Investigating female students' entrepreneurial intention in the UK and Pakistan

--- An application of TPB

Abstract

This chapter investigates female students' entrepreneurship intention in the UK and Pakistan and examine if culture moderates the three constructs of the Theory of Planned Behaviour (TPB). We utilize a considerable sample size (no = 379) representing female students in the UK and Pakistan to test the TPB model to measure students' entrepreneurial intention. Six hypotheses were formulated and surveyed amongst the sampled population where the survey data have been analyzed through structural equation modelling SEM. The findings show that attitude and subjective norms are positively related to entrepreneurial intentions, while perceived behaviour control does not contribute to entrepreneurial intention. Overall, culture does moderate the relationships between attitude and intention, subjective norms and intention, perceived behaviour control and intention. This research provides a guide to policy-makers in international organisations as well as UK and Pakistan higher education institutions by revealing the extent to which female University students are willing to conduct entrepreneurial projects in order to assist in making informed decisions on entrepreneurship practices.

Dr Xiuli(Shelly) Guo, Lecturer (Marketing), University of the West of Scotland, UK

Dr Farag Edghiem, Lecturer (Marketing & Retail), University of Bolton, UK

Dr Sarfraz Ahmed Dakhan, Assistant Professor (Entrepreneurship), Sukkur IBA University, Pakistan

Dr Muzammal Khan, Lecturer (Business & Management), University of the West of Scotland

1.0 Introduction

Entrepreneurship has been playing a key role in economic growth and job creation, productivity, and introduction of innovation into societies (Hussain and Malik 2018; Audretsch 2012; Shane and Venkataraman, 2000; Parker 2009; Wennekers et al. 2005; GEM 2019). In the past years, entrepreneurs have made great changes to trade and markets through new technologies, produced commodities, and services (Oke 2013).

Female entrepreneurship has been increasingly popular and been the focus of many studies. Although there is an increase in female business ownership rates, women business ownership falls far behind that of man and only accounts for 50-60 percent of that for men (Fairlie and Robb 2009). According to the analysis from Pew research Centre (Fetterolf 2017), women account for more than 40% of the workforces in more than 80 countries. In Pakistan, women account for 22% of the total labour forces, while in the UK, women accounts for 46.8% (World Bank 2019). Women in developed countries are more motivated to start businesses by opportunity, while those in developing countries are primarily driven into entrepreneurship by necessity (Brush and Cooper 2012).

Entrepreneurial intention (EI) has been defined by Moriano et al. (2012, p. 165) as "the conscious state of mind that precedes action and directs attention toward entrepreneurial behaviors such as starting a new business and becoming an entrepreneur". The importance of EI has been recognised by a number of scholars (Shapero 1975; Shapero and Sokol 1982; Bird 1988; Krueger 1993; Krueger et al. 2000). EI has been widely analysed in many empirical studies over the last decades (Krueger and Carsrud 1993; Krueger and Brazeal 1994; Krueger et al. 2000; Veciana et al. 2005; Zhao et al. 2005; Liñán and Chen 2009; Yordanova and Tarrazon 2010; Zhang et al. 2015; Esfandiar et al. 2019).

Several models, such as Shapero's model of the Entrepreneurial Event (SEE) (Shapero and Sokol 1982), Ajzen's (1988, 1991) theory of planned behaviour (TPB), have been widely used to explain entrepreneurial intention. Some studies have been conducted to compare and discuss SEE and TPB models (Krueger and Brazeal 1994; Veciana et al. 2005). Although different models are available to understand and predict entrepreneurial intention, TPB is still regarded as the most influential one (Krueger et al. 2000; Moriano et al. 2012; Van Gelderen et al. 2008; Liñán and Chen 2009). Since an

overwhelming majority of studies support the usefulness of TPB and prove that behavioral intent is a powerful predictor of the targeted behaviour (Engle et al. 2010), TPB model will be used in this study. Theory and the findings from the past studies showed that the strength of relationships among the TPB components might be moderated by culture (Moriano et al. 2012). The aim of the research is to investigate female students' entrepreneurial intention in the UK and Pakistan and examine if culture will moderate the relationships between the three constructs and entrepreneurial intention.

This study will shed some light on the following issues. Firstly, it will serve as an experiment to test the applicability of the TPB model and compare the entrepreneurial intention in two different settings. The sample for this study comes from a developed country UK and a developing country Pakistan, which will render the comparison more useful. Although these two countries are different in culture and economy, they are both sizable in terms of either population or total GDP. Besides, the impact of cultural factors over entrepreneurial intention will be examined. Finally, the findings and implications of the study will benefit educators and policy makers.

2.0 Literature review

Entrepreneurship Scope and Functions

The scope of the entrepreneurship is almost limitless. Entrepreneurship can be associated with ownership of property, resale of goods, sale of own products or provision of services in various fields etc. Essentially, any entrepreneurial activity is unattainable without attracting financial resources (Westhead and Solesvik 2016). Potential sources of funding can be own savings of a person planning to conduct production, attraction of investments from the parties interested in the venture results, lending from financial institutions or individuals, government aid (grants and subsidies) (Shirokova *et al.* 2016). Entrepreneurship, is perceived widely as initiative-independent, economic and commercial activities of individuals and legal entities, focused entirely on profits (Mustapha and Selvaraju 2015). Entrepreneurship can be largely distinguished by its scale and nature of activity whereas the upcoming three functions of an entrepreneur are explained below (Karimi *et al.* 2017).

The *first* function is related to the resource one. For any entrepreneurial activity, objective (means of production) and subjective factors (workers with relevant knowledge and skills) are essential. Entities of entrepreneurial activity are also legal entities that run strategic and operational management and are liable for these obligations (Yadav and Unni 2016).

The *second* function is organisational. Its essence is to ensure the effective coordination of these objective and subjective factors to achieve the intended entrepreneurial goals (Sieger *et al.* 2016). The *third* function is about creativity, which is commonly associated with innovation (Chowdhury *et al.* 2015). The value of this function for business has grown exceptionally in the context of modern scientific and technological progress leading to rapid competition (Ramadani *et al.* 2015; Poggesi *et al.* 2016).

Entrepreneurial organisations are commercial organisations, whose main purpose is to make a profit from their activities; non-profit organisations may also carry out entrepreneurial activities to serve achieving the goals for which they were set (Ratten 2016). In view, the contribution of entrepreneurship to the market economy is advocated to be a critical element of countries economic development (Noguera *et al.* 2015). Entrepreneurship contributes to the state's economic growth rate, structure, volume and quality of gross national product to the extent that both concepts of business and entrepreneurship are used interchangeably (Berger and Kuckertz 2016).

Female Entrepreneurship

Female entrepreneurship is a term that is far more than the framework of gender definition but carries the meaning of a social influence; as the conscious willingness of a female entrepreneur to contribute to the interests of society and its development needs (Berger and Kuckertz 2016). Generally, women create small enterprises in such fields as education, medical and social services, developing a rather new direction and social entrepreneurship (Sieger *et al.* 2016). Adding to essential role of women in the household as a partner or a mother carrying out extensive daily responsibilities. Therefore, government

policies should develop supportive programs and create appropriate conditions for female entrepreneurs who contribute to both the economy and society through their ventures (Noguera *et al.* 2015).

The share of women in entrepreneurship equals around one third in developed economies (Karimi *et al.* 2016). Although women typically account for a little more than half of the population, their lack of representation in entrepreneurship drives policymakers to explore the reasons for their lack of participation and employ proper action planning (Mustapha and Selvaraju 2015). Although both men and women experience start-up difficulties that may hider entrepreneurship development, these difficulties may be more acute for women (Westhead and Solesvik 2016). Women's entrepreneurial activity is impacted by gender-specific responsibilities that require time and energy, which prevent women from participating in entrepreneurship and self-realisation (Rubio-Bañóna and Esteban-Lloret 2016). In addition, women usually have difficulties securing resources that are critical to initiate entrepreneurship (Berger and Kuckertz 2016).

Entrepreneurship research traditionally exemplified the role of men as the norm. However, female entrepreneurs have distinctive perceptions such as greater fear of risk, conducting activities in areas with lower public prestige, great challenges in balancing work and family life, need for external support and unlike ordinary woman in employment (Lock and Smith 2016). The scope of female entrepreneurship may also be deemed to be distinctive and primarily in the fields of small businesses such as retail, education and training, healthcare and social assistance, cosmetics, where there are lower income levels (Noguera *et al.* 2015).

