

Un-Packing the Mechanism of Entrepreneurial Intentions: Curiosity Pathway

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Abstract

This study examines how entrepreneurial curiosity affects university students' entrepreneurial intention, with entrepreneurial capabilities and entrepreneurial opportunity recognition as mediators. The study is quantitative, using a cross-sectional survey design, grounded in the theory of planned behavior and social cognitive theory. A structured questionnaire was used to gather data from 387 undergraduate and postgraduate students of five major universities in Pakistan. Covariance-based structural equation modelling (CB-SEM) was used for data analysis. The results show that entrepreneurial intention is directly and positively influenced by entrepreneurial curiosity, with entrepreneurial capabilities and opportunity recognition partially mediating this relationship. The study makes a theoretical contribution to the literature on entrepreneurship cognition and provides practical implications for teachers and policymakers in the field to encourage entrepreneurial behaviour among youth in Pakistan. Some limitations and directions for further studies are mentioned.

Keywords: Entrepreneurial Curiosity, Entrepreneurial Intention, Opportunity Recognition, Entrepreneurial Capabilities, Pakistan, University Students, Sequential Mediation

Introduction

Entrepreneurship has long been considered a key to economic growth and economic vitality, especially in the developing world, where formal job markets fail to keep pace with the rapidly expanding educated population (Shane & Venkataraman, 2000; Audretsch & Keilbach, 2004). This challenge is particularly stark in Pakistan, where the population is expected to reach 250 million by 2025, with cities seeing a large proportion of the population under 30 (UNFPA, 2025), yet the economy is unable to provide jobs for this young cohort. A post-university educated youth is among the most economically vulnerable groups in Pakistan, as unemployment levels have exceeded 16% and endemic underemployment persists among youth (Ahsan & Khan, 2023; Pakistan Bureau of Statistics, 2023). In this context, entrepreneurship has been identified by scholars, educators, and policymakers as a viable and necessary mechanism for achieving self-employment and job creation (Naudé, 2010; Gries & Naudé, 2010).

However, empirical findings show that entrepreneurial intentions of Pakistani university students are low despite the national policy focusing on entrepreneurship development (Farrukh et al., 2017; Martins et al., 2023). This paradox, that is, a large educated youth population meeting with a lack

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of entrepreneurial activity, calls for further research to explore the psychological and cognitive precursors that facilitate or hinder entrepreneurial intentions. Although limited access to finance, political instability, bureaucratic inefficiencies and weak institutional frameworks are well documented as structural barriers to entrepreneurship in Pakistan (Aslam et al., 2018, Mustafa et al., 2016, Dubey et al., 2020), these barriers do not fully explain the low level of entrepreneurial engagement even among those individuals who, in theory, have the necessary human capital to create new businesses.

In recent years, entrepreneurship research has focused on individual-level psychological and cognitive factors to explain variance in entrepreneurial intention beyond that of structural factors alone (Bachmann et al., 2024; Barba-Sánchez et al., 2022; Saoula et al., 2023). Of these, entrepreneurial curiosity, which is a disposition to seek out new information, challenge what is known, and explore unknown areas, has emerged as a theoretically important but empirically under-researched factor that could lead to entrepreneurial intention (Hsieh & Pittaway, 2025; Litman, 2005). People engage in proactive environmental scanning, question taken-for-granted ways of doing things, and accept uncertainty when creating new ventures (Kashdan et al., 2009; Gino, 2018). Curiosity-driven exploration could be an important alternative to the resources that entrepreneurs in developed economies can rely on in more enabling institutional settings, such as Pakistan, where formal information systems and support infrastructure are weak (Basu et al., 2022; Foss & Klein, 2012).

Epistemic curiosity, one of the three dimensions of entrepreneurial curiosity, drives information-seeking behavior, helping entrepreneurs gain new knowledge and skills and eventually identify new business opportunities and their solutions (Litman & Jimerson, 2004; Heinemann et al., 2022). Curious people tend to ask questions, explore new knowledge areas, and show entrepreneurial insight into problem finding, which is a much more creative skill than managerial awareness (Dyer et al., 2008; Von Stumm et al., 2011). In entrepreneurship settings, Heinemann et al. (2022) showed that epistemic curiosity affects entrepreneurial alertness beyond that of openness to experience. But there are cognitive and strategic processes in between curiosity and entrepreneurship that are unlikely to be directly transformed by curiosity. Two such mechanisms have been increasingly theorized: entrepreneurial opportunity recognition and entrepreneurial capabilities.

