



## RESEARCH ARTICLE

# DETERMINANTS OF GRADUATES ENTREPRENEURIAL INTENT: THE CONTINGENT ROLE OF ENTREPRENEURSHIP EDUCATION AMONG TECHNOLOGY STUDENTS IN HAWASSA UNIVERSITY

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### ABSTRACT

The main purpose of this study was to investigate the determinant factors of entrepreneurial intentions of graduating students at Hawassa University and the mediating role of entrepreneurship education. The population for the study was 905 Technology undergraduate students of Hawassa University. The study proposes a research framework of the theory of planned behavior by Ajzen's (1991) to analyze factors influencing entrepreneurial intent among university students. The study adopted a cross-sectional survey design. The sample consists of 272 Institute of Technology students who have taken the entrepreneurship course. The students were surveyed by direct contact using questionnaire and a valid questionnaire of 223 students were collected. They were asked to indicate the entrepreneurship learning experiences activities they were participating in/would participate in as part of their curriculum. Data collected were analyzed using PLS-SEM analysis was employed with the help of Smart PLS3.0 software. Results of PLS-SEM showed that all the hypothesized direct and indirect relationships were supported except that entrepreneurial education fails to mediate the relationship between PBC and EI thereby rejecting H7. The findings show that the more entrepreneurial activities students are engaged in, the less the influence of entrepreneurial factors on their entrepreneurial intentions and this significantly increased entrepreneurial intentions of students who prefer career choice as an entrepreneur. It was recommended that Technology undergraduate students should see career options with a balanced view in order to understand their abilities before deciding to venture in any type of business enterprise.

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## INTRODUCTION

Globally, entrepreneurship has been widely acclaimed to be a panacea for sustainable economic growth and development, thus, it has been the major source of job growth and economic development in developed, emerging and developing economies in this 21st century (Negash and Amentie, 2013; Rasli, Rehman Khan, Malekifar, and Jabeen (2013). Entrepreneurs play an important role in bringing in economic changes and advancements to a country's economy. The contributions of entrepreneurs towards economic development have been discussed by Baron and Shane (2008), who have regarded entrepreneurs as "engines of economic growth". In recent years, the issue of graduates' employability has received much attention from the Ethiopian government lately and specially embarking on entrepreneurship is believed to be a workable strategy for handling the issue. It is because entrepreneurship, self-employment and new venture creation are becoming synonymous to one another (Schwarz *et al.*, 2009; van Gelderen *et al.*, 2008).

Recently, entrepreneurial career is becoming promoted as an attractive career alternative by most students all over the world (Schwarz *et al.*, 2009). The same phenomenon is evidenced in Ethiopia as well. In response, various efforts have been put forward by the Ethiopian government to encourage entrepreneurial activities, especially among the youths. A ramping rate of unemployment among graduates in Ethiopia is a major national problem. Many graduates from public and private higher educational institutions that join the job market are increasing year by year. The majority of the young-age group are disproportionately affected with the unemployment rate as high as 50% (Negash and Amentie, 2013). Entrepreneurial education has been argued as an effective way to promote and bolster the interest of entrepreneurship among university students. Exposures to this knowledge may instill positive attitudes towards entrepreneurship among students (Basu and Virick, 2008). Entrepreneurial intention is an extensively researched issue in the west as evidenced by Carr and Sequeira (2007), Kautonen *et al.* (2009, 2010), Schwarz *et*

al. (2009). However, little is investigated in Ethiopia specially using the planned behavior theory perspective.

### Objective of the study

- To identify determinants of entrepreneurial intentions among graduating students
- To analyze the entrepreneurial self-confidence of the student
- To understand the perception/opinion of entrepreneurship among the student

**Theoretical Background and Hypothesis Development:** In recent years, entrepreneurship is gaining more popularity in the developed, emerging, and developing countries. Entrepreneurship has been widely acknowledged as the driving force behind any economy. This is because a large supply of potential entrepreneurs is critical to a well-functioning economy besides, they have the capacity and ability to convert a new idea into a successful innovation (Schumpeter, 1934). The concept of entrepreneurship is generally viewed as a multi-dimensional construct thus, it has been defined differently in literature, for instance, Tamizharasi and Panchanatham (2010), defined entrepreneurship as “the capacity in an individual to innovate, to bear risks, to foresee the prospects of the project, confidence and competence to meet unforeseen and adverse conditions”. Barringer and Ireland (2010), defined entrepreneurship as the process through which an individual pursues opportunities without regard to the specific resources under his or her control.

