The role of gender on entrepreneurial intention among students: an empirical test of the theory of planned behavior in a Greek university

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Abstract: The purpose of this study is to examine the role gender plays in the formation of Entrepreneurial Intention (EI) and its effect on Personal Attraction to Entrepreneurship and to Perceived Behavioral Control, in a sample of Greek university students. This is the first study of its kind in a Greek university context and it illuminates the way the nation's students view the entrepreneurship option in their career choices. The study also examines the efficacy of the Theory of Planned Behavior in Greece, which is important, given that it presents large variation in its ability to EI from one country to another. PLS analysis, an implementation of Structural Equation Modeling was used, to analyze data collected from 354 business students. Snowball sampling was employed in collecting the data. The results indicate a significant indirect effect of gender on the antecedents of EI, which in turn influence intention. Another important finding is the significant albeit rather weak relationship of social norms and valuations with EI. Finally, the theoretical and practical implications of the results within the framework of entrepreneurship in Greece are discussed and the study's limitations are provided.

Keywords: Entrepreneurial intention, gender, students, Theory of Planned Behavior, Structural Equation Modeling.

1. Introduction

The overwhelming majority of the entrepreneurial intention studies concur on very few issues, one of which is the relative unimportance of the gender, in explaining the intention to start a business (Armitage and Conner, 2001; Pruett, Shinnar, Toney, Llopis and Fox, 2009). Those supporting the opposite, are a relatively small number of scholars arguing that, due to methodological issues and inadequate theory development, as well as a host of other factors, such as a limited scope of a large part of the published research, the influence of the gender on entrepreneurial intention has not been thoroughly examined and requires further investigation before coming to more definitive conclusions (Shook and Bratianu, 2010; Kourilsky and Walstad, 1998; Shay and Terjesen, 2005; Kobeissi, 2010). In spite of the

equivocal research findings, one fact remains clear, the number of males starting a business is double that of females, according to the GEM report of 2007 (Allen, Elan, Langowitz and Dean, 2008). Although women are making strides in closing the gender gap starting up businesses, they are still lagging men by a ratio of 2 to 1 in the richest countries (Shinnar, Giacomin and Janssen, 2012; Allen et al., 2008) with the Belgium ratio reaching 4 male to 1 female start-up. This raises the question of how effective the initiatives by several organizations have been, in encouraging female entrepreneurship and in removing the barriers leading to females being outperformed by male entrepreneurs. Although help to promote entrepreneurship will eventually produce, hopefully, those desired outcomes of more jobs, social mobility etc., there may be reasons to believe that the institutional efforts are more suited to foster male entrepreneurs or would-be entrepreneurs, than their female counterparts.

In this paper the theory of planned behavior (TPB) will be employed, in order to help better understand the dynamics of the gender - entrepreneurial intention (EI) relationship, shedding some light at the same time in the way gender relates to the antecedents of EI, the personal attitude towards entrepreneurship (PA), the social norms and valuations (SNV) and the perceived behavioral control (PBC). The theory of planned behavior, is one of the most thoroughly tested and validated, in many research settings and has produced generally accepted outcomes, explaining amounts of variance in EI ranging from 0.27 to 0.65 (Armitage and Conner, 2001; Ajzen, 2005). The purpose of this study is to investigate the role of gender in explaining EI, its relationship to the antecedents of EI and any possible direct or indirect links between these variables. This type of research is the first to address the Greek student population and it does so at one of the most difficult times in the economic history of the country. It is hoped that the findings will provide some useful insight, both to policy makers and to academics, assuming that some of the pitfalls of previous research will be avoided, and some useful findings will be generated to further illuminate the role of gender in promoting entrepreneurship.