Entrepreneurial capabilities (EC) are defined as a set of strategic, operational, and relational skills that an individual acquires to launch, manage, and sustain a new business development process (Alvarez & Barney, 2007; Mitchelmore & Rowley, 2010). These abilities are not natural but acquired through learning, experience, and exploratory behaviours, all of which are encouraged by curiosity. Entrepreneurial opportunity recognition (EOR) is the mental activity that entails identifying, assessing, and pursuing opportunities to create a new business within an individual's environment (Shane & Venkataraman, 2000; Ardichvili et al., 2003). It is not only about idea generation, but also about its true interpretation as a viable entrepreneurial opportunity that must be grounded in knowledge, alertness, and the willingness to actively seek information, which is what a capability base directly supports (Kirzner, 1979; Grégoire et al., 2010).

This paper explores a theoretically grounded sequential path, suggesting that university student entrepreneurs' entrepreneurial curiosity predicts entrepreneurial intention, which is then sequentially mediated by entrepreneurial capabilities and entrepreneurial opportunity recognition. Building on this, the proposed model suggests that curiosity first stimulates the development of entrepreneurial capabilities by encouraging exploratory learning and learning of skills and adaptive behavior, and the development of entrepreneurial capability endowment in turn sharpens

opportunity recognition – the capability of identifying and evaluating entrepreneurial opportunities – which eventually leads to the formation of entrepreneurial intention. This sequential logic responds to the need for more complex, process-oriented models of intention formation that acknowledge the staged, developmental characteristics of entrepreneurial cognition (Soluk et al., 2021; Mia et al., 2025).

The emphasis on Pakistani university students is intentional and relevant. Entrepreneurial cognition is very likely to be fostered or inhibited within the academic setting of universities, and higher education in Pakistan has been subject to various criticisms regarding its exclusive focus on theory-based education lacking experiential learning, cultivation of curiosity, and opportunity-oriented thinking (Taneja et al., 2024; Farrukh et al., 2017). The study focuses on this group to provide empirical evidence that directly informs pedagogical reform and policy interventions in a context where the stakes for youth are high: unemployment, macroeconomic stagnation, and limited innovation. Moreover, this study fills a gap in entrepreneurship intention studies conducted in developed countries, whereas the developing context of Martins et al. (2023) and Aslam et al. (2018) lacks sufficient evidence.

The paper is organized as follows: In Section 2, the literature review summarizes the theoretical and empirical material and presents the study hypotheses and conceptual framework. The research method used, including the study design, sample, research instruments, and analysis method, is described in Section 3. The findings are presented and discussed in Section 4, which places them in the wider theoretical/policy context. Section 5 ends with implications, limitations, and directions for further inquiry.

Literature Review

Theoretical Foundations

The study is based on two complementary theories, the theory of planned behavior (TPB) (Ajzen, 1991) and social cognitive theory (SCT) (Bandura, 1986). According to the TPB, attitudes towards the behavior, subjective norms, and perceived behavioral control are the factors that influence behavioral intentions, including entrepreneurial intentions. Among these, perceived behavioral control is a frequently reported predictor of self-efficacy and perceptions of entrepreneurial capability (Krueger et al., 2000; Kautonen et al., 2013). Therefore, when entrepreneurial curiosity stimulates the search for new information and develops perceptions of being able to do something, it directly boosts perceived behavioral control (Schlaegel & Koenig, 2014). SCT also adds to the model by explicitly focusing on the processes of observational learning, self-regulation, and self-efficacy as a motivational force in behaviour. The self-regulatory behaviors identified by SCT are essential for skill development and behavioral intention (Bandura, 1997). It aligns with the study's assumption about curiosity-driven information seeking. These theories can be combined to create a sequential pathway theory in which individual-level curiosity motivates the development of entrepreneurial capabilities, which, in turn, enhance perceptions of opportunities, leading to the development of entrepreneurial intentions.

