

The fintech frontier: Investigating fintech entrepreneurial intentions in the light of fintech awareness

Abin JOHN

Bharathidasan University, India
abinjohnnunny555@gmail.com

Selvaraj VANITHA

Bharathidasan University, India
vanitha@bdu.ac.in

Muhammed JISHAM

Bharathidasan University, India
jisham@bdu.ac.in

Abstract. *Fintech startups, with their disruptive potential, are challenging established financial services and bridging the gap between the underserved and the economic system with innovative technology. This study, which delves into fintech entrepreneurial intention, a pivotal first step in the entrepreneurial process, aims to identify the variables that influence it. The study employs the Theory of Planned Behavior (TPB) and introduces innovativeness, self-efficacy, and fintech awareness as additional factors. Two hundred ninety-eight respondents shared their fintech entrepreneurial intentions and associated factors, providing valuable insights. The findings underscore the significant impact of all factors, except subjective norms, on fintech entrepreneurial intention, highlighting the transformative potential of this field that can inspire us all.*

Keywords: fintech, entrepreneurial intention, theory of planned behaviour, fintech awareness, innovativeness.

JEL Classification: L26, F65.

1. Introduction

The fintech industry is critical in altering the global financial services market and can potentially empower the underserved. Over the last decade, the financial technology (fintech) industry has seen incredible growth and transformation, revolutionising how financial services are offered and consumed (Lagna & Ravishankar, 2022). Fintech can bridge the gap between the underserved and the financial system, connecting the underprivileged to the financial system. Fintech has expanded its reach to unbanked and underbanked communities by offering digital and mobile-based financial services, giving them access to banking, credit, and investment services. Fintech startups use novel technology and digital solutions to disrupt established financial services and create more efficient, accessible, and user-friendly alternatives. Fintech firms have been a driving force in transforming the financial services sector, responding to diverse customer needs and tackling numerous financial difficulties (Phung, 2023). Aspiring entrepreneurs in this dynamic area are motivated by a desire to use technology and creativity to develop unique solutions that address existing financial difficulties while catering to consumers' ever-changing requirements. Fintech entrepreneurial intention, the conscious and planned desire to launch a new business venture within the field, is the initial step in the entrepreneurial process. Several theories for measuring entrepreneurial intention have been established, each offering valuable insights into the cognitive processes and elements influencing individuals' decisions to become entrepreneurs. The Theory of Planned Behavior (TPB), a robust and well-confirmed theory in various cultural and entrepreneurial contexts (Kolvereid, 1996), is the most significant of these theories for assessing entrepreneurial intention. Including attitudes, subjective norms, and perceived behavioural control gives a comprehensive and diverse approach to analysing entrepreneurial intention (Ajzen, 1991).

The present study aims to identify the factors contributing to fintech entrepreneurial intention with an extended model of TPB—innovativeness, a crucial component of entrepreneurship, is added to this model, as is self-efficacy. In fintech entrepreneurship, fintech knowledge and awareness also play a crucial role in developing aspirations towards fintech ventures, which is also included in the model.

2. Literature Review and hypotheses development

2.1. Fintech entrepreneurial intention (FEI)

Entrepreneurial intention is critical to understanding and predicting entrepreneurial behaviours (Krueger and Carsrud, 1993; Kirby and Ibrahim, 2011). FEI can be viewed as a deliberate and planned desire by an individual within the financial technology industry to establish a new business venture (Kolvereid, 1996; Wilson et al., 2007). Becoming an entrepreneur in fintech involves leveraging technology to create innovative solutions that address financial challenges and provide value-added services. Starting a fintech firm begins with intention, and it becomes a critical first step in the entrepreneurial process

(Nguyen et al., 2022; Phung, 2023). It represents an individual's initial motivation and commitment to pursue entrepreneurship and create new fintech products, services, or platforms. A combination of personal, environmental, and situational factors constantly influences this intention (Shi et al., 2020).

