K., Turban, D.B., Wasti, S.A., and Sikdar, A. (2009), "The role of gender
47 stereotypes in perceptions of entrepreneurs and intentions to become an entrepreneur",
48 *Entrepreneurship Theory and Practice*, Vol. 33 No. 2, pp. 397-417.
- 49 Haddoud, M.Y., Jones, P. and Newbery, R. (2017), "Export promotion programmes and
50 SMEs' performance: exploring the network promotion role", *Journal of Small*
51 *Business and Enterprise Development*, Vol. 24 No. 1, pp. 68-87.
- 52
53
54
55
56
57
58
59
60

- 1
2
3 Hair, J.F., Hult, G.T.M., Ringle, C., and Sarstedt, M. (2014), "A Primer on Partial Least
4 Squares Structural Equations Modeling (PLS-SEM)", Sage, Los Angeles.
- 5 Halman, L. and de Moor, R. (1994), "Value patterns and modernity", In: P. Ester, L. Halman
6 and R. de Moor (Eds.), *The individualizing society*, Tilburg University Press, Tilburg,
7 pp. 155-162.
- 8 Hamid, T. (2012). "Encouraging entrepreneurship: Riyadh is looking to increase its global
9 competitiveness ranking by encouraging the growth of start-ups and innovation, but
10 significant hurdles remain", *MEED Middle East Economic Digest*, Vol. 56 No. 6, p.
11 44.
- 12 Hayton, J.C., George, G., and Zahra, S.A. (2002), "National culture and entrepreneurship:
13 a review of behavioral research", *Entrepreneurship Theory and Practice*, Vol. 26 No.
14 4, pp. 33-52.
- 15 Hayton, J.C. and Cholakova, M. (2012), "The role of affect in the creation and intentional
16 pursuit of entrepreneurial ideas", *Entrepreneurship Theory and Practice*, Vol. 36 No.
17 1, pp. 41-68.
- 18 Heckhausen, H. (1986), "Why some time out might benefit achievement motivation research",
19 in: van den Bercken, J.H.L., Bergen, C.M., De Bruyn, E.E.J. (Eds.), *Achievement and*
20 *Task Motivation*, Swets and Zeitlinger, Lisse, the Netherlands, pp. 7-39.
- 21 Heckhausen, H. (1991), *Motivation and Action*. Springer-Verlag, Berlin.
- 22 Henseler, J., Ringle, C.M., and Sinkovics R.R. (2009), "The use of partial least squares path
23 modeling in international marketing", in Sinkovics, R. and Ghauri, P. (Ed.), *Advances*
24 *in International Marketing*, Emerald, Bingley, pp. 277-320.
- 25 Henseler, J., Sarstedt, M. (2013), "Goodness-of-fit indices for partial least squares path
26 modelling", *Computational Statistics*, Vol. 28 No. 2, pp. 565-580.
- 27 Holland, D. V. and Garrett R. (2013), "Entrepreneurs' start-up versus persistence decisions: A
28 critical evaluation of expectancy and value", *International Small Business Journal*,
29 Vol. 33 No. 2, pp. 194-215
- 30 Hundley, G. and Hansen, S.D. (2012), "Economic performance and the enterprise culture",
31 *Journal of Enterprising Culture*, Vol. 20 No. 3, pp. 245-64.
- 32 Inglehart, R. (1977), *The silent revolution: changing values and political styles among*
33 *Western publics*, Guildford, Princeton University Press, Princeton.
- 34 Inglehart, R. F. (1990), *Culture shift in advanced industrial society*. University Press, N.J.,
35 Princeton.
- 36 Inglehart, R. and Abramson, P.R. (1994), "Economic Security and Value Change", *The*
37 *American Political Science Review*, Vol. 88 No. 2, pp. 336-54.
- 38 Inglehart, R. and Abramson, P.R. (1999), "Measuring Post materialism", *American Political*
39 *Science Review*, Vol. 93 No. 3, pp. 665-677.
- 40 Inglehart, R.F. (2008). "Changing values among western publics from 1970 to 2006", *West*
41 *European Politics*, Vol. 31 No. 1, pp. 130-46.
- 42 Ilouga, S.N., Mouloungni, A.N., and Sahut, J. (2014), "Entrepreneurial intention and career
43 choices: The role of volition", *Small Business Economics*, Vol. 42 No. 4, pp. 717-728.
- 44 Kautonen, T., van Gelderen, M., and Fink, M. (2015), "Robustness of the theory of planned
45 behavior in predicting entrepreneurial intentions and actions", *Entrepreneurship*
46 *Theory and Practice*, Vol. 39 No. 3, pp. 655-674.
- 47 Kautonen, T., van Gelderen, M., and Tornikoski, E.T. (2013), "Predicting entrepreneurial
48 behaviour: A test of the theory of planned behaviour", *Applied Economics*, Vol. 45
49 No. 6, pp. 697-707.
- 50 Kazén, M., Kaschel, R. and Kuhl, L. (2008), "Individual differences in intention initiation
51 under demanding conditions: Interactive effects of state vs. action orientation and
52 enactment difficulty", *Journal of Research in Personality*, Vol. 42 No. 3, pp. 693-715.
- 53
54
55
56
57
58
59
60

