Journal of Science and Technology
ISSN: 2362-1443 (Print) 3059-9490 (Online)
2024, Vol. 4, No. 2 (Special Issue), 116-139

DOI : https://doi.org/10.3126/jost.v4i2.78973

Entrepreneurial Intention among Engineering Students: The Role of Attitude, Personality and Demographics

Samundra Paudel*,
Nepal College of Information Technology,
Pokhara University, Nepal
samundra.paudel@ncit.edu.np

Dhruba Kumar Gautam,
Tribhuvan University,
Mid-West University, Nepal
dhruba.gautam@tu.edu.np

Indira Regmi,
Dillibazar Kanya Multiple
Campus, Nepal
enduregmi@gmail.com

*Corresponding author

Article History:

Received: 31 July 2024

Revised: 14 August 2024

Accepted: 15 November 2024

Keywords— *Entrepreneurship Intention, Attitude, Personality, Demographics, Engineering Student, Nepal*

Abstract

Entrepreneurship intention is an important determinant for increasing the probability of entrepreneurial behavior among youth. The literature review identified eight different determinants - entrepreneurship attitude, subjective norm, perceived behavioral control, desire for success, creativity, attitude towards money, gender, and family background - and examined their impact on the entrepreneurship intentions of undergraduate engineering students. Responses of 245 engineering students were collected through a paper-based questionnaire from four colleges in the Kathmandu Valley. The regression model revealed that entrepreneurship attitude, perceived behavior control, creativity, gender, and family background had a significant impact on the student's entrepreneurship intention. The results provide valuable insights for researchers, educators, and policymakers to better understand the factors affecting students' entrepreneurship intentions and design and implement entrepreneurship development activities in HEIs.

Introduction

Entrepreneurship has emerged as a major source of innovation, employment, technological progress, and economic growth in recent years (Urbano et al. 2019). It is the activity of creating a business and taking financial risks in the hope of profit. Peter Drucker recognized entrepreneurship as the "engine" that propels economic development by fostering new businesses, jobs and overall well-being (Lo, 2011). With its growing importance and its

linkage with economic growth, entrepreneurship has become a major area of research (Audretsch & Thurik, 2001; Urbano et al. 2019; Wennekers & Thurik, 1999). Since the 1990s, researchers have focused on identifying how an individual's entrepreneurship intention influences their entrepreneurial behaviors (Linan & Fayolle, 2015). Entrepreneurship intention is the mental state or willingness to undertake a new venture in future. According to Ajzen (1991), intention directly shapes behaviour, and the more strongly one intends to engage in planned activity, the more likely one to carry it out. Prior studies show that entrepreneurship intention is the most reliable predictor of future entrepreneurial activity and intention-based analysis offers greater predictive accuracy (Linan & Chen, 2009; Schlaegel & Koenig, 2014; Souitaris et al., 2007). Different theories like the Theory of Entrepreneurial Events, Institutional Economic Theory, and Theory of Planned Behavior (TPB) focused their attention on individual intention and behavior (Schlaegel & Koenig, 2014).

As explained by TPB, entrepreneurship intention is the outcome of three attitudinal variables i.e., entrepreneurship attitude, subjective norms and perceived behavioral control (Linan & Chen, 2009). Studies also explain personality traits, environmental factors, and demographic variables have impact on entrepreneurship intention (Schlaegel & Koenig, 2014; Zhao et al. 2010). Despite extensive studies on entrepreneurship, it has to achieve full theoretical and practical maturity (Thurik et al. 2024). Over the past few decades, scholars have focused on determining the components of entrepreneurship intention and its antecedents and its link to entrepreneurship behaviours (Lo, 2011; Linan & Fayolle, 2015; Schlaegel & Koenig, 2014).

Various countries are actively promoting entrepreneurship development activities to address economic and societal challenges. To promote entrepreneurship among younger generations and drive employment by entrepreneurship ventures, it is essential to understand students' perception of entrepreneurship as a career choice of students and identify the

determinants of entrepreneurship intention and behaviour. Technical and engineering students are mostly involved in experiments, innovation, creative thinking and project development as part of course requirements, they are expected to exhibit a stronger inclination towards entrepreneurial innovation and startups (Souitaris et al., 2007; Luthje & Franke, 2003). Therefore, it is important to identify the entrepreneurship intention level of technical students and factors affecting them. Despite numerous studies that have examined the antecedents and outcomes of entrepreneurship intention and behavior, research specifically focusing on engineering students remains scarce (Lo, 2011; Luthje & Franke, 2003; Souitaris et al., 2007).

