

Entrepreneurship Research Perspective: The Influence of Gender Differences and the Mediating Role of Subjective Norms: The Case of University Students at Preparatory Level in University of Hail, Saudi

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Abstract

Purpose: We aim to examine the context of preparatory level students, particularly in Saudi Arabia. We are exploring two points. First, the extent to which subjective norms influence attitudes and perceived control toward changing students' intentions. Second, the influence of gender differences on attitudes, subjective norms, and perceived control.

Methodology: We have integrated the theory of planned behaviour with the social feminine theory to underline our investigation using a sample size of 363 students at the University of Ha'il in Saudi Arabia.

Findings: The results showed that subjective norms play an important role in determining attitudes and perceived control; the students showed more consideration for subjective norms in determining their intention to start a business in the future.

Originality: We are motivated by the work of Camelo-Ordaz, Diáñez-González, & Ruiz-Navarro, 2016). We have extended their proposed limitations to reach an advanced level of understanding of the topic.

Keywords: preparatory level, entrepreneurship education, personal traits, self-efficacy, gender, students' intentions.

Introduction

The development of small and medium-sized enterprises has improved economic growth as evidenced by the taxes generated and new jobs created. Therefore, government, policymakers, and researchers are concerned about the driving factors behind effective entrepreneurial development, particularly among students at various education levels (Kuratko, 2005; Raposo and do Paço, 2011; Wennekers and Thurik, 1999). The theory of planned behaviour describes the following determinants from a psychological point of view: attitudes, subjective norms, and perceived behavioural control, resulting in a comprehensive study explaining the motivation of students to start their own company. In addition, universities need to link their objectives with the country's growth targets as they are not just places for holding lectures; rather, they are designed to transform creative individuals into units of output.

In Saudi Arabia, the Vision 2030 programme has specifically mentioned that building opportunities for entrepreneurship must be prioritised by universities and policymakers. Entrepreneurship is a newly implemented course for Saudi students; there are fewer female entrepreneurs compared with their male counterparts. According to Bosma and Kelley (2019), the entrepreneurship level in Saudi Arabia is considered low compared to that of other countries; only 9.3% of the total adults are engaged in starting their own business. Women in Saudi Arabia have shown an increasing interest in entrepreneurship compared to the previous years. Statistical reports by Kelley et al. (2012) show that the percentage of women who own their business increased by 35% from 2007 to 2017. In addition, studies have reported that the driving forces behind women vary from those of men (Pineset al., 2010). Moreover, we reviewed the current literature, particularly in the Saudi context, and found sufficient room to investigate the effect of gender and subjective norms on attitudes and perceived control to change students' intentions (Skoko, 2012). At the same time, the context of the preparatory level students was ignored by previous studies in Saudi Arabia as scholars considered that level to be close to the undergraduate level. Furthermore, results suggest that there is a contextual difference in the area of entrepreneurial education (Mareschet et al., 2016). Ignoring the characteristics of the preparatory stage inspired us to examine the students' intentions at that point; they had just graduated from high school, and some of them would leave, repeat classes, go to vocational training, join the military, or complete their undergraduate degree. We reviewed the University of Ha'il's analyses on preparatory level graduates. The total number of students admitted to the preparatory stage at the University of Ha'il is 5194 in 2019, of which 2103 are males and 3614 are females; there were 2506 students in the science stream, 2199 in the humanities stream, and 1012 in the medical stream, respectively. Armed with these facts, we decided to concentrate on exploring the effect of gender on attitudes, subjective norms, perceived control of behaviour on students' intentions, and the mediating role of subjective norms on attitudes and perceived control of behaviour. The first section addresses the introduction,

followed by an analysis of the literature describing the underlying ideas, previous research, and hypotheses in the second section. The third section discusses the outcome, while the fourth and fifth sections analyse the results of the studies and summarise them, respectively.