Entrepreneurial Curiosity

In psychology, curiosity has been defined as a motivational state characterized by the pursuit of new knowledge and experiences (Litman, 2005; Kashdan et al., 2009). Entrepreneurial curiosity is the disposition in business and opportunity contexts, namely the tendency to seek out, explore, and absorb market information, challenge one's own assumptions, and engage with uncertainty rather than avoid it (Hsieh & Pittaway, 2025; Gino, 2018). Litman and Jimerson (2004) identified

two types of curiosity: interest-type curiosity (exploration in response to pleasurable knowledge) and deprivation-type curiosity (exploration in response to the discomfort of not knowing). Both types of curiosity would be beneficial for entrepreneurial alertness and information integration. In reality, there is a correlation among entrepreneurial orientation, alertness to opportunities, and innovative behavior across countries worldwide (Heinemann et al., 2022; Uygur, 2019). Curious individuals possess enhanced analogical reasoning and domain-bridging cognition. It is essential to discover new market opportunities, engage in exploratory learning, and find novel ways (Gino, 2018; Von Stumm et al., 2011). Hmieleski and Corbett (2008) found that curiosity moderates the link between perceived opportunities and entrepreneurial activity – the higher the curiosity, the greater the likelihood that perceived opportunities will become entrepreneurial opportunities. Importantly, Hsieh and Pittaway (2025) assert that curiosity is not a personality trait but a modifiable trait directly related to educational settings, thus relevant to university-based entrepreneurship programmes in Pakistan.

Curiosity-based characteristics are especially important in the Pakistani context, as they can mitigate the limitations of structure to some extent. When formal market information systems, mentoring, and financial infrastructure are weak, curiosity-driven, self-directed exploration is a key way to uncover entrepreneurial opportunities (Basu et al., 2022; Foss & Klein, 2012). Previous research in similar emerging-economy settings, such as India, Turkey, and Morocco, has shown that intrinsic motivational factors, such as curiosity, have a greater influence on entrepreneurial intention in high-uncertainty settings than in more institutionalized settings (Maheshwari et al., 2023; Saoula et al., 2023). This theory and empirical foundation lead to the following hypothesis: *H1: Entrepreneurial curiosity is positively associated with entrepreneurial intention among Pakistani university students.*

Entrepreneurial Capabilities

Entrepreneurial capabilities (EC) are a dynamic set of strategic, operational, and relational capabilities that enable individuals to initiate, organize, and sustain new venture creation processes (Alvarez & Barney, 2007; Morris et al., 2013). These are not just managerial skills, but entrepreneurial skills, that is, the capacity to access resources in uncertain circumstances, to establish stakeholder networks, to recognize and seize market opportunities, to handle ambiguity, and to adjust strategies as environmental circumstances change (Man et al., 2002; Mitchelmore & Rowland, 2010). The capabilities are not fixed attributes but emerge through cycles of action, feedback, and learning, driven by the nature of exploratory learning, in which curiosity motivates (Cope, 2005; Politis, 2005).

There is a theoretical basis for the link between curiosity and the development of entrepreneurial capability, as curious individuals actively seek information, try new things, and engage in learning across domains, which is essential for capability development (Gino, 2018; Von Stumm et al., 2011). Among the many factors that influence entrepreneurial intention, particularly across cultures, is Bandura's (1997) notion of self-efficacy, one of the most consistently identified aspects of capability perception. Bandura's (1997) notion of self-efficacy, a key component in shaping individuals' perceptions of capability, is among the most consistently identified factors influencing entrepreneurial intention across cultural contexts (Zhao et al., 2005; Schlaegel & Koenig, 2014). Perceptions of entrepreneurial competence have a significant positive influence on entrepreneurial intentions, reflecting the fact that the perceived behavioral control element of the TPB model (Ajzen, 1991; Kautonen et al., 2013) is reinforced by perception of competence. Self-directed learning, driven by curiosity, is a key learning process that enables aspiring entrepreneurs to

acquire the skills necessary to launch a new business in a developing economy, where formal education institutions are underdeveloped (Basu et al., 2022; Foss & Klein, 2012).

The entrepreneurial ability is seen as a link between the entrepreneurial disposition and entrepreneurial intention in Pakistan and similar developing countries (Farrukh et al., 2017; Aslam et al., 2018). Consequently, students' perceptions of entrepreneurial capabilities positively influence their entrepreneurial intentions: the more they believe they possess entrepreneurial skills, the less difficult entrepreneurship is perceived and the more favorable their attitude toward entrepreneurship becomes (Krueger et al., 2000; Barba-Sánchez et al., 2022). Additionally, the mediating effect of EC between antecedent motivational dispositions and entrepreneurial intention has been empirically demonstrated in several studies on emerging economies, as curiosity has an indirect effect on entrepreneurial intention through the development of capability, mediated by curiosity-driven exploration (Bachmann et al., 2024; Maheshwari et al., 2023). This reasoning led to the following hypotheses:

H2: Entrepreneurial curiosity is positively associated with entrepreneurial capabilities.