In Nepal, while studies on factors influencing an individual's intention towards being an entrepreneur are growing, most studies focused on management students (Adhikari, 2019; Khanal & Prajapati, 2024; Subedi & Bhandari, 2024). These studies indicated that students exhibit low levels of entrepreneurship attitude and intention. Moreover, there is a dearth of its research among Nepali technical students, especially those in engineering. Additionally, entrepreneurship development activities in Nepal remain scarce in technical and engineering colleges. Consequently, most engineering students either seek to do a job or fly abroad for advanced degrees in search of better career prospects. The recent trend of increasing foreign migration among students indicates limited employment prospects after graduation (Baral et al., 2023). In this context, it is urgent to study their level of entrepreneurship, attitude and intention and instill the foundation and importance of entrepreneurship among them. Moreover, engineering colleges prioritize guiding students towards self-employment at the time of increasing unemployment and mounting migration.

Thus, this study aims to fill this vacuum by examining and identifying the factors affecting entrepreneurship intentions of engineering students in Nepal. This study used TPB variables, personality and attitudinal factors and demographic variables to identify the

relationship and impact on entrepreneurship intention of students in Nepali context. The results will assist educators and policymakers in designing targeted policies and programs to cultivate innovation and entrepreneurial skills among students, encouraging them to establish their own ventures after graduation.

Literature Review

Entrepreneurship

Entrepreneurship is the process of discovery, evaluation, and exploitation of opportunities (Shane & Venkataraman, 2000). Various studies characterized entrepreneurship through innovation, proactiveness, and risk-taking behaviour of individuals, with a particular focus on business creation activities (Covin & Slevin, 1991; Kreiser & Davis, 2010). Scholars widely acknowledged entrepreneurship's significance for individuals as it fosters financial independence and adds value to the economy by contributing innovation, business and job creation which further contributes to income growth, economic development and poverty reduction and resolve global challenges of 21st century (Audretsch & Thurik, 2001; Basu & Virick, 2008; Urbano et al. 2019; Wennekers & Thurik, 1999). Prior studies highlighted entrepreneurship behavior is associated with entrepreneurship intentions, personality traits, demographic variables, and environmental factors (Linan & Fayolle, 2015; Luthje & Franke, 2003; Schlaegel & Koenig, 2014; Schwarz et al., 2009; Zhao et al. 2010). They suggested incorporating attitudinal, personality and contextual factors to enhance explanatory power and a fuller understanding of the process through which entrepreneurial intent develops. Accordingly, this study examines three sets of factors affecting entrepreneurship intentions. The first set derives from the Theory of Planned Behaviour encompassing entrepreneurship attitude, subjective norm and perceived behavioral control). The second set of factors are based on the personality and attitude of individuals such as desire for success, creativity, and

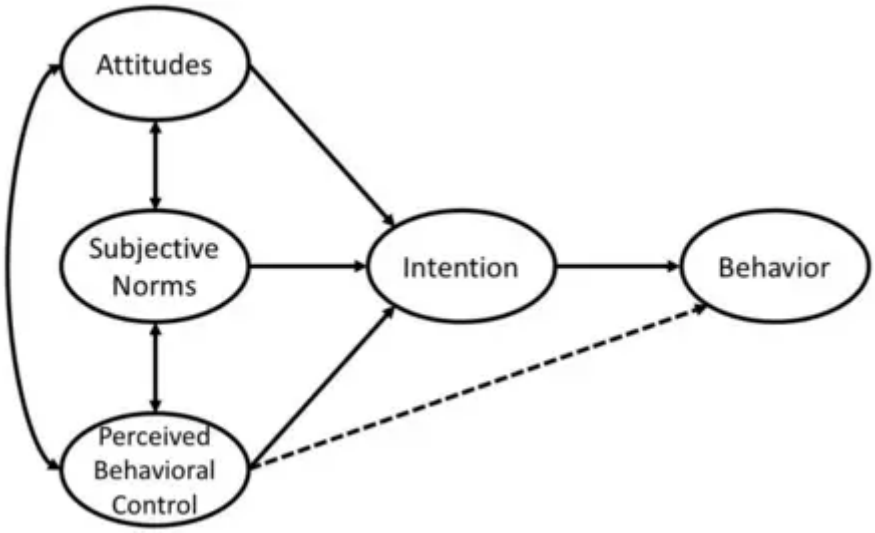
attitude towards money. The third sets of factors comprise demographic variables, specifically gender and family background.

Entrepreneurship Intention and Theory of Planned Behaviour

Intention is the best predictor of behavior (Ajzen, 1991). Prior empirical studies concluded that entrepreneurship intention predicts the process of venture creation (Linan & Chen, 2009). Entrepreneurship intention denotes an individual's personal desire, aspiration and mental orientation toward creating a business or implementing growth initiatives within existing organizations. Ajzen's (1991) Theory of Planned Behavior (TPB) is the most influential theory in social psychology to study entrepreneurship intention and behaviour relationships. Prior studies stated that the TPB has greater analytical capability than personality traits or situational factors (Linan & Chen, 2009; Schlaegel & Koenig, 2014). The TPB posits that human behavior is intentionally planned and directly influenced by three attitudinal factors: attitude, subjective norms, and perceived behavioral control (Figure 1).