Literature review

The study of the determinants of entrepreneurial intention (EI) has drawn scholars from various fields, forming different perspectives. Therefore, in this section, we have focused on explaining two emphasising theories that explain the relationship between the main variables and our direction to gender differences in students' intentions regarding entrepreneurship. This section deals with the main theories, findings, and hypotheses. First, it addresses the basic theories of these articles. Second, the relationship between variables is presented along with hypotheses to support our analysis.

The grounding theories: Theory of planned behaviour and the gender theory

Understanding the theories helps us to draw a basic idea of the intended empirical analysis. After examining the available literature to understand the determinants of students' intentions, it was found that scholars heavily relied on the theory of planned behaviour (Ali, 2016; Iakovleva et al., 2011; Küttimet et al., 2014). This theory explains intention as a step towards behaviour. This step is determined by attitudes, subjective norms, and perceived behaviour control. However, research has shown inconclusive results in different contexts (Al-Swidiet et al., 2014). Moreover, to divert students' intentions from one idea to another, we are required to advance their attitudes, self-confidence, social norms, and education level. Indeed, the more students are exposed to successful entrepreneurship stories, the more they gain the confidence to break the glass ceiling (Uygun and Kasimoglu, 2013). In addition, personal characteristics are found to play an important role in diverting students' intentions; traits such as risk tolerance, locus of control, and need for achievement are significantly related to students' intentions (Basten and Sánchez Serrano, 2019; Sivarajah and Achchuthan, 2013). On the other hand, women are found to show less

motivation and high subjective norms toward starting their business; these assumptions are supported by the gender theory, which states that women respond to the determinants of students' intentions differently from men (Choukiret al., 2019). The second ideology that serves as the theoretical basis for the study is the social feminism theory, which argues that 'from the earliest moments of life, there are disparities between the experiences of males and females, which result in profoundly different ways of viewing the world' (Aulette and Connell, 1991; Maresch et al., 2016). As a result, men and women develop different traits that, however, are equally successful in pursuing a target. Unlike liberal feminism, social feminism is viewed as a more suitable theory to describe gender-related disparities (Howe, 2012) and will, therefore, be used on a fundamental aspect in this article. However, the work on university students in Saudi Arabia, particularly at the preparatory level, is limited. Thus, there is ample room to examine the proposed theoretical framework in the current study. We have focussed on integrating the theory of planned behaviour with the gender theory. The results show an integrated framework similar to the works of Sahinidis et al. (2014) and Shirokova et al. (2016). The following sections would present the proposed hypotheses.

Attitudes, subjective norms, and perceived behaviour control towards students' intentions

The term 'attitude' is linked to the willingness of a person to quit their job to start their own business; it is the desire to be self-employed. Extensive work was carried out to implement the theory of planned behaviour, which found that attitudes showed a significant connection to changing students' intentions (Iakovleva and Kolvereid, 2009; Iakovleva et al., 2011). Therefore, academics have proposed enhancing the educational processes of entrepreneurship to improve students' attitudes and thoughts. Furthermore, subjective norms relate to the perception of the surrounding environment about the individual starting business, the impact of subjective norms on students' intentions showed inconsistent results. When subjective norms were examined as a single independent variable, it was the least influential factor against students' intentions, but when subjective norms were mediated by attitudes or perceived control, they showed an impact;

subjective norms and personal attitudes affect perceived behavioural control (Al-Swidi et al., 2014; Ferreira et al., 2012). Finally, perceived behaviour control is linked to the individual reacting to failure, encouragement, and feeling associated with starting a new company (Aloulou, 2015). The literature provides evidence that a person's ability to restart after experiencing failure influences the students' goals; encouragement through role models is the best way to improve the business will of university students (Nowiński and Haddoud, 2019). Based on this, we have found ample room to explore the possibility of influencing preparatory level students' intentions at the University of Ha'il in Saudi Arabia through attitudes, subjective norm, and perceived behaviour control. The proposed hypotheses are as follows:

H1: attitudes and students' intentions are significantly related

H2: subjective norm and students' intentions are significantly related

H3: perceived behaviour control and students' intentions are significantly related