The traditional comprehension of the differences between female and male entrepreneurship may fade away with time, and focus will be on the quality of goods and services provided by entrepreneurs (Ramadani *et al.* 2015; Westhead and Solesvik 2016) and reducing inequality for both men and women (Chowdhury *et al.* 2015).

The Theory of Planned Behavior and Entrepreneurial Intention

Entrepreneurial intention (EI) can be defined as ‘a self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future” Thompson (2009, p.676). Although there are some conflicts between the different studies, findings have supported the applicability of the TPB in EI (Karimi et al. 2013; Krueger et al. 2000; Liñán and Chen 2009). Studies also proved that the TBP can be used to explain EI across various cultures (Fayolle and Gailly 2015; Krueger et al. 2000; Tkachev and Kolvereid 1999; Engle et al. 2010; Liñán and Chen 2009).

The TPB is applied to measure and compare between female students’ entrepreneurship intention in the UK and Pakistan (see Figure 1). According to the TPB model, attitude, subjective norms, and perceived behavioural control can predict behavioural intentions. Behavioural attitude can be defined as an individual’s overall evaluation of a behaviour (Ajzen 1991). In the entrepreneurial context, attitude towards entrepreneurial behaviour influences the formation of entrepreneurial intention. In this sense, it means that the more positive the attitude toward entrepreneurial behaviour, the better the perception of entrepreneurial behaviour, the more favourable the overall desirability of toward starting a business (Shook and Bratianu 2010).

Subjective norm is regarded as the individual’s perception of the social pressures to engage (or not to engage) in entrepreneurial behaviour (Ajzen 1991). Factors such as family, friends, colleagues, peers, and other social circles etc influence subjective norms. Although some scholars failed to prove the significant effect of subjective norms (Leroy et al. 2009; Liñán and Chen 2009), both Pruett et al. (2009) and Engle et al.’s (2010) studies confirmed that social norms could help to explain entrepreneurial intention.

Perceived behaviour control (PBC) is viewed as people’s perceptions of their ability to perform a given behaviour (Ajzen 1991), which is a similar concept to self-efficacy (Bandura 1997), and to perceived feasibility (Shapero and Sokol 1982). In the entrepreneurial context, it refers to the perceived easiness or difficulty of starting a business. Some scholars have used self-efficacy to replace this concept, and

their studies showed that self-efficacy had a significant impact on entrepreneurial intention (Austin and Nauta 2016; Gupta and Bhawe 2007; Hussain and Malik 2018; Prabhu et al. 2012; Peng et al. 2013),

Hence, based on the above discussion, the following hypotheses are proposed (see Figure 1):

H1: Behavioural attitude positively contributes to social entrepreneurial intention.

H2: Subjective norms are positively associated with Social entrepreneurial Intention.

H3: Perceived behavioural control is positively associated with social entrepreneurial intention.

Cultural Implications

Cultural differences in entrepreneurship have been known to exist (Moriano et al. 2012). In addition to the perceptions on gender differences in entrepreneurship, complex country specific variances may also influence entrepreneurship activities (GEM 2010). For instance, Stenholm et al. (2013) argued that the rate of entrepreneurial activity varies widely from country to country, yet it may be difficult to precisely explain why. Foreman-Peck and Zhou (2014) postulated that country-specific differences may not only be related to economic indicators but may exceed it to factors such as opportunities, motivations, institutions and culture. The focus in our research is on the cultural aspect and how it mediates female entrepreneurship intentions.

In recognition of the social cognitive theory (Bandura 2001) proposing that the social setting in which people live in plays an imperative role in their cognition, cultural values may influence entrepreneurial intention in different ways. Unsupportive cultural values may hinder entrepreneurship intentions in terms of motivation, confidence, and persistence (Mueller and Thomas 2001). On the contrary, culture could play a supportive role to encourage entrepreneurial intention. Given the context of this study, it is realistic to expect varied cultural perspectives of entrepreneurship in the UK and Pakistan.

Cultural implications may vary significantly between the two countries to be studied. Previous empirical research, however, did not examine the impact of culture on creation of new business in depth (Karimi et al. 2017) especially from the viewpoint of developing countries such as Pakistan (Nabi and Liñán

2013). Expectedly, external environmental features such as the socio-economic situation and the ability to access finance (Taormina and Lao 2007; Nabi and Liñán 2013) and the religion (Barro and McCleary 2003) to be key determinants of cultural norms.

Cultural factors have been proved to moderate relationships between the TPB constructs (Hagger et al., 2007 cited in Moriano et al., 2012). Krueger (2000) believed that culture influences intentions mainly through the influence on the ‘‘social’’ component, subjective norms in the TPB model. Krueger et al. (2000) argued that attitude and PBC, but not subjective norm, significantly impacted U.S. students' entrepreneurial intention. However, Tkachev and Kolvereid's (1999) study showed that subjective norm was a significant predictor of entrepreneurial intention in a collectivistic country (Russia). By applying the theory of planned behavior model (Ajzen 1991), we opt to test the impact of culture on the intention of female students in the UK and Pakistan to carry out entrepreneurial activities.

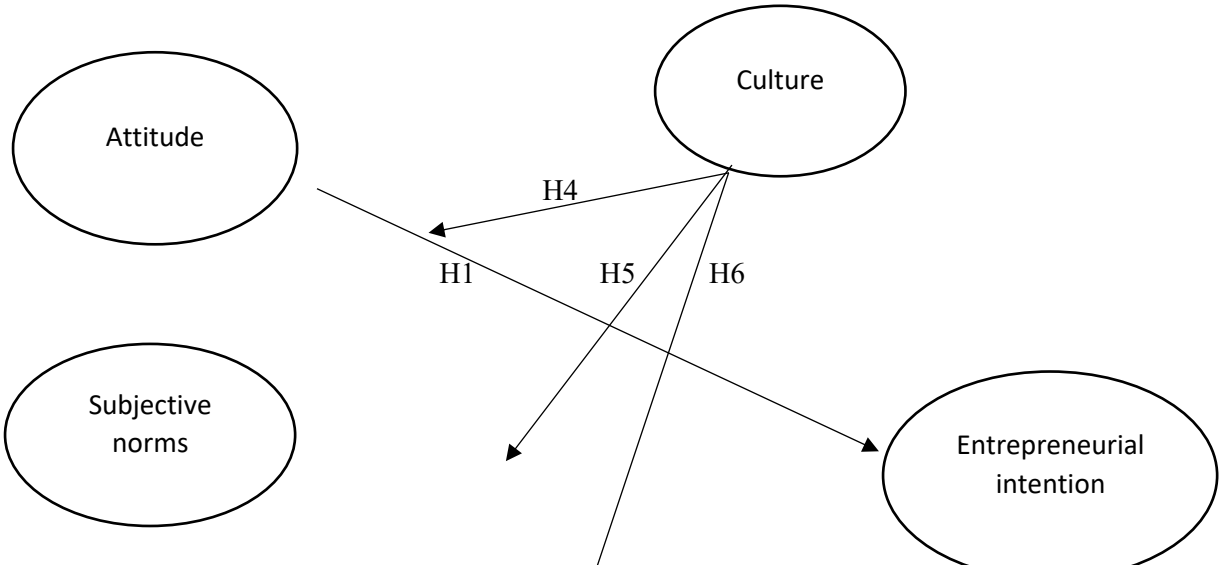
Based on the above discussion, the following hypotheses are suggested (see Figure 1):

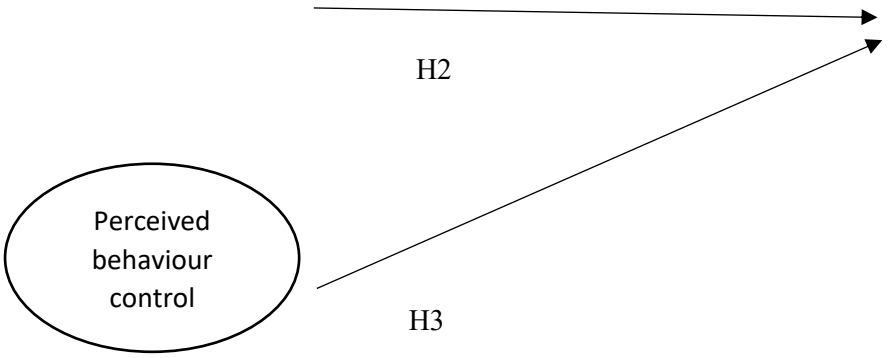
H4: Culture moderates the relationship between behavioural attitude and social entrepreneurial intention.

H5: Culture moderates the relationship between subjective norms and social entrepreneurial intention.

H6: Culture moderates the relationship between perceived behavioural control and social entrepreneurial intention.