1. Attitudes are described as an individual's beliefs and perceptions regarding the personal desirability of performing the behavior, tied to expectations about the behavior (Ajzen,1991). Entrepreneurship attitude is an individual's attractiveness towards an entrepreneurship career (Linan & Chen, 2009).
2. Subjective norms is the perceived social pressure to perform or not to execute a desirable activity (Ajzen, 1991). Pressure from family, friends and society affects people's behavior to be an entrepreneur. It encompasses perceived familial expectations and views around entrepreneurship behavior (Basu & Virick, 2008).
3. Perceived behavioral control refers to a person's belief about their ability to execute planned behavior and their perception of control over it. It is the perceived ability to execute the intended behavior of entrepreneurship (Basu & Virick, 2008).

Figure 1: Theory of Planned Behaviour, Adapted from Ajzen (1991)



Prior studies found that entrepreneurship attitude, subjective norms, and perceived behavioral control positively influence entrepreneurship intention and supported the model (Linan & Chen, 2009). Prajapati (2019) and Adhikari (2019) used the behavioral determinants of students' intention in Nepal. The results showed the attitude towards behavior subjective norm and perceived behavioral control significantly and positively contributed to Entrepreneurship intentions. Based on these discussions, the following hypotheses were proposed:

H1: *Entrepreneurial attitude positively influences entrepreneurship intention.*

H2: *Subjective norms positively influence entrepreneurship intention.*

H3: *Perceived behavioral control positively influences entrepreneurship intention.*

Personality and Attitudinal Issues

Personality comprises the unique combination of characteristics that form an individual's distinctive character. Individual personality traits such as need for achievement, self-efficacy, creativity, locus of control, risk tolerance and others significantly influence intentions and behaviours (Zhao et al., 2010). These traits shape an individual's cognitive processes, personal capabilities and one's propensity to take risk taking, innovation, and

persevere. These factors are relevant for understanding students' entrepreneurship intentions and behaviors. Among various personality and attitudinal factors, Nguyen, et al. (2019) explored that desire for success, creativity and attitudes towards money impacts entrepreneurship intention.

1. Desire for success refers to possessing and demonstrating a strong desire and determination to succeed. Students that are motivated by a desire to succeed are completely committed to their career, project, or personal goal. They frequently put in extra time and effort to achieve the result they want.
2. Creativity is the ability to create anything using one's imagination and recognizing ideas which might be valuable in solving problems. It is the ability to create or bring into anything new, such as a new method or device, or a new artistic object or form, or a new solution to a problem.
3. Attitude towards money refers to a person's view, belief, or feeling about the role of money and purpose in contemporary life.

Nguyen et al. (2019) found the desire for success and creativity positively influences entrepreneurship intention. Schwarz et al. (2009) found that individuals with a positive attitude toward money show greater inclination toward self-employment. Based on these empirical results, the following hypotheses were proposed:

H4: *Desire for success positively influences entrepreneurship intentions.*

H5: *Creativity positively influences entrepreneurship intentions.*

H6: *Attitude toward money influences entrepreneurship intentions.*

Demographic Factors

Prior research has identified that multiple demographic factors play an important role in contributing to the entrepreneurship intention and behavior of students, including age, gender, education, employment experience, prior entrepreneurial exposure, family business