However, studies indicate that subjective norms influence both attitudes and perceived control of behaviour, which result in subjective norms mediating the relationship between attitudes and perceived control of behaviour (Al-Swidi et al., 2014; Entrialgo and Iglesias, 2016; Hamet al., 2015; Park, 2000; Tsai et al., 2016). Based on this, we have found ample room to explore the possibility of an influence of subjective norms mediated by attitudes and perceived behaviour control on preparatory level students' intentions at the University of Ha'il in Saudi Arabia. The proposed hypotheses are as follows:

H4: subjective norms and attitudes are significantly related

H5: subjective norms and perceived behaviour are significantly related

Gender and students' intentions towards entrepreneurship

There is no clear consensus among scholars in the literature focussing on liberal feminism and social feminism whether there is any difference between gender at all when applying intention analysis. Moreover, empirical results tend to be

complex and inconsistent in many cases (Díaz-García and Jiménez-Moreno, 2010; Wonget al., 2012). Nevertheless, in the last twenty years, the field of female entrepreneurship and gender disparities faced by them have gained some interest. Female entrepreneurs are less likely to own several businesses; female company owners are less likely to plan an expansion but launch smaller companies to be larger (Díaz-García and Jiménez-Moreno, 2010; Haus et al., 2013). The asset value of female-owned businesses is slightly smaller than that of male-owned companies; male entrepreneurs are more likely to want to expand their own company as fast as they can, whereas female entrepreneurs tend to work part-time and in the service sector (Majumdar and Varadarajan, 2013). Moreover, studies have shown that women tend to overestimate their ability to perform duties; their fear of failure is shown to be greater than that of men. It is argued that family history, gender, and self-employment experience indirectly influence self-employment intentions through their impact on attitude, subjective norms, and perceived control of behaviour (Laspita et al., 2007). This gives us ample room to explore how gender differences influence attitudes, subjective norms, and perceived behavioural control of preparatory level students' intentions at the University of Ha'il in Saudi Arabia.

H6: there is a relationship between gender differences and students' intentions

H7: there is a relationship between gender differences and attitudes

H8: there is a relationship between gender differences and subjective norms

H9: there is a relationship between gender differences and perceived behavioural control

Methodology

Data

In order to explore the determinants of students' intentions and test the related hypotheses, we investigated 363 preparatory level students at the University of Ha'il by using a questionnaire. We targeted 5194 enrolled students at the University of Ha'il during the year 2019-2010. Most of the items are derived from Liñán (2005) as well as Francisco Liñán and Chen (2009); the questionnaire was

translated from English to Arabic, and the students answered based on questions designed on a five-point Likert scale. It is worth noting that as the investigation was performed during the Covid-19 pandemic where handing over of hard copies is prohibited due to health safety issues, an online survey was the alternative. We are inspired by Al-Swidi et al. (2014) as well as Santos and Liguori (2019), replicating their analytical methods in the following sections.

Variables and measurements

The structure of the questionnaire consists of five-point Likert Scale questions to measure the determinants of students' intentions. The source of these questions is as follows:

- The variable attitudes is measured using the items derived from Francisco Liñán and Chen (2006) as well as Francisco Liñán and Fayolle (2015), using 5 questions to explore the students' attraction to entrepreneurship.
- The items measuring subjective norms are 3 questions extracted from Francisco Liñán and Chen (2009). They enquire about the opinions of an individual's family, friends, and colleagues about their ability to start a new business.
- The items related to perceived behavioural control are 5 questions extracted from Francisco Liñán and Chen (2009). This independent variable covers questions related to the students' self-confidence in launching a new business.
- Students' Intentions-related items are derived from Francisco Liñán and Chen (2009). The number of questions for this dependent variable is 6; they are concerned about the students' goals in the future and their relationship to starting a new business.
- Gender is measured using a dummy variable where (1) indicates males and (2) indicates females.