2.2. Attitude towards Fintech Entrepreneurship (ATF)

The ATF refers to how someone evaluates, perceives, and feels about starting and operating a fintech venture (Ajzen, 1991; Souitaris et al., 2007). It represents the individual's positive or negative feelings and thoughts about starting a business in the financial technology (fintech) industry (Liñán and Chen, 2009). FEI are significantly influenced by ATF (Dinh and Sen, 2022). Individuals with positive attitudes are more likely to succeed in their fintech entrepreneurial endeavours, while negative attitudes hinder their progress and willingness to succeed (Agolla, Monametsi and Phera, 2019). Based on the previous literature, we framed the following hypothesis.

H1: Attitude towards fintech entrepreneurship (ATF) has a significant positive relationship with Fintech entrepreneurial intention (FEI)

2.3. Subjective norms (SN)

SN refers to a person's perception of social pressure and the influence of essential others concerning a particular behaviour or action (Ajzen, 1991). Family, friends, peers, coworkers, mentors, and societal norms are considered as these significant others (Miranda et al., 2017). SN are extremely important in shaping a person's attitudes, intentions, and behaviours. SN can play a vital role in shaping FEI (Kautonen et al., 2013; Nguyen et al., 2020). Influential individuals in their lives can boost their self-confidence and motivation to pursue their entrepreneurial aspirations in the fintech sector by providing them with encouragement, support, and approval and considering the importance of subjective norms following the hypothesis framed.

H2: Subjective norms (SN) have a significant positive relation with fintech entrepreneurial intention (FEI).

2.4. Perceived behaviour control (PBC)

PBC involves how easy or difficult it is to perform a particular behaviour and the presence or absence of factors that may facilitate or hinder behaviour (Kadir et al., 2012). PBC, in the context of entrepreneurship, reveals a person's self-assurance in their capacity to launch and run a fintech enterprise (Ajzen, 2002). PBC directly and significantly influences FEI (Autio et al., 2001). People are more likely to have favourable intentions about beginning a fintech enterprise when they have faith in their ability to overcome potential obstacles and take advantage of available resources and possibilities. Studies reveal the crucial role of PBC in shaping entrepreneurial intention, so we framed the following hypothesis.

H3: Perceived Behaviour Control (PBC) has a significant positive relation with fintech entrepreneurial intention (FEI).

2.5. Innovativeness (INN)

INN is the readiness and capacity of people or organisations to adapt and apply new concepts, ideas, technologies, processes, or goods to add value and gain an advantage (Ahmed et al., 2010). INN is crucial in fintech entrepreneurship because the fintech sector is fundamentally driven by technology and disruptive ideas (Mueller and Thomas, 2001). Successful fintech businesses frequently provide cutting-edge products to the market that fill gaps in existing financial services, improve user experiences, and increase overall effectiveness and accessibility. Innovativeness is a critical factor in determining the desire of fintech entrepreneurs to launch new businesses (Biswas and Verma, 2021). Innovation fosters a positive attitude toward entrepreneurship since individuals see it as a way to bring new ideas to life. Furthermore, innovativeness enhances entrepreneurs' perception of behaviour control, as they believe they can solve challenges (Law and Breznik 2016). The following hypotheses are framed to determine the importance of innovativeness in fintech entrepreneurial intention.

H4: Innovativeness (INN) has a significant positive relation with attitude towards fintech entrepreneurship (ATF)

H5: Innovativeness (INN) has a significant positive relation with perceived behaviour control (PBC)

2.6. Self-efficacy (SE)

An individual's SE is the belief that they can accomplish tasks effectively, reach goals, and handle various situations effectively (Huitt, 2011). The SE of individuals plays a vital role in fintech entrepreneurship. People with high SE in fintech are more confident in their skills, problem-solving abilities, and capacity to navigate challenges (Dissanayake, 2013). People with high SE feel more in control of their behaviour and activities because they are more confident in their abilities (Naktiyok et al., 2010). This increased PBC drives them to overcome obstacles, persevere in their ambitions, and make decisions with more excellent agency and determination.