H3: Entrepreneurial capabilities are positively associated with entrepreneurial intention.

H4: Entrepreneurial capabilities mediate the relationship between entrepreneurial curiosity and entrepreneurial intention.

Entrepreneurial Opportunity Recognition

Entrepreneurial opportunity recognition (EOR) is a cognitive process in which individuals detect, interpret, and assess environmental cues as potential entrepreneurial opportunities (Shane & Venkataraman, 2000; Kirzner, 1979). It is a cognitive process that consists of three stages: scanning the environment, identifying patterns in information from different sources, and assessing the perceived feasibility and desirability of a new business idea (Ardichvili et al., 2003; Baron & Ensley, 2006). Prior knowledge structures are cognitive networks developed through education, experience, and continuous information gathering, and act as templates that enable individuals to see entrepreneurial signals that others cannot (Shane, 2000; Ucbasaran et al., 2009). The entrepreneurial capabilities constitute the competency base from which these prior knowledge structures are drawn – and people with better strategic, operational and relational skills are more likely to be able to engage in the pattern recognition and environmental scanning that EOR demands.

The development of capabilities to opportunity recognition has strong theoretical support. Chaudhry (2019) showed that entrepreneurial competencies serve as a sensemaking foundation, sensitising people to opportunities in their environment, which triggers cognitive pattern-recognition processes that help identify them. The idea of cognitive bricolage, offered by Baker and Nelson (2005), is related to the fact that those who have learned multiple types of entrepreneurial competencies are more able to identify and re-configure existing resources into new opportunities. However, in Pakistani universities, entrepreneurship education is generally theoretical, lacking a practical learning component (Taneja et al., 2024; Farrukh et al., 2017). Students who actively acquire entrepreneurial skills through self-directed, curiosity-driven learning are better equipped to sense and assess entrepreneurial opportunities in their environment. The link between entrepreneurial opportunity recognition and entrepreneurial intention has been well established in the literature. Higher opportunity recognition is associated with higher entrepreneurial intentions, because when students have the opportunity recognized in their minds, they also have lower perceived uncertainty and higher perceived behavioral control (Krueger et al., 2000; Barba-Sánchez et al., 2022). In fact, George et al. (2016) found that those with greater

exploratory competencies are significantly more effective at discovering market gaps and resource misalignments, because their capability base enables them to read the environmental signals as opportunities for action. Rasmussen et al. (2011) also showed that the link between competency building and behavioral orientation (i.e., entrepreneurial intention) is mediated by opportunity recognition, a process-level mechanism that explains how competency building turns into entrepreneurial intention. This work leads to the following hypotheses:

H5: Entrepreneurial capabilities are positively associated with entrepreneurial opportunity recognition.

H6: Entrepreneurial opportunity recognition is positively associated with entrepreneurial intention.

H7: Entrepreneurial opportunity recognition mediates the relationship between entrepreneurial capabilities and entrepreneurial intention.

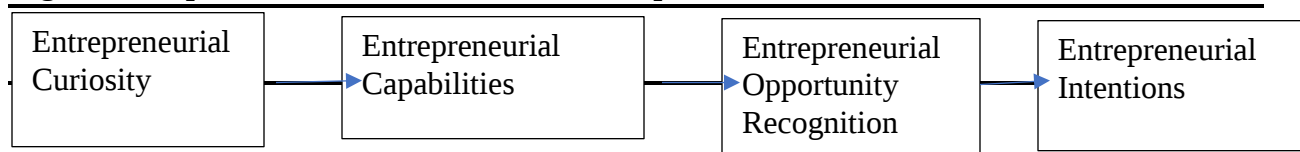
Sequential Mediation

Based on this research, the integrated model proposed in this study posits a sequential mediation model in which entrepreneurial curiosity leads to entrepreneurial intention, with entrepreneurial capabilities and entrepreneurial opportunity recognition mediating the intervening process. This sequential logic follows the overarching theoretical reasoning that entrepreneurial intention formation is a sequential development process rather than a one-time cognitive occurrence (Soluk et al., 2021; Mia et al., 2025). On the one hand, in the first stage, curiosity stimulates capacity-building by prompting self-directed learning, skill acquisition, and adaptive experimentation, processes by which aspiring entrepreneurs develop strategic, operational, and relational competencies that entrepreneurship requires. The second stage involves building an enhanced competency base through curiosity-driven learning, which leads to better opportunity recognition. People with a stronger entrepreneurial capability base can scan their contexts, identify entrepreneurial signals, and assess the desirability and feasibility of emergent business opportunities. This opportunity recognition, in turn, provides entrepreneurial intention with a boost by minimizing perceived uncertainty and confirming perceived feasibility of venture creation.