2. Theoretical framework

The increasingly important role of entrepreneurship in modern economies cannot be overstated (The Economist, 2012). Governments, universities, global institutions and non-profit organizations are marshaling a great deal of their resources, in various ways in order to promote entrepreneurship, to find and support entrepreneurs and when they cannot do that, create them, by training, coaching and financing them. Traditionally, it has been believed that the entrepreneur needed no help, since he/she has the qualities necessary to seize the opportunity when that arises and exploit it, regardless of obstacles of any kind. Gradually however a shift has taken place in that belief and within a short period of time, hundreds of universities started to teach entrepreneurship classes preparing students with (some of) the prerequisites of entrepreneurial action, were they to choose a career of self-employment (Audretsch, 2012; Harris and Gibson, 2008; Van Gelderen, Brand, Van Praag, Bodewes, Poutsma and Van Gils, 2008). Some countries such as Norway and Hong Kong have introduced entrepreneurship lessons to their secondary education curricula (Cheung, 2008; Alsos et al., 2006), so as to identify entrepreneurial talent as early as possible and set the stage for its development. Academics from the fields of psychology, social psychology and management have been trying to explain the entrepreneurship "phenomenon" for a long time, with considerable success. Organizations like the global entrepreneurship monitor (GEM) have created huge

databases with enormous amounts of categorized data and periodically issue reports on the state of entrepreneurship globally. GEM analyses, however illuminating, do not address all academic questions that have been asked in the extant literature. One such issue is female entrepreneurship and the factors inhibiting and promoting it in various settings and environments.

2.1. The theory of planned behavior

In an effort to overcome the shortcomings of the personality and situational measures in predicting entrepreneurial intention, a large number of researchers turned to Social Psychology theory and specifically to the Theory of Planned Behavior (Ajzen, 2005). The basic premise of the TPB is the strong relationship between intention to act and actual behavior. Armitage and Conner (2001), in a meta-analysis of 185 studies using the TPB model, found that TPB could explain 27% of behavior variance and 39% of EI. Ajzen (2005), presents much higher predictive power of the model, but mostly in studies from areas unrelated to entrepreneurship, largely pertaining to health-related behaviors. Sheeran (2002), in a meta-analysis of other meta-analyses, found an overall correlation of 0.53 between intention and behavior. The literature on the EI lends support to the TPB, with the reported findings showing a link between the antecedents of EI and intention and even behavior (Krueger et al., 2000; Guerrero et al., 2009; Gelderen et al., 2008). In spite of the support received in the literature, the findings of the studies employing the TPB have not always been in agreement. So, whereas Gelderen et al. (2008), Kolvereid (1996) and Gird and Bagraim (2008) reported a significant relationship between the three antecedents of EI and intention to start a business, Liñán and Chen (2009), found no support for the social norms – EI relationship, corroborating the earlier findings of Krueger et al. (2000). Engle et al. (2010), in their study including samples from twelve nations found that in half of those, the predictors of EI were social norms and desirability of entrepreneurship, while in the other half, were again social norms and perceived behavioral control. The implication of the latter study is rather clear, pointing to the direction of a more culture – specific approach needed in using TPB, when making predictions about EI and behavior, rather than trying to identify a universally applied model. In this study, the aim is to further elucidate the impact of the gender on EI, both direct and indirect, through influencing the antecedents of intention.

Perceived Behavioral Control (PBC) is another very important variable in predicting EI and behavior. Researchers vary in their use of the term and frequently use the terms PBC, self-efficacy and Internal Locus of Control interchangeably, or with little clarification of the differences between these terms (Krueger et al., 2000). Gerderen et al. (2008) using a closely related term to PBC, self-efficacy, found a strong predictive power for that variable. Harris and Gibson (2008) and Armitage and Conner (2001) and Pruett et al. (2009), similarly, found a significant relationship between EI and PBC or self-efficacy.

In the multicultural study by Engle et al. (2010), self-efficacy was found to significantly relate to EI only in seven of the 12 countries investigated. All in all, the PBC construct is among the strongest predictors of EI together with attitude according to researcher and almost invariably is reported to relate to EI (Ajzen, 2005).

One last concept, the social norms and valuations construct, is a basic element of the TPB, aiming to assess the impact of the social surroundings of the individual on his/her intention to start a business. The focus in this case is on the parents, the friends and important others (such as mentors) who may promote, or disapprove of

the idea of the individuals taking entrepreneurial action. Some studies found support for that notion of social norms directly affecting EI (Pruett et al., 2009; Engle et al., 2010 and Gelderen et al., 2008). Shook and Bratianu (2010), found a negative relationship between social norms and EI, while Krueger et al. (2000) and Armitage and Conner (2001) found a weak link between the two variables.

