

Identifying Factors affecting Customers' Adoption towards Payments Banks

Shazeb Tariq*

Rais Ahmad**

Abstract

Payments banks are the brainchild of the Reserve Bank of India. There are many scopes for the private players to have emerged as payment bank license holders to deliver financial services to customers. The key target audience of payments banks is migrant labourers, low-income households and small businessmen because financial services deprive these sections. There is a need to understand the customers' psyche in their banking patterns to take feasible steps to use their familiarity with payment banks. The present study aims to fulfil this gap by empirically investigating the factors that could affect the Indian under-banked and unbanked customers' adoption of payments banks; for this purpose, this study first identifies the variables from past literature and reduces these variables into different factors with the help of exploratory factor analysis. After that, this study used binary logistic regression to analyze how these factors affect customers' adoption of payment banks. The results indicate that the ease of use, popularity, efficient cost of time and innovative features significantly influences customers' intention to join payments banks.

Keywords: Payments Banks, Financial services, Financial Inclusion, Customer adoption, Exploratory factor analysis, Binary logistic regression

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* Research Scholar, Department of Agricultural Economics & Business Management, Aligarh Muslim University, Aligarh 202002, Email: shahzaibtariq93@gmail.com, Mob.: 8439153248

** Dean, Faculty of Agricultural Sciences, Aligarh Muslim University, Aligarh

1. Introduction

The banking industry has emerged remarkably well across the world in recent times. Technology has been a fundamental instrument in delivering banking products in deprived areas. (Leeladhar, 2006). The reach of the banking sector varies from country to country (Beck et al., 2007). In developing countries, only 50% of their adult population has bank accounts, whereas, in OECD countries, this figure reaches 94%. (Demirguc-Kunt et al., 2015). The main factors that restrict the customers to use traditional banks in developing countries, i.e. high yearly maintenance and rigid documentation (Beck et al., 2008). Other factors are lengthy counter queues, far-located bank branches and fewer operating hours (Dupas et al., 2012).

Customers need to be financially stable; thus, they cannot earn adequate monetary savings to spend on these extra costs (Bachas et al., 2016). The developments in mobile technology have revolutionized the finance industry by introducing new products & services that include direct transfers in bank accounts, utility bill payments, and services like a digital wallet. These technology-driven concepts are already practised in countries like Brazil and the Philippines. This is a kind of “branchless banking” (Ivatury & Mas, 2008), where the costs of providing financial services to small or middle-income customers are meagre. However, the banking industry has delivered many technology-driven services, such as Automatic Teller Machines (ATM) (Laukkanen & Pasanen, 2007). Mobile Financial Services have revolutionized the world's finance industry in recent years, making banking more convenient to the section that still needs to be associated with the banking industry in any form in developed countries. The Governments of developing countries are considering Mobile Financial Services as an instrument to achieve financial inclusion among their unbanked population, which mostly lives in rural or remote areas. In India, the situation of financial inclusion is not as pleasing as there is very limited access to banking services in deprived areas; nearly 40 per cent of the country's adult population still don't have their bank accounts, and they are not affiliated with the banking industry in any way (Venkataramakrishnan, 2016).

There are many reasons for limited access; for example, fewer branches are in rural and remote areas, so the population lives without financial services. So to attain higher financial inclusion in rural areas, the Union Government of India is encouraging Mobile Financial Services in the country through various instruments like mobile banking, digital wallets and recently conceptualized ‘payments banks’. Though mobile banking and digital wallets are old in India, payments bank is the latest concept. Payments banks are the brainchild of the Reserve Bank of India (RBI). It came into existence in 2014 and took inspiration from Kenya's similar concept M-Pesa (Mas & Morawczynski, 2009). The payments bank is a niche bank that accepts customer deposits and provides services like ATMs, prompt money transfers, paying utility bills etc. There is much scope for private players to have emerged as payment bank license holders to deliver financial services to customers (RBI, 2014). The key target audience of payments banks is migrant labourers, low-income households and small businessmen because these sections are majorly deprived of financial services. The underbanked and unbanked people are primarily from these groups. The major challenge for the payments banks in India is to convince Indian banking customers as they are mostly stuck with conventional banking.

As payments banks provide technology-driven financial services, “technical issues, perceived risks, lack of trust and security concerns are generally found to be the major reasons behind customers' resistance to adopt such services” (Laukkanen et al., 2007) (Brown et al., 2003), (Koenig-Lewis et al., 2010) (Zhou, 2012), On the other hand, some attractive features like rewards points, cashback, heavy discounts etc. are the motivational factors towards the adoption of payments banks (Taylor & Todd, 1995) (Lee, 2009) (Oliveira et al., 2014). So there is a need to understand the customers' psyche in their banking patterns to take feasible steps to use their familiarity with payments banks. However, the acceptance rate of digital financial services has not reached desired levels in developing countries because customers have shown less interest in these services. (Pu"schel et al., 2010), (Lin, 2011), (Lin H., 2013) (Hanafizadeh et al., 2014) (Alalwan et al., 2016). Indian customers are especially hesitant to

use digitally available financial services (Thakur & Srivastava, 2013).

Past studies were focused on finding the responsible factors for the adoption of digital financial services in several non-Asian countries, such as Jordan (Alalwan et al., 2017), Turkey (Akturan & Tezcan, 2012), Portugal (Oliveira T. T., 2016), Iran (Hojjati & Rabi, 2013), and Lebanon (Tarhini et al., 2016). Few types of research have also focused on digital banking and digital payment acceptance behaviour in Asian countries, such as Malaysia (Tan & Lau, 2016), Singapore (Riquelme & Rios, 2010), Taiwan (Lee M., 2009), and the Philippines (Chiu et al., 2017). Researchers such as (Deb & Agrawal, 2017) and (Madan & Yadav, 2016) identified various factors which affect the acceptance of mobile-supported digital banking in India. Still, few studies have taken place regarding the issues related to this technology as the concept of payments banks is firsthand for Indians, and it is in the beginning stage of implementation (Kohli & Patel, 2016) (Abid, 2017); (Goel & Manrai, 2016). Also, no empirical study is available regarding the adoption behaviour of potential customers for the payments banks.

As a result, there is a need to investigate the factors significantly affecting the adoption of payment banks. In past research, much work has been done regarding the factors influencing the adoption of mobile banking, online banking, etc.. However, these researches are primarily based on the views of those customers who are associated with the existing means of banking services. However, the point of view of the underbanked and unbanked people in the society had been unnoticed in most of the existing research" (Dass & Pal, 2011). Henceforth, the present study aims to fulfil this gap by empirically investigating the factors that could affect the Indian underbanked and unbanked customers' adoption of payments banks.

2. Theoretical Framework

Payments banks are an emerging and exciting area for researchers; therefore, several studies have been conducted on payment banks. Many past studies focused on characteristics and benefits concomitant to payment banks (Shah & Mehta, 2019), (Reddy, 2018), (Gupta, 2016), (Agarwal, 2016), (Shivnani & Siwach, 2017), (Chakraborty, 2019)); many focused

on problems faced by these banks (Taneja & Bhasin, 2016), (Pande, 2015), (Damle et al., 2016)). Modification of these banks is needed (Kapoor & Garg, 2017), (D'souza, 2018), (Vaishnavi & Shruthi, 2017)). However, limited researches are available that identified factors that influence the Indian underbanked and unbanked customers' adoption towards payments banks (Pramani & Iyer, 2020), (Shrey et al., 2018). After extensively exhausting the existing literature, **25** variables are identified that influence customers' adoption of payment banks.