- 1
2
3 Koe, W., Roaimah, O., Izaidin, A. (2014). "Factors associated with propensity for sustainable
4 entrepreneurship", *Procedia—Social and Behavioral Sciences*, Vol. 130, pp. 65-74.
- 5 Koenig, C., Steinmetz, H., Frese, M., Rauch, A., and Wang, Z.M. (2007), "Scenario-based
6 scales measuring cultural orientations of business owners", *Journal of Evolutionary
7 Economics*, Vol. 17 No. 2, pp. 221-229.
- 8 Kolvereid, L. and Isaksen, E. (2006), "New business start-up and subsequent entry into self-
9 employment", *Journal of Business Venturing*, Vol. 21 No. 6, pp. 866-885.
- 10 Kostova, T. (1997). "Country institutional profiles: Concept and measurement", in Havlovic,
11 S.J. (Ed.), *Academy of Management Best Paper Proceedings*, Academy of
12 management, Briarcliff Manor, NH, pp.180-189.
- 13 Kroh, M. (2009), "The preadult origins of postmaterialism: A longitudinal sibling study",
14 *European Journal of Political Research*, Vol. 48 No. 5, pp. 598–621.
- 15 Krueger, N. (1993), "The impact of prior entrepreneurial exposure on perceptions of new
16 venture feasibility and desirability", *Entrepreneurship Theory and Practice*, Vol.18
17 No.1, pp. 5–21.
- 18 Krueger, N.F., Carsrud, A.L. (1993), "Entrepreneurial intentions: Applying the theory of
19 planned behaviour", *Entrepreneurship and Regional Development*, Vol. 5 No. 3, pp.
20 315-330.
- 21 Krueger, N.F., Reilly, M.D., and Carsrud, A.L. (2000), "Competing models of
22 entrepreneurial intentions", *Journal of Business Ventures*, Vol. 15 No. 5-6, pp. 411-
23 432.
- 24 Kuhl, J. (1985), *Volitional Mediators of Cognitive-Behavior Consistency: Self-Regulatory
25 Processes and Actions versus State Orientation*, Springer, Heidelberg.
- 26 Kuhl, J. and Beckmann, J. (1985), *Action Control: From Cognition to Behavior*, Springer-
27 Verlag, Berlin.
- 28 Kuhl, J. and Fuhrmann, A. (1998), "Decomposing self-regulation and self-control: The
29 volitional components inventory", in Heckhausen, J. and Dweck, C. (Eds.), *Life Span
30 Perspectives on Motivation and Control*, Erlbaum, Mahwah, NJ, pp. 15–49.
- 31 Kuratko, D.F. (2005), "The Emergence of Entrepreneurship Education: Development, Trends,
32 and Challenges", *Entrepreneurship Theory and Practice*, Vol. 29 No. 5, pp. 577-598.
- 33 Lazarus, R.S. and Folkman, S. (1984), *Stress, Appraisal, and Coping*, Springer, New York.
- 34 Liang, H., Saraf, N., Hu, Q. and Xue, Y. (2007), "Assimilation of enterprise systems: the
35 effect of institutional pressures and the mediating role of top management", *MIS
36 Quarterly*, Vol. 31 No. 1, pp. 59-87.
- 37 Liñán, F. and Chen, Y.W. (2009), "Development and cross-cultural application of a specific
38 instrument to measure entrepreneurial intentions", *Entrepreneurship Theory and
39 Practice*, Vol. 33 No. 3, pp. 593-618
- 40 Liñán, F. (2008), "Skill and value perceptions: How do they affect entrepreneurial
41 intentions?", *International Entrepreneurship and Management Journal*, Vol.4 No.3,
42 257-272.
- 43 Locke, E.A. (1991). "The motivation sequence, the motivation hub, and the motivation core",
44 *Organizational Behavior and Human Decision Processes*, Vol. 50 No. 2, pp. 288-299.
- 45 Locke, E.A. and Latham, G.P. (2006), "New directions in goal-setting theory", *Current
46 Directions in Psychological Science*, Vol.15 No.5, pp. 265-268.
- 47 Macintosh, R. (1998). "Global Attitude Measurement: An Assessment of the World Values
48 Survey Postmaterialism Scale", *American Sociological Review*, Vol.63 No.3, pp. 452-
49 464.
- 50 McGee, J.E., Peterson, M., Mueller, S.L. and Sequeira, J.M. (2009), "Entrepreneurial Self
51 Efficacy: Refining the Measure", *Entrepreneurship Theory and Practice*, Vol. 33 No.
52 4, pp. 965-88.
- 53
54
55
56
57
58
59
60