This sequential model is consistent with Grégoire et al.'s (2010) structural alignment theory, which proposes that opportunities are identified through an increasingly successful alignment of one's prior knowledge structure with new stimuli in one's environment. The alignment can be understood as the moment when a capable, curiosity-driven individual notices a viable entrepreneurial opportunity, which is the opportunity recognition event; the capability development is the accumulation of entrepreneurial knowledge and skills that enable the event of opportunity recognition; and the expansion of the knowledge base and building up of the competency repertoire is the competency development. The sequential pathway is thus captured in the combined construct, from motivational disposition to behavioral intention, which is identified as a crucial area of empirical investigation in developing economy settings (Bachmann et al., 2024; Basu et al., 2022). The central serial mediation hypothesis is thus:

H8: The relationship between entrepreneurial curiosity and entrepreneurial intention is sequentially mediated by entrepreneurial capabilities and entrepreneurial opportunity recognition ($ECu \rightarrow EC \rightarrow EOR \rightarrow EI$).

Figure 1: Sequential Mediation Model of Entrepreneurial Intention



Research Methodology

This study explores the relationship between entrepreneurial curiosity (ECU), entrepreneurial capability (ECAP), entrepreneurial opportunity recognition (EOR), and entrepreneurial intention (EI) amongst university students in Pakistan. A quantitative cross-sectional survey design was used; these are particularly suitable designs for the measurement of psychological constructs that are not directly observable and testing theoretically grounded hypotheses across a large sample.

Students in higher education institutions in business and management study were targeted using purposive sampling method. The reason to choose the university students is their relative status as a target group for entrepreneurship policy and education. The data was gathered by using a structured self-administered questionnaire, which were distributed face-to-face and through online channels. After screening for missing data and careless responding, a total of 458 usable responses were retained for analyses.

The questionnaire consisted of two parts. First collected data on sex, age, educational attainment, academic qualifications and marital status. A total of 22 scale items were included in the second section assessing the four focus constructs. All items were answered on a scale of 1 to 5 for responses that ranged from Strongly Disagree to Strongly Agree.

The measure of entrepreneurial curiosity (ECU) consisted of nine items that reflect the curiosity of respondents in relation to information that is new to them in the area of business. Entrepreneurial Capabilities (ECAP) was measured by four items that tapped into self-perceived entrepreneurial capabilities in performing entrepreneurial tasks. Five items measuring entrepreneurial opportunity recognition (EOR) ability were used to measure this. The outcome variable, Entrepreneurial Intention (EI) was measured by four items measuring the degree of intention to establish a business.

The data have been analysed using SPSS (v.27). The internal consistency of the measurement was determined using Cronbach's alpha, convergent validity using Average Variance Extracted (AVE), and construct reliability using Composite Reliability (CR). A Pearson correlation matrix was next generated and descriptive statistics calculated. Finally, a multiple linear regression analysis was estimated with EI as a dependent variable and ECU, ECAP and EOR as simultaneous predictors. Throughout, the significance threshold was $p < 0.05$.

Data Analysis and Results

Demographic Profile of Respondents

Table 1 summarises the demographic characteristics of the 458 respondents. The sample was nearly gender-balanced (51.97% male; 48.03% female). The majority fell in the 26–30 age bracket (48.25%), followed 21–25 (39.52%). Most participants held a bachelor's degree (76.64%), with master's degree holders constituting 16.81%. Married respondents formed a slight majority (53.06%).