**Entrepreneurial Intention:** Entrepreneurship intention is the state of mind of an individual to foster creativity in a business venture Rasli *et al.* (2013). An individual’s sense of the feasibility of initiating a new venture or business is referred to as entrepreneurial intention (Littunen, 2000). It is now widely acknowledged that venture creation is an outcome of intentions (Bird, 1992; Krueger *et al.*, 2000; Krueger and Carsrud, 1993; Katz, 1992). Intention is a state of mind that focuses a person’s attention, experiences and behavior etc towards a goal or path (Boyd and Vozikis, 1994; Bird, 1988).

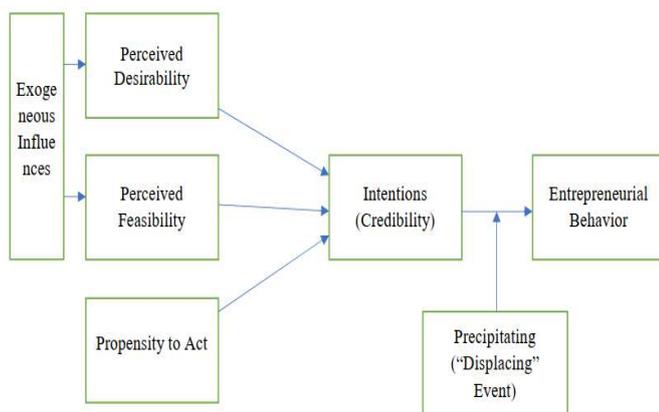


Figure 1. Shapiro's Entrepreneurial Event Model

Intentions are determined by attitudes that are in turn determined by beliefs. Intentions are related to motivation, which is the driving force in any action (Ryan and Deci, 2000). In recent years, many studies applied a process-based approach to the analysis of entrepreneurial intent. A number of models attempt to explain the relationship between an

individual's personal characteristics and his or her entrepreneurial intentions. The most noted examples are the Entrepreneurial Event Model (Shapero, 1982), the Theory of Planned Behavior (Ajzen, 1991), Entrepreneurial Attitude Orientation (Robinson *et al.*, 1991), Intentional Model (Bird, 1988), and Davidsson Model (Davidsson, 1995).

**The Entrepreneurial Event Model:** Shapero's Entrepreneurial Event Model (SEE) proposes that entrepreneurial intention to start a new venture depends on three elements: a) the perception of the desirability, b) the propensity to act, and c) the perception of feasibility (Shapero, 1982). SEE is increasingly used to investigate antecedents of entrepreneurial intentions. In short, this model frames that life changes lead to changes in entrepreneurial intention. Called “displacing events”, Shapero identified that a person's desire to partake in entrepreneurship is triggered by an event (e.g., being fired) which transforms their intentions to actual behavior.

**Theory of Planned Behavior:** Another well-known model is based on Ajzen's (1991) Theory of Planned Behavior (TPB). Any behavior requires a certain amount of planning (Autio, Keeley, Klofstedt and Ulfstedt, 2001). Such action can be predicted by the intention to adopt that behavior. These intentions are explained by a) the subject's attitudes toward the behavior, b) subjective norms, and c) the subject's perception of behavioral control.

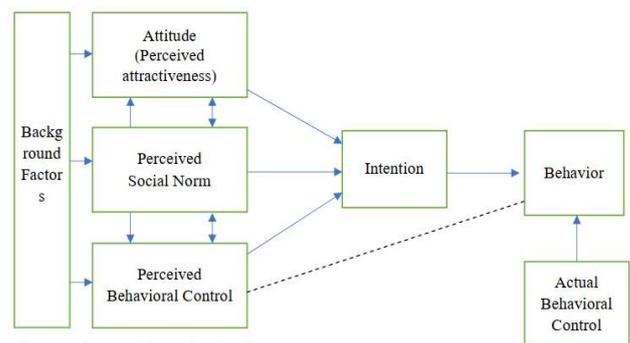


Figure 2. Theory of Planned Behavior.