Figure 1 the research conceptual framework





3.0 Research methods & results

Sample

The target audiences of this study were university female students. The reason why university students were chosen is that students' entrepreneurial intention are mainly affected by their perceptions and attitudes in identifying opportunities (Robledo et al. 2015). Secondly, they are more accessible for the researcher so that the data can be collected quickly.

The sampling method used was non-probability convenience, which is similar to that used in other studies (Robledo et al. 2015; Liñán et al. 2011). The sample consists of students from two universities in the UK and two universities in Pakistan. A total of 382 participants completed the questionnaire and 379 responses (220 from the UK and 159 from Pakistan) were usable for analysis.

Data collection

Data were collected via both an online questionnaire survey link and paper-based surveys administered to students from four universities in the UK and Pakistan between 18th November 2019 and 31st December 2019. The online survey could help the researchers to achieve wider access of participants and the paper-based survey can help to increase the response rate.

Measures

The four variables of TPB, namely entrepreneurial intention, attitude, subjective norm and perceived behavioural control, were measured by different items. Each item was measured by a 5-point Likert scale with 1 representing strongly agree to 5 strongly disagree. The measures were adopted from Liñán and Chen (2009), which have been extensively used in other studies (Robledo et al. 2015; Linan et al.

2011; Lo et al. 2012; Karimi et al. 2014; Soria-Barreto et al 2017; Dinc and Budic 2016). The items for culture were derived from the relevant literature (Moriano et al., 2012; Krueger 2000; Mueller and Thomas 2001).

Results/Data analysis

Literature on structural equation modeling (SEM) suggests that structural models can be examined either through a variance based approach, a co-variance based approach (Bock and Bargmann 1966; Byrne and Van De Vijver 2010) or partial least square structural equation modeling (PLS-SEM) (Chin 1998; Henseler et al. 2009). To conduct this study, we adopted PLS-SEM due to following reasons: 1- it is preferred over other traditional multivariate approaches (Haenlein and Kaplan, 2004); 2- PLS-SEM can simultaneously estimate hypothesized relationships reflected in structural model and links between latent variables and their indicators as measurement model reflects (Hair et al. 2016; Hair et al. 2013; Henseler et al. 2009); 3- by using bootstrapping method, PLS-SEM provides statistically reliable estimates that produce standard errors for path coefficients (Hair et al. 2016; Hair et al. 2013; Kock 2014); 4- the current study focusses on prediction therefore the use of PLS-SEM is more appropriate as suggested by Hair et al. (2016); finally, PLS-SEM has been widely applied by different scholars as a popular method for data analysis in social science research (Hair et al. 2019; Muskat et al. 2019; Sabiu et al. 2018; Sarstedt et al. 2019; Umrani et al. 2018).

Following the guidelines suggested in PLS-SEM literature, a two-step approach was adopted to analyze the data. First, the measurement model was examined followed by testing of structural model (Hair et al. 2019).

Measurement model

To examine the measurement model, first inter-item reliability was ascertained by testing factor loadings and a threshold of 0.70 was maintained (Hair et al. 2016). Second, the convergent validity was examined by assessing average variance extracted (AVE) and as suggested in literature, all values of AVE were found greater than 0.50 (Bagozzi et al. 1991; Chin 1998; Fornell and Larcker 1981; Gefen et al. 2000). Finally, the internal consistency reliability was assessed by analyzing composite reliability (CR) values and a minimum threshold of 0.70 or above was maintained (Bagozzi et al. 1991; Chin

1998; Fornell and Larcker 1981; Gefen et al. 2000; Hair et al. 2016). The results presented in Table 1 suggests that the entire threshold was achieved. Therefore, we conclude that the reliability and validity of the measurement model is ascertained.

Table 1

Table 1					
Measurement Model					
Construct	**Items**	**Loadings**	**Alpha**	**CR**	**AVE**
Behavioral Attitude	A1	0.881	0.820	0.875	0.585
	A2	0.663			
	A3	0.805			
	A4	0.709			
	A5	0.749			
Culture	C1	0.927	0.830	0.898	0.746
	C2	0.780			
	C3	0.877			
Social Entreprenuerial Intentions	EI1	0.855	0.831	0.898	0.747
	EI2	0.819			
	EI3	0.916			
Percieved Behavioral Control	PBC1	0.916	0.925	0.944	0.772
	PBC2	0.933			
	PBC3	0.915			
	PBC4	0.866			
	PBC5	0.751			
Subjective Norms	SN1	0.889	0.789	0.876	0.702
	SN2	0.804			
	SN3	0.818			

Discriminant validity

To asses discriminant validity, we used hetrotrait-monotrait (HTMT) ratio of correlations. HTMT is based upon the multitrait-multimethod matrix (Henseler et al. 2015) to determine discriminant validity. The reason behind using HTMT is the recent criticism on Fornell and Larcker (1981) criterion. Literature suggests that if HTMT value exceeds 0.85 (Kline 2011), or 0.90 (Gold et al. 2001) then there is problem of discriminant validity. Table 2 presented below suggests that all values passed the HTMT 0.90 (Gold et al. 2001) and 0.85 (Kline 2011), therefore it is suggested that discriminant validity has been ascertained.

Table 2

Table 2					
Discriminent Validity					
Construct	**1**	**2**	**3**	**4**	**5**
Behavioral Attitude					
Culture	0.72				
Percieved Behavioral Control	0.628	0.712			
Social Entreprepreneurial Intentions	0.853	0.739	0.599		
Subjective Norms	0.743	0.558	0.59	0.772	

Structural model

As per suggested guidelines, the second step in PLS-SEM is to determine significance of path coefficients (Henseler et al.in 2009). To assess significance of path coefficients, bootstrapping procedure by taking 5000 subsamples was employed by using Smart PLS software version 3.2.9 (Ringle et al. 2015; Hair et al. 2011). The results of structural model are presented in Table 3.

Table 3

Table 3						
Structural Model						
Hypothesis	**Relationship**	**Beta**	**SD**	**t-Values**	**p-Values**	**Decision**
1	BA -> SEI	0.273	0.058	4.636	0.000	Supported
2	SN -> SEI	0.318	0.047	6.807	0.000	Supported
3	PBC -> SEI	0.014	0.051	0.297	0.766	Not Supported
4	Culture x BA -> SEI	0.071	0.046	1.990	0.048	Supported
5	Culture x SN -> SEI	0.159	0.043	3.731	0.000	Supported
6	Culture x PBC -> SEI	0.202	0.050	3.985	0.000	Supported
Note: BA = Behavioral Attitude, SN = Subjective Norms, PBC = Percieved Behavioral Control, SEI = Social Entrepreneurial Intentions.						

The hypothesis 1 of current study posits that behavioral attitude positively contributes to social entrepreneurial intention. Our results revealed that behavioral attitude significantly contributes in shaping individuals' social entrepreneurial intention (B = 0.273, t = 4.636, p = 0.000), hence it is concluded that hypothesis 1 is fully supported.

Similarly, hypothesis 2 of current study suggests that subjective norms are positively associated with Social entrepreneurial Intention. Our results confirm that subjective norms plays a key role in developing social entrepreneurial intention among individuals (B = 0.318, t = 6.807, p = 0.000), therefore it is concluded that hypothesis 2 is also fully supported.

Likewise, hypothesis 3 of present study posits that perceived behavioral control is positively associated with social entrepreneurial intention. The results do not provide empirical support to this hypothesis (B = 0.014, t = 0.297, p = 0.766). Therefore, it is stated that hypothesis 3 is not supported.

Moderation analysis

The product indicator approach was employed to asses moderating effects of culture in relationship between behavioral attitude and social entrepreneurial intention, subjective norms and social entrepreneurial intention, perceived behavioral control and social entrepreneurial intention (Henseler and Chin 2010; Helm et al. 2010; Chin et al. 2003). The results of moderating analysis are presented in Table 3.

Hypothesis 4 of current study posits that culture moderates relationship between behavioral attitude and social entrepreneurial intention. As expected, our results fully supported this hypothesis (B = 0.071, t = 1.990, p = 0.048), by confirming that the link between behavioral attitude and social entrepreneurial intention become more relevant when we add moderating effect of culture. Therefore, hypothesis 4 is fully supported.

In similar vein, hypothesis 5 of current study suggests that the link between subjective norms and social entrepreneurial intention is moderated by culture. This relationship is also supported by our results (B = 0.159, t = 3.731, p = 0.000). This finding suggests that the relationship between subjective norms and social entrepreneurial intention becomes stronger when we add culture as a moderating variable between this link. Hence, hypothesis 5 is fully supported.