Table 1-Identified variables from the existing literature

Variables	Author
Awareness	(Priyamvada et al., 2018), (Pramani & Iyer, 2020), (Shrey et al, 2018), (Chakraborty, 2019)
Documentation	(Pramani & Iyer, 2020)
Security Risk	(Pramani & Iyer, 2020), (Shah & Mehta, 2019) (Vaishnavi & Shruthi, 2017)
Trust	(Pramani & Iyer, 2020)
Advanced features	(Gupta, 2016) (Shah & Mehta, 2019) (Anahita & Sonalika, 2019)
Customer friendly	(Shah & Mehta, 2019) (Shivnani & Siwach, 2017)
Rapidly growing	(Gupta, 2016) (Kapoor & Garg, 2017)
Zero balance account	(Purohit & Mishra, 2017)
Innovative Marketing strategy	(Shrey et al., 2018)
Wider societal acceptance	(Shrey et al., 2018) (Anahita & Sonalika, 2019)
Easily approachable	(Agarwal, 2016) (Damle et al., 2016)
Low service charges	(Agarwal, 2016) (Pande, 2015) (Chakraborty, 2019)
Quantity of services	(Shivnani & Siwach, 2017)

Technological solutions	(Taneja & Bhasin, 2016)
Profitability	(Pande, 2015)
Creativity	(Pande, 2015)
Digital approach	(Agarwal, 2016) (Damle et al., 2016)
Pricing policies	(Kapoor & Garg, 2017)
Quality of services	(D'souza, 2018)
Potentially Competent services	(D'souza, 2018) (Reddy, 2018)
Easy access	(Vaishnavi & Shruthi, 2017) (Chakraborty, 2019)
Attractive interest rates	(Vaishnavi & Shruthi, 2017) (Chakraborty, 2019)
Security norms	(Vaishnavi & Shruthi, 2017)
Time flexibility	(Chakraborty, 2019)
Place flexibility	(Chakraborty, 2019)

This study performed exploratory factor analysis using IBM SPSS software to identify the dataset's core factorial structure (Child, 1990). The Kaiser-Meyer-Olkin test and Bartlett's Test of Sphericity were performed as a first step. Then as the second step, this study conducted a factor analysis to check on sampling adequacy and investigate the correlation among the identified variables.

Table 2-KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.772
Bartlett's Test of Sphericity	Approx. Chi-Square 4123.019
	Sig. 0.000

Bartlett's Test of Sphericity point out the Chi-square value as 4123.019, and the p-value is found to be 0.000 (**Table 2- KMO and Bartlett's Test**); these two values are significant and indicate that there exists a significant correlation among variables (Hair et al., 2014).

Table 3- Eigen value with cumulative percentag of variance

Component	Eigen value	Percentage of variance	Cumulative percentage of variance
1	5.149	17.175	17.175
2	4.017	15.114	32.289
3	3.871	14.190	46.479
4	2.919	12.783	59.262
5	1.765	11.184	70.446

Principal Component method analysis, arimax rotation method and Kaiser Normalization rotation have been used to extract factors. Eigen value of 1 or more and components with a loading score of 0.40 are used as parameters to extract factors. Factors with Eigen value of 1 or above and component loading score of more than 0.60 were retained as prescribed by (Hair et al., 2014) (**Table 3- Eigen values with the cumulative percentage of variance**). Five factors were extracted for customer attraction towards Payments Banks. The five factors account for 70.744% of the total variance.

Table 4 –Rotated component matrix

Identified Variables	1	2	3	4	5
Documentation	0.732				
Customer friendly	0.715				
Easy access	0.751				
Easily approachable	0.668				
Awareness		0.710			
Rapidly growing		0.826			
Digital approach		0.629			
Wider societal acceptance		0.737			
Security risk			0.812		
Trust			0.689		
Security norms			0.761		
Advanced features				0.697	
Technological solutions				0.761	
Attractive Interest rates				0.784	
Potentially Competent services				0.739	
Quality of services				0.714	
Quantity of services				0.671	
Time Flexibility					0.827
Place Flexibility					0.725
Zero balance account					0.696
Low service charges					0.765
Profitability					0.849

The variables with factor loading values greater than 0.60 were retained, and loadings less than 0.60 were discarded from further analysis (Hair et al., 2014). Thus, the variables of Innovative Marketing strategies, Creativity and Pricing Policies are eliminated. The summary of each factor is given below.

Factor 1: Ease of use

The first factor has an Eigen value of 5.149 and 17.175 % of the variance. The name of the first factor is “ease of use”. It has four components, namely documentation, customer-friendly, easy access, easily approachable. These components describe the easiness of the use of payments banks; therefore, it is named as ease of use.

Factor 2: Popularity

The first factor has an Eigen value of 5.149 and 17.175 % of the variance. The name of the first factor is “ease of use”. It has four components: documentation, customer-friendly, easy access, and easily approachable. These components describe the ease of use of payments banks; therefore, it is named ease of use.

Factor 3 : Security Concerns

The third factor is named security concerns. The factor has an Eigen value of 3.871, accounting for 14.190% of the variance. Three components, namely security risk, trust and security norms, are loading in this factor. These components are related to security concerns while using payment banks. Thus, it is named the same.

Factor 4: Innovative features

The fourth factor is named innovative features. The Eigen value is 2.919, and the variance is 12.783%. Advanced features, technological solutions, attractive interest rates, potentially competent services, quality of services and quantity of services are the six components that are loaded in this factor. All the components of this factor are innovative. That is why it is termed an innovative feature.

Factor 5: Cost and Time

The fifth factor is named cost and time. The five components loaded in this factor are time flexibility, place flexibility, zero balance account, low service charges, and profitability. These components have cost & time aspects; therefore, the name of the factor is cost and time.

Data methodology

Population and data sources: The population for this study has one main character and two distinct sub-characteristics:

1. Indian adult population
 - 1.1. Banked customers
 - 1.2. Unbanked customers

Banked customers are those customers who are formally availing of banking services from traditional banks operating in India. Unbanked customers are those who are potential banking customers.

Questionnaire development: The questionnaire in this study is developed by considering the identified variables from past literature. There were two sections of the questionnaire. The first part includes questions related to the socio-demographic profile (i.e. age, gender, marital status, type of family, educational qualification, income level, and savings). The 2nd part of the questionnaire includes

questions that have been formed using the identified variables from the past literature that assisted and influenced customers' adoption of payments banks. The questionnaire was drafted in English, and the questions were put on a five-point Likert scale that ranged from strongly agree to disagree strongly.

Sample Selection and survey administration: The sample size for this study is 500 respondents, which is 20 times the size of identified variables (Hair et al., 2014). The minimum sample size for Exploratory Factor Analysis (EFA) is five times that of the variables under study; the optimal size is 10:1 ratio (Hair et al., 2014). However, the same authors recommend a sample size of twenty times the number of variables. Since this is a PAN India study, researchers have opted for the criteria of twenty times the size of variables for sample selection. The study was carried out in India on a PAN basis from Oct 2020 to Nov 2021. Online and offline methods have been used to collect the data.

Data cleaning: A structured questionnaire collected data from 615 respondents. Among the 615 responses, 96 had missing entries; therefore, they were deleted from further analysis, and the final sample size was 519, which is higher than the recommended sample size.

Data analysis:

A total of 519 responses were found valid. The reliability of the questionnaire is verified to find its consistency and stability. Cronbach's alpha is used to calculate the reliability of the instrument. Cronbach's alpha describes the average correlation and internal consistency between the questionnaire items to measure the accuracy of measurement value (Dillon, Firtle, & Madden, 1990), (Santos, 1999). In this study, Cronbach's alpha value for overall items in the questionnaire is 0.911, which is higher than the proposed cut-off value of 0.70, indicating the internal consistency of the construct (Nunnally & Bernstein, 1978).