**Other Theoretical Influences:** Robinson *et al.* (1991) described the attitude of the entrepreneurs with more than demographic and personal characteristics. These authors generated the Entrepreneurial Attitude Orientation scale that explains the attitude prediction through four different categories (self-esteem, achievement, personal control, and innovation) and three types of reactions (affective, cognitive or conative). Bird (1988) developed another model of interpreting entrepreneurial intent. Bird considers entrepreneurial intentions as based on a combination of personal and contextual factors. Davidson's (1995) model tests an economic-psychological pull of factors that influence an individual's intentions to go into business. According to this model, entrepreneurial intentions are influenced by conviction, defined by general attitudes (change, compete, money, achievement, and autonomy) and domain attitudes (payoff, societal contribution and know how). This study, therefore, is based on identifying factors that are important in the development of entrepreneurial intent. Generally, The inception of TPB resulted from the criticism of the Theory of Reasoned Action which stated that behavior would be adopted when there is a positive attitude toward it and the existence of social norms to support it (Ajzen and Fishbein, 1980).

The combination of these two variables enhanced the predictability of many behaviors. However, Ajzen (1985) advanced it by adding perceived behavioral control as a third factor. In his later writings, Ajzen (1991) noted that perceived behavioral control was a similar concept to self-efficacy. In fact, it was not control that was predictive but perceived difficulty of the behavior to be performed which led to the adoption of many behaviors. Regardless, a person's feeling of controllability over the intended behavior which is often influenced by its perceived difficulty is the key piece of this line of research. As a result, although conceptually influenced by the concept of self-efficacy, extending the Theory of Reasoned Action in this way enhanced its explanatory abilities (Madden, Ellen, and Ajzen, 1992). In summary, the two models are associated through this component but, while TPB provides the primary theoretical framework for this study, SEE is relevant due to its contextual focus on entrepreneurship. Perceived desirability and feasibility of initiating a new business mirrors the factors of TPB. Feasibility aligns with motivating and hindering factors, as well as the attitude students have toward Ethiopia's entrepreneurial climate, and desirability aligns with social norms that value entrepreneurship. TPB, supported by SEE, provides a comprehensive theoretical perspective for analyzing entrepreneurial intent. Similarly, theories of Robinson *et al.* and Bird (1998) make valid points, they focus more heavily on distinct interpersonal qualities. Less focus is given to outside, macro-level influences such as education and economic climate. As this study aims to understand how entrepreneurial intent is affected by elements such as educational preparedness and perceptions of economic climate, a more comprehensive analysis of TPB along with SEE is more appropriate.

**Conceptual Framework of the study:** Though TPB is indeed a good and useful model to explain entrepreneurial intention, Sommer and Haug (2011) and van Gelderen *et al.* (2008), stated that extending the basic model by adding in new variables does make sense. As such, in addition to the original variables, entrepreneurship education is added as a mediating variable. The following sections explain the research model in details.

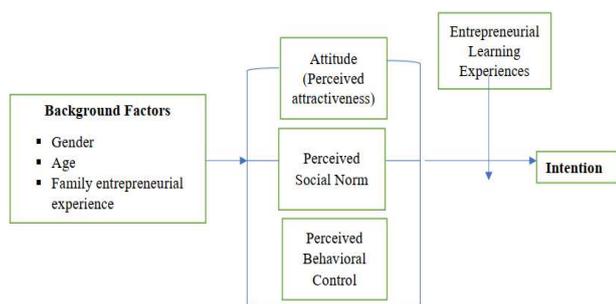


Figure 3. Conceptual Framework partially adapted from Ajzen's (1991)

**Attitude:** According to Ajzen's (1991) definition, Attitude towards a behavior is favorable or unfavorable evaluation towards a behavior (entrepreneurship) influences, the desire to involve in self-employment decision. Attitude has proven as an important factor to explain intention towards entrepreneurship, whereby significant relationship existed between attitude and entrepreneurial intention (Fini *et al.*, 2009; Kautonen *et al.*, 2009; Moriano *et al.*, 2011). Moreover, do Paço *et al.* (2011) identify that attitude, among other factors, actually plays the most important role in explaining entrepreneurial intention.