- 1
2
3 Ministry of Labour (2013), *Statistics reports*, available at: <https://sd.mlssd.gov.sa/ar/reports>
4 (accessed 16 January 2017).
- 5 Ministry of Economy and Planning (2014), *Development Plans*, available at:
6 <http://www.mep.gov.sa/en/knowledge-resources/ninth-development-plan/>(accessed 20
7 January 2017).
- 8 Mitchell, R.K., Smith, J.B., Morse, E.A., Kristie, W., Seawright, A. M. P. and McKenzie, B.
9 (2002), “Are entrepreneurial cognitions universal? Assessing entrepreneurial
10 cognitions across cultures”, *Entrepreneurship: Theory and Practice*, Vol. 26 No. 4, pp.
11 9-32.
- 12 Moghavvemi, S., Salleh, N.A. (2014), “Malaysian entrepreneurs’ propensity to use IT
13 innovation”, *Journal of Enterprise Information Management*, Vol. 27 No. 2, 139-157.
- 14 Morales, C. and Holtschlag, C. (2013), “Post materialist values and entrepreneurship: a
15 multilevel approach”, *International Journal of Entrepreneurial Behaviour and*
16 *Research*, Vol. 19 No. 5, pp. 266-282.
- 17
18 Mueller, S. L. and Thomas, A. S. (2001), “Culture and entrepreneurial potential: a nine
19 country study of locus of control and innovativeness”, *Journal of Business Venturing*,
20 Vol.16 No.1, pp. 51–75.
- 21 Murphy, J.D.G. and Thomas L. A. (2004), “An examination of cross-cultural age or
22 generation-based value differences between United States and Japan”, *Journal of*
23 *Applied Management and Entrepreneurship*, Vol. 9 No. 1, pp. 21-47.
- 24 Newbery, R., Lean, J. Moizer, J., and Haddoud, M. (2018), “What is the Impact of the Initial
25 Enterprise Intervention on Entrepreneurial Intent”, *Journal of Business Research*, Vol.
26 85 No. 1, pp. 51-59.
- 27
28 Newbery, R., Lean, J. and Moizer, J. (2016), “Evaluating the Impact of Serious Games: The
29 Effect of Gaming on Entrepreneurial Intent”, *Information Technology and People*,
30 Vol. 29 No. 4, pp.733-749
- 31 Noorderhaven, N., Thurik, R., Wennekers, S. and Van Stel, A. (2004), “The Role of
32 Dissatisfaction and per Capita Income in Explaining Self-Employment across 15
33 European Countries”, *Entrepreneurship Theory and Practice*, Vol. 28 No. 8, pp.447-
34 466.
- 35 Obadia, C. (2013), “Competitive export pricing: The influence of the information context”,
36 *Journal of International Marketing*, Vol. 21 No. 2, pp. 62–78
- 37 Ozgen, E., Minsky, B.D. (2013), “Why some college students engage in entrepreneurial
38 activities while others do not”, *Journal of Entrepreneurship Education*, Vol.16, pp.
39 45–58.
- 40 Papies, D., Ebbes, P., and van Heerde, H.J. (2016), “Addressing endogeneity in marketing
41 models”, in Leeflang, P.S.H., Wieringa, J.E., Bijmolt, T.H.A., and Pauwels, K.H.
42 (Eds.), *Advanced Methods for Modeling Markets*. Springer International Publishing,
43 pp. 581-630.
- 44
45 Peterman, N.E. and Kennedy, J. (2003). “Enterprise Education: Influencing Students’
46 Perceptions of Entrepreneurship”, *Entrepreneurship Theory and Practice*, Vol. 28 No.
47 2, pp. 129-144.
- 48 Pinillos, M. and Reyes, L. (2011), “Relationship between individualist–collectivist culture
49 and entrepreneurial activity: evidence from Global Entrepreneurship Monitor data”,
50 *An Entrepreneurship Journal*, Vol. 37 No. 1, pp. 23-37.
- 51 Podsakoff, P. M., Scott, B., MacKenzie, J.Y.L. and Nathan, P. (2003), “Common Method
52 Biases in Behavioral Research: A Critical Review of the Literature and
53 Recommended Remedies”, *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879-
54 903.
55
56
57
58
59
60