Finally, Ajzen (2005) and Guerrero, Lavin and Alvarez (2009) found an indirect effect of social norms and valuations on EI with the mediation of attitudes and PBC. The norms, when supportive, tend to promote a favorable attitude toward entrepreneurship and also can increase the PBC or the self- efficacy impacting thus EI. Zahra et al. (2009) considered the role of culture through social valuation in combination with social norms in determining their impact on entrepreneurial behavior. For this reason Guerrero et al. (2008) proposed a second-order construct, named Social Norms and Valuations, to include both norms and valuations as its sub-dimensions. Based on the preceding analysis the following hypotheses are proposed:

H1: Social Norms and Valuations are represented as a second-order construct having Social Norms (H1a) and Social Valuations (H1b) as its subdimensions.

H2: The Personal Attitudes toward entrepreneurship affect Entrepreneurial Intention.

H3: Perceived Behavioral Control affects Entrepreneurial Intention.

H4: The Social Norms and Valuations affect the Entrepreneurial Intention of students.

H5: The Social Norms and Valuations affect Personal Attraction toward entrepreneurship

H6: The Social Norms and Valuations affect Perceived Behavioral Control

2.2. The gender issue

A fundamental question still awaiting an answer is, considering women have closed or nearly closed many aspects of the gender gap, how is it that they are still lagging so far behind men in starting their own business, or being self- employed (Leroy, Maes, Sels and Debrulle, 2009). After all, if female entrepreneurs were to increase in absolute numbers, that would increase their income too and offer them more job opportunities and possibly create even more jobs for the economy in general. Although many studies addressed the effect of gender on entrepreneurial intention and behavior many of them found no statistically significant relationships between the two variables (Krueger, Reilly and Carlsrud, 2000; Gird and Bagraim, 2008; Engle, Dimitriadi, Gavidia, Schlaegel, Delanoe, Alvarado, He, Baume, and Wolff, 2010). On the contrary Shook and Bratianu (2010) found that gender as a control variable was significant, noting that male students found entrepreneurship more attractive than female students. Further, Leroy et al. (2009) found the effect of gender to be mediated by personal attitude towards entrepreneurship and the perceived behavioral control. They also reported that, while male students were achievement driven, females were interested in a balanced life. In a cross- cultural study, Shinnar et al. (2012) also reported a significant positive gender effect on EI. The same authors identified a moderating effect of gender on the link between EI and its antecedents in their study. The effect, however, varied in the countries examined. Based on the aforementioned studies on the gender - EI relationship and in line with Leroy et al. (2009) findings the following propositions are made:

H7: The gender will have an effect on Personal Attitude toward Entrepreneurship

H8: The gender will have an effect on Perceived Behavioral Control

H9: The gender will have an effect on Social Norms and Valuations provide a uniform style for the proceedings volume.

Based on the results of the literature review the framework of the study is given in Figure 1.
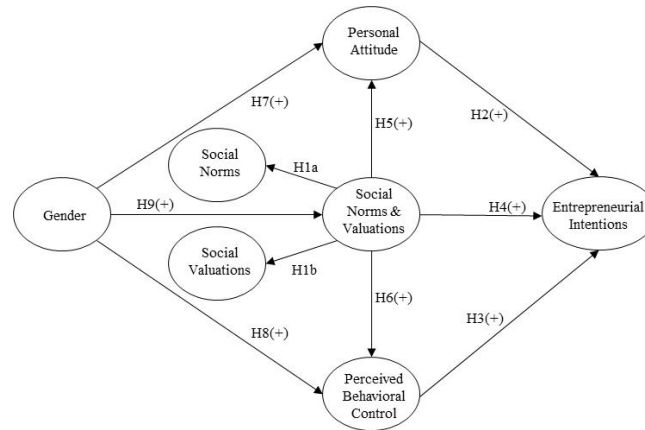

Figure 1. Conceptual Model.

3. Theoretical framework

3.1. Measures of the constructs

A questionnaire was employed to collect data from Greek universities students. Likert scales (1–7), with anchors ranging from "strongly disagree" to "strongly agree" were used for all belief items to ensure statistical variability among survey responses for all items measured. The items of the questionnaire were adapted from existing and well tested scales offered by the extant literature. In particular, the scales for measuring entrepreneurial intentions (EI), personal attitude (PA), perceived behavioral control (PBC) and perceived social norms (SN) were adapted from the instrument developed by Liñán and Chen (2009) while perceived social valuations (SV) were adopted from the study of Guerrero et al. (2009).