IBM SPSS v25 Statistical software has been used to perform binary logistic regression to test the impact of identified factors on customers' adoption of payments banks. In the present study, the dependent variable is binary, i.e. having two categories, and the independent variable/variables are/are categorical or

continuous; therefore, we have used the binary logit model (King, 2008). In the binary logit, the model-independent variable is associated with a coefficient “ β ” that measures its independent contribution to variations in the dependent variable, and ε_i is the error term. Customers' adoption regarding payments banks is binary, with adopt (1) and not adopt (0) as the options. Joining option (1) indicates customers' adopting payments banks, whereas (0) reflects customers' not adopting payments banks. The empirical model was constructed to predict the probability of identified factors influencing customers' adoption /non-adoption regarding payments banks.

$$\text{Logit (P)} = \beta_0 + \beta_1 \text{EU} + \beta_2 \text{PO} + \beta_3 \text{SC} + \beta_4 \text{IF} + \beta_5 \text{CT} + \varepsilon_i \quad (1)$$

Logit model, instead of predicting the value of a dependent variable (Y) from a predictor (independent) variable X1 or several predictor (independent) variables (Xs), predict the probability of dependent variable (Y) occurring given known values of X1 (or Xs). P(Y) is the probability of Y occurring, e is the base of natural logarithms. When there are several predictors, the equation is given by:

$$P(Y) = \frac{1}{1 + e^{-(b_0 + b_1 X_{1i} + b_2 X_{2i} + \dots + b_3 X_{3i})}} \quad (2)$$

4. Results and discussion

Table 5- Socio-demographic profile of respondents

Sample size (Total) N = 519		
Socio-Demographics	N	%
Gender		
Male	370	71.29
Female	149	28.71
Age (in years)		
Less than 20	67	12.90
20 to 40	233	44.89
40 to 60	183	35.26
Above 60	36	6.93
Marital Status		
Single	267	51.44
Married	252	48.56

Educational qualification		
Illiterate	63	12.13
Up to matric	122	23.50
Intermediate	107	20.61
Graduate	97	18.68
Post graduate	130	25.04
Monthly Income (INR)		
Less than 20,000	217	41.81
20,000 to 30,000	87	16.76
30,000 to 40,000	65	12.52
40,000 to 50,000	97	18.68
More than 50,000	53	10.21
Monthly Savings (INR)		
Less than 20,000	240	46.24
20,000 to 30,000	102	19.65
30,000 to 40,000	68	13.10
40,000 to 50,000	73	14.06
More than 50,000	36	6.93
Monthly Expenditure(INR)		
Less than 20,000	290	55.87
20,000 to 30,000	79	15.22
30,000 to 40,000	51	9.82
40,000 to 50,000	82	15.79
More than 50,000	17	3.27

Table 5 summarizes the socio-demographic profile of the respondents. Out of the total sample size 71.29% are males, and 28.71% are females. It shows that most of the customers are male. In terms of age, most of the customers belong to the age group of 20-40 makes 44.89% followed by 40 to 60, >20 and <60 who are 35.26%, 12.90% and 6.93% respectively. As far as the marital status of the customers is concerned, 51.44% are found single while 48.56% are found to be married. The majority of the customers have their maximum qualification as postgraduates, which is 25.04%. 23.50% have attained their education till matric level, 20.61% has stated intermediate as their highest qualification while 18.68% are graduates. 12.13% of respondents are illiterate and have not attained any type of education. Most of the customers who are using

payments banks have an income level of less than 20,000, which makes it 41.81% of the total respondents. It indicates that low-income customers are target customers of the payments banks. 18.68% respondents have their income level Rs.40,000 to 50,000 followed by 16.76 having their income Rs.20,000 to Rs.30,000 and 12.52% having their income Rs.30,000 to Rs.40,000. The 10.21% of respondents have an income level of more than Rs.50,000. When it comes to monthly savings, the highest number of respondents that is 46.24%, have their monthly savings less than Rs.20,000/-.19.65% respondents have their monthly savings between Rs.20,000 to Rs.30,000, followed by 14.06% respondents have their savings between Rs.40,000 to Rs.50,000 and 13.10% have their savings Rs.30,000 to Rs.40,000. The least number of respondents in this regard is 6.93%, whose savings is more than Rs.50,000. From the monthly expenditure point of view of the customers, the highest 55.87% have their monthly expenditure less than Rs. 20,000 followed by 15.79% whose monthly expenditure is between Rs.40,000 to Rs.50,000. The 15.22% of the customers have their monthly expenditure between Rs.20,000 to Rs.30,000, followed by 9.82% whose monthly income is between Rs.30,000 to Rs.40,000. The least is 3.27% of respondents whose monthly income is more than Rs.50,000.

Table 6- Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	969.660	.343	.461

The validation of this conceptual model has been done through Binary logistic regression. **Table 6- model summary** shows the value of Cox and Snell R as 0.343 and Nagelkerke R square as 0.461. Nagelkerke R square is also known as multiple correlation coefficients. The Nagelkerke R square value here encapsulates the proportion of variance explained by the independent variables on the dependent variable. Table 7 reflects that in this model, 35–47% of the variation is explained by independent variables on the dependent variable.

Table 7- Factors affecting customers' adoption towards payments banks

Factors	B	S.E.	Wald	Df	Sig.	Exp (β)
EU	0.914	0.101	6.963	1	0.006***	2.632
PO	0.664	0.141	5.013	1	0.037**	1.501
ECT	1.405	0.087	23.203	1	0.000*	2.313
SC	-0.101	0.202	2.251	1	0.121	0.817
IF	0.819	0.224	18.527	1	0.000*	1.789
Constant	2.934	0.305	31.224	1	0.000	1.227

*Significant at 1%, **Significant at 5%, ***Significant at 10%.

Table 7 illustrates the statistical summary of factors affecting customers' adoption/non-adoption towards payments banks. The beta value of factor ease of use is .914 at the significant level of 10%. This implies a positive relationship between ease of use and customers' adoption of payment banks. It shows that a one-unit increase in the knowledge related to the ease of use of payments banks results in a change in the chances of customers' adoption of payments banks divided by the chances of customers' non-adoption to payments banks by (odds ratio) of 2.632. This means that if the ease of use increases, the probability of customers adopting payment banks will increase. The reason behind this is that most customers hesitate to join payments because they need proper knowledge about how to use the services of payments banks. Previously they have not availed of any such service. Similar studies have also been done by (Shah & Mehta, 2019) (Akhter et

al., 2021), which state that payment banks are user-friendly, convenient and cost-effective, and these are some of the reasons which attract customers towards the adoption of payments banks.

Here is a positive relationship between the popularity of payments banks and customers' intention to join payments banks. It is significant at a 5% significance level ($\beta = .664$, $p\text{-value} = .037$). The result here shows that for every one-unit increase in the factor popularity, there is a 1.511 times increase in the chances that the customers will join payments banks. Its popularity has gone to peaks after demonetization. It is a transformed banking system (Gupta, 2016). Its digital approach is also a significant factor in its immense popularity. (Damle, Thenuan, & Raval, 2016) Payments bank's efficient cost and time positively relate to customers' intention to join payments banks. Its beta value is 1.405 at a significant level of 1%. The expected beta is 2.313, which means if anyone unit increases in the factor efficient cost and time, the chances of increasing customers' intention to join payments banks is 2.313 times. In traditional banks, the customer is bound by time & place, but that is not the case for payments banks. Customers can use it anytime and anywhere. (Chakraborty, 2019) The innovative factor features show a positive relationship, which is significant at a 1% significance level ($\beta = 0.819$, $p\text{-value} = .000$). Every one-unit increase in that factor means a 1.79 times increase in the chances that customers will join payments banks. Customers want something new in the market that is attractive in features, and payment banks serve this to these customers by providing services in customer-friendly ways (Shah & Mehta, 2019). It is elementary to access and cashless as well. The interest rates are also attractive compared to traditional banks (Vaishnavi & Shruthi, 2017). These factors will not only attract customers towards payments banks but also enhance the satisfaction of existing customers, which in turn increase organizational performance, as suggested by (Maaz & Ahmad, 2022).