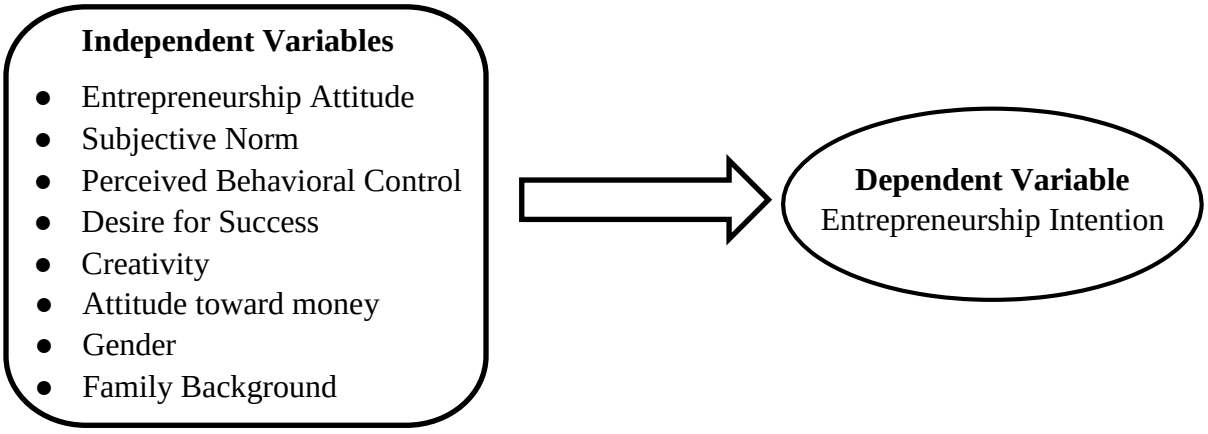
background, family income level, ethnicity, religions and cultural context (Linan & Chen, 2009). Empirical studies consistently show that there is a significant difference between males and females on entrepreneurship intention and behavior (Schwarz et al., 2009; Linan & Chen, 2009). This disparity may stem from the perception of entrepreneurship as a high-risk activity, which traditionally aligns more with male dominated career choices globally. However, recent trends indicate a gradual increase in women's entrepreneurship intentions and activities. Family background emerges as another critical determinant, as students with entrepreneurial family members influence desire to start a business (Nguyen et al., 2019). If a family already has their business, students may feel them as role models and encouraged to become an entrepreneur. Though numerous demographic variables exist, this study focuses specifically on gender and family background of students, leading to the following hypotheses:

H7: *Gender influence on entrepreneurship intention, with male students exhibiting higher entrepreneurship intention compared to female students.*

H8: *Family background influence entrepreneurship intention, with students whose parents are self-employed exhibiting higher entrepreneurship intention than those whose parents are not.*

The theoretical framework was developed as presented in Figure 2.

Figure 2: Theoretical Framework of the study



Methodology

Measures and Questionnaire

This study employed a quantitative approach, utilizing a structured questionnaire survey to collect primary data tailored to the research objectives. The questionnaire was developed based on a comprehensive review of existing literature. Scale for TPB constructs (i.e., entrepreneurship intention, attitude, subjective norm and perceived behavioral control) were adapted from Linan & Chen (2009). Three personality and attitudinal constructs (i.e., desire for success, creativity and attitude towards money) were drawn from Nguyen et al. (2019). The final questionnaire comprised 37 items, with eight items capturing demographic information and remaining 29 items measured on a 7-point Likert scale. The study operationalized that a student's entrepreneurship intention was influenced by attitude towards entrepreneurship, subjective norms, perceived behavioral control, desire for success, creativity, attitude towards money, gender and family background.

Population and Sample

The population of this study consisted of bachelor level engineering students studying in different colleges in Kathmandu. Prior to the administration of the questionnaire, a pilot test was carried out to 10 prospective respondents to refine the questionnaire. Using the convenience sample approach, 300 questionnaires were distributed across three private and one public colleges. These colleges were either constituent or affiliated with three major universities of Nepal (i.e., Tribhuvan University, Pokhara University and Purbanchal University) and located within Kathmandu Valley. From the initial 257 returned surveys, 245 responses were found complete and usable for research analysis. The survey captured respondents self reported views on different study variables.

Data Processing Procedure

All returned questionnaires were manually screened for missing data. After manual screening, the responses of each individual respondent were entered into SPSS 25.0 for Windows, with appropriate coding. Prior to analysis, data adequacy was ensured by examining normality, multicollinearity and adequacy of sample size. Mean, standard deviation, descriptive statistics of each variable were calculated for preliminary analysis. Reliability was insured with Cronbach's alpha coefficients, with all exceeding the 0.70 threshold. The descriptive statistics and reliability test results are presented in Table 1.

Table 1: Descriptive statistics of study variables (N=245)

	No. of Items	Cronbach's Alpha	Min.	Max.	Mean	SD
Entrepreneurship Attitude (EA)	5	0.83	1.00	7.00	5.6024	1.05263
Subjective Norm (SN)	3	0.89	1.00	7.00	5.6313	1.07828
Perceived Behavioral Control (PBC)	6	0.79	1.00	6.17	4.7565	1.16622
Entrepreneurship Intention (EI)	6	0.901	1.00	7.00	5.1367	1.25514
Desire for Success (DFS)	6	0.79	1.17	7.00	5.7388	.85904
Creativity (C)	8	0.71	2.25	7.00	5.2117	.75604
Attitude Towards Money (ATM)	3	0.80	1.00	7.00	5.0245	1.53684

Data Analysis Tools

To examine relationships between study variables correlation analysis was conducted. The impact of independent variables was determined using the following equation of multiple regression:

Initial Model: $EI = a + b_1EA + b_2SN + b_3PBC + b_4 DFS + b_5C + b_6ATM + b_7G + b_8FB$

where,

a= Regression intercept;

b = Multiple regression coefficient;

EA= Entrepreneurial Intention;