In order to maintain the technical and conceptual equivalence of these instruments, a translation and back-translation strategy was applied during the development of the Greek version of the questionnaire. Two bilinguals translated the measures, originally written in English, into Greek, and then another two bilinguals translated the Greek-written measures back in English again. A third person was used to compare both the original and the back- translated versions of the survey instruments and highlight any discrepancies in meanings. Finally, a factor analysis was performed on the data collected from the pilot study. The results were satisfactory, given that the five expected factors corresponding to the six intended constructs clearly emerged and all factors' Cronbach's alpha values were well above the commonly accepted threshold value of 0.70.

The list of items used for developing each construct in the entrepreneurial intentions questionnaire is shown in the Appendix.

3.2. Data collection and sample profile

Study's fieldwork was carried out through an online survey aimed at students studying business administration at the Technological Educational Institute of Athens. An online questionnaire was posted on the internet using Google_Docs

facilities. To reach participants a 'snowball' data collection technique was used. 10 appropriately trained students were used to approach 50 individuals each. More specifically 8 out of 10 persons were assigned to collect data from individuals with tenure equal or less than four years, whereas the other 2 were assigned to attend students of higher tenure. The data were collected during November and December 2011. During the field study period, 500 persons were randomly approached by the interviewers. Finally, 354 usable, complete responses were obtained. The sample size is considered adequate. This view is backed by Struwig and Stead (2001) who state that if the sampling process has been correctly followed then sample sizes of 150-200 can provide an acceptable reflection of the population.

The descriptive statistics of the respondents' demographics are as follows: of the 354 respondents, 51 per cent of the respondents were female, 78 per cent were in the 18-24 age group and 77 per cent have less than four years tenure.

4. Data analysis and results

The method of partial least squares (PLS) analysis (Gefen et al., 2000), an implementation of structural equation modelling (SEM), was applied to test the measurement model, to determine the internal consistency, reliability and construct validity of the multiple-item scales used to operationalize the study variables. PLS is a multivariate technique that helps in constructs' testing of the psychometric properties of the scales used to estimate the parameters of the structural model (Fornell, 1987). Basically, PLS and LISREL are the most widely used techniques for SEM. In this study PLS was preferred to LISREL because it fits both exploratory and confirmatory research, places less restriction on the data and requires smaller sample sizes.

The data analysis employed a two-phase approach suggested by Anderson and Gerbing (1988) in order to assess the reliability and validity of the measures before using them in the research model. The first phase includes the analysis of the measurement model, while the second phase examines the structural relationships among latent constructs.

4.1. Validation of the measurement scale

The test of the measurement model involves the estimation of internal consistency reliability as well as the convergent and discriminant validity of the study constructs, which indicates the strength measures used to test the proposed model (Fornell, 1987).

As shown in Table 1, all reliability measures are well above the recommended level of 0.7 as an indicator for adequate internal consistency (Hair et al., 1995). The latent constructs also show adequate convergent and discriminate validity. Based on Fornell and Larcker (1981), convergent validity is adequate when constructs present an average variance extracted (AVE) which is bigger than 0.5. Convergent validity can also be verified when items loading on their associated factors are well above 0.5, which is true in our case (Hair et al., 1995).

Table 1. Descriptive statistics of items and psychometric properties of the constructs

Latent variable	Items	Mean	Std. deviation	Standardized loadings	Critical ratio (CR)	Cronbach's alpha	Composite reliability	AVE
PA	PA1	4.82	1.34	0.69	18.95			
	PA2	5.14	1.48	0.85	43.08			
	PA3	5.82	1.30	0.84	43.15	0.88	0.91	0.67
	PA4	5.57	1.33	0.88	69.94			
	PA5	4.92	1.49	0.82	33.47			
SN	SN1	5.14	1.37	0.80	24.05			
	SN2	5.14	1.42	0.90	66.48	0.86	0.91	0.78
	SN3	5.27	1.38	0.94	103.19			
SV	SV1	4.01	1.59	0.86	46.65			
	SV2	4.23	1.41	0.88	56.51	0.86	0.92	0.78
	SV3	4.29	1.43	0.91	62.53			
PBC	PBC1	4.69	1.46	0.85	47.71			
	PBC2	4.78	1.41	0.88	62.67			
	PBC3	4.48	1.30	0.85	40.11	0.89	0.92	0.70
	PBC4	3.96	1.64	0.78	28.39			
	PBC5	3.75	1.46	0.82	36.65			
EI	EI1	3.95	1.74	0.82	36.05			
	EI2	4.37	1.83	0.91	78.32			
	EI3	4.49	1.79	0.93	97.81	0.95	0.96	0.81
	EI4	4.28	1.84	0.91	101.79			
	EI5	4.38	1.86	0.92	102.66			
	EI6	4.75	1.76	0.90	72.80			