Table 1: Demographic Profile of Respondents

Gender	Male	238	51.97
	Female	220	48.03
Age	Under 20	13	2.84
	21–25	181	39.52
	26–30	221	48.25
	Above 30	43	9.39

Education	Bachelor's	351	76.64
	Master's	77	16.81
	Other	30	6.55
Marital Status	Single	215	46.94
	Married	243	53.06

Descriptive Statistics and Reliability Analysis

Table 2 presents the means, standard deviations, and Cronbach's alpha values for all four constructs. ECAP has the highest mean ($M = 3.430$, $SD = 1.286$) which indicates moderate-to-high perceived capability. ECU ($M = 3.016$) and EI ($M = 3.142$) both exceeded the scale midpoint, while EOR reported the lowest mean ($M = 2.907$, $SD = 1.347$). All Cronbach's alpha values exceeded 0.90—ranging from 0.946 (ECU) to 0.969 (EI)—these are above the 0.70 threshold; thus, it confirms excellent internal consistency across all constructs.

Table 2: Descriptive Statistics and Reliability Coefficients

ECU – Entrepreneurial Curiosity	9	3.016	1.269	0.946
ECAP – Entrepreneurial Capabilities	4	3.430	1.286	0.965
EOR – Entrepreneurial Opportunity Recognition	5	2.907	1.347	0.959
EI – Entrepreneurial Intention	4	3.142	1.220	0.969

Factor Loadings, Average Variance Extracted (AVE), and Composite Reliability (CR)

Table 3 reports item-level factor loadings alongside the Average Variance Extracted (AVE) and Composite Reliability (CR) for each construct. All factor loadings were substantial, ranging from 0.797 (ECU3) to 0.964 (EI3 and EI4), exceeding the minimum recommended threshold of 0.70. AVE values ranged from 0.702 (ECU) to 0.916 (EI), all comfortably above the 0.50 criterion, confirming convergent validity—meaning each construct captures more than half of the variance in its indicators. CR values ranged from 0.955 (ECU) to 0.978 (EI), surpassing the 0.70 benchmark and corroborating the reliability findings from Cronbach's alpha. Taken together, these results provide strong psychometric support for the measurement model prior to structural analysis.

Table 3: Factor Loadings, Average Variance Extracted (AVE), and Composite Reliability (CR)

ECU – Entrepreneurial Curiosity		0.702	0.955
ECU1	0.856		
ECU2	0.806		
ECU3	0.800		
ECU4	0.828		
ECU5	0.868		
ECU6	0.881		
ECU7	0.848		
ECU8	0.852		
ECU9	0.797		
ECAP – Entrepreneurial Capabilities		0.905	0.975

ECAP1	0.955		
ECAP2	0.959		
ECAP3	0.940		
ECAP4	0.952		
EOR – Entrepreneurial Opportunity Recognition		0.861	0.969
EOR1	0.925		
EOR2	0.927		
EOR3	0.925		
EOR4	0.924		
EOR5	0.939		
EI – Entrepreneurial Intention		0.916	0.978
EI1	0.947		
EI2	0.955		
EI3	0.964		
EI4	0.964		

Note: Factor loadings are item-to-construct correlations. AVE > 0.50 and CR > 0.70 indicate acceptable convergent validity and reliability (Hair et al., 2019).

Correlation Analysis

Table 4 presents the Pearson correlation matrix. All inter-construct correlations were positive, statistically significant ($p < 0.01$), and substantial. ECU and EOR shared the strongest correlation ($r = 0.805$), suggesting that curiosity is closely linked to the ability to recognise opportunities. ECU also correlated strongly with ECAP ($r = 0.734$) and EI ($r = 0.722$). ECAP and EI were significantly related ($r = 0.712$), as were EOR and EI ($r = 0.705$). Discriminant validity was further supported by the observation that the square root of each construct's AVE exceeded its correlations with all other constructs, confirming that the constructs are empirically distinct.

Table 4: Pearson Correlation Matrix

ECU – Entrepreneurial Curiosity	1.000			
ECAP – Entrepreneurial Capabilities	0.734**	1.000		
EOR – Entrepreneurial Opportunity Recognition	0.805**	0.692**	1.000	
EI – Entrepreneurial Intention	0.722**	0.712**	0.705**	1.000

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

Multiple Regression Analysis

A multiple linear regression was conducted to assess the simultaneous predictive power of ECU, ECAP, and EOR on EI. The overall model was statistically significant and explained 61.4% of the variance in entrepreneurial intention ($R^2 = 0.614$, Adjusted $R^2 = 0.611$), indicating strong explanatory power.