- Porter, M. (2009), *Competitiveness and the State of Entrepreneurship in Saudi Arabia*, Institute for Strategy and Competitiveness, available at: https://www.hbs.edu/faculty/Publication%20Files/20090127_Saudi_Arabia_Competitiveness_and_Entrepreneurship_5bb2a687-c951-48c9-bc05-cb4ba3340c3e.pdf.
- Pruett, M., Shinnar, R., Toney, B., Llopis, F. and Fox, J. (2009), "Explaining entrepreneurial intentions of university students: a cross-cultural study", *International Journal of Entrepreneurial Behaviour and Research*, Vol. 15 No. 6, pp. 571-594.
- Pruett, M. (2012). "Entrepreneurship education: Workshops and entrepreneurial intentions", *Journal of Education for Business*, Vol. 87 No. 2, pp. 94-101.
- Quan, X. (2012), "Prior experience, social network, and levels of entrepreneurial intentions", *Management Research Review*, Vol. 35 No. 10, pp. 945-957.
- Reinartz, W., Haenlein, M., and Henseler, J. (2009), "An empirical comparison of the efficacy of covariance-based and variance-based SEM", *International Journal of Research in Marketing*, Vol. 26 No. 4, pp. 332-344.
- Robichaud, Y., McGraw, E., and Roger, A. (2001), "Toward the development of a measuring instrument for entrepreneurial motivation", *Journal of development entrepreneurship*, Vol. 6 No. 2, pp. 189-201.
- Rohan, M. J. (2000), "A rose by any name? The values construct", *Personality and Social Psychology Review*, Vol. 4 No. 3, pp. 255-277.
- Thompson, E.R. (2009), "Individual entrepreneurial intent: construct clarification and development of an internationally reliable metric", *Entrepreneurship Theory and Practice*, Vol. 33 No. 3, pp. 669-694.
- Tkachev, A. and Kolvereid, L. (1999), "Self-employment intentions among Russian students", *Entrepreneurship and Regional Development*, Vol. 11 No. 3, pp. 269-280.
- Sarstedt, M., Ringle, C.M., Smith, D., Reams, R., and Hair, J.F. (2014), "Partial least squares structural equation modelling (PLS-SEM): A useful tool for family business researchers", *Journal of Family Business Strategy*, Vol. 5 No. 1, pp. 105-115.
- Saudi Central Department of Statistics and Information (2015), *Labour force survey*, available at: <http://www.stats.gov.sa/en/34> (accessed 10 January 2017).
- Schlaegel, C. and Koenig, M. (2014), "Determinants of entrepreneurial intent: A meta-analytic test and integration of competing models", *Entrepreneurship Theory and Practice*, Vol. 38 No. 2, pp. 291-332.
- Schwab, K. and Sala-i-Martin, X. (2015), "World Economic Forum's global competitiveness report 2014-2015", available at: www.weforum.org/docs/WEF_GlobalCompetitiveness_Report_2014-15.pdf (accessed March 8, 2018).
- Schwarzer, R. (1998), "General perceived self-efficacy in 14 cultures", Available at: http://userpage.fu-berlin.de/gesund/publicat/ehps_cd/health/world14.htm (accessed 10 January 2017).
- Sedigheh M., and Noor, A.M. (2014), "Malaysian entrepreneurs propensity to use IT innovation", *Journal of Enterprise Information Management*, Vol. 27 No. 2, pp. 139-157.
- Setiawan, J.L. (2014), "Examining entrepreneurial self-efficacy among students", *Procedia—Social and Behavioral Sciences*, Vol. 115, pp. 235-242.
- Shapero, A., Sokol, L. (1982), *Social Dimensions of Entrepreneurship*, Prentice-Hall, NJ.
- Sheeran, P., Milne, S., Webb, T.L., and Gollwitzer, P.M. (2005), "Implementation intentions and health behaviours", in M. Conner and P. Norman (2nd Eds.), *Predicting health behaviour: Research and practice with social cognition models*, Open University Press, Buckingham, , pp. 276-323