Finally, the hypothesis 6 of this research posits that the relationship between perceived behavioral control and social entrepreneurial intention become more relevant when we add culture as moderating variable. As per our expectations, the results also supported this hypothesis by providing empirical evidence that when we add culture as an interacting variable between perceived behavioral control and social entrepreneurial intention, the link between perceived behavioral control and social entrepreneurial intention becomes stronger.

Multi-group analysis

In order to find any significant differences among individual responses across the countries, a multigroup analysis technique was employed by using Smart PLS software. Following the guidelines suggested by Matthews (2017), a three-step approach was adopted. First, two different data groups were generated and it was ensured that both data groups large enough to demonstrate statistical power.

Second, test for invariance was performed through measurement invariance of composite models (MICOM). To assess MICOM, first, it was ensured that all indicators in model are identical by assessing measurement models of both data groups separately. Next, composite invariance was assessed by ensuring that original correlation is greater than or equal to the 5% quantile. The results presented in Table 4 shows that all correlation values are greater than 5% quantile, hence measurement invariance is established.

Table 4

Table 4				
MICOM Step 2 Results				
Constructs	**Original Correlation**	**Correlation Permutation Mean**	**5.00%**	**Permutation p-Values**
Behavioral Attitude	1.000	0.999	0.997	0.935
Culture	0.995	0.999	0.996	0.034
Percieved Behavioral Control	1.000	0.999	0.998	0.525
Social Entreprnuerial Intentions	1.000	0.999	0.998	0.850
Subjective Norms	0.999	0.999	0.996	0.397

After establishing measurement invariance, we proceed with third step of MICOM, that is composite equality. The composite equality was ensured by maintaining the suggested criteria that is mean original difference should fall between the boundaries of 2.5%% and 97.5%, and original variance should fall between 2.5% and 97.5%. Results in Table 5 suggest that all values met the suggested criteria, therefore composite equality is achieved.

Table 5

Table 5										
MICOM Step 3 Results										
Constructs	**Mean - Original Difference (Pakistan - UK)**	**Mean - Permutation Mean Difference (Pakistan - UK)**	**2.50%**	**97.50%**	**Permutation p-Values**	**Variance - Original Difference (Pakistan - UK)**	**Variance - Permutation Mean Difference (Pakistan - UK)**	**2.50%**	**97.50%**	**Permutation p-Values**
Behavioral Attitude	-0.026	-0.001	-0.211	0.200	0.807	-0.005	0.005	-0.292	0.309	0.972
Culture	-0.112	0.001	-0.201	0.210	0.000	-0.189	0.005	-0.198	0.211	0.000
Percieved Behavioral Control	-0.103	0.000	-0.210	0.209	0.323	0.032	0.004	-0.188	0.200	0.742
Social Entreprnuerial Intentions	0.081	0.000	-0.208	0.207	0.435	-0.010	0.004	-0.265	0.278	0.944
Subjective Norms	-0.052	-0.001	-0.202	0.206	0.615	-0.034	0.004	-0.251	0.260	0.810

After testing for invariance, we proceed towards final step of PLS Multi group analysis. Path coefficients of both groups were obtained by using Multi group analysis in Smart PLS version 3.2.9. The results of path coefficients of both groups are presented in Table 6. The results suggest that no significant difference found among the responses of individuals living in Asia and Europe except for hypothesis 4, that suggests that culture moderates the relationship between behavioral attitude and social entrepreneurial intention. This hypothesis is supported by data obtained from individuals residing in Asia (B = 0.106, t = 2.362, p = 0.019), but not supported by the data obtained from individuals living in Europe (B = 0.043, t = 0.314, p = 0.754).

Table 6

Table 6									
Country vise Multi-group Analysis									
Hypothesis	**Relationship**	**Beta (Pakistan)**	**Beta (UK)**	**SD (Pakistan)**	**SD (UK)**	**t-Value (Pakistan)**	**t-Value (UK)**	**p-Value (Pakistan)**	**p-Value (UK)**
1	BA -> SEI	0.159	0.447	0.071	0.092	2.164	4.889	0.031	0.000
2	SN -> SEI	0.377	0.227	0.064	0.079	5.980	2.864	0.000	0.004
3	PBC -> SEI	0.005	0.108	0.066	0.089	0.066	1.316	0.947	0.189
4	Culture x BA -> SEI	0.106	0.043	0.046	0.094	2.362	0.314	0.019	0.754
5	Culture x SN -> SEI	0.157	0.120	0.067	0.060	2.322	2.065	0.021	0.039
6	Culture x PBC -> SEI	0.223	0.193	0.071	0.095	3.114	1.991	0.002	0.047
Note: BA = Behavioral Attitude, SN = Subjective Norms, PBC = Percieved Behavioral Control, SEI = Social Entrepreneurial Intentions.									

Assessment of predictive validity

The predictive power of a model demonstrates its ability to generate accurate predictions of new observations, cross-sectional or temporal (Shmueli and Koppius 2011). Predictive validity suggests that a set of measures of a construct can predict a given outcome variable (85). The predictive relevance was examined by using cross-validation through holdout samples. By running PLS-Predict algorithm in Smart PLS version 3.2.9, k-fold cross validated prediction errors and prediction error summaries like mean absolute error (MAE), root mean square error (RMSE) were obtained to examine predictive performance of their PLS path model for constructs and indicators. After getting these statistics, two newly developed benchmarks were used to assess predictive relevance of structural model (Ringle et al. 2015).

First, by running Blindfolding in Smart PLS, Q2 value was obtained. Q2 compares the prediction errors of PLS path model against simple mean predictions. Research suggests that in order to demonstrate predictive relevance, the value of Q2 should be positive. PLS predict assessment results presented in

Table 5 show positive value of Q2, suggesting an appropriate predictive relevance. Finally, RMSE and MAE along with Q2 of PLS and linear regression models were obtained through running PLS predict in Smart PLS. Results presented in Table 7 suggest that the values of RMSE and MAE for PLS model are lower than for LM model. In addition to that, Q2 values for indicators of PLS model are greater than LM model. Therefore, the predictive validity of the structural model has been ascertained.

Table 7

Table 7									
PLS Predict									
Construct Prediction Summary									
	Q^2								
EI	0.473								
Indicator Prediction Summary									
	PLS			**LM**			**PLS - LM**		
	RMSE	**MAE**	**Q^2**	**RMSE**	**MAE**	**Q^2**	**RMSE**	**MAE**	**Q^2**
EI2	0.889	0.629	0.348	0.909	0.65	0.319	-0.02	-0.021	0.029
EI3	0.698	0.488	0.592	0.717	0.51	0.569	-0.019	-0.022	0.023
EI1	0.791	0.532	0.464	0.797	0.533	0.455	-0.006	-0.001	0.009
Note: EI = Social Entrepreneurial Intentions.									

4.0 Discussion

The aim of this research was to investigate the impact of culture on female students' entrepreneurial intention while comparing this phenomenon in two distinct culture, namely Pakistan and the UK. TPB was applied to determine which factors influence the entrepreneurial behavioural intentions of female students. Six main hypotheses were formulated which examined the impact of culture on the attitudes, perceived behaviour, and subjective norms towards the entrepreneurial intention of this group. H1 stated that behavioural attitude positively contributes to social entrepreneurial intention; H2 stated that subjective norms are positively associated with social entrepreneurial intention; H3 stated that perceived behavioural control is positively associated with social entrepreneurial intention; H4 stated that culture moderates the relationship between behavioural attitude and social entrepreneurial intention; H5 stated that the link between subjective norms and social entrepreneurial intention are moderated by culture; and, finally H6 suggested that the relationship between perceived behavioural control and social entrepreneurial intention became more relevant when adding culture as a variable. Of the six hypotheses

mentioned above only, H3 was not supported by the research data. Similar results were also found in previous literature (Autio et al. 2001; Ferreira et al. 2012; Krueger et al. 2000).

UK and Pakistan comparison

By examining the behavioural attitudes, subjective norms, and cultural factors relevant to female students, the results of this current study were able to significantly predict the responses from this group in relation to their entrepreneurial intention. It is possible that the positive results of H1 and H2 may have been due to a desire of some in this group to start-up a business or could suggest the potential conviction for some to start their own business. According to Global Entrepreneurship Monitor 2020 report (GEM (2020) hereafter) by (Bosma et al. 2020) state that only 2% of female in Pakistan identify as entrepreneurs this compares with 7% females in the UK. As a ratio only 3 in every 10 entrepreneurs in Pakistan are female compared to 6 in every 10 in the UK. This is despite the fact that, according to GEM (2020), 33% more women than men in Pakistan identify with entrepreneurship as means for making a difference to society, whereas in the UK 4% more men than women identify with this concept. Table below highlights the motivational reasons for setting up as entrepreneurs and compares females in Pakistan with females in the UK.