As shown in Table 5, all three predictors were significant at $p < 0.001$. ECAP was the strongest predictor ($\beta = 0.323$, $t = 7.686$), followed by ECU ($\beta = 0.259$, $t = 4.984$) and EOR ($\beta = 0.229$, $t = 4.975$). These results indicate that entrepreneurial capabilities exert the greatest independent influence on students' entrepreneurial intentions, while curiosity and opportunity recognition each contribute meaningfully and significantly to the model.

Table 5: Multiple Regression Results (Dependent Variable: Entrepreneurial Intention)

(Constant)	0.590	0.104	5.691	< 0.001
ECU – Entrepreneurial Curiosity	0.259	0.052	4.984	< 0.001
ECAP – Entrepreneurial Capabilities	0.323	0.042	7.686	< 0.001
EOR – Entrepreneurial Opportunity Recognition	0.229	0.046	4.975	< 0.001

Note: $R^2 = 0.614$; Adjusted $R^2 = 0.611$; F-statistic significant at $p < 0.001$.

Table 6: Monte Carlo Post-Hoc Power Analysis

Structural Path	Standardized Estimate (β)	Statistical Power	Detection Rate	Interpretation of Power
ECU $\rightarrow$ EI	0.298	100%	100/100	Excellent power
EOR $\rightarrow$ EI	0.243	100%	100/100	Excellent power
ECAP $\rightarrow$ EI	0.328	100%	100/100	Excellent power
ECU $\rightarrow$ ECAP	0.800	100%	100/100	Excellent power
ECAP $\rightarrow$ EOR	0.111	81%	81/100	Acceptable power
ECU $\rightarrow$ EOR	0.792	100%	100/100	Excellent power
Overall Mean Power	—	96.8%	—	Strong overall model power

A post hoc Monte Carlo power analysis was conducted to assess the structural model's statistical power. Results showed that the overall model had strong predictive power, with a mean of 96.8%, indicating high sensitivity in detecting the hypothesized effects. The majority of structural paths had very good power levels (100%), well above the recommended 80% to ensure adequate statistical power. Specifically, the perfect detection rate (100/100 simulations) was found for the relationships between entrepreneurial curiosity usage (ECU) and entrepreneurial intention (EI), entrepreneurial opportunity recognition (EOR) and EI, entrepreneurial capability (ECAP) and EI, ECU and ECAP, and ECU and EOR.

The path from ECAP to EOR had relatively lower but comparable statistical power (81%), with the methodological literature suggesting a minimum acceptable value above that threshold. In sum, these results validate the sample size and model specification and provide confidence in the reliability of the proposed structural relationships, thereby enhancing the robustness and stability of the research's empirical findings.

Discussion

This study aimed to shed light on the impact of entrepreneurial curiosity on entrepreneurial intention among Pakistani university students and to propose that this impact is mediated

sequentially by entrepreneurial ability and entrepreneurial opportunity recognition. The results are expected to support all eight hypotheses, as offered by the theory that was developed based on the theory of planned behavior and social cognitive theory. The direct effect of entrepreneurial curiosity on entrepreneurial intention (H1) is consistent with the increasing evidence that intrinsic motivational dispositions towards information seeking and exploratory engagement are important precursors to entrepreneurial intention (Hsieh & Pittaway, 2025; Heinemann et al., 2022). In the Pakistani university environment, which lacks structural enablers such as access to finance, stable institutional support, and mentorship, the motivational energy of curiosity appears to serve as a cognitive catalyst, compensating for the lack of external entrepreneurial infrastructure (Basu et al., 2022; Foss & Klein, 2012).

This positive link between entrepreneurial curiosity and entrepreneurial capabilities (H2), and then the positive link between entrepreneurial capabilities and entrepreneurial intention (H3), aligns with well-developed self-efficacy- and competency-based entrepreneurial intention models (Bandura, 1997; Zhao et al., 2005). The curious person selflessly explores and learns more deeply, tries out new ideas, and builds a wider competency portfolio as a result of the exploratory engagement that curiosity sparks (Gino, 2018; Politis, 2005). This is especially crucial in a resource-poor developing economy like Pakistan where formal training structures are scarce and aspiring entrepreneurs have to make an effort to acquire the necessary skills on their own by exploring and experimenting.