Techniques used to analyse the data

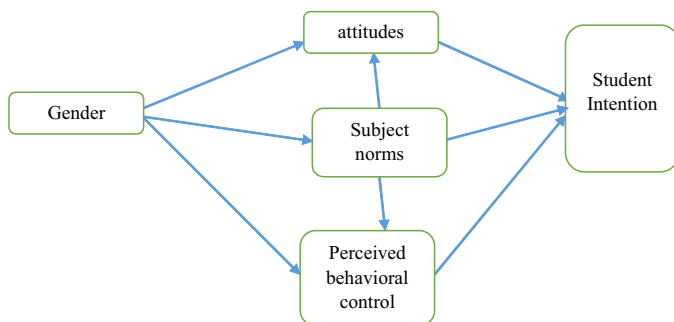
We imported data from the Excel file to SmartPLS for analysing the data. This software considers factor loading, the relationships between variables, the path coefficient, and the goodness of fit. The interpretations using the

software are considered to be a great contribution to the EI field. PLS-SEM version 3.9 has been used to evaluate the data (Christian et al., 2015); according to Hairet et al. (2013), the partial least squares regression method can replace normal regression analyses for more accurate multiple regression analyses. It allows users to execute mediation and moderation without separating the analysis process, while SmartPLS is suitable for a small number of samples.

Results

A data summary, inferential analysis, and interpretation of the findings are carried out in this section, following the theory of planned behaviour and the social feminism theory. We placed students' intentions as a dependent variable as well as attitudes, subjective norms, and perceived behavioural control as independent variables. Subjective norms are proposed to mediate the relationship between attitudes and perceived behavioural control toward students' intentions. Gender is proposed to influence the three dependent variables along with students' intentions; the theoretical framework can be seen in Figure 1.

Figure 1.0 The proposed conceptual framework



Source: (Sahinidis et al., 2014)

Demographic characteristics of the respondents

The sample population consisted of preparatory level students from the University of Ha'il; most of them live in Ha'il City and have recently graduated from high schools, ranging in age from 18 to 20 with 50.7% female respondents and 49.3% male respondents. Out of the total respondents, 35.3% reported that one of their parents owns a company while the remaining students reported the

opposite; 18.7% did not study entrepreneurship, while the remaining 81.3% had completed the preparatory level course. Moreover, our analysis in the next section involves two steps: First, the assessment of the measurement model to ensure that the questions we used were appropriate. Second, the assessment of the structural model to ensure that the model structure was appropriate.

Assessment of measurement model

In this section, content validity and construct validity have been used to measure the ability of the model to propose assumptions, that is, to validate the variables, and the questions asked to reflect the variables.

Content validity: Content validity is important to confirm that each factor has a satisfactory loading, which is performed by examining the green number shown by the outer loading (Ringle et al., 2014). We have ensured that each question shows a factor loading with a minimum of ≥ 0.60 . We have removed questions that show less factor loading, as presented in Table 1 below. None of the factors has shown less than 60% loading. To conclude, we had confirmed the content validity.

Convergent validity: In order to examine whether each indicator fully represents the targeted concept, convergent validity is implemented (Ringle et al., 2015). We applied an algorithm test by using SmartPLS to confirm the numbers related to composite reliability and average variance. Indeed, by exploring the results reported in Table 1, the loading factors exceed 0.60 (Chin et al., 1997). Similarly, the results of internal reliability using Cronbach's values ranged from 0.72 to 1.00, which is higher than 0.60, as recommended by Nunnally and Bernstein (1994). The composite reliability values of all latent constructs ranged from 0.82 to 1.00, which were well above the acceptable level of 0.70 (Hairet et al., 2013). Average variance statistical results showed that the overall number of shared variance was satisfactory; it ranged from 0.53 to 0.74, exceeding the acceptable level of 0.50 (Hair et al., 2013). To summarise, the assessment of our measurement used in the proposed conceptual framework showed a high level of ability to measure the constructs.