PBC = Perceived Behavioral Control;

SN = Subjective Norm;

DFS=Desire for Success;

C=Creativity;

ATM= Attitude towards money;

G = Gender;

FB = Family Background (Father Self Employed)

Nature of Respondents

The respondent's demographic evaluation shows that 72.70 % were male, 96.3% were under 25 years of age, 58.8% were from Brahman and Kshetri ethnic group, 41.6% were from Bagmati province. The sample represents four colleges, with approximately 50% of students from Tribhuvan University (IOE, Pulchowk Campus and Kathford College) followed by Pokhara University (NCIT, 41.2%) and Purbanchal University (Hillside College, 9%). Respondents were from different engineering programs (i.e., 20.4% are from Bachelor of Computer Engineering, 13.1% are from Software Engineering, 33.1% are from IT Engineering, 29.4% are from Civil Engineering and 4.1% are from Electrical and Electronic Engineering). Most participants were in their third (53.1%) and fourth year (44.5%) of study. The sample's proportion resembles the population of the students in engineering education of Nepal. The detailed demographic statistics of respondents are presented in Table 2.

Table 2: Demographics Statistics of Respondents (N=245)

Demography	Response	Total Sample	Percentage

Gender	Male	178	72.7
	Female	67	27.3
Age	Less than 21	58	23.7
	21-22	163	66.5
	23-24	15	6.1
	25 or above	9	3.7
Ethnicity	Brahman/Kshetri	141	57.6
	Newar	104	42.4
	Janajati	12	4.9
	Madhesi	27	11.0
	Other	24	9.8
Province	Koshi	25	10.2
	Madhesh	34	13.9
	Bagmati	102	41.6
	Gandaki	35	14.3
	Lumbini	26	10.6
	Karnali	4	1.6
	Far East	19	7.8
Family Background	Job Employed Father	141	57.6
	Self-Employed Father	104	42.4
College	IOE, Pulchowk Campus	77	31.4
	NCIT College	101	41.2
	Kathford College	45	18.4
	Hillside College	22	9.0
	Computer	50	20.4

Engineering	Software	32	13.1
Program	Information Technology	81	33.1
	Civil	72	29.4
	Electrical and Electronics	10	4.1
Academic	1st Year	2	0.8
Year	2nd Year	4	1.6
	3rd Year	130	53.1
	4th Year	109	44.5
	Total	245	100

Results and Discussion

Correlation Analysis

To evaluate the strength of the association between the study variables, a correlation matrix was generated for the whole sample. It illustrates how the entrepreneurship intention, entrepreneurship attitude, subjective norms, perceived behavioral control, desire for success, creativity and attitude towards money variables are related to one another. Correlations with two demographics gender and family background with other study variables were also computed. Table 3 depicts the correlation analysis of the variables under study.

Apart from attitude towards money and gender, the study variables had positive correlations with one another at the level of 1% and 5% significance. The significant correlations between engineering students' entrepreneurship intention and their entrepreneurship attitude, subjective norms, perceived behavioral control, desire for success, creativity and family background were .704, .340, .500, , .366, .339, and .195 respectively. Table 3 demonstrates the correlation among the study variables. Though attitude towards money was insignificant with TPB factors i.e. intention, attitude, subjective norm, and

perceived behavioral control, it is significantly correlated with two personality variables i.e. desire for success and creativity. Regarding demographic variables, results showed family background had positive and significant correlation whereas gender had negative but insignificant correlations with TPB variables.

Table 3: Correlation among the study variable (N=245)

	I	A	SN	PBC	DFS	C	ATM
A	.704**	1					
SN	.340**	.284**	1				
PBC	.500**	.324**	.369**	1			
DFS	.366**	.375**	.264**	.211**	1		
C	.339**	.289**	.151*	.253**	.528**	1	
ATM	-.017	.038	.011	.042	.154*	.164*	
Gender	-.105	-.014	.071	-.024	.128*	.064	
FB	.195**	.135*	.097	.052	.109	-.023	-.032

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Apart from attitude towards money and gender, the study variables had positive correlations with one another at the level of 1% and 5% significance. The significant correlations units between engineering students' entrepreneurship intention and their entrepreneurship attitude, subjective norms, perceived behavioral control, desire for success, creativity and family background were .704, .340, .500, , .366, .339, and .195 respectively. Table 3 demonstrates the correlation among the study variables. Though attitude towards money was insignificant with TPB factors i.e. intention, attitude, subjective norm, and perceived behavioral control, it is significantly correlated with two personality variables i.e. desire for success and creativity. Regarding demographic variables, results showed family

background had positive and significant correlation whereas gender had negative but insignificant correlations with TPB variables. engineering students' entrepreneurship intentions.

