# Testing the Relationship Between Entrepreneurial Intention and its Antecedents on University Students Using PLS-SEM

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## Abstract

**The concept of entrepreneurial intention serves as an emerging area of interest for researchers due to its close association with psychological models and theories. One of the leading theories in this field is the theory of planned behavior (TPB) (Ajzen, 1991), which considers the social and cultural environment affecting human behavior. Taking cues from the theory, the relationships between entrepreneurial intention and its three antecedents, that is, attitude towards the behavior (personal attitude), subjective norms, and perceived behavioral control, were tested in this paper. Students pursuing post-graduation in business and commerce stream across several universities in Kamrup (Metro) district of the state of Assam were considered as the sample for this study. To test the hypotheses, partial least squares structural equation modeling (PLS-SEM) was carried out using SmartPLS Version 3.3.3. The results confirmed the existence of significant relationships between the four constructs of TPB. It also revealed the existence of partial mediation across the several paths of the research model. As such, the study validated the applicability of the TPB on the said sample. Moreover, the moderating effect of gender as a categorical variable was tested for the sample. The results from the multi-group analysis showed that gender exerted no significant influence on the relationship between EI and its three antecedents.**

***Keywords :*** **entrepreneurial intention, theory of planned behavior, antecedents, structural equation modeling, SmartPLS, moderating effect**

**JEL Classification Codes : I23, L26, M13**

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The study of entrepreneurship dates back to the seventeen and eighteenth centuries, as illustrated by the works of Richard Cantillon and Jean-Baptiste Say (Mars & Rios-Aguilar, 2010). Numerous studies on entrepreneurship focus on analyzing the process and challenges involved in venture creation, but these studies left the internal process within an individual completely unnoticed (Liñán, 2007). The pre-start-up phase is extremely crucial since it sets the base for the next stages of venture creation. However, the abstractness of the pre-venture creation stage makes it difficult to fathom the mindset of the prospective entrepreneurs. Over the years, there has been a growing urge among researchers to explore the various dimensions, elements, and issues of entrepreneurial psychology. There is an emerging body of research on entrepreneurial intent since it is regarded as the best determinant of entrepreneurial behavior (Krueger & Carsrud, 1993).

There has been a pressing need to understand an individual's entrepreneurial intention (EI) to provide impetus to the start-up culture. The Indian government and policymakers have been vocal about the need to promote and develop entrepreneurship considering the situation of joblessness in the country. The *Global Entrepreneurship Monitor Report, 2021–22* (Bosma et al., 2021) stated that India ranks 39$^{th}$ out of 43 nations in terms of total early-

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stage entrepreneurial activity, which is the percentage of adults engaged in starting or managing a new business. Concurrently, the unemployment scenario of the country also got worse due to the global pandemic, surging up to 23.52% in April 2020 (Centre for Monitoring Indian Economy, 2020). Therefore, with the poor state of employment and low to moderate level of entrepreneurship activities in the country, there is an urgent need to stimulate young minds to consider entrepreneurship as a career alternative. Entrepreneurship education is considered a crucial medium for disseminating awareness and information on the matter. It is also reported to moderate the relationship between cognitive factors and generation of EI (Shah et al., 2020) and entrepreneurial potentiality (Aggarwal, 2019).

Educational institutes in North-East India have been offering courses and programs on entrepreneurship for the past few years. However, there is a dearth of studies measuring the EI of students of the region and the state of Assam in particular. Despite offering courses on entrepreneurship, evaluative work on measuring students' EI after availing of such courses cannot be found. This study is conducted on students of Gauhati University, which is one of the premier institutions in the entire region. It considers the theory of planned behavior (TPB) (Ajzen, 1991) to determine the factors influencing EI. With the help of the model, the study aims to examine if the factors mentioned in the said model, that is, attitude towards the behavior, subjective norms, and perceived behavioral control, affect the EI of the students of the study area as well. Testing the validity of already developed models in different cultures and different settings provides external validity to the theory (Sihombing, 2015). As such, in this way, this research contributes to the existing literature on TPB. Moreover, by identifying the factors that result in the generation of EI among students, the academicians and policymakers can focus on implementing measures that intend to strengthen the influential factors among students. As such, by incorporating lessons on the identified antecedents of EI in the entrepreneurship courses and programs, the curriculum is expected to be more effective.