Guerrero *et al.* (2006) who have compared the data obtained from a sample of 719 university students by categorizing it into: students in entrepreneurship related majors, in non-entrepreneurship related majors and engineering courses found out that attitudes towards entrepreneurship are determinant factors to decide to be an entrepreneur. Schwarz *et al.* (2009) performed a study that explored the effect of attitude on students entrepreneurial intention and found that attitude towards change, money and entrepreneurship were some of the good predictors of entrepreneurial intention. Similarly, van Gelderen *et al.* (2008) found out that individuals attitude constructs, such as need for financial security, importance of wealth, work load avoidance and autonomy were found to explain entrepreneurial intention significantly. Moreover, a study conducted by Emnet and Chalchissa, (2013) in Ethiopia from four sampled universities; Jimma university, Addis Ababa university, Adama Science and Technology university and Haramaya Universities concluded that student's attitude about continuous employment indicating that around 40% of the respondents replied that they prefer self-employment than employed implying that positive attitude of students to entrepreneurship. A study by Walie Zewudu and Meselu Alamnie. (2018) on 220 business students in Bahir Dar university, Ethiopia revealed that attitude has significant and positive effect on entrepreneurial intention. Hence, the following hypothesis is developed:

**H1:** Attitude has a significant and positive effect on entrepreneurial intention.

**Perceived Social Norm:** Another determinant factor of intention is a social factor called social norm, which refers to "perceived social pressure to perform or not to perform the behavior" (Ajzen, 1991, pp 188). When individuals know the exposure of others who have started their own venture may lead to a stronger belief in the feasibility of starting once own business. Theory of planned behavior model suggests that the greater the expectation or pressure, the greater the gravitation towards the behavior (Samuel *et al.*, 2013). Some of the past studies conducted produced a controversial finding on the relationship between social norm and entrepreneurial intention. To cite a few, Moriano *et al.* (2011) confirmed that social norm is a significant predictor of entrepreneurial intention. Van Gelderen *et al.* (2008) also found that social norm was important in explaining intention towards entrepreneurship; Carr and Sequeira (2007); (Susetyo and Lestari., 2014) and Kautonen *et al.* (2009) have also ascertained a positive relationship between social norm and entrepreneurial intention in their studies. Accordingly, the following hypothesis is posited.

**H2:** Perceived Social Norm has a positive effect on entrepreneurial intention.

**Perceived Behavioral Control:** Perceived Behavioral Control is similar to self-efficacy; Kolvereid, and Isaksen, (2006, p.867); Shook and Bratianu (2010); Moriano *et al.* (2011); Schwarz *et al.* (2009), and van Gelderen *et al.* (2008). Perceived Behavioral Control significantly impacts entrepreneurial behavior and amplifies entrepreneurial intention among young individuals (Matlay, 2005). To name a few studies conducted, Shook and Bratianu (2008); Paço *et al.* (2011); Moriano *et al.* (2011); Fini *et al.* (2009); and Emnet and Chalchissa, (2013), have also concluded that self-efficacy is positively associated with entrepreneurial intention in which

students were more likely to start-up a business when they believed they could perform the tasks related to entrepreneurship. Hence, the following hypothesis is developed:

**H4:** *Perceived behavioral control has a positive effect on entrepreneurial intention.*

**Entrepreneurial education (Learning Experiences):** Many studies indicate that entrepreneurship learning experiences activities which students' are engaged in increases their entrepreneurial intentions (Zhao *et al.*, 2005; Galloway and Brown, 2002; Kolvereid and Moen, 1997). Overall, entrepreneurial intent increases in students who participate in such programs (Liñán, 2004). When examined through the lens of TPB, entrepreneurial education performs as a predictive factor for further entrepreneurial behavior. This is an example of how TPB's associates attitudes with behavior (Ajzen, 1991). When analyzed in the different cultural contexts, a supportive university environment always influences the entrepreneurial self-assurance of graduating students (Autio *et al.*, 1997).