Regression Analysis

The relationship, impact and significance of the independent variable (i.e., attitude towards entrepreneurship, subjective norms, perceived behavioral control, desire for success, creativity, and attitude towards money and some demographic variables as the independent variables) on a student's intention as the dependent variable were tested using the multiple regression model. The model summary of overall regression model results showed that R i.e. correlation coefficient (0.779). This indicates the positive relationship between independent and dependent variables. The regression model's R Square was 0.62 which demonstrates that 62% of the dependent variables' explanation is provided by the independent variables. Other factors explain the remaining percentage. The p-value was less than 0.05, at 0.000 for the initial model which inferred that the model is appropriate for the investigation. The results of regression coefficients showed that entrepreneurship attitude, perceived behavioral control, gender (female as 1 and male as 0) and parents background (father self-employed as 1 and father job employed or other as 0) were significant, at the 1% significance level, to entrepreneurship intention. It indicates that entrepreneurship attitude, perceived behavior control, creativity, gender and family background have significant impact on the entrepreneurship intention. One unit increase in EA, PBC and C leads to .650, .283 and .179 unit increases in intention. Moreover, female students had .237 less entrepreneurship intention in comparison to male students whereas students with self-employed fathers had .214 higher units of entrepreneurship intention compared to students with job-employed fathers. However subjective norms, desire for success, and attitude towards money had a p-value of more than 5 percent indicating they are statistically insignificant. Thus, the result of

the initial multiple regression model showed that out of eight independent factors, only five were statistically significant. Again, refined multiple regression analysis was also conducted including only five significant variables of the initial model. The results showed that all five variables were statistically significant predictors of entrepreneurship intention. This model also demonstrated the same level of explanatory power with an adjusted R Square (0.60) compared to the full model. Table 4 depicts the regression analysis of the initial and refined model.

Table 4: Regression Coefficients (N=245)

	Initial Regression Model		Refined Regression Model	
	B	Sig.	B	Sig.
(Constant)	-1.044	.027	-.854	.047
EA	.650	.000	.675	.000
SN	.068	.196		
PBC	.283	.000	.303	.000
DFS	.072	.334		
C	.179	.043	.184	.011
ATM	-.045	.193		
G	-.237	.047	-.233	.046
FB	.214	.046	.238	.025
R	.782		.777	
R^2	.612		.604	
Adj. R^2	.599		.596	
F	46.508		72.952	
Sig.	.000		.000	

Note. Dependent Variable: Entrepreneurship Intention (EI); Independent Variables: Entrepreneurship Attitude (EA); Subjective Norm (SN); Perceived Behavioral Control (PBC); Desire for Success (DFS); Creativity (C); Attitude towards money (ATM); Gender (G); Family Background-Self Employed Father (FB)

Discussion

This study aimed to ascertain factors influencing entrepreneurship intention of bachelor level engineering students in Kathmandu Valley. The findings demonstrate strong support for Hypotheses 1 and 3 confirming that entrepreneurship attitude and perceived behavioral control significantly predict entrepreneurship intention. The results contradict the original TPB formulation that all three sets of attitudes affect intention (Ajzen, 1991; Linan & Chen, 2009) as the subjective norm is not a significant factor. This result supports the findings of Prajapati (2019) which also found entrepreneurship attitude and perceived behavioral control had significant but subjective norms that had insignificant impact on the entrepreneurship intention. This study also supports the findings of Nguyen et. al (2019). That study, which was based on Vietnamese youths, also found that both perceived behavioral control and entrepreneurship attitude had a positive impact on entrepreneurship intentions, whereas study did not find the linkage between social norms and intentions. This indicates western models may not completely align with eastern context and are required to be contextualized (Sthapit et al., 2016). The results rejected hypothesis 4 and 6 and supported hypothesis 5 indicating only creativity has an impact on entrepreneurship intention. The result confirmed findings of Nguyen et al. (2019) about creativity. However, the results contradict prior research on impacts of desire for success and attitude towards money on intention (Nguyen et al., 2019). Still the results on desire for success aligns with the results of Testado (2021) which also found that this factor had no impact on the entrepreneurship intentions of the students in the Philippines. Though the attitude towards money is not significant for entrepreneurship intention, the result is consistent with the findings of Nguyen et al. (2019) but contradicts with Schwarz et al. (2009) and Testado (2021). The reasons behind those insignificant roles should be explored in the context of Nepal in future research.

The result of this study supported male students exhibit higher intentions compared to female students whereas students whose fathers are self-employed exhibit higher entrepreneurship intention than those whose parents are not. These findings supported Hypotheses 7 and 8 and are consistent with prior findings that gender and family background both have an impact on an individual's entrepreneurship intention (Adhikari, 2019; Khanal & Prajapati, 2024; Nguyen et al., 2019; Pant, 2016; Schwarz et al., 2009).