H6: Self-efficacy (SE) has a significant positive relation with Perceived Behaviour Control (PBC)

2.7. Fintech Awareness (FTA)

The state of being conscious or educated about something is called awareness. It is the acknowledgement, comprehension, or realisation of a certain fact, circumstance, or notion (Islam and Gronlund, 2011). FTA is an individual's level of knowledge, comprehension, and familiarity with financial technology and its uses. Individuals with fintech awareness can perceive the incredible scope of opportunities and unrealised potential in the fintech

field (Nguyen, 2022). Knowing about new fintech solutions and success stories drives entrepreneurs to picture their own fintech companies, fuelling their desire to establish a name for themselves in the field (Phung, 2023b). FTA educates budding entrepreneurs on the most recent technology and its applications in the financial sector. FTA educates budding entrepreneurs on the most recent technology and its applications in the financial sector. So, we framed the hypothesis.

H7: Fintech awareness (FTA) has a significant positive relation with fintech entrepreneurial intention (FEI).

3. Methodology

3.1. Research Instrument

FEI, ATF, SN, and PBC were measured using four items. All TPB components are measured through the items directly inspired by those developed and validated by Linan and Chen (2009). The questionnaire contains five statements used to measure INN, originating from Koh (1996). Wilson et al. (2007) developed a scale to measure SE. Finally, four items from Alaeddin and Altounjy (2018) were used to identify the variable FTA. A 5-point Likert scale ranges from "Strongly Disagree" to "Strongly Agree," with a neutral midpoint to assess the variable.

3.2. Sample and Data Collection

The study focused on the final year commerce and management students from Tamilnadu. Only final-year postgraduate students were considered for the study. They were chosen because they would have studied key business skills, so initiating a new venture could be a feasible alternative (Krueger et al., 2000). In addition, students are considered to be the population with a high inclination towards startups (Maheshwari & Kha, 2021). We followed the convenience sampling technique, commonly used in entrepreneurship research, despite concerns about generalizability (Kuckertz et al., 2019). All the data was collected online through a Google form with the help of the faculties in different institutions.

Utilising G Power version 3, the sample size for this investigation was determined. With an impact size of 0.15 and a power of 0.95, this study required 146 participants to test the model with six predictors. A total of 318 respondents were received during the study period from November 2023 to December 2023, so the minimum required sample for the study was acquired. Among the 298 respondents, females constitute 56%, and males constitute 44%. The annual family income of the respondents also identified shows 60% of them having income below 2.5 lakhs. Ninety-eight people have an income between 2.5 lakhs to 10 lakhs. The sample consists of 143 people from the urban population and 175 from the rural population. Even though most respondents belong to agricultural families, 20% still had some business background.

4. Data analysis and results

The Structural Equation Modelling (SEM) approach explored the causal relationship between the factors and fintech entrepreneurial intention. SEM is considered an appropriate technique to simultaneously test the relationships between the different constructs of the model (Hair et al., 2013). Further, it allows the assessment of the relationships between several latent constructs while minimising the model error. PLS-SEM was used to analyse the measurement model of this research.

4.1. Measurement model

4.1.1. Validity and reliability

The convergence validity of the indicators was based on the factor loadings that exceeded 0.70 on the respective constructs (Fornell & Larcker, 1981). Additionally, we calculated the Average Variance Extracted (AVE) for each construct and found that all values ranged from 0.505 to 0.625, exceeding the recommended threshold of 0.50 (Fornell & Larcker, 1981). Composite Reliability (CR) was used to assess internal consistency reliability. The CR values for each construct ranged from 0.715 to 0.835, beyond the 0.70 threshold recommended by Hair et al. (2013). The Cronbach's alpha values ranged from 0.709 to 0.806, further confirming the validity of the measurement model (Hair et al., 2013).

Table 1. Measurement model analysis

Variable	Loadings	Cronbach alpha	CR-Rho A	AVE
FEI	0.768-0.802	0.789	0.792	0.611
ATF	0.737-0.847	0.800	0.808	0.625
SN	0.659-0.795	0.709	0.720	0.536
PBC	0.682-0.854	0.763	0.792	0.587
INN	0.690-0.781	0.806	0.818	0.561
SE	0.664-0.862	0.784	0.835	0.602
FTA	0.625-0.778	0.701	0.716	0.505

4.1.2. Discriminant validity

we employed the Heterotrait-Monotrait (HTMT) method to assess discriminant validity. All HTMT values were below the threshold of 0.85, indicating that the constructs are distinct from each other. In addition, Discriminant validity was evaluated using the Fornell-Larcker criterion, which involves comparing the square root of the AVE values with the correlations between constructs. The square root of the AVE for each construct was more significant than the correlations with other constructs, supporting the presence of discriminant validity.