Souitaris *et al.* (2007) found that entrepreneurship programs raised entrepreneurship intentions among students. Kassean *et al.* (2015) stated that the specific reason for this effect might be that a focus of many entrepreneurship programs is to expose students to role models, in the form of guest speakers, consulting projects, and mentoring programs. Entrepreneurship learning experience activities increases students' confidence in establishing a new business enterprise as well as the ability to complete entrepreneurial tasks Kassean *et al.* (2015). A study conducted among university students in Turkey found that university education has a positive impact on entrepreneurial intention (Türker and Selçuk, 2009). Türker and Selçuk (2009) argue that entrepreneurship education is resourceful for acquiring knowledge on entrepreneurship. This is consistent with the cross-cultural study conducted by Moriano *et al.* (2012). Similar study has been conducted in Malaysia found that appropriate entrepreneurship education exposure will influence the students to be an entrepreneur (Mumtaz *et al.*, 2012). University education plays strong role in promoting entrepreneurship as a career choice by providing necessary exposure through theoretical and practical knowledge about entrepreneurship. Accordingly, we posit the following hypothesis.

**H4:** *Entrepreneurial education mediates the relationship between attitude and entrepreneurial intention.*

**H5:** *Entrepreneurial education mediates the relationship between subjective norm and entrepreneurial intention.*

**H6:** *Entrepreneurial education mediates the relationship between perceived social norm and entrepreneurial intention.*

## MATERIALS AND METHODS

The study adopted a cross-sectional survey research design. The data were obtained from all graduating students of 2022 at Hawassa University, Institute of technology. A total of 905 regular undergraduate students were targeted to participate in this study. The author used quota sampling technique (30% from each 5 Faculties) to ensure fair representation of the

population due to the dominance of members in some of the faculties. The study was based on both primary and secondary sources. The primary data was collected from 272 sampled technology students.

**Research Instrument, Data Collection and Data Analysis:** A structured questionnaire was designed to gather the data required for this research. The research instrument was structured into two parts. The first part included personal background of the respondents and the second part included variable to measure entrepreneurial intention, education and perception/opinion on entrepreneurship. Respondents were approached in a class room setting and enabled to answer all the measures based on 5-point Likert scales, ranging from 1 "strongly disagree" to 5 "strongly agree."

Finally, data collected were analyzed using PLS-SEM version 3.0 involving the assessment of both the basic model of measurement model and structural model (Hair *et al.*, 2014). PLS-SEM is employed because of its flexible restriction with respect to distribution and population of the study and also has the possibility of providing a more reliable and accurate computations of mediating effect because its accounts for error that is capable of reducing the possible relationship as well as the improvement of the validation of the theory (Haenlein and Kaplan, 2004; Helm, Eggert, and Garnefeld, 2010; Henseler and Fassott, 2010).

## RESULTS AND DISCUSSION

As depicted in Table 1 below, the descriptive statistics indicates that majority of the respondents were males, and more than 50 percent of the respondents indicated that they are in the age range of 15 – 25. The majority of the respondents' family did not have business backgrounds. Generally the exposure of the students to entrepreneurship or business environments was low.

**Table 1. Demographic characteristics of Respondents**

		Frequency	Percent
<b>Gender</b>	Male	143	64.13
	Female	80	35.87
<b>Age</b>	15-25	132	59.19
	26-35	86	38.57
	36-45	5	2.24
	Above 45	-	-
<b>Family Business Background</b>	Yes	44	19.73
	No	179	80.27

Source: Survey Data, 2022.

**Measurement model Assessment:** To evaluate validity, both convergent validity and discriminate validity tests were performed. Hair *et al.* (2014) suggested that factor loading of each dimension and AVE should exceed 0.5. Accordingly, results presented in Table1 shows that all the items indicate factor loading of above 0.50 which indicate significant cross loadings. The average variance extracted (AVE) also shows that items were in the range of 0.556 - 0.784 and meet the recommended criteria by (Hair *et al.*, 2014). With regard to Discriminant validity, if the square root of the AVE is larger than its correlations with other constructs in the model, discriminant validity is assumed to be proved.