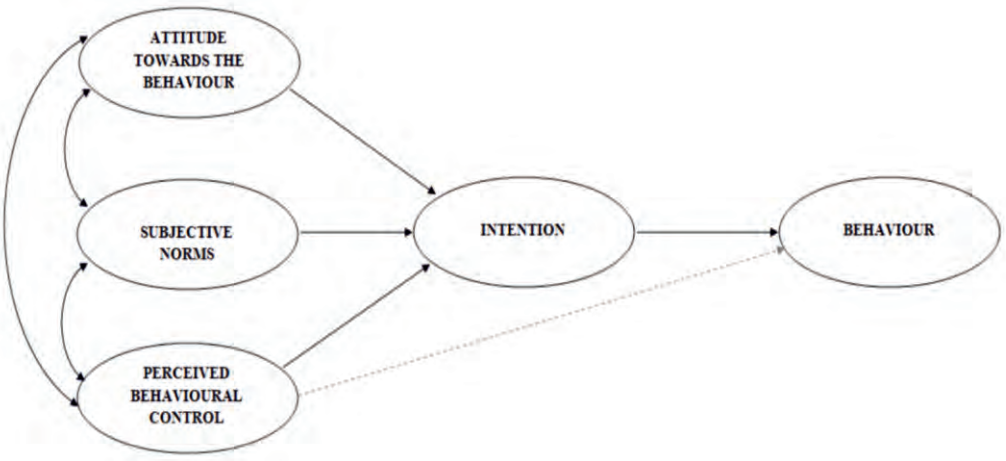
## Theoretical Background and Formulation of the Research Model

The cognitive process of becoming an entrepreneur is complex, and the formation of the intent may be regarded as the foremost phase in the protracted entrepreneurship process (Liñán & Chen, 2009). Several studies have identified that intention is the single best predictor of actual behavior (Ajzen, 1991; Fishbein & Ajzen, 1975; Liñán & Chen, 2009). The actual behavior is expected after the formation of intention (Bae et al., 2014). As defined by Ajzen 1991 (in Liñán, 2007), "Intention is a cognitive construct that captures the motivational factors influencing behaviors" (p. 232). As such, the subjective probability of performing the behavior in question represents an individual's intent (Fishbein & Ajzen, 1975). Behavior, thus, is an outcome of intention (Ajzen, 1991).

The intention study has been applied by eminent researchers like Krueger and Carsrud (1993) and Liñán and Chen (2009) to comprehend an individual's entrepreneurial behavior. As an antecedent to entrepreneurial behavior, the intention helps determine an individual's employment choice. According to Thompson (2009), EI implies a "sense of a conscious and planned resolve that drives actions necessary to launch a business" (p. 671). It is one's judgment about the likelihood of owning a business (Fatoki, 2010). Thus, entrepreneurship is an intentional activity (Henley, 2007) and involves an individual's keenness and readiness to start up. Being a combination of four factors: desires, preferences, plans, and behavior expectancies (Tentama, 2018), EI guides entrepreneurs toward critical strategic thinking and decision-making in the entrepreneurial journey (Bird, 1988, 1992).

The extensive behavior of entrepreneurs is deeply rooted in psychological theories and concepts. The theory of planned behavior (TPB) (Ajzen, 1991) is one of the most influential and commonly used theories for measuring EI (Ambad & Damita, 2016; Fayolle & Gailly, 2015; Kolvereid, 1996; Krueger & Carsrud, 1993; Krueger

**Figure 1.** ***Theory of Planned Behaviour (TPB)***




Source : Azjen (1991).

et al., 2000; Küttim et al., 2014; Liñán et al., 2011; Malebana, 2014; Maresch et al., 2016; Parveen et al., 2018; Piperopoulos & Dimov, 2015; Solesvik, 2013; Sondari, 2014; Usaci, 2015; Volery et al., 2013). This theory explains that three antecedents shape an individual's intention: attitude towards the behavior, subjective norms, and perceived behavioral control (Figure 1). Ajzen (1991) regarded them as 'antecedents' as these three cognitive components influence intention. This means that before a person's intention develops, the aforementioned three cognitive factors take shape in the human mind. The venture creation process requires meticulous planning, and therefore, entrepreneurship is planned behavior that is grasped better with the help of intention models (Volery et al., 2013). A clear depiction of the theory is provided in Figure 1.