Table 2. Discriminant validity (HTMT)

	ATE	FEI	FTA	INN	PBC	SE	SN
ATE							
FEI	0.795						
FTK	0.756	0.646					
INN	0.540	0.794	0.526				
PBC	0.571	0.737	0.565	0.671			
SE	0.799	0.680	0.774	0.712	0.602		
SN	0.194	0.253	0.349	0.248	0.331	0.201	

The variance inflation factors (VIFs) of the latent variables used in the study were examined to test the model's multicollinearity problems. The results show that the VIF factors range from 1.163 to 2.000, significantly below the cutoff value 3.3. Consequently, this study did not experience concerns about collinearity.

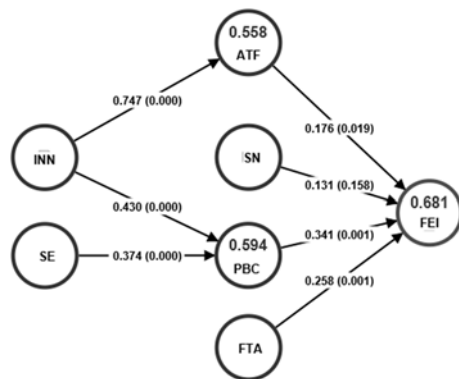
4.2. Structural model

As noted in Table 6, the path coefficients show that INN has a significant relation with ATF ($\beta= 0.747, P<0.01$). INN also show a significant relationship with PBC ($\beta= 0.131$ with $P< 0.01$). The coefficient for ATF shows a positive ($\beta= 0.176$) and significant ($P< 0.05$) effect on FEI. The coefficient for PBC shows a positive ($\beta= 0.341$) and significant ($P< 0.01$) effect on FEI. The relationship between SE and PBC is positive and significant ($\beta= 0.374, P<0.01$). Finally, FTA significantly affects FEI ($\beta= 0.258, P<0.01$). However, only SN does not create any significant effect on FEI. So, all the hypotheses H1, H3, H4, H5, H6 and H7 were supported. However, only H2 was not supported. The R^2 value for entrepreneurial intention is .681, showing that the six exogenous constructs can explain 68 % of students' entrepreneurial intention variation.

Table 3. Hypotheses Testing

	Hypothesis	β	T statistics	P values	Decision
H1	ATF -> FEI	0.176	2.346	0.019	Supported
H2	SN -> FEI	0.131	1.412	0.158	Not supported
H3	PBC -> FEI	0.341	3.290	0.001	Supported
H4	INN -> ATF	0.747	19.823	0.000	Supported
H5	INN-> PBC	0.430	5.012	0.000	Supported
H6	SE -> PBC	0.374	4.360	0.000	Supported
H7	FTA-> FEI	0.258	5.012	0.001	Supported

Figure 1. Path analysis and Hypotheses testing



4.3. Discussion

This study explores the factors that influence the desire of students to become entrepreneurs in the rapidly expanding financial technology (fintech) sector. By highlighting several key factors that significantly impact these intentions, the research offers an understanding of the

complicated processes at work. The study's most important finding is the favourable relationship between innovation abilities (INN) and students' attitudes toward fintech (ATF). According to this exciting observation, more innovative students generally see fintech entrepreneurship more favourably. This association emphasises the importance of supporting innovation in learning environments to develop a favourable view of new and emerging industries. Moreover, the research indicates a positive relationship between perceived behavioural control (PBC) and innovation capability. This suggests that innovative students feel more confident and competent when making decisions in the fintech business. This control is essential because it gives students the confidence to take risks and explore entrepreneurial endeavours. Students' ambitions to pursue careers in the fintech industry are significantly predicted by attitude toward fintech (ATF) and perceived behavioural control (PBC). This study is consistent with planned behaviour, which holds that forming entrepreneurial intentions requires positive attitudes and a strong sense of control. It also has implications for practice. Therefore, fostering a positive outlook and increasing students' understanding of control may be helpful to tactics for promoting fintech entrepreneurship.