In order to test for discriminate validity, a matrix of loadings and cross- loadings was constructed (see Table 2). By using this matrix, the loadings of an item with its associated factor (or construct) to its cross-loadings were compared. All items had higher loadings with their corresponding factors in comparison to their cross-loadings. Therefore, it was concluded that there is enough confidence in the discriminate validity of the measures and their corresponding constructs (Chin, 1998).

Table 2. Matrix of loadings and cross-loadings

Items	PA	SN	SV	PBC	EI
PA1	*0.69*	0.32	0.33	0.44	0.44
PA2	*0.85*	0.40	0.48	0.47	0.62
PA3	*0.84*	0.51	0.44	0.45	0.54
PA4	*0.88*	0.42	0.47	0.44	0.60
PA5	*0.82*	0.37	0.45	0.49	0.63
SN1	0.34	*0.80*	0.33	0.25	0.26
SN2	0.46	*0.90*	0.43	0.35	0.40
SN3	0.50	*0.94*	0.51	0.33	0.39
SV1	0.48	0.45	*0.86*	0.37	0.46
SV2	0.42	0.38	*0.88*	0.31	0.37
SV3	0.50	0.45	*0.91*	0.33	0.42
PBC1	0.55	0.32	0.33	*0.85*	0.53
PBC2	0.50	0.31	0.35	*0.88*	0.50
PBC3	0.51	0.29	0.31	*0.85*	0.51
PBC4	0.34	0.28	0.26	*0.78*	0.43
PBC5	0.40	0.27	0.33	*0.82*	0.51
EI1	0.56	0.31	0.39	0.55	*0.82*
EI2	0.65	0.34	0.50	0.55	*0.91*
EI3	0.62	0.36	0.44	0.52	*0.93*
EI4	0.61	0.34	0.40	0.53	*0.91*
EI5	0.63	0.38	0.40	0.54	*0.92*
EI6	0.64	0.44	0.43	0.52	*0.90*

Table 3 illustrates the discriminant validity of the constructs, with correlation among constructs and the square root of AVE on the diagonal. All values in the diagonal were greater than those in corresponding rows meaning that all measurable variables load more highly on their own constructs than on the other constructs (Fornell and Larcker, 1981).

Table 3. Discriminant validity assessment

	PA	SN	SV	PBC	EI
PA	*0.82*				
SN	0.50	*0.88*			
SV	0.53	0.49	*0.88*		
PBC	0.56	0.35	0.38	*0.84*	
EI	0.69	0.40	0.47	0.60	*0.90*

Thus, it was concluded that students entrepreneurial intentions are explained sufficiently by the revealed first-order latent variables' structure (convergent validity) and this structure includes all unique manifest variables (discriminant validity).

4.2. Assessments of higher-order construct

In Table 4, the composite reliability (CR) and AVE measures of the second- order construct named Social Norms and Valuations (SNV) are indicated. This exhibit CR

equal to 0.85 and AVE greater than 0.74, well above the recommended thresholds of 0.7 and 0.5 respectively, providing evidence of reliable second-order construct (Wetzels et al., 2009). Finally, second-order constructs loadings on first-order constructs of SNV are equal to 0.84 and 0.89 and are significant at a=0.01. All these support the validity of hypotheses H1a and H1b that perception about SNV dimensions are based on perception about the pre-specified sub-dimensions of SN and SV.