According to the TPB, entrepreneurship is a behavior, and the performance of this behavior can be predicted by studying individual intention. A detailed discussion of these antecedents has been made in the following section.

### *Attitude Towards the Behavior (Personal Attitude) (PA)*

The foremost antecedent of intention is the degree to which a person has a positive or negative assumption of self-performance of the behavior in question. Attitudes get developed in people based on the beliefs they possess regarding the result of a given behavior (Ajzen, 2005). An individual may either have a favorable or an unfavorable attitude towards the said behavior depending on prior experience or observation of the outcome achieved by else due to the performance of the behavior (Malebana, 2014). As such, PA is an individual's attractiveness towards performing a said behavior.

### *Subjective Norms (SN)*

It refers to perceived social pressure (Malebana, 2014) and the influence of others' judgment while performing the behavior. For an entrepreneur who designates social validation of the task as salient to its successful performance, a positive response from 'reference people' (Liñán et al., 2011) would be immensely critical under such circumstances. Even though the road to entrepreneurship is laden with severities and challenges, but when family

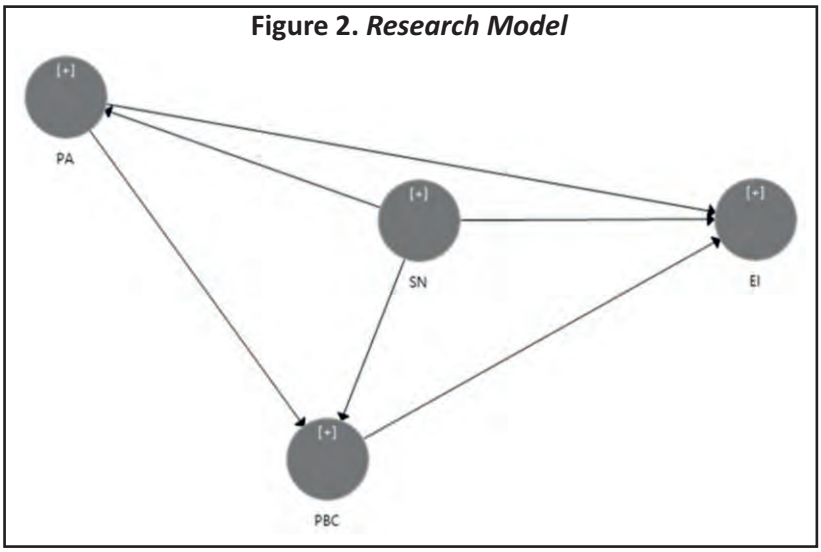
and social support back an individual, the obstacles are overcome by great fortitude. In other words, higher support from significant others results in higher EI (Pihie & Bagheri, 2013). The social approval of entrepreneurship behavior generates not only a higher level of intention but also other related psychological variables like higher self-efficacy and higher motivation (Vanevenhoven & Liguori, 2013). The social valuations "enhance the capability to engage in the search, discovery and ultimate exploitation of entrepreneurial opportunities" (Malebana, 2014) (p. 713).

### *Perceived Behavioural Control (PBC)*

It refers to perceived ease or difficulty in performing the behavior (Ajzen, 1991). The significance of this construct resides in its predictive ability of whether an individual would be able to take control of the new venture (Liñán et al., 2011). The control beliefs determine the PBC of an individual since it is based on the availability and accessibility of the factors or resources that either assist or hinder the performance of the said behavior (Ajzen, 2005, 2011, 2012). As such, the more easily the individuals are able to access resources and recognize market opportunities, the higher their perception of control over their behavior. Therefore, as per this model, it is imperative for an entrepreneur to receive financial, social, legal, and other forms of support to have a better perception of control over the entrepreneurial process.