The study also discovered that self-efficacy (SE) and perceived behavioural control (PBC) are positively related. Students with higher self-efficacy are more confident in influencing results and controlling their entrepreneurial activities. This emphasises that self-confidence is vital to entrepreneurial ambition since it increases students' perceived control over their actions and decisions. Financial technology awareness (FTA) is crucial in determining entrepreneurial intentions. This conclusion emphasises the relevance of educational programs and curricula that provide complete insights into fintech, igniting students' curiosity and willingness to work in this dynamic field. It emphasises the significance of academia in moulding students' entrepreneurial inclinations. Interestingly, subjective norms (SN) do not significantly affect fintech entrepreneurial intention. This finding is consistent with previous studies and suggests that the influence of peers, family, and societal expectations may not be as pivotal in fintech entrepreneurship. Instead, personal attitudes, perceived control, and self-efficacy play a more critical role.

Conclusion

This study shows that fostering students' innovativeness, promoting positive attitudes, and increasing their sense of control to cultivate their fintech entrepreneurial intention is very important. Additionally, increasing awareness of fintech concepts and considering social influences are crucial in encouraging student interest in fintech entrepreneurship. Ultimately, this research endeavours to shed light on the factors that encourage and hinder individuals' fintech entrepreneurial aspirations, facilitating the creation of targeted interventions and support systems to foster a thriving fintech entrepreneurial ecosystem. By understanding the nuances of fintech entrepreneurial intention, stakeholders in the fintech industry can harness the potential of innovative entrepreneurs to drive forward the advancement of financial technology and positively impact the global financial landscape.

Further research, including longitudinal studies and exploration of additional variables, is recommended to understand better the causal relationships and contextual factors influencing fintech entrepreneurial intentions among students. This study offers valuable insights for educators, policymakers, and stakeholders interested in fostering a thriving fintech entrepreneurship ecosystem and supporting student entrepreneurial aspirations.

References

- Agolla, J.E., Monametsi, G.L. and Phera, P., 2019. Antecedents of entrepreneurial intentions amongst business students in a tertiary institution. *Asia Pacific Journal of Innovation and Entrepreneurship*, [online] 13(2), pp. 138-152. <<https://doi.org/10.1108/apjie-06-2018-0037>>
- Ajzen, I., 1991. The theory of planned behaviour. *Organisational Behavior and Human Decision Processes*, [online] 50(2), pp. 179-211. <[https://doi.org/10.1016/0749-5978\(91\)90020-t](https://doi.org/10.1016/0749-5978(91)90020-t)>
- Ajzen, I., 2002. Perceived behavioural control, Self-Efficacy, locus of control, and the theory of planned behaviour. *Journal of Applied Social Psychology*, [online] 32(4), pp. 665-683. <<https://doi.org/10.1111/j.1559-1816.2002.tb00236.x>>
- Autio, E., Keeley, R.H., Klofsten, M., Parker, G.G.C. and Hay, M., 2001. Entrepreneurial Intent among Students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies/Enterprise & Innovation Management Studies*, [online] 2(2), pp. 145-160. <<https://doi.org/10.1080/14632440110094632>>
- Biswas, A. and Verma, R.K., 2021. Attitude and alertness in personality traits: a pathway to building entrepreneurial intentions among university students. *Journal of Entrepreneurship*, [online] 30(2), pp. 367-396. <<https://doi.org/10.1177/09713557211025656>>
- Dissanayake, D.M.N.S.W., 2014. The Impact of Perceived Desirability and Perceived Feasibility on Entrepreneurial Intention among Undergraduate Students in Sri Lanka: An Extended Model. *Deleted Journal*, [online] 2(1), pp. 39-57. <<https://doi.org/10.4038/kjm.v2i1.6543>>
- Englis, B.G. and Frederiks, A.J., 2023. Using experimental designs to study Entrepreneurship Education: a historical overview, critical evaluation of current practices in the field, and directions for future research. *Entrepreneurship Education and Pedagogy*, [online] 7(1), pp. 93-149. <<https://doi.org/10.1177/25151274231161102>>
- Fornell, C. and Larcker, D.F., 1981. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, [online] 18(1), p. 39. <<https://doi.org/10.2307/3151312>>
- Hair, J.F., Ringle, C.M. and Sarstedt, M., 2013. Partial least squares structural equation modelling: rigorous applications, better results and higher acceptance. *Long Range Planning*, [online] 46(1-2), pp. 1-12. <<https://doi.org/10.1016/j.lrp.2013.01.001>>
- Kadir, M.B.A., Salim, M. and Kamarudin, H., 2012. The relationship between educational support and entrepreneurial intentions in Malaysian higher learning institutions. *Procedia: Social & Behavioral Sciences*, [online] 69, pp. 2164-2173. <<https://doi.org/10.1016/j.sbspro.2012.12.182>>