Table 8:

Topics (somewhat or strongly agree)	% Total early-stage Entrepreneurial Activity (all)		% female Pakistan	% female UK
	Pakistan	UK		
To make a difference	70.3	49	95.1	46.1
Build great wealth	90.3	51.6	100	44.3
Continue family tradition	67.1	5.8	54.5	7.8
To earn a living	92.1	64.4	100	69.5

Adapted from Global Entrepreneurship Monitor 2019/2020 Global Report pages 148 and 186.

It appears that in all but one of the topics Pakistani females rate motivational issues higher than their male counterparts, with only the continuation of the family tradition, mainly a male-dominated culture (Mahmood et al. 2012), ranking less than the males who were surveyed by GEM (2020). Note the responses were considerably higher in each category than those of the UK female respondents. There may be a number of reasons why these figures differ so widely between the two countries, potentially cultural but also likely due to the economic disparities between the two nations. for examples if the GDP per capita is compared (2018), GDP in Pakistan was the equivalent of 5.69 thousand dollars U.S whereas the equivalent UK figure was 45.74 thousand US dollars. It is also worth noting that the weighting for Pakistan by the World Bank Starting a Business Rating was 89.3/100 which ranked Pakistan at 72 out of 190 countries compared with the UK's 94.6/100, ranking the UK at 18th out of 190 countries. Despite Pakistan's economic position this is still a solid performance and suggests that the government has made attempts to encourage entrepreneurship, particularly given that the country ranks at only 110 from 141 countries that make up The World Economic Forum Global Competitiveness Rank compare to the UK's 9th position.

The positive motivation shown by Pakistani females is very much in contrast to the ratings and suggest that many see entrepreneurship as desirable and as a mean of escaping economic poverty. It may negatively reflect the perceived ability of Pakistani students to perform the target behaviours because of uncertainty due to the political and economic crisis. This is in line with previous studies (Autio et al. 2001; Krueger et al. 2000; Liñán, 2008; Shah and Soomro 2017). This is an interesting result and will require further investigation to find out the reasons for this. However, one possible reason could be linked to the perception that entrepreneurial activity in Pakistan is a male domain and perhaps this impacts more on the potential for females to start a business despite having perceived opportunities; they may simply choose instead to go for a salaried job. Contrast this to the UK females' responses which suggests considerably lower motivation towards entrepreneurship and the question then changes to 'What stops UK females from being motivated towards the benefits of entrepreneurship that Pakistani women more clearly identify with?'.

There are some indications at the difference lies in how employment perceived, not just how self-employment/entrepreneurship perceived. For example, Smith et al. (2019) examined the experiences of UK and Australian university students and notice that job flexibility in employment was a strong motivation for UK students in avoiding self-employment. The benefits that paid full-time employment brought in the shape of sick leave, sick pay, paid leave, maternity and paternity provision and pay, constant and regular income, and some additional benefits such as pension scheme, free car parking, access to gymnasiums and healthcare, may be some of the reasons why entrepreneurship, with none of these benefits, is seen as less attractive. This paper by Smith et al. (2019) predates COVID-19 and refers to a point in time when the UK labour market was extremely buoyant. Wennekers et al. (2005) argued that developed countries offer attractive public and private sector job opportunities for graduates which result in reduced entrepreneurial intention, relevant in the UK context. In contrast, Pakistani students' higher levels of entrepreneurial intention could be explained by the GEM (2020) found that less developed countries with the unfavourable economic environment, for example those countries with high unemployment and low wages have witnessed higher entrepreneurial activity than the developed countries (Davey et al. 2011; Iakovleva et al. 2011). However, although the data from this paper does not fully conquer with the GEM (2020) report, it does appear that entrepreneurship in Pakistan among both females and males is lower than in the UK, however this may be due to some of the issues discussed later.

Another earlier cited article identified that women in the UK have the lowest percentage of entrepreneurship uptake within high income countries (Minniti et al. 2005 cited in Quader 2012). They considered this to be a negative influence on the employment market and on GDP. Quader (2012) concluded that the main issue which prevented UK women from entering into self-employment was fear of failure. He argued that although a considerable effort had been expended by government and other start-up support mechanisms, this only focused on the early stages of the business and that support beyond the early stages was essential to provide confidence for longer term self-employment success. In contrast, lack of employment rights and protection, benefits and pay equality may explain the

motivation displayed by Pakistani females in relation to the issue entrepreneurial intention. Table 8 above confirms the findings of this paper in relation to hypotheses 1 and 2 which show a similar response pattern to the GEM (2020) findings.

Impact of culture

Hypothesis 4 considered the impact of culture on moderating attitudes and social entrepreneurial intention, and Hypothesis 5 considered the link between the subjective norms and the social entrepreneurial intention by considering how these are moderated by culture. Pakistani female students appear to be keener to work and create a business venture than their UK counterparts, despite having unique challenges, particularly resulting from cultural pressures. In the Pakistani context there exist different stereotypes that may also be seen as a hindrance to women in entering into any form of entrepreneurial activity. For example, the predominant view is that the male should pursue an entrepreneurial career rather than the female. This comes from a traditional masculine culture which does exist, most notably in rural parts of the country. Anwar ul Haq et al. (2014), argued that men dominate when it comes to entrepreneurship in Pakistan. Islam is the dominant religion in Pakistan, and in a traditional Muslim culture, women are discouraged to work alongside men, particularly young females as they are more vulnerable to exploitation within a male oriented business environment. It remains a challenge to transform the norm, which is that males should pursue an entrepreneurial career, rather than females pursuing an entrepreneurial career. In contrast decades of gender equality legislation, albeit not yet fully successfully integrated, have allowed UK females scope and opportunities to access education and employment in all walks of life, with few industries now providing barrier to entry, allowing females the opportunity to earn and progress in employed careers. The barriers placed on Pakistani females remain limiting and perhaps it is understandable that many perceive entrepreneurial as a means of breaking through these barriers (Fazal et al. 2019; Roomi and Parrott 2008).

In addition to culture, the weak economy and the long term unstable political situation in Pakistan, this may have increased pressure on Pakistani females when selecting their career choices, an issue not

based by their counterparts in the UK. The fact that Pakistani females are faced with cultural, economic, religious and political issues does not mean that they have no ambitions. As Maslow in his seminal theory of hierarchal needs suggest individuals will seek to fulfil their desire and a career and the wealth it may bring will perhaps seem more important to those who have fewer opportunities in life that to those who have more opportunities. This may explain why, in the GEM (2020) report Pakistani females ratings for motivational issues, and for some of the attitudes and perceptions, ranked much higher than their female counterparts in the UK, however realism prevails in that Pakistani females recognised that starting a business in Pakistan was considerably more difficult than the UK females suggested it would have been to set up in the UK. Importantly, despite that perception, Pakistani women had a stronger belief in their own abilities i.e. skill and knowledge, and belief in having opportunities to do so than their UK counterparts. Although this belief was strong their fear of failure was much higher, perhaps due to the stronger economic and employment sector within the UK. This could be due to a more sophisticated support network for new UK entrepreneurial business setup but could easily be attributed to the much easier access to employment in the jobs market. In common with the Bosma et al. (2020) (GEM report), an important finding of this study is that both Pakistani showed an extremely positive attitude to becoming an entrepreneur, whereas UK female students showed a positive, if somewhat muted response. However, when evaluating the moderating effect of culture, it was clear that Pakistani students' intentions were impacted by cultural factors and that UK students were influenced more by a secure employment market and the benefits that this brings.

Discussion based on theory of planned behaviour

The positive results reinforced the TPB Ajzen (1991) confirming this theory to be predictive amongst female students from both countries. However, Mahmood et al. (2012) found that a number of additional barriers exist in the Pakistani context that does not exist in the UK. For example, "lack of finance, restriction on mobility, limited decision making, lack of role models and guiders, men's hold on markets, family pressure and discrimination" (p.340). As confirmed in the Bosma et al. (2020) report this paper has confirmed that female students in Pakistan still strive to find a career in spite of the

challenges that exist in Pakistan. This is not replicated in the UK female context. In contrast to the findings from the UK female students, Pakistani female students appear to be willing to start-up a business after their degree. However, there needs to be support provided to them in order to achieve their goals. In this regard, Hussain and Malik (2018) suggested that universities could be a factor in providing the support that they need in preparing the way towards their entrepreneurship. This is a service which many universities in the UK already provide as part of their employability support. Dutta et al. (2011) suggested that training and coaching on entrepreneurship can strengthen students' interest in engaging in a start-up activity as well as helping them to improve their venture creation norms and skills.