- 1
2
3 Shook, C.L., Priem, R.L., McGee, J.E. (2003), "Venture creation and the enterprising
4 individual: A review and synthesis", *Journal of Management*, Vol. 29 No. 3, pp. 379-
5 399.
- 6 Shook, C.L., Bratianu, C. (2010), "Entrepreneurial intent in a transitional economy: An
7 application of the theory of planned behavior to Romanian students", *International*
8 *Entrepreneurship and Management Journal*, Vol. 6 No. 3, pp. 231-247.
- 9 Skoko, H. (2011), "The State of Entrepreneurship in the Kingdom of Saudi Arabia (KSA)",
10 in *5th Proceedings: Reflections on the World in Turmoil*, University Juraj Dobrila,
11 Pula, Croatia, pp. 503-515.
- 12 Solesvik, M.Z., Westhead, P., Kolvereid L., and Matlay, H. (2012), "Student intentions to
13 become self-employed: the Ukrainian context", *Journal of Small Business and*
14 *Enterprise Development*, Vol. 19 No. 3, pp. 441-60.
- 15 Sowmya, D.V., Majumdar, S., Gallant, M. (2010), "Relevance of education for potential
16 entrepreneurs: An international investigation", *Journal of Small Business and*
17 *Enterprise Development*, Vol. 17 No. 4, pp. 626-640.
- 18 Stenholm, P., Acs, Z.J. and Wuebker, R. (2013), "Exploring country-level institutional
19 arrangements on the rate and type of entrepreneurial activity", *Journal of Business*
20 *Venturing*, Vol. 28 No. 1, pp. 176-93.
- 21 Thomas, A. S., and Mueller, S. L. (2000), "A case for comparative entrepreneurship:
22 Assessing the relevance of culture", *Journal of International Business Studies*, Vol.
23 31No. 2, pp. 287-301.
- 24 Tomlinson, H. (2007), "Job seeking: Saudi Arabia must create 3.5 million jobs in 10 years to
25 employ its youthful population. But even if the kingdom does succeed, will Saudis be
26 prepared to take the work available?", *MEED Middle East Economic Digest*, Vol. 51,
27 p.4.
- 28 Uhlaner, L.M., Thurik, R. and Hutjes, J. (2002), *Post-Materialism as a Cultural Factor*
29 *Influencing Entrepreneurial Activity across Nations*, Erasmus Research Institute for
30 Management, available at: <http://ondernemerschap.panteia.nl/pdf-ez/h200202.pdf>.
- 31 Uhlaner, L. and Thurik, R. (2007), "Postmaterialism influencing total entrepreneurial activity
32 across nations", *Journal of Evolutionary Economics*, Vol. 17 No. 2, pp. 161-85.
- 33 Urbig, D., and Mosen, E. (2012), "The structure of optimism: Controllability affects the
34 extent to which efficacy beliefs shape outcome expectancies", *Journal of Economic*
35 *Psychology*, Vol. 33 No. 4, pp. 854-867
- 36 Uy, A.O.O. (2011), "What motivates entrepreneurs? A study of the value systems of
37 Filipino entrepreneurs", *International Journal of Entrepreneurship*, Vol.15 No.1,
38 pp. 73-95.
- 39 Van Gelderen, M., Brand, M., Van Praag, M., Bodewes, W., Poutsma, E., and Van Gils, A.
40 (2008), "Explaining entrepreneurial intentions by means of the theory of planned
41 behaviour", *Career Development International*, Vol. 13 No. 6, pp. 538-559.
- 42 Van Gelderen, M., Kautonen, T., and Fink, M. (2015), "From entrepreneurial intentions to
43 actions: Self-control and action-related doubt, fear, and aversion", *Journal of Business*
44 *Venturing*, Vol. 30 No. 5, pp. 655-673.
- 45 Van Stel, A., Carree, M. and Thurik, R. (2005), "The effect of entrepreneurial activity on
46 national economic growth", *Small Business Economics*, Vol. 24 No. 3, pp. 311-321.
- 47 Wang, C.K., Wong, P.K., and Lu, Q. (2001), "Entrepreneurial intentions and tertiary
48 education", paper presented at the Conference on Technological Entrepreneurship in
49 the Emerging Regions of the New Millennium, Singapore, available at:
50 <https://www.researchgate.net/publication/228727871> (accessed 10 November 2017).
- 51
52
53
54
55
56
57
58
59
60