5. Conclusion

There is a lot of potential for payment banks to grab customers, especially in developing countries like India, which is rapidly going towards digitalization and urbanization. More has to be done on this with

the help of the Central Government & Reserve Bank of India. Earlier Indian banking customers were dependent only on traditional banks, whose working mechanism is out of date as of now. Payments banks bridge this gap by providing banking at their fingertips. The present study aims to empirically investigate factors that affect the Indian under-banked and unbanked customers' adoption towards payments banks. The binary logistic regression model indicates that the ease of use, popularity, efficient cost and time, and innovative features significantly influences customers' intention to join payments banks. These empirical findings will be helpful for private as well as government players to make strategies and frameworks to promote payments banks among Indian customers and to increase their market reach.

5.1 Implications:

The empirical findings indicate that ease of use, popularity, efficient cost and time, and innovative features significantly affects customer adoption towards payment banks. These findings will be helpful for payment banks to make strategies and frameworks to promote themselves and to increase their customer group. The advertisement agencies involved in designing an ad for payment banks can use the identified factors to design effective advertisements for payment banks which can attract more customers. They can show in their advertisement how payment banks are very easy to use, save cost and time, and provides innovative features. This study contributes to financial literacy and inclusion by building a new theory of customer adoption towards payment banks that future researchers can extend by adding new factors or checking this theory on different regions.

5.2. Limitations and future directions:

This study is confined to Indian customers; thus, its result of external validity is unknown. The antecedents of the identified factors still need to be discovered. Moreover, the identified factors can form the attitude of consumers towards payments banks, which needs to be studied in this research. Future researchers can test this model in different regions and incorporate complex models to identify antecedents and consequences of the identified

factors. Future researchers can also explore other things, such as the service quality of payment banks.

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An Empirical Investigation of Factors Impacting Entrepreneurial Potentiality on Entrepreneurial Intention with a Moderating Effect of Entrepreneurship Education

Vaneeta Aggarwal*

ABSTRACT:

The term “Entrepreneurial Potentiality” encompass the psychological (creativity, decision-making skills, passion, locus of control, risk-taking propensity, tolerance for ambiguity, need for achievement and self-efficacy), social (family support, mentoring, networking and peer group influence) and institutional factors (entrepreneurship awareness programs, guiding material and awareness of government schemes) leading towards entrepreneurial intention. The purpose of this study is to empirically explore the moderating effect of entrepreneurship education on the relationship between the factors of entrepreneurial potentiality and entrepreneurial intention. Primary data is collected from 266 college students in Tamil Nadu, India. The results reveal that institutional factors primarily impact entrepreneurial intentions, followed by psychological and social factors. In addition, the moderating role of entrepreneurship education is established in the relationship between institutional factors and entrepreneurial intention, thus proving that institutional factors and entrepreneurship education play a significant role in shaping an individual’s entrepreneurial choice.

Keywords: *Entrepreneurial Potentiality; Entrepreneurial Intention; Entrepreneurship Education; Entrepreneurship Management; Psychological Factors; Social Factors; Institutional Factors*

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* Assistant Professor, Department of Management Studies, University of Madras, Chepauk, Chennai – 600005, e-mail: drvaneetaresearchaward@gmail.com

Introduction:

The word 'entrepreneur' brings images of business tycoons like Ambani or Bill Gates. How are they different from others? The only answer to this question is their entrepreneurial abilities. The field of entrepreneurship is vast, multi-dimensional and has many elements making it difficult for anybody to claim expertise in this field (Chell and Ozgan, 2014). Entrepreneurship can be visualized as a group phenomenon of creatively organizing actions, thoughts and people in work life (Johannisson, 2014).

Entrepreneurs exhibit their risk-taking propensity in introducing change, and they believe to be remunerated for it (Harold, 1994). The construction of new firms paved the way for augmenting and revitalizing economic systems. The importance of entrepreneurship pivots on several economic and social facets, which are acknowledged at both national and international levels. Theoretically, Dyer 1994, gave a comprehensive framework by viewing entrepreneurship as a career influenced by psychological, social and economic factors. People's willingness to try and their level of effort results in the intentions which help them perform their behaviour (Ajzen, 1991). *The intention* is a mental picture of one's goal and action plan to achieve that goal (Tubbs and Ekeberg, 1991). Entrepreneurial intention is to undertake new ventures or create new value in existing organizations, i.e. Intrapreneurship. Intentions predict behaviours. Individual intentions are related to entrepreneurial behaviour (Shaver, 2001). Intentions are affected by attitudes, which are determined by personal and contextual variables (Ajzen, 1991). Potentiality occurs before a person recognizes or creates entrepreneurial opportunities. Entrepreneurial potentiality is linked to entrepreneurial possibility, which is conceiving the idea of becoming an entrepreneur (Gartner, 1988). Entrepreneurial possibilities become opportunities when there is a desire (impacted by psychological and sociological factors) and feasibility (Contextual and Institutional Factors.) Entrepreneurial orientation or intention is influenced by entrepreneurial potentiality. The psychological, social and institutional factors encompass entrepreneurial potentiality, which leads to the entrepreneurial intention with the moderating impact of entrepreneurial education (Aggarwal, 2019).

We need to view the bigger picture of entrepreneurship by giving a theoretical framework considering the various disciplinary approaches contributing to the field of entrepreneurship. An integrated approach has been used to examine the complex interplay of entrepreneurial behaviour. The individual, social and environmental factors impact entrepreneurial intention (Cooper, 1981; Dyer, 1994; Forson et al., 2014). This study is an empirical extension of the conceptual study, which studies the impact of factors of entrepreneurial potentiality on the entrepreneurial intention with moderating effect of entrepreneurship education (Aggarwal, 2019).

Need of the Study

- Entrepreneurship research has been growing over the past few decades. The field of entrepreneurship, despite the numerous published papers, has yet to lead to the emergence of accepted entrepreneurship theory as researchers from one particular field have tended to ignore the other disciplines leading to fragmentation of the direction of entrepreneurship research. Entrepreneurship has elicited interest from many disciplines of social sciences and humanities, paving the way for the opening up of new elements and challenges in entrepreneurial research. Entrepreneurship research has been criticized for having fewer empirical studies (Mueller and Thomas, 2000).
- The impact of demographic variables on entrepreneurial intention needs to be explored (Singh, 2014). Thus, researchers need to study the effect of demographic variables like gender, parents' occupation, school education, etc.
- There are very few studies that consider multidimensional drivers of entrepreneurial intention. (Fini et al., 2009) Most researchers have taken a uni-dimensional personality factor as an antecedent of entrepreneurial activity. The foundation of entrepreneurial behaviour that affects the entrepreneurial process and outcomes needs to be understood. For any academic endeavour and analysis in

entrepreneurship, an integrated approach is needed. It is very significant to reflect on the existing literature review and empirically study the different dimensions affecting entrepreneurial activity. The research needs multi-level investigations transcending different framing levels. Hence, this study aims to understand factors including different psychological traits, social dimensions, contextual and institutional aspects contributing to entrepreneurial potentiality and their influence on entrepreneurial intention.

- Global Entrepreneurship Monitor (GEM) shows substantial variation in the quantum of entrepreneurial activities. Some countries like Venezuela (25%) and Thailand (20.7%) have a very high rate of entrepreneurial activity, while countries like Hungary (1.9%) and Japan (2.2%) have lower rates. According to the GEM report, in 2014 in India, there were 4.1% of nascent adult entrepreneurs, whereas 2.5% were entrepreneurs running new business ventures. Thus the TEA (Total early-stage Entrepreneurial Activity) rate is found to be approximately 7% which means one in every 15 adults is undertaking entrepreneurial activity (www.gemconsortium.org). Very few Indian studies were conducted related to entrepreneurial orientation, taking into account only women entrepreneurs (Charumathi, 1997, Ganesan et al., 2002). Indian research studies on entrepreneurial orientation among students are very limited and there is no study encompassing all the factors i.e. individual, psychological, social and institutional so this makes the topic more suitable for carrying out a research and this research was done among students to empirically understand the factors affecting their entrepreneurial intentions.
- Very few studies involve entrepreneurial education as a moderator in entrepreneurial research (Shamsudin et al., 2017; Bhat & Singh, 2018), thus creating a need to study the moderating effect of entrepreneurial

education. Keeping in mind the importance of entrepreneurial education and the unemployment rate, the researchers need to study the moderating effect of entrepreneurship education on the relationship between the factors of entrepreneurial potentiality and entrepreneurial intention for the effective implementation of entrepreneurial activities.