Based on the aforesaid discussions, the study attempts to confirm the relationships that exist between the dependent variable (EI) and the independent variables (PA, SN, and PBC), as shown in the research model (Figure 2). Apart from determining the significant factor(s) influencing EI, the study also attempts to examine the mutual relationship between the antecedents. After an extensive review of the existing literature, it is observed that prominent research works have been carried out on the EI of students (Fatoki, 2010; Kolvereid, 1996; Küttim et al., 2014; Parveen et al., 2018; Pihie & Bagheri, 2011; Remeikiene et al., 2013; Sánchez, 2013; Setiawan, 2014; Shiri et al., 2013; Solesvik, 2013; Tentama, 2018; Usaci, 2015; Vanevenhoven & Ligouri, 2013), also on EI of final year students (Liñán et al., 2011; Malebana, 2014; Mustapha et al., 2014), and more particularly, on EI of students enrolled in business, commerce, management, entrepreneurship, and economics programs (Ambad & Damita, 2016; Chavadi & Sirothiya, 2018; Fayolle & Gailly, 2015; Fretschner & Weber, 2013; Graevenitz et al., 2010; Nieuwenhuizen & Swanepoel, 2015; Peterman & Kennedy, 2003; Piperopoulos & Dimov, 2015; Sagie & Elizur, 1999; Uddin & Bose, 2012; Urban, 2010; Volery et al., 2013; Walter et al., 2013).

**Figure 2.** ***Research Model***



It is evident that the studies described above were being conducted in either developed nations or in country settings different from the study area. Country-specific differences in EI of students have been reported by Parveen et al. (2018). Even though the study of Chavadi and Sirothiya (2018) was conducted on an Indian sample, however, it only measured entrepreneurial traits, attitude, and business skills. Therefore, this study fulfills this research gap by testing the relationship between EI and its antecedents among higher education students in the Kamrup (Metro) district of Assam, India. Moreover, this research work further attempts to contribute to the existing literature by modeling the relationship between the variables of the TPB in a sample setting not studied by the studies mentioned above.

Hence, to fulfill the objective of this study, the following hypotheses have been assumed:

- **H1 :** Attitude towards behavior has a positive effect on entrepreneurial intention ($PA \rightarrow^{+} EI$).
- **H2 :** Subjective norms have a positive effect on entrepreneurial intention ($SN \rightarrow^{+} EI$).
- **H3 :** Perceived behavioral control has a positive effect on entrepreneurial intention ($PBC \rightarrow^{+} EI$).
- **H4 :** Attitude towards behavior has a positive effect on perceived behavioral control ($PA \rightarrow^{+} PBC$).
- **H5 :** Subjective norms have a positive effect on attitude towards behavior ($SN \rightarrow^{+} PA$).
- **H6 :** Subjective norms have a positive effect on perceived behavioral control ($SN \rightarrow^{+} PBC$).

### *Gender as a Moderating Variable*

Since opportunities and challenges tend to be different for males and females across the various stages of entrepreneurship, Zhang et al. (2009) held that "gender could moderate the magnitude of genetic influences on entrepreneurship" (p. 95). Even with similar socio-cultural backgrounds, gender disparity tends to be robust across cultures (Do Paço et al., 2015). Gender has been found to influence EI (Díaz-García & Jiménez-Moreno, 2010; Do Paço et al., 2015; Liñán & Chen, 2009; Pfeifer et al., 2016) and entrepreneurial motives (Jeger et al., 2014). Based on the aforesaid observations, this study examines the role of gender as a moderator of the relationships between EI and its antecedents. Hence, the following hypotheses have been assumed:

- **H7 :** Gender acts as a moderator of the relationship between entrepreneurial intention and its antecedents.
- **H7a :** Gender moderates the relationship between *PA* and *EI.*
- **H7b :** Gender moderates the relationship between *SN* and *EI.*
- **H7c :** Gender moderates the relationship between *PBC* and *EI.*

## Method

### *Nature and Scope of the Study*

The present study is exploratory in nature as it consists of an elaborate review of existing literature on TPB so as to frame the research model and the related hypotheses. The study was undertaken among final year post-graduation students of the Kamrup (Metro) district of Assam. Assam is a prominent state in the North-Eastern region of India, and the Kamrup (Metro) district is the most densely populated district in the state (Directorate of Economics and Statistics, 2018). Being the educational hub of the entire region, each year, numerous students graduate from the

several institutes of the Kamrup (Metro) district. However, the dearth of job opportunities is a major challenge for these graduates. There is a need to encourage and motivate the students to consider entrepreneurship as a career alternative. Against this backdrop, the study attempts to understand the contextual factors that affect the EI of the students of the study area.

### *Sampling and Data Collection*

During their final year, the students mostly come to terms with career decisions, so determining their EI fits appropriately at this stage. In terms of determining students' employability intentions, EI can be stated as students' expectations that they will be entrepreneurs (Yi & Duval-Couetil, 2018).