- 1
2
3 Wennekers, S., Thurik, R., Stel A. and Noorderhaven, N. (2007), "Uncertainty avoidance and
4 the rate of business ownership across 21 OECD countries 1976–2004". *Journal of*
5 *Evolutionary Economics*, Vol. 17 No. 2, pp. 133-160.
- 6 Wieber, F., Thürmer, J.L., and Gollwitzer, P. (2015), "Promoting the translation of intentions
7 into action by implementation intentions: Behavioral effects and physiological
8 correlates", *Frontiers in Human Neuroscience*, Vol. 9, pp.1–18.
- 9 Wieber, F., Odenthal, G., and Gollwitzer, P. (2010), "Self-efficacy feelings moderate
10 implementation intention effects", *Self and Identity*, Vol. 9 No. 2, pp. 177–194.
- 11 Wood, R. and Bandura, A. (1989), "Social Cognitive Theory of Organizational Management",
12 *Academy of Management Review*, Vol. 14 No. 3, pp. 361-384.
- 13 Zhao, H., Seibert, S.E., and Hills, G.E. (2005), "The Mediating Role of Self-Efficacy in the
14 Development of Entrepreneurial Intentions", *Journal of Applied Psychology*, Vol. 90
15 No. 6, pp. 1265-72.
16
17
18
19