In relation to Ajzen's TPB, and similar to previous literature that investigated entrepreneurial intention, the finding of this paper support the positive relationship between entrepreneurial intention and subjective norms. These results coincide with of Liñán & Chen (2009) which all recognised the positive relationship between entrepreneurial intention and the subjective norm. However, a perceived behavioural control factor was not proven to be a predictor of the entrepreneurial intention of female students in Pakistan.

As previously discussed, students' self-efficacy may have been impacted by their attitudes towards paid jobs, particularly as a result of the risk aversion that exists in their society (Paul et al. 2017), reducing their aspiration to venture creation, particularly visible within the UK market. It can be observed from the results that Pakistani students have positive views about entrepreneurship, however low self-efficacy could be the result of a desire to secure long-term salaried employment, such as government positions. In addition, the political situation faced by Pakistan (country under huge debt, troubled economy due to terrorism, lack of government focus) and the UK Brexit, potentially leads to students' desires to create ventures, and this has led to a statistically significant outcome, yet there remains for many the feeling that the possibility of starting a new business is not currently feasible in either country.

The young and dynamic Pakistani population provides an important prospect for new ventures, unfortunately due to lack of government support and input from the higher education system, the potential in Pakistan is not well supported particularly for females. Conversely, the situation is reversed

in the UK and would be expected to lead to higher uptake of entrepreneurship amongst younger females, yet the motivation and attitudes remain relatively low. Although females in the UK have already broken down long held traditional views of women in the workplace and have achieved equality, at least in legal terms if not fully, Pakistani females still have a long journey ahead. However, Pakistani females are beginning to break down barriers and are challenging the traditional norms. In recent years, women have realised the importance of entrepreneurship as it offers benefits to society and individuals. It is very interesting and positive to see that women are excelling in Pakistan (Farrukh et al. 2019) whether they choose a job or entrepreneurship as a career, albeit the level remains low. Key to the success for future young female entrepreneurs is the influence of their family on building their confidence and in supporting their desire to start a business. As the younger generation, with its aspirations and increased expectations, particularly in terms of its attitude towards success, wealth, and position, becomes the next generation to raise children, perhaps these new parents will have an important a pivotal influence on the next generation of entrepreneurs.

5.0 Conclusion

In this study, culture as a moderator, theory of planned bebaviour (TPB) was adopted to investigate and compare female students' entrepreneurial intention in Pakistan and the UK. The findings of this study further supported previous studies that attitude and subjective norms are positively related to entrepreneurial intention, while perceived behaviour control does not contribute to entrepreneurial intention. Overall, culture does moderate the relationships between attitude and intention, subjective norms and intention, perceived behaviour control and intention.

We provide recommendations as follows based on our findings in order to support female entrepreneurship. It appears that for the situation to change in Pakistan, the culture that shaped the perceptions needs to be changed, and a culture of female empowerment is needed.

In Pakistan, government and universities should develop new policies which promote entrepreneurship education as previous research has suggested that training and education have a positive impact on inspiring female students to start new ventures (Premand et al. 2016). In addition, universities should

enhance their current curricula and transform their environment to support and encourage female students' intentions to start new ventures. However, in the UK such support does exist both from government and from universities. What may be missing is relevant, direct, and focused communication. It is essential that these bodies look more closely at how the message is received and that some of the fear associated with establishing a business is removed from the decision before starting on a venture, for example providing ongoing support beyond the initial start-up period.

There are also limitations in this study. Firstly, the samples of this study were only from two universities in Pakistan and two universities in the UK. The generalisation of the results could be problematic. Future studies could include participants from more developing countries and developed countries so that the results could be more representative. Secondly, the data were collected cross-sectionally from both undergraduates and postgraduates, which did not further identify which year the students were in. With time passing by, female students may make news friends and change their attitudes and intentions. Therefore, a longitudinal research could be explored further in future.

References

Ajzen, I. (1988) *Attitudes, Personality, and Behaviour.* Open University Press.

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), pp.179-211.

Anwar ul Haq, M., Usman, M., Hussain, N., and Anjum, Z. U. Z. (2014). Entrepreneurial activity in China and Pakistan: a GEM data evidence. *Journal of Entrepreneurship in Emerging Economies*, 6(2), pp.79–193.

Audretsch, D. (2012) Entrepreneurship research. *Management Decision.* 50 (5), pp.755-764.

Austin, M.J. and Nauta, M.M. (2016) Entrepreneurial role-model exposure, self-efficacy, and women's entrepreneurial intentions. *Journal of Career Development*, *43*(3), pp.260-272.

Autio, E., H. Keeley, R., Klofsten, M., G. C. Parker, G., and Hay, M. (2001). Entrepreneurial Intent among Students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies,* 2(2), pp.145–160.

Bagozzi, R.P., Yi, Y. and Singh, S. (1991) On the use of structural equation models in experimental designs: Two extensions. *International Journal of Research in Marketing*, *8*(2), pp.125-140.

Bandura, A. (1997). *Self-efficacy: The excercise of control*. New York: Freeman.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual review of psychology*. 52(1), pp.1-26.

Barro, R.J. and McCleary, R. (2003) *Religion and economic growth* (No. w9682). National Bureau of Economic Research.

Berger, E.S. and Kuckertz, A. (2016) Female entrepreneurship in startup ecosystems worldwide. *Journal of Business Research*, *69*(11), pp.5163-5168.

Bird, B., (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of management Review*, 13(3), pp.442-453.

Bock, R.D. and Bargmann, R.E. (1966). Analysis of covariance structures. *Psychometrika*, *31*(4), pp.507-534.

Bosma, N., Hill, S., Ionescu-Somers A., Kelley, D., Levie, J., and Tarnawa, A. (2020). Global Entrepreneurship Monitor 2019/2020 Global Report. [Online] Available from: https://www.gemconsortium.org/report/gem-2019-2020-global-report [Accessed 15th November 2020]

Brush, C.G. and Cooper, S.Y. (2012) Female entrepreneurship and economic development: An international perspective. *Entrepreneurship & Regional Development*, *24*(1-2), pp.1-6.

Byrne, B.M. and Van de Vijver, F.J. (2010) Testing for measurement and structural equivalence in large-scale cross-cultural studies: Addressing the issue of nonequivalence. *International Journal of Testing*, *10*(2), pp.107-132.

Chin, W.W. (1998) The partial least squares approach to structural equation modeling. *Modern methods for business research*, *295*(2), pp.295-336.

Chin, W.W., Marcolin, B.L. and Newsted, P.R. (2003) A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Information systems research*, *14*(2), pp.189-217.

Chowdhury, F., Terjesen, S. and Audretsch, D. (2015) Varieties of entrepreneurship: institutional drivers across entrepreneurial activity and country. *European Journal of Law and Economics*, *40*(1), pp.121-148.

Davey, T., Plewa, C., and Struwig, M. (2011) Entrepreneurship perceptions and career intentions of international students. *Education and Training*, 53(5), pp. 335–352.

Dinc, M.S. and Budic, S. (2016). The impact of personal attitude, subjective norm, and perceived behavioural control on entrepreneurial intention of women. *Eurasian Journal of Business and Economics*, 9(17), pp.23-35.

Dutta, D.K., Li, J. and Merenda, M. (2011) Fostering entrepreneurship: impact of specialization and diversity in education. *International Entrepreneurship and Management Journal*, *7*(2), pp.163-179.

Engle, R.L., Dimitriadi, N., Gavidia, J.V., Schlaegel, C., Delanoe, S., Alvarado, I., He, X., Buame, S. and Wolff, B., (2010). Entrepreneurial intent: A twelve-country evaluation of Ajzen's model of planned behavior. *International Journal of Entrepreneurial Behavior & Research*, 16(1), pp.35-57.

Esfandiar, K., Sharifi-Tehrani, M., Pratt, S. and Altinay, L., (2019). Understanding entrepreneurial intention: A developed integrated structural model approach. *Journal of Business Research*, 94, pp.172-182.

Fairlie, R.W. and Robb, A.M. (2009). Gender differences in business performance: evidence from the Characteristics of Business Owners survey. *Small Business Economics*, *33*(4), pp.375-395.

Farrukh, M., Lee, J. W. C., Sajid, M., and Waheed, A. (2019). Entrepreneurial intention: The role of individualism and collectivism in perspective of theory of planned behaviour. *Education and Training*, 61(7–8), pp.984–1000.