Objectives of the Study

- To analyze the effect of gender, schooling area and parents' occupation on entrepreneurial intention.
- To explore the relationship between factors of entrepreneurship potentiality and entrepreneurship intention.
- To study the moderating effect of entrepreneurship education on the relationship between the factors of entrepreneurial potentiality and entrepreneurial intention.

Review of Literature

This empirical research paper analyses the dimensions of entrepreneurial potentiality and links it with entrepreneurial intentions. The following dimensions explored in this study are based on the review of literature which influences entrepreneurial intentions. These dimensions together form a model incorporated from the same author's previous work through an extensive literature review (Aggarwal, 2019).

Psychological Perspective

One approach to entrepreneurial research is to focus on individual resources leading to psychological perspectives that do not consider the importance of context in shaping individual choices. It views entrepreneurship as a function of people pursuing entrepreneurial activities (Eckhardt and Shane, 2003). It is inevitable for researchers in entrepreneurship to study the impact of psychological factors on entrepreneurial intentions as psychological factors, or personality traits, start developing at a very young age (Aggarwal, 2019). Various authors have advocated personality traits as the main characteristics impacting intentions (Costa et al., 1984 & Ismail et al., 2009; Zain et al.,

2010) though certain research studies were found to be inconclusive while identifying differences in personality among entrepreneurs (Gartner, 1988 & Stewart et al., 2003).

Creativeness

Creativity is generating new ideas, while innovation is the application of these ideas to provide something novel and valuable. Creativity is finding new meanings for existing concepts or a new way of solving a problem by breaking away from the perceptual and cognitive set (Amabile, 1983). It also includes transformational processes to create creative ideas by associating different products and expanding existing ideas.

Decision Making Skills

The higher the speed of the strategic decision-making process, the better the performance (Murmann and Sardana, 2013). Dragan Sutevski, founder and CEO of Sutevski Consulting, created small business excellence through innovative thinking and acting and stated that quick decision-making is one of the essential traits of an entrepreneur (www.entrepreneurshipinbox.com). Entrepreneurs generally have limited time to decide and need help to take all the decisions rationally. Hence, entrepreneurs are considered intuitive decision-makers (Schendel, 2001; Stewart and Roth, 2007).

Passion

Passion is the drive and energy required to overcome the various barriers (individual, social and institutional) to implementing the correct strategy. An entrepreneur needs personal strength and energy when starting an enterprise (Goss, 2005). In a study by Bird (1989), passion influences an entrepreneur's tenacity and persistence. Passion makes one believe the work is meaningful and can be linked to motivation facilitating innovation (Baum et al., 2001).

Locus of Control

Locus of control is a construct that denotes the extent to which we take responsibility for events in our life (Ajzen, 2002). Internal locus of control signifies an individual's belief that one can control one's behaviour and actions resulting in experienced

events (Stewart, 2012). Brockhaus (1975) gave internal locus of control as one attribute associated with entrepreneurial intentions. However, some studies found no significant difference in the locus of control between entrepreneurs and non-entrepreneurs (Gatewood et al., 1995). Kaufman et al., 1995 found entrepreneurs having lower levels of internal locus of control, and Korunka et al. (2003) found that different types of entrepreneurs have different levels of Locus of Control. Ahmed (1985) found a significant relationship between locus of control and entrepreneurship.

Risk-Taking Propensity

Risk-taking propensity does not distinguish entrepreneurs from non-entrepreneurs (Brockhaus, 1980). Entrepreneurs' psychological testing should be directed towards measuring handling risk (Palmer, 1971). Entrepreneurs risk other career opportunities and financial outcomes (Liles, 1974). Entrepreneurs starting a new venture indicate a capacity to override risks (Freeman et al., 2006). Rauch and Frese (2001) reported the relationship between business performance and risk-taking. Hence risk-taking propensity can be considered positively and significantly related to entrepreneurial behaviour (Rauch, Andreas, 2014).

Tolerance for Ambiguity

Tolerance for ambiguity is a tendency not to perceive ambiguous situations as threatening (Budner, 1962) but as challenging and needing to overcome unstable situations (Koh, 1996). Knight 1921 stated that entrepreneurs were awarded for bearing ambiguous rather than risky situations. This emphasized the importance of handling ambiguous situations in the activities of entrepreneurs.

Need of Achievement

It is one of entrepreneurial research's most widely researched personality characteristics (Chell, 2008). In a demanding environment, achievement needs become more significant (Brandstatter, 2011). A meta-analysis by Collins et al. 2004 and Rauch & Frese, 2007 found a correlation between achievement needs and organization performance.

Self-Efficacy

Self-Efficacy has emerged as an essential construct for entrepreneurial inclination and business growth (Segal et al., 2005). The likeliness of a new business venture is influenced by entrepreneurial self-efficacy, founded by Rauch and Frese (2007) in a meta-analysis.

Social Perspective

In the pretext of moving entrepreneurial research from a psychological to a social perspective, Gartner and Chell (1985) explored the relational and contextual perspective of entrepreneurial activity, thus developing social psychological research. An individual requires support to decide about starting a business (Forson *et al.*, 2014). It is mandatory to study the impact of social factors on entrepreneurial intention. Dyer (1994) studied the influence of social factors like networking and family support on entrepreneurial careers. "Entrepreneurs are born" has been emphasized under the Psychological theory.

In contrast, according to Social Institutional theory, social institutions like family play a significant role in developing entrepreneurs. Entrepreneurial research concerning the sociological context is still in its infancy and requires further progress (Johnson, 1990). Socialization is one of the most crucial determinant factors for entrepreneurship. The importance of government, society and family in developing the urge for entrepreneurship among female students was highlighted in a research study by Singh (2013).

Family Support

Family support is of great importance for starting new entrepreneurial ventures. Family members are found to be a part of the entrepreneurial team (Discua-Cruz, Howorth & Hamilton, 2013). Through the help of family, entrepreneurs can access diverse resources (Sirmon & Hitt, 2003). Family, Business, and entrepreneurship are interrelated (Nordquist & Merlin, 2010; Kammerlander & Ender, 2013).

Mentoring

Mentoring is essential for supporting entrepreneurial ventures as it provides guidance and expert advice to overcome obstacles (Sullivan, 2000). A mentor, using his experience, guides an entrepreneur to run

a business successfully. Mentoring is a panacea for entrepreneurial growth and business development (Chukwu & Uzochukwu, 2013). A study conducted in Nigeria stated that mentoring could develop entrepreneurial skills. It is also mentioned that entrepreneurial mentoring must be incorporated into the university curriculum to transform our nation into a flourishing entrepreneurial nation (Uzochukwu, Lilian & Chidiebere, 2015).

Networking

As examined by Reynolds (1991), one social context that influences individual entrepreneurial behaviour is the social network, whether tight or loose. Loose networks act as informal information networks needed to start an enterprise (Birley & Godrey, 1999), while tight groups assure high cohesiveness and confidential information (Reynolds, 1991). Polanyi (1944) stated that entrepreneurship is embedded in networking personal relationships. Social networks impact entrepreneurial intentions (Aldrick, 1999).