Table 4. Higher-order construct's assessment

Second-order construct: Social Norms & Valuations CR = 0.85 AVE = 0.74		
Sub-Dimensions	Loadings	Critical Ratio
SN	0.84	28.67
SV	0.89	46.11

4.3. Structural analysis results and discussion

The PLS method was also used to confirm the hypothesized relations between constructs in the proposed model. The significance of paths included into the proposed model was tested using a bootstrap resample procedure with 500 replications. Smart-PLS software was used to conduct the PLS analysis (Ringle et al., 2005). In assessing the PLS model, the squared multiple correlations (R2) of all endogenous latent variables were initially examined and the significance of the structural paths was evaluated.

The assessment of the proposed SEM is presented in Table 5 and Figure 2 where the standardized path coefficients, representing the direct effects of the constructs, their statistical significance, and the proportion of explained variance for each endogenous construct are given.

Table 5. Structural equation model assessment

Path	Coefficient	Standard error	Pr > |t|	R^2	Hypotheses Validation
Gender → PA	0.10	0.04	0.03	0.37	H7: validated
SNV → PA	0.59	0.04	0.00		H5: validated
Gender → PBC	0.17	0.05	0.00	0.21	H8: validated
SNV → PBC	0.42	0.05	0.00		H6: validated
Gender → SNV	0.02	0.05	0.68	0.00	H9: not validated
SNV → EI	0.11	0.04	0.02		H4: validated
PA → EI	0.47	0.05	0.00	0.56	H2: validated
PBC → EI	0.29	0.04	0.00		H3: validated

Based on the structural equation model estimation results all TPB elements influence entrepreneurial intentions. However, PA presents stronger influence on EI followed by PBC and SNV, as indicated by model's coefficients of $\beta = 0.47$ (t = 9.55) for PA, $\beta = 0.29$ (t = 6.65) for PBC and $\beta = 0.11$ (t = 2.41) for SNV. Therefore, hypotheses H2, H3 and H4 are confirmed. Furthermore, SNV is also exert its indirect influence on EI through both PA and PBC, since the relevant path coefficients are statistically significant ($\beta = 0.59$, t = 13.97; $\beta = 0.42$, t = 8.90), confirming the validity of proposed hypotheses H5 and H6. The influence of Gender on PA and PBC are small in magnitude ($\beta = 0.10$, t = 2.22; $\beta = 0.17$, t = 3.49) but

significant and the signs of the coefficients are as expected. Based on that, both proposed hypotheses, concerning the impact of student's gender on the two belief elements (H7 and H8), are confirmed. Finally the impact of gender on SNV is not significant and the relevant hypothesis (H9) is not confirmed. This could be attributed to the fact that in the bad economic conditions prevailing in Greece, where salaried job availability is low for all, male and female environments (i.e. family and friends) have the same beliefs about entrepreneurship, as it is the only alternative either for males or females.
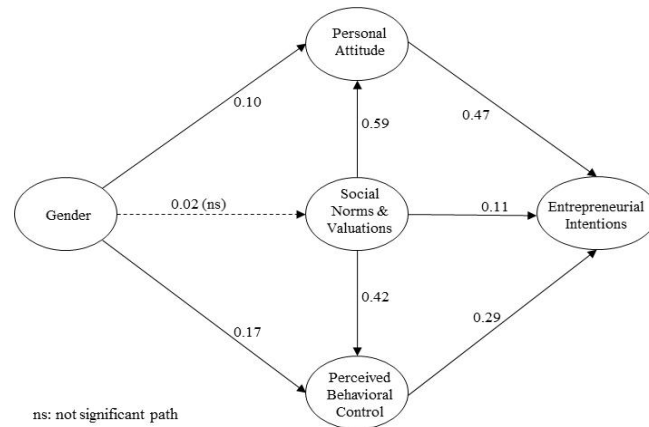

Figure 2. Structural equation model results.

Table 6 depicts the indirect effects of gender and SNV on EI through PA and PBC. Both coefficients are statistically significant at 5%, since their 95% confidence intervals do not contain 0. The indirect effects of gender on PA and PBC through SNV are not significant.

Table 6. Indirect effects

Path	Coefficient	Standard error	Lower bound (95%)	Upper bound (95%)
Gender → EI	0.10	0.05	0.009	0.19
SNV → EI	0.40	0.04	0.32	0.471

The proposed model accounted for 37% of the variance in PA, 21% of the variance in PBC and 56% of the variance in EI. The relatively medium to high values of coefficients of determination (R2) indicate that sizeable portions of variance in endogenous variables are explained by the chosen independent variables.