Implications

The study confirmed entrepreneurship attitude, perceived behavioral control, creativity, gender and family background are significant determinants for Nepali engineering students. If students have more entrepreneurship intentions, they will have a higher possibility to follow an entrepreneurship journey (Linan & Chen, 2009). The results will be important for researchers, educators and policymakers for better understanding of factors affecting entrepreneurship intentions of students in Nepali context and designing and implementing entrepreneurship development activities to increase the level of determinants and intention which subsequently increase students' entrepreneurial behaviour.

Future researchers can understand the Nepal specific insights on antecedents of entrepreneurship intentions and ways for future research based on findings and limitations of this research. The study offers empirical evidence that challenges some TPB assumptions in developing contexts and establishes baseline research for future studies. Upcoming research should investigate why subjective norms, desire for success and attitude towards money showed limited impact in the context of Nepal. As the study was based on cross-sectional data covering the engineering programs of Kathmandu Valley, findings generalizability might be the issue which can be improved in future research with a larger sample size, additional colleges including other locations of Nepal in the survey. Additional research using longitudinal data and exploration of hidden issues may provide more enlightening

insights. Moreover, future research can be conducted considering the intention theories beyond TPB, more demographic, personality, and environmental factors of students.

The research findings will be extremely valuable to universities, educators, trainers, and teachers working in the field of entrepreneurship. The educational institution and educators might use the findings as a guide to increase students' attitude, perceived behavioral control, and creativity which ultimately increases the student's entrepreneurship intention and behavior. HEIs can design effective entrepreneurship courses and interventions and focus on practical and experiential educational activities for technical (e.g., engineering, medical) and non-technical students to increase their Entrepreneurship intention. As gender and family background impact entrepreneurship intention, colleges should focus on entrepreneurship development activities for females and people with different family backgrounds than business, to increase their level entrepreneurial attitudes and intention. Thus, institutions can develop students' knowledge, skills, creativity, attitudes, and self-efficacy to increase student's entrepreneurship intentions and activate them toward entrepreneurship careers.

The literature and findings of this study will also be useful for policymakers on designing educational and entrepreneurship policies. They can focus on devising and implementing policies and programs that help to develop students' entrepreneurial attitudes, self-efficacy, creativity, intentions and behaviour as they are linked to the nation's economic development.

Conclusion

The entrepreneurship behavior of individuals plays a vital role in driving employment creation and economic development. A large body of empirical research asserts that such behaviour basically depends on individuals' intentions to become entrepreneurs. Several factors were identified that determine the EI. While numerous studies demonstrated the theoretical and practical significance of the entrepreneurship intention and behaviour of

students in the entrepreneurial development of a country, there remains scant research on technical students' entrepreneurship intentions. This study addresses this gap by identifying the determinants of entrepreneurship intention among Nepali engineering students. It investigated the impact of TPB factors (i.e., entrepreneurial attitudes, subjective norms, and perceived behavioral control), personality and attitudinal factors (i.e., desire for success, creativity, and attitude towards money) and demographic variables (i.e., gender and family background) on entrepreneurship intention. This study revealed that entrepreneurship attitude, perceived behavioral control and creativity are more important for entrepreneurship intentions of engineering students. Moreover, it confirmed that male students and children of self-employed family backgrounds have more intention for an entrepreneurship career.

These insights prove valuable for understanding how to motivate engineering students towards entrepreneurship creation and development activities. In the context of Nepal's rising unemployment and increasing student migration abroad, policymakers and educators need to develop a supportive environment, and implement targeted policies, programs and educational activities to enhance students' entrepreneurship intention and motivate them towards entrepreneurship journeys. Engineering education aligning with entrepreneurship development interventions attract new students toward Nepali universities in the context of increased foreign migration for higher education and fosters entrepreneurship among engineering students to transform their innovative ideas into viable enterprises. Ultimately, this will mitigate unemployment and brain drain while having significant implications in strengthening the nation's entrepreneurship landscape and long-term economic prosperity.

Acknowledgement

This research was supported by the University Grants Commission, Nepal.

References

Adhikari, R. (2019). Behavioral determinants in entrepreneurship intention. *SOMTU Journal of Business and Management Research*.

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes, 50(2)*. https://doi.org/10.1016/0749-5978(91)90020-T

Audretsch, D. B., & Thurik, R. (2001). *Linking entrepreneurship to growth.*

Baral, E., Adhikari, B. P., & Gurung, R. (2024). Unveiling motivational factors driving Nepali students to pursue higher education abroad. *OCEM Journal of Management, Technology & Social Sciences*, *3*(1), 18-25. https://doi.org/10.3126/ocemjmtss.v3i1.62221

Basu, A., & Virick, M. (2008). Assessing entrepreneurship intentions amongst students: A comparative study. In *VentureWell. Proceedings of Open, the Annual Conference* (p. 79). National Collegiate Inventors & Innovators Alliance.