20 Appendix

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

Table 1 Sample Characteristics

Age	%	Education	%	Gender	%
20-25	6.8	Postgraduate	16.3	Male	95
26-30	8.8	Undergraduate	68	Female	5
31-40	39.8	Secondary	7.4		
41-50	35.1	Other	8.3		
51-60	9.4				

Appendix

Reliability and Validity Measures

Construct	Items	Loadings	Cronbach's Alpha	AVE	VIF
Post-Materialistic Values	Seeing that people have more say in how things are decided at work and in their communities.	0.665	0.815	0.567	1.000
	Giving the people more say in important government decisions.	0.758			
	Protecting free of speech.	0.794			
	Progress toward a less impersonal more human society.	0.777			
	Progress toward a society in which ideas count more than money.	0.765			
Desirability	I would rather earn a higher salary employed by someone else than own my own business.	0.699	0.733	0.543	1.274
	I would rather pursue another promising career than own my own business.	0.715			
	I would work somewhere else only long enough to make another attempt to establish my business.	0.733			
	I am willing to work more with the same salary in my own business, than if employed in an organisation.	0.797			
Feasibility	It will be feasible to start my own business.	0.817	0.589	0.539	1.654
	If I start my own business, I am certain that it will be a success.	0.673			
	I know enough to start a business.	0.704			
Entrepreneurial Self-efficacy	Conceive a unique idea for a business.	0.683	0.882	0.515	1.566
	Identify market opportunities for a new business: Planning stage.	0.762			
	Plan a new business.	0.795			
	Write a formal business plan: Marshalling stage.	0.800			
	Raise money to start a business.	0.746			
	Convince others to invest in your business.	0.665			
	Convince others to work for you in your new business: Implementing stage.	0.672			
	Manage a small business.	0.600			
Grow a successful business.	0.708				
Goal Intention	I am ready to do anything to be an entrepreneur.	0.734	0.921	0.718	
	My professional goal is to become an entrepreneur.	0.825			
	I will make every effort to start and run my own firm.	0.871			
	I am determined to create a firm in the future.	0.907			
	I have very seriously thought of starting a firm.	0.877			
	I have the firm intention to start a firm some day.	0.860			
Gender		1.000	1.000	1.000	1.018
Age		1.000	1.000	1.000	1.052
Education		1.000	1.000	1.000	1.020

Table 2 Discriminant Validity

	Age	Desirability	Education	Feasibility	Gender	Goal Intention	Post-materialistic Values	Self-efficacy
Age	1.000							
Desirability	0.153	0.737						
Education	0.084	0.067	1.000					
Feasibility	0.179	0.429	0.048	0.734				
Gender	-0.068	0.020	-0.076	-0.013	1.000			
Goal Intention	0.135	0.563	-0.042	0.588	0.019	0.848		
Post materialistic Values	0.016	-0.152	0.105	-0.084	0.015	-0.180	0.753	
Self-efficacy	0.146	0.370	-0.010	0.579	-0.068	0.598	-0.154	0.717

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
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