Fayolle, A. and Gailly, B. (2015) The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of small business management*, *53*(1), pp.75-93.

Fazal, S., Naz, S., Khan, M. I., & Pedder, D. (2019). Barriers and enablers of women's academic careers in Pakistan. *Asian Journal of Women's Studies*, 25(2), 217–238.

Ferreira, J. J., Raposo, M. L., Rodrigues, R. G., Dinis, A., and do Paço, A. (2012). A model of entrepreneurial intention: An application of the psychological and behavioral approaches. *Journal of Small Business and Enterprise Development*, 19(3), 424–440.

Fetterolf, J. (2017) In many countries, at least four-in-ten in the labor force are women. *Pew Research Center*. [Online] Available from: https://www.pewresearch.org/fact-tank/2017/03/07/in-many-countries-at-least-four-in-ten-in-the-labor-force-are-women/ [Accessed 28 November 2019]

Foreman-Peck, J. and Zhou, P. (2014) *Cultures of female entrepreneurship* (No. E2014/1). Cardiff Economics Working Papers.

Fornell, C. and Larcker, D.F. (1981) Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), pp.39-50.

Gefen, D., Straub, D. and Boudreau, M.C. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the association for information systems*, *4*(1), p.7.

Global Entrepreneurship Monitor by Bosma, N.; Kelley, D. (2019). 2018/2019 Report. [Online] Available from: https://www.gemconsortium.org/report [Accessed 28 November 2019]

Global Entrpreneurship Monitor by Bosma, N. and Levie, J. (2010) 2009 global report. [Online] Available from: http://entreprenorskapsforum.se/wpcontent/uploads/2011/02/GEM-2010-Global-Report.pdf. [Accessed 15th March 2021]

Global Entrepreneurship Monitor by Bosma, N., Hill, S., Ionescu-Somers A., Kelley, D., Levie, J., and Tarnawa, A. (2020). 2019/2020 Global Report. [Online] Available from: https://www.gemconsortium.org/report/gem-2019-2020-global-report [Accessed 15th November 2020]

Gold, A.H., Malhotra, A. and Segars, A.H. (2001) Knowledge management: An organizational capabilities perspective. *Journal of management information systems*, *18*(1), pp.185-214.

Gupta, V.K. and Bhawe, N.M. (2007) The influence of proactive personality and stereotype threat on women's entrepreneurial intentions. *Journal of Leadership & Organizational Studies*, *13*(4), pp.73-85.

Haenlein, M. and Kaplan, A.M. (2004) A beginner's guide to partial least squares analysis. *Understanding statistics*, *3*(4), pp.283-297.

Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011) PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, *19*(2), pp.139-152.

Hair, J.F., Ringle, C.M. and Sarstedt, M. (2013) Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long range planning*, *46*(1-2), pp.1-12.

Hair Jr, J.F., Sarstedt, M., Matthews, L.M. and Ringle, C.M. (2016) Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I–method. *European Business Review*.

Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019) When to use and how to report the results of PLS-SEM. *European business review*.

Helm, S., Eggert, A. and Garnefeld, I. (2010) Modeling the impact of corporate reputation on customer satisfaction and loyalty using partial least squares. In Esposito Vinzi, V., Chin, W.W., Henseler, J. and Wang, H. (Eds.) *Handbook of partial least squares: concepts, methods and applications*. (pp. 515-534). Heidelberg, Dordrecht, London, New York: Springer..

Henseler, J. and Chin, W.W. (2010) A comparison of approaches for the analysis of interaction effects between latent variables using partial least squares path modeling. *Structural equation modeling*, *17*(1), pp.82-109.

Henseler, J., Ringle, C.M. and Sinkovics, R.R. (2009) The use of partial least squares path modeling in international marketing. In *New challenges to international marketing*. Emerald Group Publishing Limited.

Henseler, J., Ringle, C.M. and Sarstedt, M. (2015) A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, *43*(1), pp.115-135.

Hussain, S. and Malik, M.I. (2018) Towards nurturing the entrepreneurial intentions of neglected female business students of Pakistan through proactive personality, self-efficacy and university support factors. *Asia Pacific Journal of Innovation and Entrepreneurship*. 12(3), pp.363-378

Iakovleva, T., Kolvereid, L., and Stephan, U. (2011). Entrepreneurial intention in developing and developed countries. *Education and Training*, 53(5), pp. 353–370.

Karimi, S., Biemans, H.J., Lans, T., Chizari, M., Mulder, M. and Mahdei, K.N. (2013) Understanding role models and gender influences on entrepreneurial intentions among college students. *Procedia-Social and Behavioral Sciences*, *93*, pp.204-214.

Karimi, S., JA Biemans, H., Lans, T., Chizari, M. and Mulder, M., (2014). Effects of role models and gender on students' entrepreneurial intention. *European Journal of Training and Development*, 38(8), pp.694-727.

Karimi, S., Biemans, H.J., Lans, T., Aazami, M. and Mulder, M. (2016) Fostering students' competence in identifying business opportunities in entrepreneurship education. *Innovations in education and teaching international*, *53*(2), pp.215-229.

Karimi, S., Biemans, H.J., Naderi Mahdei, K., Lans, T., Chizari, M. and Mulder, M. (2017). Testing the relationship between personality characteristics, contextual factors and entrepreneurial intentions in a developing country. *International Journal of Psychology*, *52*(3), pp.227-240.

Kline, R. B. (2011) *Principles and practice of structural equation modeling*. New York: Guilford Press.

Kock, N. (2014) Advanced mediating effects tests, multi-group analyses, and measurement model assessments in PLS-based SEM. *International Journal of e-Collaboration (IJeC)*, *10*(1), pp.1-13.

Krueger, N. F. (1993). The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship theory and practice*, 18(1), pp.5-21.

Krueger, N. F. (2000) The cognitive infrastructure of opportunity emergence. *Entrepreneurship Theory & Practice*, 24, pp. 5-23.

Krueger Jr, N.F. and Brazeal, D.V. (1994) Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship theory and practice*, *18*(3), pp.91-104.

Krueger, N.F. and Carsrud, A.L. (1993) Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, *5*(4), pp.315-330.

Krueger, N.F., Reilly, M.D. and Carsrud, A.L. (2000). Competing models of entrepreneurial intention. Journal of Business Venturing, 15(5–6), pp. 411-432.

Leroy, H., Manigart, S. and Meuleman, M. (2009) The planned decision to transfer an entrepreneurial company. *Working Paper Series of Faculty of Economics and Business Administration,* Ghent University

Liñán, F. (2008). Skill and value perceptions: How do they affect entrepreneurial intention? *International Entrepreneurship and Management Journal*, 4(3), pp.257–272.

Liñán, F. and Chen, Y.W., (2009). Development and cross–cultural application of a specific instrument to measure entrepreneurial intention. *Entrepreneurship theory and practice*, 33(3), pp.593-617.

Liñán, F., Urbano, D. and Guerrero, M., (2011). Regional variations in entrepreneurial cognitions: Start-up intentions of university students in Spain. *Entrepreneurship and Regional Development*. 23(3-4), pp.187-215.

Lo, C., Sun, H. and Law, K., (2012). Comparing the entrepreneurial intention between female and male engineering students. *JWEE*, (1-2), pp.28-51

Lock, R. and Smith, H.L. (2016). The impact of female entrepreneurship on economic growth in Kenya. *International Journal of Gender and Entrepreneurship*.

Mahmood, B., Sohail, M., Khalid, S., and Babak, I. (2012). Gender Specific Barriers to Female Entrepreneurs in Pakistan: A Study in Urban Areas of Pakistan. *Journal of Education, Society & Behavioural Science*, 2(4), pp.339–352.

Matthews, L. (2017) Applying multigroup analysis in PLS-SEM: A step-by-step process. In Latan, H., Noonan, R. and Matthews, L. (Eds.) *Partial least squares path modeling: basic concepts, methodological issues and applications*. (pp. 219-243). Springer, Cham.

Moriano, J.A., Gorgievski, M., Laguna, M., Stephan, U. and Zarafshani, K. (2012) A cross-cultural approach to understanding entrepreneurial intention. *Journal of career development*, 39(2), pp.162-185.

Mueller, S.L. and Thomas, A.S. (2001) Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of business venturing*, *16*(1), pp.51-75.

Muskat, B., Hörtnagl, T., Prayag, G. and Wagner, S. (2019) Perceived quality, authenticity, and price in tourists' dining experiences: Testing competing models of satisfaction and behavioral intentions. *Journal of Vacation Marketing*, *25*(4), pp.480-498.