**Table 2. Convergent validity measures**

Constructs	Indicators	Loadings	Cronbach's Alpha	Composite Reliability	AVE
Attitude	Att2	0.833	0.791	0.892	0.733
	Att3	0.720			
	Att4	0.853			
Subjective Norm	Sn3	0.763	0.82	0.816	0.596
	Sn4	0.817			
	Sn5	0.739			
Perceived Behavioral Control	Pbc1	0.821	0.72	0.716	0.556
	Pbc2	0.670			
Entrepreneurial Education	EE1	0.853	0.908	0.936	0.784
	EE2	0.870			
	EE3	0.845			
Entrepreneurial Intention	EI1	0.858	0.729	0.796	0.566
	EI2	0.764			
	EI3	0.850			
	EI4	0.913			
	EI5	0.878			

Items removed: indicator items are below 0.5:- Att1, Att5, Sn1,Sn2, Pbc3, Pbc4

**Table 3. For nell-Lacker Criterion Analysis for Discriminant Validity**

	ATT	EE	EI	PBC	SN
ATT	<b>0.856</b>				
EE	0.863	<b>0.885</b>			
EI	0.790	0.666	<b>0.753</b>		
PBC	0.709	0.695	0.685	<b>0.746</b>	
SN	0.630	0.737	0.605	0.568	<b>0.772</b>

Note: The bold diagonal values indicate the square root of average variance extracted while other entries indicate the squared correlation.

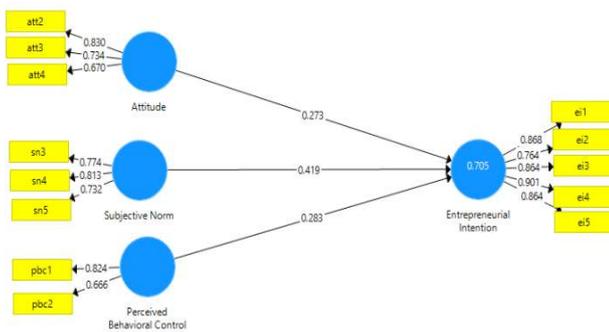
**Table 4. Hypothesis Testing and Structural Relationship**

	Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
ATT -> EI	0.273	0.279	0.058	4.722**	0.000	H1 supported
SN -> EI	0.419	0.417	0.062	6.777**	0.000	H2 supported
PBC -> EI	0.283	0.283	0.049	5.743**	0.000	H3 supported
EE -> EI	0.718	0.725	0.068	10.493**	0.000	H4 supported
ATT*EE -> EI	0.526	0.528	0.051	10.230**	0.000	H5 supported
SN*EE -> EI	0.171	0.168	0.058	2.969**	0.003	H6 supported
PBC*EE -> EI	0.096	0.094	0.039	2.455	0.064	H7 not supported

t-values for two tailed tests; \*p < 0.05; \*\*p < 0.01

(Fornell and Larcker, 1981). PLS-SEM results shown in Table 2, indicated all the diagonal values exceed the suggested threshold of 0.5 of inter-construct correlations satisfying discriminant validity test.

Based on Hair *et al.* (2014), the CR values should be higher than 0.708 and the results shown in Table 2 are all greater than the minimum threshold and hence adequate internal consistency is maintained.



**Fig. 4. Measurement Model**

**Internal Consistency Reliability:** Is used to assess the consistency of results across items of the same variables (Hair *et al.*, 2013). Composite reliability (CR) and Cronbach's alpha were computed to assess the internal consistency of each constructs. However, due to the limitation of Cronbach's alpha in underestimating the internal consistency reliability and its sensitivity to the number of items in the scale, composite reliability (CR) is more appropriate to measure the internal consistency reliability (Hair *et al.*, 2014).

- All item loadings are > 0.5 indicates indicator reliability (Hulland, 1999, p. 198)
- All average variance extracted (AVE) are > 0.5 (indicates convergent reliability) (Bagozzi, R. and Yi, Y. (1988); Fornell, C. and Larcker, D. F. (1981)).
- All composite reliability (CR) > 0.7 (indicates internal consistency) Gefen, D. and Straub, D. W. (2000).
- All cronbach's alpha > 0.7 (indicates indicator reliability) Nunnally, J. C. (1978).