For the present research, two principles have been adhered to while defining the study population. Firstly, the final year students enrolled in Master of Commerce (M.Com) and Master of Business Administration (MBA) programs in universities and affiliated institutes in Kamrup (Metro), Assam have been considered, and secondly, these set of students must have undergone the entrepreneurship course in their respective programs. Considering these two premises, the total population of the study is 744, out of which a sample of 250 (Krejcie & Morgan, 1970) was drawn randomly during the period from January to July 2019. Among the total seven institutes in the study area (both MBA and M.Com and offering entrepreneurship courses), a stratified random technique was applied, and the sample was drawn from each institute on a proportionate basis. Out of the total 250 students, 132 (52.80%) were male students, and 118 were female students (47.20%). Furthermore, 116 (46.40%) students were enrolled in the M.Com program, while the remaining 134 (53.60%) were enrolled in the MBA program.

### *Measures*

The study used multi-item scales to measure the four constructs: PA, SN, PBC, and EI. The items of the questionnaire were framed by taking inputs from previous studies (Fatoki, 2010; Lashley, 2010; Lee et al., 2005; Liñán et al., 2011; Malebana, 2014; Nieuwenhuizen & Swanepoel, 2015; Sánchez, 2013; Solesvik, 2013; Walter et al., 2013). PA has been measured using five items, SN using six items, PBC using four items, and EI using 13 items. These items are scored on a 5-point Likert scale, ranging from 1 being *'strongly agree'* to 5 being *'strongly disagree.'* The 5 - point scale is a better measure to capture EI as this range is appropriate to capture the strength of intent (Jeger et al., 2014). The reliability and validity of the indicators have been discussed in Table 1.

### *Data Analysis*

To test the relationship between EI and its antecedents, partial least squares structural equation modeling (PLS-SEM) has been used using SmartPLS Version 3.3.3 (Ringle et al., 2015). The PLS path modeling estimates indicator variables and structural paths by using total variance (Hair et al., 2019) and also provides causal explanations (Wold, 1982). The procedure is divided into two parts : (a) the assessment of the measurement model and (b) the assessment of the structural model. A detailed analysis has been made in the next section. Further, to ascertain the moderating effect of the categorical variable, that is, gender, multi-group analysis (PLS-MGA) is carried out.

## Analysis and Results

### *Assessment of the Measurement (Outer) Model*

The first stage assesses the outer model to determine the fit between the factors and the constructs (Mokhtar

et al., 2017). At this stage, the reliability and validity of the questionnaire as well the constructs are assured. In the case of reflective measurement models, observing indicator loadings is the foremost step. As such, Table 1 displays the outer loadings of all the indicators against their respective constructs. The indicators which failed to exhibit the minimum criteria were eliminated from the model. According to Hair et al. (2014), indicators with loadings above 0.4 (as in the case of *SN5*) may be included if they do not affect the content validity. Since the composite reliability has already been achieved, and deletion of any more indicators has no role to play in achieving the threshold level for average variance extracted (AVE), therefore, the indicators above 0.4 have been retained (Hair et al., 2014) (Table 1).

In the next step, composite reliability (CR) (Jöreskog, 1971) is used as the measure to assess the internal consistency reliability. Since CR considers the outer loadings of the indicators, it is considered a better measure than Cronbach's alpha (Hair et al., 2014). As seen in Table 1, the values of CR in the range of 0.7 – 0.95 are reliable. Thereafter, the convergent validity has been measured with the help of average variance extracted (AVE), which

**Table 1.** ***Reliability and Convergent Validity Analysis***

| Constructs | Items | Loadings | Composite Reliability (CR) | Average Variance Extracted (AVE) |
|---|---|---|---|---|
| *PA* | *PA1* | 0.633 | 0.867 | 0.567 |
| | *PA2* | 0.79 | | |
| | *PA3* | 0.714 | | |
| | *PA4* | 0.791 | | |
| | *PA5* | 0.823 | | |
| *PBC* | *PBC1* | 0.782 | 0.771 | 0.53 |
| | *PBC2* | 0.739 | | |
| | *PBC3* | 0.656 | | |
| *SN* | *SN1* | 0.797 | 0.83 | 0.566 |
| | *SN2* | 0.858 | | |
| | *SN3* | 0.85 | | |
| | *SN5* | 0.409 | | |
| *EI* | *EI1* | 0.771 | 0.943 | 0.56 |
| | *EI2* | 0.756 | | |
| | *EI3* | 0.773 | | |
| | *EI4* | 0.765 | | |
| | *EI5* | 0.774 | | |
| | *EI6* | 0.799 | | |
| | *EI7* | 0.797 | | |
| | *EI8* | 0.758 | | |
| | *EI9* | 0.75 | | |
| | *EI10* | 0.799 | | |
| | *EI11* | 0.604 | | |
| | *EI12* | 0.682 | | |
| | *EI13* | 0.675 | | |