Peer Group Influence

The impact of peer group influence on entrepreneurship was confirmed by Phizacklea and Ram (1995). Peer group influence plays a crucial role in transforming coworkers into business owners (Nanda & Sorensen, 2006). The study also revealed that if the coworkers possessed prior experience related to entrepreneurship, they were more proficient in becoming entrepreneurs. More than 90% of start-up owners were subject to previous employment at a reputed organization. Thus, the time spent with coworkers or colleagues influences one's entrepreneurial career choice (Gompers, Lerner, and Scharfstein, 2005; Burton, Beckman, Christine, Sorensen, & Jepsen, 2002).

Institutional Perspective

Institutions are viewed as "rules of the game" of society (Baumol, 1990). The rules are set by the institutions which shape the economic behaviour of the individuals in our country by providing meaning and stability to social life (Scott, 2001) and also predict the overall economic performance of a country (North, 1994). Institutional factor comprises entrepreneurship awareness programs, guiding schemes and awareness of government schemes.

These factors are linked to entrepreneurial intention, and their contribution to entrepreneurship is being studied through a literature review. Institutional factors play a significant role in shaping entrepreneurs. Universities must develop their curriculum with a paper on entrepreneurship to introduce the business world to students.

Entrepreneurship Awareness Programs

Awareness programs in the field of entrepreneurship must be conducted by the government or non-governmental organizations in order to motivate students towards creating entrepreneurial ventures. 20% of the participants of an entrepreneurial program named Ingenio and Ekin chose entrepreneurship as their career whereas 54% were found to work in related entrepreneurial domain (Arruti & Azanza, 2014).

Guiding Material

Reviews, papers, websites and books which offer business-related knowledge are referred to as guiding material, according to the author of this paper. An empirical study revealed a positive relationship between knowledge resources and business performance. Entrepreneurial orientation augmented the relationship between knowledge resources and firm performance (Wiklund & Sheperd, 2003). Only some measures of knowledge resources acted as a solution towards enriching an individual's capacity to start a business (Shane, 2000).

Awareness of Government Schemes

According to a study by Luthje & Franke (2003), legislation, economic factors, political and financial support, and infrastructure impact entrepreneurial intention. Literature evidence supports that government schemes help promote entrepreneurship (Lerner, 1999). Entrepreneurship contributed towards the employment sector and increased the Gross Domestic Product (GDP), as per a study by Kumar & Liu (2005). Regarding this, researchers named Acs *et al.*, 2004 recommended that the government must work towards reducing the constraints on the entrepreneurial domain. Many developing countries witnessed policy formulation for uplifting the entrepreneurial sector (Oni and Daniya, 2012). Tax incentives, direct subsidies and

government procurement were a few initiatives the government made to bring resources for enlightening the entrepreneurial process (Shou, 2014).

Entrepreneurship Education

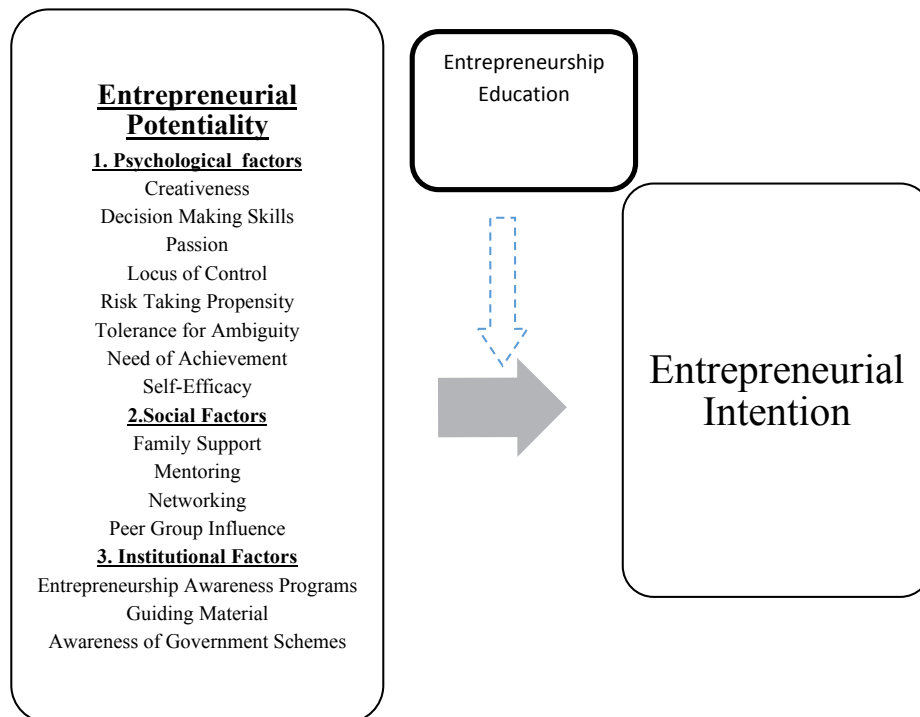
Rae (2010) stated that entrepreneurial education plays a vital role in the era of economic crises, like in 2008. Gorman *et al.* (1997) reported that entrepreneurship could be taught, impacting entrepreneurship attitudes. Pittaway and Cope (2007) concluded that entrepreneurship education positively impacts students' intentionality and propensity towards entrepreneurship without proving that they also make better entrepreneurs. Rae (2010) stated that entrepreneurship education plays a vital role in economic crises like in 2008. Entrepreneurship education is linked favourably to the entrepreneurial intentions of students. Educational initiatives are instrumental in enhancing entrepreneurship awareness. Some studies have negatively correlated entrepreneurship education with entrepreneurship intention (Oosterbeek *et al.*, 2010) and entrepreneurship performance (Hoing & Samuelsson, 2012). In a meta-analysis conducted by Martin *et al.* (2013), entrepreneurship education was found to have a significant but small positive relationship with the perception of entrepreneurship intention and other entrepreneurship-related skills and knowledge. Entrepreneurial education moderated the relationship between family background, entrepreneurship barriers, entrepreneurship traits, supportive environment, and entrepreneurial intention (Shamsudin *et al.*, 2017).

Proposed Framework

The interaction between different factors, including personality, social, contextual and institutional factors, impacts entrepreneurial activity in a Bourdieuan multi-level framework (Forson *et al.*, 2014). Entrepreneurial possibilities become opportunities when there is a desire (impacted by psychological and sociological factors) and feasibility (Institutional Factors). The individual, social and institutional dimensions affecting entrepreneurial activity postulated by theorist Cooper, 1981; Dyer, 1994; Forson *et al.*, 2014 are examined. The psychological, sociological and institutional factors

are grouped under the term “Entrepreneurial Potentiality” and its impact on entrepreneurial intention is analysed by using the model given by the same author (Aggarwal, 2019)

Figure 1: Dimensions Linking Entrepreneurial Potentiality with Entrepreneurial Intention



Research Methodology

The descriptive quantitative research method was used to find the relationship between entrepreneurial potentiality and intention dimensions. A survey method using a questionnaire was undertaken. Based on the abovementioned factors, the questionnaire included demographic details like gender, schooling type and parents’ occupation. The Entrepreneurship Potentiality Questionnaire (EPQ) has 21 items, one for each dimension mentioned above and three for entrepreneurship education and entrepreneurial intention. The questionnaire was checked for its reliability.

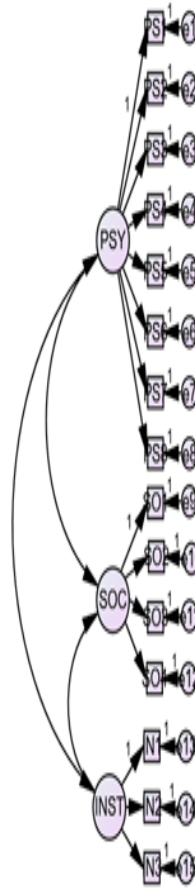
This study mainly targeted undergraduate students whose age group lies between 19-22 years. The data was collected from the participants of the Youth Money Olympiad conducted by Money Wizard in ten colleges in Chennai related to financial literacy. Random sampling using a random table was used to collect the data from the participants. A total of 280 questionnaires were collected. Only 266 questionnaires were completely filled, so the total sample size is 266. Cronbach’s reliability test, Confirmatory Factor analysis, T-test, Regression Analysis and Moderation Analysis were done using SPSS & AMOS.