Discriminant validity: In this section, we attempt to validate that the variables used in the proposed model are not the same; therefore, we need to process discriminant validity. This implies that the variance shared among a set of items measuring a construct and their own construct is higher than the variance shared with other constructs in the model (Compeau et al., 1999). Following the criterion suggested by Fornell and Larcker (1981), we compared the square roots of the average variance with the correlation among constructs, as presented in Table 1. The square roots of the average variance presented a satisfactory result. These results verify that the model has adequate discriminant validity. To conclude, the variables used in the proposed model are different from each other (see Figure 2).

Figure 2.0 Theoretical framework based on measurement model

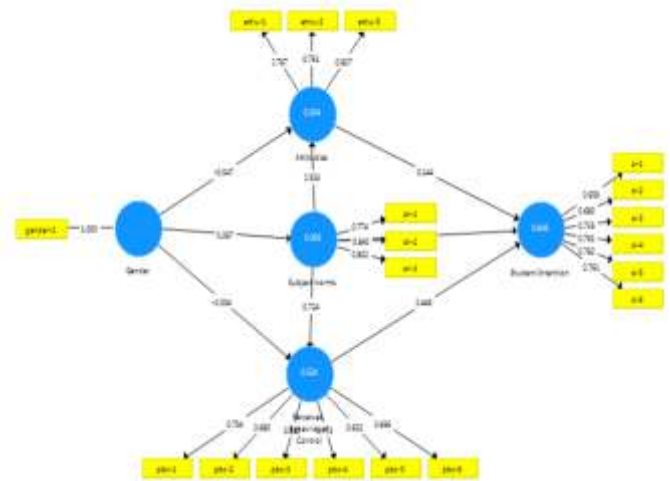


Table 1.0 result of measurement model: Convergent Validity

Attitudes	Question	Loading	AV	CR
	Attiu-1	0.767	0.606	0.822
	Attiu-2	0.761		
	Attiu-3	0.80		
Gender	gender-1	1.00	1	1
Perceived Behavioral Control	Pbc-1	0.754	0.532	0.872
	Pbc-2	0.680		
	Pbc-3	0.810		
	Pbc-4	0.773		
	Pbc-5	0.652		
	Pbc-6	0.696		
Student Intention	SI-1	0.659	0.535	0.872
	SI-2	0.683		
	SI-3	0.735		
	SI-4	0.761		
	SI-5	0.782		
	SI-6	0.761		
Subject Norms	Sn-1	0.774	0.650	0.847
	Sn-2	0.840		
	Sn-3	0.802		

In this section, we tested the hypothesis by examining the proposed model. Figure 2 above shows the connections between variables and the fit numbers of the structural model. However, there are five different tests to assess the structural models: path coefficient exploring the hypothesis testing, coefficient of determinations, effect size test,

predictive relevance, and goodness of fit. First, we have implemented the bootstrapping analysis for the path coefficient to explore the hypothesis testing. We found that the p-values of attitudes, subjective norms, and perceived behavioural control, respectively, were less than 5% with positive signs. This indicates a positive significant

relationship between attitudes, subjective norms, and perceived behavioural control with students' intentions. This result supports the proposed hypotheses. However, the relationship between gender and students' intentions showed no relationship even when mediated by attitudes, subjective norms, and perceived behavioural control. This is an indication that our proposed hypothesis is rejected (Table 2). We may relate that to the uniqueness of the preparatory level context, these students are still young, and their confidence level is higher than what we expected, they are of similar age group. More importantly, subjective norms have been found to influence attitudes and perceived behavioural control, meaning that subjective norms and students' intentions are fully mediated by attitudes and perceived behavioural control. Second, examining the coefficient of determinations, which measures the ability of independent variables to explain the dependent variable, the R square of the dependent variable showed a value of 0.642 that is considered moderate according to Hair et al. (2013). Third, the effect size test is used to explore the size of influence each independent variable has towards the dependent variable. The results indicate that attitudes, subjective norms, and perceived behavioural control had 0.0319 medium effect size as well as a small effect size of 0.066, 0.001, and 0.085, respectively (Cohen, 1988). Fourth, predictive relevance explores the ability of each

independent variable to predict the dependent variable Q square. The result showed 0.271%, which is higher than zero. This result showed that this model is acceptable. Lastly, the goodness of fit test explores the overall performance of the model, both measurement or structural. The result of our analysis showed that goodness of fit was 0.3111, which is medium enough to consider that our model is fit for the partial least square method (Hair et al., 2013).