Mustapha, M. and Selvaraju, M. (2015) Personal attributes, family influences, entrepreneurship education and entrepreneurship inclination among university students. *Kajian Malaysia: Journal of Malaysian Studies*, *33*.

Nabi, G., and Liñán, F. (2013) Considering business start-up in recession time: The role of risk perception and economic context in shaping the entrepreneurial intent. *International Journal of Entrepreneurial Behavior & Research*. 19(6), pp.633-655.

Noguera, M., Alvarez, C., Merigo, J.M. and Urbano, D. (2015) Determinants of female entrepreneurship in Spain: an institutional approach. *Computational and Mathematical Organization Theory*, *21*(4), pp.341-355.

Oke, D.F., (2013). The effect of social network on women entrepreneurs in Nigeria: A case study of Ado-Ekiti Small scale Enterprise. *International Journal of Education and Research*, *1*(11), pp.1-14.

Parker, S.C. (2009) *The Economics of Entrepreneurship*. MIT Press, Cambridge, MA.

Paul, J., Hermel, P., and Srivatava, A. (2017) Entrepreneurial intention—theory and evidence from Asia, America, and Europe. *Journal of International Entrepreneurship*, 15(3), pp.324–351.

Peng, Z., Lu, G. and Kang, H. (2013) Entrepreneurial intentions and its influencing factors: A survey of the university students in Xi'an China. *Creative education*, *3*(8), p.95.

Poggesi, S., Mari, M. and De Vita, L. (2016) What's new in female entrepreneurship research? Answers from the literature. *International Entrepreneurship and Management Journal*, *12*(3), pp.735-764.

Prabhu, V.P., McGuire, S.J., Drost, E.A. and Kwong, K.K. (2012) Proactive personality and entrepreneurial intent: is entrepreneurial self-efficacy a mediator or moderator?. *International Journal of Entrepreneurial Behavior & Research*.18(5), pp. 559-586

Premand, P., Brodmann, S., Almeida, R., Grun, R. and Barouni, M. (2016). Entrepreneurship education and entry into self-employment among university graduates. *World Development*, *77*, pp.311-327.

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 Behavior & Research*.

Quader, M.S. (2012) A characteristic model of successful women entrepreneurs in the uk. *Journal of Services Research*, *12*(1).

Ramadani, V., Hisrich, R.D. and Gërguri-Rashiti, S. (2015) Female entrepreneurs in transition economies: insights from Albania, Macedonia and Kosovo. *World Review of Entrepreneurship, Management and Sustainable Development*, *11*(4), pp.391-413.

Ratten, V. (2016) Female entrepreneurship and the role of customer knowledge development, innovation outcome expectations and culture on intentions to start informal business ventures. *International Journal of Entrepreneurship and Small Business*, *27*(2-3), pp.262-272.

Ringle, C.M., Wende, S. and Becker, J.M. (2015) SmartPLS 3. *Boenningstedt: SmartPLS GmbH*.

Robledo, J.L.R., Arán, M.V., Sanchez, V.M. and Molina, M.Á.R. (2015) The moderating role of gender on entrepreneurial intentions: A TPB perspective. *Intangible capital*, *11*(1), pp.92-117.

Roomi, M. A., and Parrott, G. (2008). Barriers to Development and Progression of Women Entrepreneurs in Pakistan. *The Journal of Entrepreneurship*, 17(1), pp.59–72.

Rubio-Bañóna, A. and Esteban-Lloret, N. (2016) Cultural factors and gender role in female entrepreneurship. *Suma de Negocios*, *7*(15), pp.9-17.

Sabiu, I.T., Abdullah, A., Amin, A. and Tahir, I.M. (2018) An empirical analysis of the need for achievement motivation in predicting entrepreneurial persistence in Bumiputra entrepreneurs in Terengganu, Malaysia. *International Journal of Business and Globalisation*, *20*(2), pp.190-202.

Sarstedt, M., Hair Jr, J.F., Cheah, J.H., Becker, J.M. and Ringle, C.M. (2019) How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing Journal (AMJ)*, *27*(3), pp.197-211.

Shah, N., and Soomro, B. A. (2017) Investigating entrepreneurial intention among public sector university students of Pakistan. *Education and Training*, 59(7–8), pp. 841–855.

Shane, S. A. and Venkataraman, S. (2000) The promise of entrepreneurship as a field of research, *Academy of Management Review*, 25 (1), pp. 217-226.

Shapero, A., (1975). The displaced, uncomfortable entrepreneur. *Psychology today*, 9(6), pp.83-88.

Shapero, A. and Sokol, L. (1982). The social dimensions of entrepreneurship. *University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship*.

Shirokova, G., Osiyevskyy, O. and Bogatyreva, K. (2016). Exploring the intention–behavior link in student entrepreneurship: Moderating effects of individual and environmental characteristics. *European Management Journal*, *34*(4), pp.386-399.

Shook, C.L. and Bratianu, C. (2010) Entrepreneurial intent in a transitional economy: an application of the theory of planned behavior to Romanian students. *International Entrepreneurship and Management Journal*, *6*(3), pp.231-247.

Shmueli, G. and Koppius, O.R. (2011) Predictive analytics in information systems research. *MIS quarterly*, 35(3), pp.553-572.

Sieger, P., Gruber, M., Fauchart, E. and Zellweger, T. (2016) Measuring the social identity of entrepreneurs: Scale development and international validation. *Journal of Business Venturing*, *31*(5), pp.542-572.

Smith, B. R., Conger, M. J., McMullen, J. S., and Neubert, M. J. (2019). Why believe? The promise of research on the role of relgion in entrepreneurial action. *Journal of Business Venturing Insights*, 11, e00119. https://doi.org/10.1016/j.jbvi.2019.e00119

Soria-Barreto, K., Honores-Marin, G., Gutiérrez-Zepeda, P. and Gutiérrez-Rodríguez, J., (2017). Prior exposure and educational environment towards entrepreneurial intention. *Journal of technology management & innovation*, 12(2), pp.45-58.

Stenholm, P., Acs, Z.J. and Wuebker, R. (2013) Exploring country-level institutional arrangements on the rate and type of entrepreneurial activity. *Journal of Business Venturing*, *28*(1), pp.176-193.

Taormina, R.J. and Lao, S.K.M. (2007) Measuring Chinese entrepreneurial motivation. *International Journal of Entrepreneurial Behavior & Research*.13(4), pp.200-221

The World Bank (2019) Labor force, female (% of total labor force). [Online] Available from: https://data.worldbank.org/indicator/SL.TLF.TOTL.FE.ZS [Accessed 28 November 2019]

Thompson, E.R. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship theory and practice*, *33*(3), pp.669-694.

Tkachev, A. and Kolvereid, L. (1999) Self-employment intentions among Russian students. *Entrepreneurship & Regional Development*, *11*(3), pp.269-280.

Umrani, W.A., Kura, K.M. and Ahmed, U. (2018) Corporate entrepreneurship and business performance. *PSU Research Review*.

Van Gelderen, M., Brand, M., van Praag, M., Bodewes, W., Poutsma, E. and Van Gils, A., (2008). Explaining entrepreneurial intention by means of the theory of planned behaviour. *Career development international*, 13(6), pp.538-559.

Veciana, J.M., Aponte, M. and Urbano, D., (2005). University students' attitudes towards entrepreneurship: A two countries comparison. *The International Entrepreneurship and Management Journal*, 1(2), pp.165-182.

Wennekers, S., van Stel, A., Thurik, R. and Reynolds, P. (2005) Nascent entrepreneurship and the level of economic development. *Small Business Economics*, 24(3), pp. 293-309.

Westhead, P. and Solesvik, M.Z. (2016). Entrepreneurship education and entrepreneurial intention: Do female students benefit?. *International Small Business Journal*, *34*(8), pp.979-1003.

Yadav, V. and Unni, J. (2016) Women entrepreneurship: research review and future directions. *Journal of Global Entrepreneurship Research*, *6*(1), pp.1-18.

Yordanova, D.I. and Tarrazon, M.A., (2010). Gender differences in entrepreneurial intention: evidence from Bulgaria. *Journal of Developmental Entrepreneurship*, 15(03), pp.245-261.

Zhao, H. , Hills, G.E. , and Siebert, S.E. (2005). The mediating role of self–efficacy in the development of entrepreneurial intention. *Journal of Applied Psychology*, 90(6), pp.1265–1272.

Zhang, P., Wang, D.D. and Owen, C.L., (2015). A study of entrepreneurial intention of university students. *Entrepreneurship Research Journal*, 5(1), pp.61-82.