Data Analysis

Reliability Analysis

The reliability values are analyzed using Cronbach’s alpha values. The Cronbach’s alpha value for psychological factors is 0.735, the sociological factor is 0.639, and the institutional factor is 0.641; all these values are above the suggested value of 0.6; hence, the reliability of the variables is established.

CONFIRMATORY FACTOR ANALYSIS



PSY- PSYCHOLOGICAL FACTORS, SOC- SOCIAL FACTORS, INST – INSTITUTIONAL FACTORS

CMIN/DF	GFI	AGFI	CFI	RMSEA
2.507	0.908	0.874	0.856	0.075

The Confirmatory Factor Analysis (CFA) is carried out to check the model fit, and the results are found to be satisfactory. The CMIN/DoF is found to be 2.507 as against the suggested value of less than 5, the GFI, AGFI and CFI values are 0.908, 0.874 and 0.856 as against the suggested value of close to 0.9 and the RMSEA value is 0.075 as against the suggested value of less than 0.08. All the obtained values are in the range of suggested values. Hence, the model fit is perfectly established.

T-TEST LINKING ENTREPRENEURIAL INTENTION WITH GENDER, SCHOOLING AND PARENTS OCCUPATION

		Entrepreneurial Intention				
		N	Mean	SD	T-Value	Significance Value
Gender	Male	225	3.86	1.006	1.353	0.177
	Female	41	3.63	0.915		

Schooling	Rural	67	3.90	1.032	0.721	0.472
	Urban	108	3.78	1.062		
Parents as Entrepreneurs	Yes	133	3.95	0.944	2.110	0.036*
	No	133	3.70	1.030		

*p<0.05

As shown in table 4 t-test shows there is no significant difference in entrepreneurial intention among male and female participants. There is also no significant difference in entrepreneurial intention among the participants based on their area of schooling (Urban vs Rural). T-test reveals a significant difference in entrepreneurial intentions among entrepreneurs whose parents are entrepreneurs.

Correlation

Correlations					
		EDU	INSTI	PSY	SOCI
Entrepreneurial intention	Pearson Correlation	.827**	.711**	.681**	.533**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	266	266	266	266
**. Correlation is significant at the 0.01 level (2-tailed).					

From the correlation output it can be inferred that entrepreneurial intention is having significant and positive correlation with education and all the independent variables (institutional, psychological and social) at 99% significance level.

Regression Analysis

Model	R	R Square	Adjusted R Square	F- values
1	.711	.506	.504	270.38**
2	.823	.677	.674	275.47**
3	.890	.791	.789	330.99**

**Significant at 99% confidence level

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.707	.111		15.403	.000
	INSTI	.496	.030	.711	16.443	.000
2	(Constant)	.612	.129		4.742	.000
	INSTI	.358	.027	.512	13.175	.000
	PSY	.399	.034	.459	11.794	.000
3	(Constant)	.074	.113		.656	.513
	INSTI	.326	.022	.467	14.786	.000
	PSY	.349	.028	.401	12.666	.000
	SOCI	.241	.020	.349	11.980	.000
Dependent Variable: Entrepreneurship intention						

INSTI – Institutional Factors, PSY – Psychological Factors and SOCI- Social Factors

The step-wise regression is carried out to find the impact of the independent variables (psychological, institutional, and social factors) on the dependent variable (entrepreneurial intentions). The results indicate that institutional factors alone contribute 50.4% of variation on entrepreneurial intentions, institutional factors along with psychological factors contribute 67.4% of variation on entrepreneurial intentions, and institutional factors along with psychological and social factors contribute 78.9% of variation on entrepreneurial intentions.

Moderation Analysis

The moderation analysis uses SPSS- PROCESS MACRO with entrepreneurial education as a moderator. The institutional factor has a significant positive impact on entrepreneurial education with a coefficient of 0.1628 ($t=2.55$) significant at a 95% confidence level; entrepreneurship education has a significant positive impact on entrepreneurial intentions with a coefficient of 0.0507 ($t=2.37$) significant at 95% confidence interval with the R-square of 0.8471. The interaction effect of institutional factors and entrepreneurship education revealed a change in R-square (0.033) which is significant at a 95% confidence interval. The conditional effects revealed that at the levels of -1, 0 and +1 S.D, the effect size through entrepreneurship education as a moderator increased from 0.2811 to 0.3160 to 0.3549, all being significant at a 99% confidence level.

The psychological factor has a significant positive impact on entrepreneurial education with a coefficient of 0.3794 ($t=4.29$) significant at a 99% confidence level, entrepreneurship education has a significant positive impact on entrepreneurial intentions with a coefficient of 0.4292 ($t=3.58$) significant at 99% confidence interval with the R-square of 0.8421. However, the interaction effect between psychological factors and entrepreneurship education is insignificant. The social factor has an insignificant impact on entrepreneurial education; entrepreneurship education has a significant positive impact on entrepreneurial intentions with a coefficient of 0.3588 ($t=3.95$) significant at a 99% confidence interval with an R-square of 0.7635. The interaction effect between social factors and entrepreneurship education is insignificant. The moderation analysis output revealed that entrepreneurial

education moderates the relationship between institutional factors and entrepreneurial intentions. Entrepreneurial education does not moderate the relationships between psychological and social factors with entrepreneurial intentions.

Discussion of Findings

The t-test result reveals that gender and area of schooling do not have an effect on entrepreneurial intention whereas parent's occupation had a positive effect on entrepreneurial intention. Similar results were shown in a study conducted by Wilson et al in 2007 stating that gender does not produce any effect in entrepreneurial intentions. The results are in contradiction to certain studies that reveal that gender seems to affect entrepreneurial intentions i.e. men possessed a higher edge over women in starting new ventures (Lele 1986; Gupta, 2008; Nishantha, 2008; Thrikawala, 2011). Sri Lankan studies also reveal that there exists a relationship between family business and entrepreneurial intention (Nishantha, 2008; Thrikawala, 2011). Students having self-employed parents were found to possess higher inclination towards pursuing entrepreneurship as a career (Nguyen, 2018). An empirical study conducted among 532 management students in Mumbai revealed that parental influence and family background strongly impacted entrepreneurial intention, whereas gender was not found to influence the inclination towards entrepreneurship (Singh, 2014).

From the regression analysis the researcher could come to a conclusion that **Institutional factors** (Entrepreneurship Awareness Programs, Guiding Material and Awareness of Government schemes), **Social factors** (Family Support, Mentoring, Networking and Peer Group Influence), **Psychological factors** (Creativeness, Decision Making Skills, Passion, Locus of Control, Risk Taking Propensity, Tolerance for Ambiguity, Need for Achievement and Self-Efficacy) plays a critical role in augmenting the entrepreneurial intention among the youth of our country. The results are in line with the following research studies. An Indian study found that certain social (Family Support), psychological (Risk taking propensity), and institutional (Government Schemes) factors highly affect entrepreneurial orientation among women entrepreneurs (Jyoti et al, 2011). Tolerance for ambiguity was found to be a useful