**Table 2. *HTMT Ratios***

| Constructs | *EI* | *PA* | *PBC* | *SN* |
|---|---|---|---|---|
| *EI* | | | | |
| *PA* | 0.808 | | | |
| *PBC* | 0.603 | 0.60 | | |
| *SN* | 0.666 | 0.599 | 0.661 | |

explains if a construct converges to explain the variance of its items (Hair et al., 2014). Since the AVE scores of all the four constructs are above 0.5 (Table 1), convergent validity has been achieved for all of them.

In order to ensure that each construct is dissimilar from the other constructs in the model, discriminant validity needs to be ascertained. For this purpose, heterotrait-monotrait ratios (HTMT) of the constructs have been calculated, which is considered a better measure for determining discriminant validity (Henseler et al., 2015). HTMT is defined as "the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct"(Hair et al., 2019) (p.9). As seen in Table 2, all the HTMT values fall below 0.90 and, therefore, are acceptable.

### *Assessment of the Structural (Inner) Model*

After verifying the reliability and validity of the constructs and their respective items, the next stage requires an assessment of the path coefficients, level of $R^2$, and the predictive relevance ($Q^2$) of the structural model (Hair et al., 2014). In order to calculate these measures, bootstrapping was carried out for 5,000 samples for the whole sample unit. Table 3 depicts the results of *t*-statistics and the *p* - values for each of the paths in the model. The path coefficients depict the direction of the causal relationship between the constructs (Mokhtar et al., 2017).

It can be observed from Table 3, that all the paths stand significant at $p < 0.05$. Therefore, the hypotheses (H1 to H6) are supported. This result confirms the relationship between EI and its three antecedents, as reported in previous studies (Engle et al., 2010; Kolvereid, 1996; Solesvik, 2013). Further, the indirect relationships that exist due to the mediation of the constructs also require assessment of the specific indirect effect, as shown in Table 4.

Since the *t*-statistic stands significant at $p < 0.05$, therefore, the mediating effects of PBC and PA through all the five paths of the model are significant (Table 4). This confirms the existence of partial mediation in all the above five paths.

The coefficient of determination ($R^2$) value of the endogenous constructs measures the model's explanatory

**Table 3. *Path Coefficients***

| | Sample Mean *(M)* | Standard Deviation | *t*-values | *p* - values |
|---|---|---|---|---|
| *PA –> EI* | 0.526 | 0.044 | 11.827 | 0.000* |
| *PA –> PBC* | 0.252 | 0.068 | 3.656 | 0.000* |
| *PBC –> EI* | 0.108 | 0.046 | 2.312 | 0.010* |
| *SN –> EI* | 0.281 | 0.053 | 5.325 | 0.000* |
| *SN –> PA* | 0.513 | 0.042 | 12.037 | 0.000* |
| *SN –> PBC* | 0.297 | 0.064 | 4.637 | 0.000* |

*significant at $p < 0.05$ (one-tailed).

**Table 4.** ***Specific Indirect Effect***

| | Sample Mean (M) | Standard Deviation | *t* - values | *p* - values |
|---|---|---|---|---|
| *PA –> PBC –> EI* | 0.028 | 0.015 | 1.743 | 0.041* |
| *SN –> PBC –> EI* | 0.032 | 0.015 | 2.085 | 0.019* |
| *SN –> PA –> PBC* | 0.129 | 0.036 | 3.537 | 0.000* |
| *SN –> PA –> EI* | 0.27 | 0.034 | 7.936 | 0.000* |
| *SN –> PA –> PBC –> EI* | 0.014 | 0.008 | 1.714 | 0.043* |

*significant at $p < 0.05$.