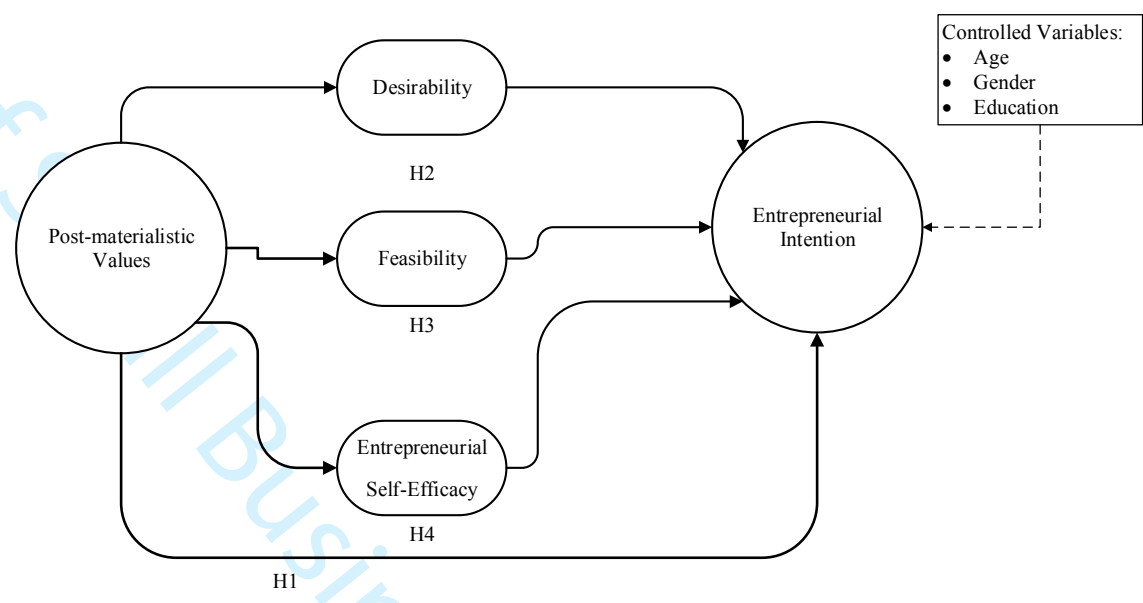


Figure 1 Influence of Post-materialistic Values on Entrepreneurial Intention

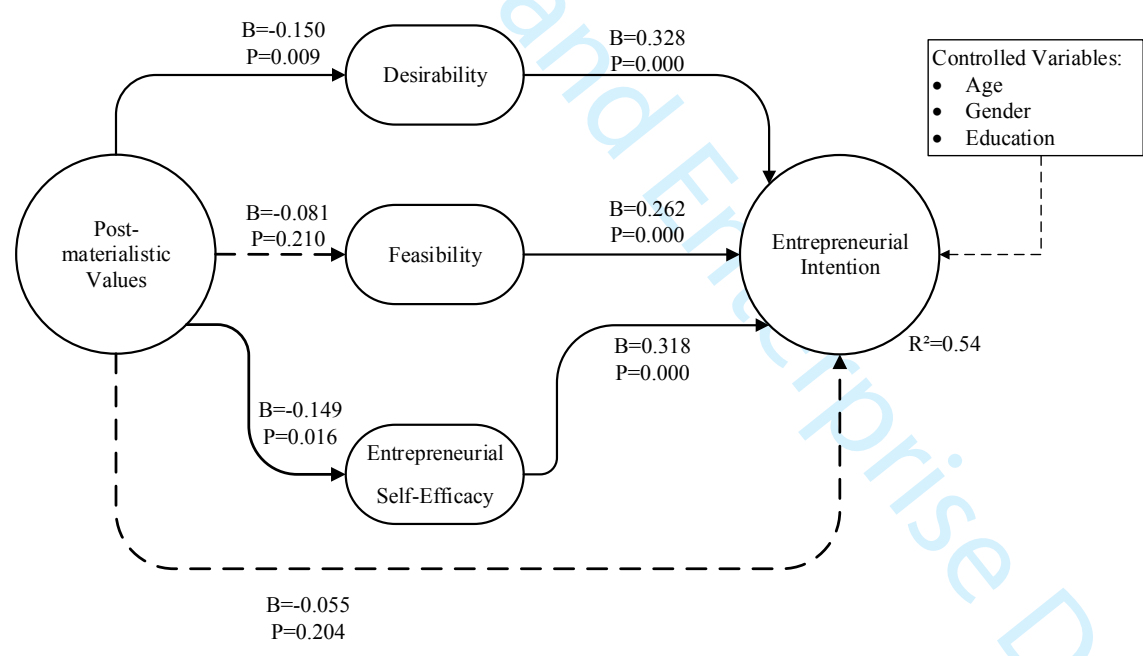


Figure 2 Structural Model