- Kautonen, T., Van Gelderen, M. and Tornikoski, E.T., 2013. Predicting entrepreneurial behaviour: a test of the theory of planned behaviour. *Applied Economics*, [online] 45(6), pp. 697-707. <<https://doi.org/10.1080/00036846.2011.610750>>
- Krueger, N.F. and Carsrud, A.L., 1993. Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship and Regional Development/Entrepreneurship & Regional Development*, [online] 5(4), pp. 315-330. <<https://doi.org/10.1080/08985629300000020>>
- Kuckertz, A., Berger, E.S.C. and Gaudig, A., 2019. Responding to the greatest challenges? Value creation in ecological startups. *Journal of Cleaner Production*, [online] 230, pp. 1138-1147. <<https://doi.org/10.1016/j.jclepro.2019.05.149>>
- Lagna, A. and Ravishankar, M.N., 2021. Making the world a better place with fintech research. *ISJ. Information Systems Journal/Information Systems Journal*, [online] 32(1), pp. 61-102. <<https://doi.org/10.1111/isj.12333>>
- Law, K.M.Y. and Breznik, K., 2016. Impacts of innovativeness and attitude on entrepreneurial intention: among engineering and non-engineering students. *International Journal of Technology and Design Education*, [online] 27(4), pp. 683-700. <<https://doi.org/10.1007/s10798-016-9373-0>>
- Liñán, F. and Chen, Y., 2009. Development and Cross-Cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice*, [online] 33(3), pp. 593-617. <<https://doi.org/10.1111/j.1540-6520.2009.00318.x>>
- Miranda, F.J., Chamorro-Mera, A. and Rubio, S., 2017. Academic entrepreneurship in Spanish universities: An analysis of the determinants of entrepreneurial intention. *European Research on Management and Business Economics*, [online] 23(2), pp. 113-122. <<https://doi.org/10.1016/j.iedeen.2017.01.001>>
- Naktiyok, A., Karabey, C.N. and Gulluce, A.C., 2009. Entrepreneurial self-efficacy and entrepreneurial intention: the Turkish case. *International Entrepreneurship and Management Journal*, [online] 6(4), pp. 419-435. <<https://doi.org/10.1007/s11365-009-0123-6>>
- Nguyen, C., 2022. The Antecedents and Determinants of Entrepreneurial Intention among Business Students in Vietnam. In: *IntechOpen eBooks*. [online] <<https://doi.org/10.5772/intechopen.99798>>
- Phung, T.M.T., 2023. Vietnam Fintech Industry and Government support: A role of Fintech Entrepreneurial Intention. *Public Organization Review*. [online] <<https://doi.org/10.1007/s11115-023-00708-2>>
- Shi, Y., Yuan, T., Bell, R. and Wang, J., 2020. Investigating the relationship between creativity and entrepreneurial intention: The moderating role of creativity in the Theory of Planned Behavior. *Frontiers in Psychology*, [online] 11. <<https://doi.org/10.3389/fpsyg.2020.01209>>
- Souitaris, V., Zerbinati, S. and Al-Laham, A., 2007. Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, [online] 22(4), pp. 566-591. <<https://doi.org/10.1016/j.jbusvent.2006.05.002>>
- Wilson, F., Kickul, J. and Marlino, D., 2007. Gender, Entrepreneurial Self-Efficacy, and Entrepreneurial Career Intentions: Implications for Entrepreneurship Education. *Entrepreneurship Theory and Practice*, [online] 31(3), pp. 387-406. <<https://doi.org/10.1111/j.1540-6520.2007.00179.x>>