**Table 5. R-Square and Adjusted R-Square**

	R Square	R Square Adjusted
Entrepreneurial Intention	0.705	0.705

According to Hair Jr *et al.* (2013), the quality of the structural model in PLS-SEM can be assessed using four key criteria; assessing significance of the path coefficients, coefficient determination ( $R^2$ ), the effect size ( $f^2$ ), and predictive relevance ( $Q^2$ ). Results for the assessment of the significance of path coefficients are presented in Fig. 2 and Table respectively shows that the  $R^2$  was found to be 0.705 suggesting that 70.5% of the variances in entrepreneurial intention are explained by

the independent variables i.e. attitude toward entrepreneurship, Subjective norm, and perceived behavioral control. As reported in table 4 above, Results of the PLS path modeling indicated that there is significant positive relationship between ATT ( $\beta = 0.273$ ;  $t = 4.722$ ;  $p < 0.01$ ) and Intention to be an entrepreneur, thus, supporting the first hypothesis.

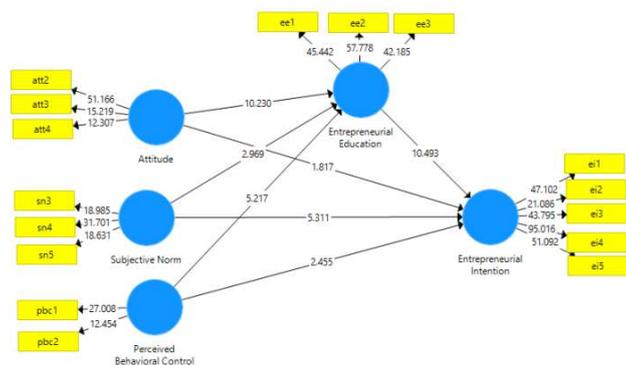


Fig 5. Structural Model with PLS-SEM Bootstrapping Mediators

The significant finding on the relationship of ATT and EI of technology students is found to be consistent with the study results of (Paço *et al.*, 2011; Fini *et al.*, 2009; Kautonen *et al.*, 2009; Moriano *et al.*, 2011). Similarly, relationship that SN ( $\beta = 0.419$ ;  $t = 6.777$ ;  $p < 0.01$ ) has positive and significant relationship with entrepreneurial intention and hence the second hypothesis is accepted and the result is supported by (Moriano *et al.*, 2011; van Gelderen *et al.*, 2008; Carr and Sequeira (2007) and Kautonen *et al.*, 2009). The relationship between PBC and EI was also found to be positive and significant with ( $\beta = 0.283$ ;  $t = 5.743$ ;  $p < 0.01$ ). Therefore, the third hypothesis is supported and this finding is consistent with the findings of Paço *et al.* (2011), Moriano *et al.* (2011), and Shook and Bratianu (2010). With respect to moderation analysis, entrepreneurial education moderates the relationship between ATT and EI ( $\beta = 0.526$ ;  $t = 10.230$ ;  $p < 0.01$ ), hence H4 also accepted. This is also consistent with Souitaris *et al.* (2007), Moriano *et al.* (2012), and Türker and Selçuk, (2009). Entrepreneurial education is also found to be mediating the relationship between SN and EI ( $\beta = 0.171$ ;  $t = 2.969$ ;  $p < 0.01$ ), supporting H6. However, entrepreneurial education fails to moderate the relationship between PBC and EI ( $\beta = 0.096$ ;  $t = 2.455$ ,  $p > 0.05$ ) thereby rejecting H7.

## CONCLUSION

This study aims to determine the factors that affect entrepreneurial intentions of Technology graduating students in Hawassa University. First, factors related to the entrepreneurial intention of students were explored and the major determinants of students' entrepreneurial intention were found to be Attitude, Subjective norm and Perceived Behavioral Control. In the second stage, we proceed to confirm the factors emerged, namely the effect of attitude, subjective norm, perceived behavioral control and entrepreneurial education on entrepreneurial intention among the target students. To provide more insights, this study provides further analysis of the mediating effects of entrepreneurial education between attitude, perceived behavioral control and subjective norm towards entrepreneurial intention. The result of this study which revealed that there is significant positive relationship between Attitude, Subjective norm, and Perceived Behavioral Control and Intention to be an entrepreneur.

The significant finding on the relationship of ATT, SN, and PBC and EI of technology students is found to be consistent with the study results of (Paço *et al.*, 2011; Fini *et al.*, 2009; Kautonen *et al.*, 2009; Moriano *et al.*, 2011; van Gelderen *et al.*, 2008; Carr and Sequeira 2007; Paço *et al.* (2011), Moriano *et al.* (2011), and Shook and Bratianu 2010).

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