**Table 5.** ***Explained Variance***

| Endogenous Constructs | $R^2$ |
|---|---|
| *EI* | 0.587 |
| *PA* | 0.259 |
| *PBC* | 0.222 |

power (Hair et al., 2019). It determines the proportion of variance of the endogenous constructs accounted for by the exogenous constructs (Hair et al., 2011). Table 5 indicates that the model states that 58.7% of the variance in EI is explained by PA, PBC, and SN. Similarly, 25.9% of the variance in PA is explained by PBC and SN ; whereas, 22.2% of the variance in PBC is explained by PA and SN.

Thus, the results obtained from observing the $R^2$ values (Table 5) are highly satisfactory (Do Paço et al., 2011), and the predictive power of the model is moderate (Hair et al., 2014).

**Figure 3.** ***Path Coefficients and $R^2$ Values (Results from Bootstrapping)***

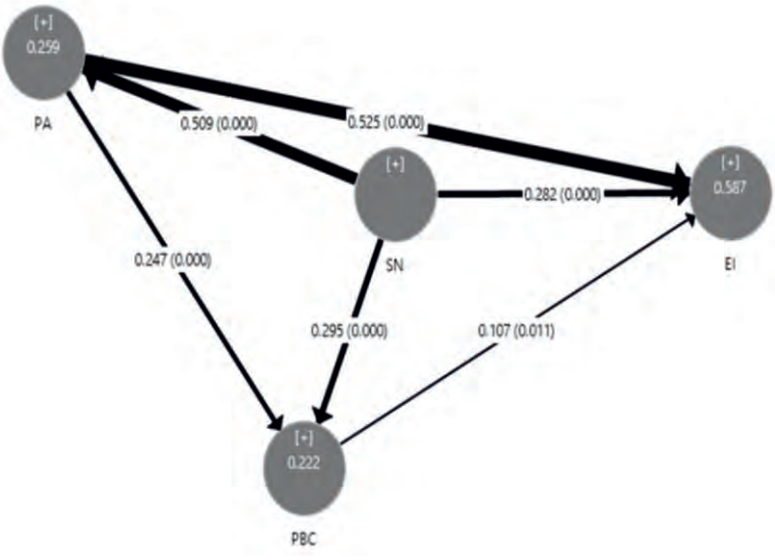


**Table 6.** ***Construct Crossvalidated Redundancy***

| Endogenous Construct | SSO | SSE | $Q^2$ (= 1 – SSE/SSO) |
|---|---|---|---|
| *EI* | 3250 | 2197.594 | 0.324 |

**Table 7.** ***Results of PLS-MGA***

| Paths | Path Coefficients-diff (GROUP_Male - GROUP_Female) | *p* - value new (GROUP_Male vs. (GROUP_Female) |
|---|---|---|
| *PA –> EI* | 0.139 | 0.063 |
| *PBC –> EI* | 0.042 | 0.335 |
| *SN –> EI* | –0.15 | 0.069 |

It is clear from Figure 3 that all three antecedents have a significant influence on the EI of the students. Out of the three, PA appears to be the strongest influencing antecedent of EI, followed by SN and PBC.

### *Blindfolding*

To determine the model's predictive accuracy, it is important to calculate the $Q^2$ value (Geisser, 1974; Stone, 1974). The blindfolding technique has been used for this purpose where every 7th data point of the endogenous construct (EI) has been omitted, 7 being the default omission distance (Ringle et al., 2015). Table 6 presents the results of a cross-validated redundancy analysis of EI wherein the $Q^2$ value is 0.324, thus depicting a medium predictive relevance of the PLS path model (Hair et al., 2014).

### *Multi-group Analysis (PLS-MGA)*

Multi-group analysis (MGA) is used to test apriori-defined groups to observe whether there exist significant differences in group-specific parameter estimates (Matthews et al., 2018). The present study attempts to determine whether the PLS path model is moderated by gender differences in the sample. Therefore, taking males and females as the two data groups, PLS-MGA has been carried out.

Table 7 presents the various paths and the differences in coefficients across the two groups: male and female. The results generated by the MGA operation reveal that the effect of gender is insignificant across all the paths of the model. In other words, gender does not moderate the relationship between EI and its antecedents. Hence, hypothesis H7 cannot be accepted.