predictor of entrepreneurial orientation (Okhomina, 2006). Entrepreneurs tend to exhibit a higher need for achievement (Mc Clelland, 1965). Self-efficacy is found to influence entrepreneurial intentions (Zhao et al, 2005). A Sri Lankan study reveals that the undergraduates who possessed low intention levels towards entrepreneurship were also found to have less inclination towards risk taking propensity (Sivarajah & Achchuthan, 2013). There exists a moderating effect of entrepreneurial education on the relationship between institutional factors and entrepreneurial intentions. A study conducted in Malawi on both male and female entrepreneurs suggested that entrepreneurial education plays a critical role in the success of ventures owned by women entrepreneurs (Chirwa, 2008). An empirical study conducted among Turkish university students stated that certain entrepreneurial traits like need for achievement, locus of control, risk taking propensity & innovativeness were higher in students who desire to become entrepreneurs (Gurol & Atsan, 2006). Education programs on entrepreneurship helps in building the above cited entrepreneurial characteristics in an individual, preferably students who are not showing their willingness towards entrepreneurship according to a study conducted by Gurol & Atsan, 2006. According to Samili, 2002 developing countries play an important role in developing entrepreneurial talent and the countries should also pave the way for an exclusive class of entrepreneurs to emerge in order to boost the country's economy. Founders of a business were found to have higher need for achievement, were prone to take more risks and possessed a higher degree of tolerance of ambiguity (Begley et al, 1987). An Indian study recommends that progressive education in the field of entrepreneurship has a critical role to play in the career intentions of students interested in the entrepreneurial domain (Chandra et al, 2015). According to a Sri Lankan study there exists a relationship between personality traits (locus of control, need for achievement and risk taking propensity) and entrepreneurial intention (Nishantha, 2008). There tends to be an indirect impact of personality trait on entrepreneurial intention (Khuong & An, 2016). An empirical study conducted among 240 undergraduates of the University of Kelaniya in Sri Lanka suggests that locus of control, need for achievement, innovation and risk taking

ability positively affects entrepreneurial inclination whereas tolerance of ambiguity negatively affects entrepreneurial inclination (Edirisinghe & Nimeshi, 2016). Entrepreneurial education moderated the relationship between factors like family background, entrepreneurship barriers, entrepreneurship traits and supportive environment and entrepreneurial intention (Shamsudin et al, 2017). An empirical study conducted among 350 final year business studies students revealed that entrepreneurial education moderated the relationship between subjective norms and entrepreneurial attitude and subjective norms and perceived behavioral control. Furthermore, the moderating effect of entrepreneurial education with respect to gender on the relationship between subjective norms and entrepreneurial intention also existed (Bhat & Singh, 2018).

The following research studies have results contrary to the studies mentioned above. A study by Brockhaus, 1980 suggested that entrepreneurs' risk-taking propensity was not considered a distinguishing factor. Specific research studies in entrepreneurship were found to be inconclusive while identifying differences in personality among entrepreneurs (Shurry et al., 2002 & Stewart et al., 2003). According to an empirical study by Gurol & Atsan (2006), psychological traits such as tolerance for ambiguity and self-efficacy were lower in entrepreneurially oriented students than entrepreneurially non-oriented students.

Suggestions

- An entrepreneur's ability with his/her personality traits or behavioural pattern is developed over time, primarily through relationships with their parents and teachers in their early life stages. The values, traits and ideals inculcated in one's school, family, culture, community and religion remain with an individual and guide him throughout his life. The personality traits were found to be learned in the early stages of life. Much attention should be paid to certain psychological traits like the need for achievement, risk-taking propensity, tolerance for ambiguity and self-efficacy. These psychological traits

can be inculcated in an individual through educational programs. One of the significant problems for poor economic growth in certain countries is failing to master entrepreneurship traits. A multi-tier strategy involving students' education through economics is crucial for building up entrepreneurial intentions.

- Entrepreneurial awareness programs must be designed for parents as their support in their children's careers as entrepreneurs is very important. According to a framework proposed by Valerio et al., 2014 entrepreneurial education should be provided to secondary education students as well as higher education students (undergraduates and post graduates) and entrepreneurial training must be given to potential entrepreneurs (inactive, vulnerable or unemployed youth) and practising entrepreneurs (Informal, micro and small enterprise owners, High-growth potential enterprise owners).
- Entrepreneurial awareness programs must be designed not only for students but also for parents and teachers, as they play a vital role in building the career of their wards. The target audience of the program, the outcomes of the program, the dimensions shaping these outcomes and the cost at which the outcomes are achieved are the four main elements while designing an entrepreneurship education program. Feedback should be taken from the target audience before and after an interactive session on entrepreneurship. Feedback is taken before the program would help in knowing about the requirements, interests and intentions of the audience before attending the program. Feedback taken after the program helps identify how many of the target audience aspire to take up entrepreneurship as a career.
- Entrepreneurial education should involve a cross-course project model by Envick et al., 2003 as an interdisciplinary approach in the field of entrepreneurship given, which employs the methodology that the content of one course helps in teaching the objectives

to be learned in the other course and vice versa increasing ambiguity and uncertainty. Entrepreneurship Labs can be constructed in educational institutions that allow students to come in contact with researchers, businesses and innovators. Through real-life cases, the students could work towards realizing their goals, i.e., becoming entrepreneurs. Through these real-life cases, they can also improve their personality traits like the need for achievement, tolerance for ambiguity, need for achievement and self-efficacy. Life History analysis is found to be a significant contributor to the field of entrepreneurial education (Peterson et al., 2003). A successful small venture owner must be chosen. Then his success story of running the business must be written down interestingly and the same should be taught to the audience of an entrepreneurial education program.

- Students should be encouraged to participate in organizations like Students in Free Enterprise (SIFE), a fast-growing USA organization which aids pre-professionals in order to possess a meaningful career. Since students intend to become entrepreneurs, the government should have policies and procedures supporting their ventures.
- The government, other educational institutions, and NGOs can work towards enhancing entrepreneurial intentions and behaviour. A consortium to conduct large-scale research in India should be developed on the lines of the Entrepreneurial Research Consortium (ERC) in the USA, which conducts large-scale research in entrepreneurship. Research also needs to be conducted on the regulatory and financial problems that hinder the transformation of intention into entrepreneurial behaviour.

Conclusion

The purpose of the study is to explore the influence of various psychological, social, contextual and institutional factors on entrepreneurial intention and also to study the moderating effect of entrepreneurial

education on the relationship between factors of entrepreneurial potentiality and entrepreneurial intention among students. The various institutional, personality and social support factors emerged as significant predictors of entrepreneurial intention. No prior study in India compared all the dimensions of entrepreneurship potentiality and its influence on entrepreneurial intention among students. Since students are future entrepreneurs, this study plays a significant role in understanding the dimensions of entrepreneurial potentiality impacting their intentions.

Implications

The research implication of this study is that the factors of personality, social and institutional groups grouped under the term entrepreneurial potentiality (Aggarwal, 2019) play a significant role in understanding entrepreneurial intentions. The conceptual model developed by the same author in her previous publication is strengthened through empirical testing. Entrepreneurship education moderates the relationship between institutional factors of entrepreneurial potentiality and entrepreneurial intention. Thus this paper is an extension of the conceptual paper developed by the same author, which cited the importance of entrepreneurship education in developing entrepreneurs. Hence this paper proves that entrepreneurship education is considered to be of great importance in shaping entrepreneurs. This paper empirically proves the comprehensive effect of the factors of entrepreneurial potentiality (psychological, social and institutional), entrepreneurial intention and the role of entrepreneurship education. The institutional factors were found to primarily and majorly impact entrepreneurial intention, but if entrepreneurship education is not there, the role of institutional factors in impacting entrepreneurial intention is limited. Institutional factors play the most crucial role. All agencies need to work towards making students aware of various entrepreneurship programs and government schemes and play an essential role in imparting entrepreneurship education among budding entrepreneurs.

Scope For Further Research

Further research studies may be conducted incorporating all the above factors for determining the factors affecting entrepreneurial activities in different regions. More entrepreneurial traits can be incorporated for further study. Studies can be conducted comparing successful and non-successful entrepreneurs. Cultural factors may be considered as a factor impacting entrepreneurial intention. Further comparative studies may also be conducted between the two countries for their TEA (Total early-stage Entrepreneurial Activity) Rate. More mediating and moderating variables can be found from an extensive review of the literature and their impact can be tested empirically.

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