5. Implications

The goal of this paper was to investigate primarily the gender impact on entrepreneurial Intention and additionally, to test the validity of the Theory of Planned Behavior, in a sample of Greek students. The results indicate an indirect link between gender and EI, mediated by the antecedents of intention, PBC, PA and SNV. This runs counter to the conclusions of several studies, proposing that gender hardly matters in EI (Farrington, Venter and Louw, 2012; Gird and Bagraim, 2008; Engle et al., 2010). The findings provide solid support to the TPB, demonstrating robust relationships between EI and its antecedents. The implications for academics are considerable, given the conflicting findings reported in the plethora of studies on

the gender issue. The importance of the findings presented here lies in the fact that the conflicting findings may be suggestive of the need of additional variables needed to be included in the models, so as to identify contingencies that are not apparent but do influence the gender effect in some cases and do not in others. A model with high predictive ability in one country for instance, may be less accurate in another. This is evident in cross-cultural studies, such as the one by Engle et al. (2010), where the explaining power of the model used ranged from 0.14 to 0.42. This suggests that scholars need to acknowledge this variation in model effectiveness from one country to another and take remedial action to improve the model used or construct a new one.

The implications for educators and policy-makers are also important. The results of this study indicate a strong SNV effect on PA (0.59) and PBC (0.42) and a weaker but significant one on EI. This makes the role of SNV pivotal if an intervention is attempted, so as to increase the self-efficacy of the person, or, to increase entrepreneurship attractiveness, or both. Female potential entrepreneurs comprise a large pool the educators can act on, using social science, to increase the attractiveness of starting up a business. Similarly, they can intervene and increase the self-efficacy of the students, especially the female ones, instilling in them the belief that starting a business is feasible once you have the skills for it and the opportunity arises.

6. Limitations of the study

An inherent problem of cross-sectional studies including the present one is the static view of an evolving phenomenon. Although intention models tend to be linked with future behavior in some situations, they fail to do so in others (Kruger et al., 2000; Ajzen, 2005). However, to this point many scholars propose that it is "the single best predictor of behavior" and as such its contribution cannot be overlooked (Armitage and Conner, 2001). A second problem is that while intention may be a valid predecessor of behavior in the short-run, its potency fades with time and while it may be easy to predict that intention to vote will lead to a certain voting behavior, in the next elections, it could hardly be argued that one can predict that a person will start a business after 3.5 or 10 years, based on what his intention is today. Finally the student sample, of a specific university does not allow for generalizations about the public at large and even more so about people from other countries, cultures or age-groups (Liñán and Chen, 2009).

Acknowledgments

Appendix: Measures of Entrepreneurial Intentions Model

Appendix A.   Entrepreneurial intention

EI1 I am ready to do anything to be an entrepreneur
EI2 My professional goal is to be an entrepreneur
EI3 I will make every effort to start and run my own business
EI4 I am determined to create a business venture in the future
EI5 I don't have doubts about ever starting my own business
EI6 I have a strong intention of ever starting a business

Appendix B.   Personal Attitude

PA1 Being an entrepreneur implies more advantages than disadvantages to me
PA2 A career as an entrepreneur is totally attractive to me
PA3 If I had the opportunity and resources, I would love to start a business
PA4 Being an entrepreneur would give me great satisfaction
PA5 Amongst various options, I would be anything but an entrepreneur

Appendix C.   Perceived Behavioral Control

PBC1 Starting a firm and keeping it viable would be easy for me
PBC2 I believe I would be completely able to start a business
PBC3 I can control the creation process of a new firm
PBC4 I know all about the practical details needed to start a business
PBC5 I know how to develop an entrepreneurial project
PBC6 If I tried to start a business, I would have a high chance of being successful

Appendix D.   Social Norms

SN1 My friends would approve of my decision to start a business
SN2 My immediate family would approve of my decision to start a business
SN3 My colleagues would approve of my decision to start a business

Appendix E.   Social Valuation

SV1 My immediate family values entrepreneurial activity above other activities and careers
SV2 My friends value entrepreneurial activity above other activities and careers
SV3 My colleagues value entrepreneurial activity above other activities and careers

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