Mediator analysis

Following the steps suggested by Preacher and Hayes (2004), we should conduct an analysis based on the two-step approach, the bootstrap indirect effect, and the bootstrap confidence interval. First, the relationship between the independent variable, mediator variable, and dependent variable was found to be significant in our study; it is applicable only with subjective norms, attitudes with students' intentions, and also subjective norms, perceived behavioural control with students' intentions. Gender showed no relationship to qualify for a mediation effect. Second, the analysis of bootstrap confidence interval shows that there is a mediation level that applies only to subjective norms, attitudes with students' intentions as well as subjective norms and perceived behavioural control with students' intentions. To conclude, attitudes and perceived behavioural control mediate the relationship between subjective norms and students' intentions. (see Table 2).

Table 2.0 Path coefficient of the research hypothesis

Hypothesis	Relationship	Stand Beta	Stand error	T-value	P value	Decision
H1	attitudes ->intention	0.143	0.046	3.072	0.002	Supported*
H2	subject norms->intention	0.305	0.059	5.173	0.000	Supported*
H3	perceived behavioral control ->intention	0.448	0.063	7.092	0.000	supported*
H4	gender ->attitudes	-0.042	0.046	0.922	0.357	Not Supported*
H5	gender >subject norms	-0.004	0.038	0.097	0.923	Not Supported*
H6	gender > Perceived behavioral control	0.056	0.053	1.269	0.205	Not Supported*
Mediation Effect						
H7	Subject norms -> attitudes >intention	0.081	0.027	2.931	0.004	supported*
H7	Subject norms -> Perceived behavioral control >intention	0.324	0.047	6.837	0.000	supported*

*Significance level 5 percent

Discussion and Conclusion

In this paper, we have tried to cover the gap of the contextual difference present in the literature related to preparatory level students' intentions at universities (Yurtkoru et al., 2014) in Saudi Arabia. One of the striking features of this study is the implementation of SmartPLS in analysing the relationships. Furthermore, the influence of gender differences and examining the mediation role of subjective norms were explored. The study found that a positively significant relationship exists between attitudes, subjective norms, and perceived behavioural control with students' intentions, and attitudes and perceived behavioural control mediated the role between subjective norms and students' intentions. This result supports the proposed hypothesis partially. However, the relationship between gender and students' intentions showed no relationship even by the proposed mediation of attitudes, subjective norms, and perceived behavioural control. This indicates that our proposed hypothesis is rejected. Indeed, it is in line with a few studies that showed a low influence of gender difference (Díaz-García and Jiménez-Moreno, 2010). The reason could be attributed to the uniqueness of the preparatory level students' contexts. The students at this age are more confident about undertaking a journey (Alias and Hafir, 2009; Eşkisü, 2014; Hosein and Harle, 2018; Passaro et al., 2018). Therefore, further exploration of the mediation and factors related to women's uniqueness in the Arab world is needed (Savneet, 2013). Moreover, further studies could extend this work by questioning the gender results in this study, and they may examine the possibility of examining gender by using other constructs. This study has a few limitations. The sample of study could not be generalised as it was only applied to one university. Future researchers could expand the sampling to other universities in Saudi Arabia. Another limitation could be the exclusion of entrepreneurship education and alertness influence among preparatory level students, as many of them have completed their entrepreneurship course. We believe that students with entrepreneurship knowledge are different from those with no knowledge. The findings of this study are important to researchers and policymakers in Saudi Arabia. This study can act as a

reference guide for the education authority in the Kingdom of Saudi Arabia to include entrepreneurship education through different streams.

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