The summary of the results of the hypotheses has been presented below:

- **H1 :** PA $\rightarrow^{+}$ EI – Supported
- **H2 :** SN $\rightarrow^{+}$ EI – Supported
- **H3 :** PBC $\rightarrow^{+}$ EI – Supported
- **H4 :** PA $\rightarrow^{+}$ PBC – Supported
- **H5 :** SN $\rightarrow^{+}$ PA – Supported

- **H6 :** SN $\Rightarrow^{+}$ PBC – Supported
- **H7 :** Not Supported
- **H7a :** Not Supported
- **H7b :** Not Supported
- **H7c :** Not Supported

## Managerial and Theoretical Implications

This study establishes the applicability of the TPB in a sample setting different from the previously conducted studies in the domain. The PLS modeling of the relationships between the variables provides a detailed explanation of the theory. The results of this study are expected to crucially contribute toward a better entrepreneurship culture in the state of Assam and India. The Indian economy needs more entrepreneurs, and today's educated youth are expected to bring about a sea change in the Indian entrepreneurship scenario in the years to come. By exploring the EI of students, this study indicates their self-employment propensity. Understanding the factors behind the formation of EI leads to an informed appreciation of the behavior of entrepreneurs (Fitzsimmons & Douglas, 2011). As this study clearly establishes the direct and indirect relationships between the factors, this understanding can be used for the meticulous designing of the pedagogy to cater to the PA, SN, and PBC of the students, which in turn, are expected to generate favorable levels of EI. If similar studies are conducted on a regular basis as per the changing environmental factors, then the authorities can timely revise their measures to channel the intention into real behavioral outcomes.

The findings of this study are in agreement with previous studies by Liñán et al. (2011), Kautonen et al. (2013), and Mokhtar et al. (2017), where EI was found to be influenced by PA, SN, and PBC. In addition, Krueger et al. (2000), Douglas and Shepherd (2002), and Liñán and Chen (2009) were able to prove the existence of a positive association between PA and EI. A significant relationship between EI and SN was also reported by Ferreira et al. (2012). Studies of Liñán and Chen (2009) and Do Paço et al. (2011) also observed significant impact of PBC on EI. PA and PBC being strong predictors of EI for Indian students sample were also found in the study by Mishra and Singh (2022). The PLS-SEM test done by Shah et al. (2020) on students also reported PA and SN as strong predictors of EI, similar to this study. As such, this study strengthens the already available literature on EI and further confirms the suitability and applicability of the TPB among students.

## Conclusion, Limitations of the Study, and the Way Forward

Since there has been a steady increase in unemployment rates in India (Vyas, 2018), the issue requires urgent action. Entrepreneurship is capable of solving the problem to a considerable extent as it contributes to self-employability. Therefore, research in entrepreneurship cognitions will provide a better grasp of the mindsets of entrepreneurs. Against this backdrop, this paper highlights the contextual factors affecting the EI of students pursuing post-graduation in the Kamrup (Metro) district of Assam, a North - Eastern state of India.

The study confirms that students' EI is shaped by three factors: PA, SN, and PBC. The significance of this observation lies in the fact that to enhance the EI of the students, their personal and environmental factors must be paid due weightage. As such, while making policy endeavors to increase the self-employment intentions of the students enrolled in various institutes of Kamrup (Metro), equal courses of action must also be framed toward positively influencing their personal attitudes and their social & control beliefs. In addition, gender is not found to moderate the relationship between EI and its antecedents. Thus, the model stands valid for both male and female

students of the sample. However, since it was evident from the PLS-SEM that these three factors account for only 58.7% variations in EI, other factors contribute to the generation of EI among students.

A primary limitation of this study is that it considers only three cognitive factors, PA, SN, and PBC, while there may be other antecedents of EI. Another matter of fact is that the study is limited to only one district of Assam, therefore, the results cannot be generalized to the whole of the state. Furthermore, only students of higher education and those from commerce and management programs were considered. Thus, future research may be carried out on exploring other determinants of EI. Students of other programs like science and humanities can also be considered in this regard. This opens up future avenues to test the robustness of the TPB on a broader sample and a broader geographical area.

## Author's Contribution

The author, Saptadweepa Shandilya, is solely responsible for the conception of the research idea, framing the research problem, data collection and analysis, interpretation of results, and writing the manuscript.

## Conflict of Interest

The author certifies that she has no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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