Covin, J. G., & Wales, W. J. (2012). The measurement of entrepreneurial orientation. *Entrepreneurship Theory and Practice*, *36*(4), 677-702. https://doi.org/10.1111/j.1540-6520.2010.00432.x

Khanal, K. and Prajapati, B. (2024). Influence of demographic factors on entrepreneurship intentions among business students in Nepal. *Journal of Economic Sciences 2*(1). https://doi.org/10.55603/jes.v2i1.a1

Kreiser, P. M., & Davis, J. (2010). Entrepreneurial orientation and firm performance: The unique impact of innovativeness, proactiveness, and risk-taking. *Journal of Small Business & Entrepreneurship, 23*(1), 39-51. https://doi.org/10.1080/08276331.2010.10593472

Liñán, F., & Chen, Y. W. (2009). Development and cross–cultural application of a specific instrument to measure Entrepreneurship intentions. *Entrepreneurship Theory and*

Practice, 33(3), 593-617. https://doi.org/10.1111/j.1540-6520.2009.00318.x

Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurship intentions: citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal*, *11*, 907-933. https://doi.org/10.1007/s11365-015-0356-5

Lo, C. T. (2011). *The impact of entrepreneurship education on Entrepreneurship intention of engineering students* (Doctoral dissertation, City University of Hong Kong).

Lüthje, C., & Franke, N. (2003). The 'making'of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT. *R&d Management*, *33*(2), 135-147. https://doi.org/10.1111/1467-9310.00288

Nguyen, A. T., Do, T. H. H., Vu, T. B. T., Dang, K. A., & Nguyen, H. L. (2019). Factors affecting entrepreneurship intentions among youths in Vietnam. *Children and Youth Services Review*, *99*, 186-193. https://doi.org/10.1016/j.childyouth.2019.01.039

Pant, S. K. (2016). Role of The Family in Entrepreneurship Development in Nepali Society. *Journal of Nepalese Business Studies*, *9*(1), 37–47.

Prajapati, B. (2019). Entrepreneurship intention among business students: The effect of entrepreneurship education. *Westcliff International Journal of Applied Research 3(1)*. https://doi.org/10.47670/wuwijar201931BP

Schlaegel, C., & Koenig, M. (2014). Determinants of entrepreneurial intent: A meta–analytic test and integration of competing models. *Entrepreneurship Theory and Practice*, *38*(2), 291-332. https://doi.org/10.1111/etap.12087

Schwarz, E. J., Wdowiak, M. A., Almer-Jarz, D. A., & Breitenecker, R. J. (2009). The effects of attitudes and perceived environment conditions on students' entrepreneurial intent:

An Austrian perspective. *Education+ Training*, *51*(4), 272-291. https://doi.org/10.1108/00400910910964566

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, *25*(1), 217-226. https://doi.org/10.1007/978-3-540-48543-8_8

Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise Entrepreneurship intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, *22*(4), 566-591. https://doi.org/10.1016/j.jbusvent.2006.05.002

Sthapit, A., Shrestha, A., & Adhikari, J. R. (2016). Research in general management and HR in Nepal: Review and preview. *Seminar on Management Research in Nepal*, Kathmandu University School of Management (KUSOM).

Subedi, D. P., & Bhandari, D. R. (2024). University level curriculum and entrepreneurship intentions among Nepali business students: Examining the mediating role of teaching methods. *Nepalese Journal of Management and Technology*, *2*(2), 37-53. https://doi.org/10.3126/njmt.v2i2.68720

Testado, D. (2021). Factors affecting entrepreneurship intentions among youth of Philippines. *Journal of Global Business Volume 10* (1).

Thurik, A. R., Audretsch, D. B., Block, J. H., Burke, A., Carree, M. A., Dejardin, M., ... & Wiklund, J. (2024). The impact of entrepreneurship research on other academic fields. *Small Business Economics*, *62*(2), 727-751. https://doi.org/10.1007/s11187-023-00781-3

Urbano, D., Aparicio, S., & Audretsch, D. B. (2019). Twenty-five years of research on institutions, entrepreneurship, and economic growth: What has been learned? *Small Business Economics, 53*(1), 21–49. https://doi.org/10.1007/s11187-018-0038-0

Wennekers, S., & Thurik, R. (1999). Linking entrepreneurship and economic growth. *Small Business Economics*, 13, 27-56. https://doi.org/10.1023/A:1008063200484

Zhao, H., Seibert, S. E., & Lumpkin, G. T. (2010). The relationship of personality to Entrepreneurship intentions and performance: A meta-analytic review. *Journal of Management, 36*(2), 381-404. https://doi.org/10.1177/0149206309335187