The sequential mediation via entrepreneurial capabilities and opportunity recognition (H8) is the study's most theoretically significant contribution. The process from curiosity to behaviour, which leads to the development of capability before sharpening opportunity recognition, and then to formed intentions, is consistent with the developmental approach proposed by Soluk et al. (2021) and Mia et al. (2025), which is based on the notion that entrepreneurial intentions are a product of the iterative development of cognition before capability before contextual engagement before formed intentions. The sequential pathway indicates that a state of curiosity alone is not enough to trigger entrepreneurial intention; it must trigger a process of competency development that helps them recognize and assess entrepreneurial opportunities in their context and, finally, develop a strong entrepreneurial intention.

Theoretical Implications

The study has several implications for the theoretical literature on entrepreneurial cognition and intention. First, the study extends understanding of the process of intention formation beyond a single-variable, single-mediation approach to one that includes a sequence of steps from entrepreneurial curiosity to entrepreneurial capabilities and opportunity recognition to entrepreneurial intention (Bachmann et al., 2024; Maheshwari et al., 2023). The results directly address recent requests from Hsieh and Pittaway (2025) and Soluk et al. (2021) to develop multi-stage models to represent the development and iterative process of entrepreneurial cognition. The study can be used to isolate entrepreneurial curiosity as the initiating motivational element in this sequential chain, to bring clarity to the distal and proximal functions of various cognitive and strategic elements of the intention formation process.

Secondly, the study is a new application of SCT in the context of entrepreneurship in a developing economy. Bandura's (1986, 1997) model of self-efficacy suggests that self-regulatory behaviors, such as curiosity-motivated information seeking, develop self-efficacy perceptions that, in turn, facilitate goal-oriented behaviors. In institutionally underdeveloped settings, the study results indicate that this process can be especially salient: the lack of external provisioning puts more

internal effort into the task, where curiosity has to work harder and harder to predict intention, as compared to its influence in more developed economy settings – where it might not matter as much (Zahra et al., 2014; Welter, 2011). Third, as the study expands the geographical and contextual scope of entrepreneurship, it adds empirical evidence to the growing body of literature on entrepreneurship in emerging economies with institutional voids, limited resource availability, and structural uncertainty (Martins et al., 2023; Saoula et al., 2023).

Practical Implications

The study has very practical implications for university administrators, curriculum planners, and education policymakers in Pakistan. The key antecedent of entrepreneurial intention that was identified, entrepreneurial curiosity, which flows through the pathway of capability development and opportunity recognition, implies that the development of entrepreneurial curiosity should be a core component of entrepreneurship education; it should not only be a part of the characteristics of a gifted student. Problem-based learning, industry immersion programs, case study discussions on challenges in the local market, and exploratory project assignments are likely to enhance students' entrepreneurial capability portfolios, thereby improving their opportunity recognition skills and entrepreneurial intentions (Lackéus, 2015; Neck & Greene, 2011). The curricula for entrepreneurship courses should be revisited by the Higher Education Commission (HEC) and the administrators of the universities to incorporate more learning experiences that foster curiosity and develop competencies, instead of the theory-based and lecture-oriented courses in business education that are currently prevalent in Pakistan (Taneja et al., 2024; Farrukh et al., 2017).

The findings indicate a need for a human capital-based strategy to promote entrepreneurship, alongside structural measures such as access to finance and regulatory reforms at the policy level. Government agencies and development organizations in Pakistan, such as Small and Medium Enterprise Development Authority (SMEDA) and the National Incubation Center (NIC) network, can create programs that specifically focus on cognitive and motivational aspects of entrepreneurial readiness, providing workshops, mentorship, and competition-based learning experiences to help nurture entrepreneurial capability development, curiosity, and opportunity scanning among young Pakistanis. Such initiatives would also help mitigate the still-existing gap between graduates' skills and entrepreneurs' market needs, thereby alleviating the economic cost of a jobless graduate population and improving the innovativeness of Pakistan's economy (Hussain, 2022; Maheshwari et al., 2023).

Conclusion

The present study aimed to investigate the impact of entrepreneurial curiosity on entrepreneurial intention among university students in Pakistan, introducing the study's mediators, namely entrepreneurial capabilities and entrepreneurial opportunity recognition. The results provide a theoretically sound pathway from curiosity to competency development, from competency development to opportunity recognition, and finally to entrepreneurial intention, suggesting a sequence that leads to the development of the desire to engage in entrepreneurship. Both theoretical and practical conclusions are drawn from these results. Although the study contributes to the entrepreneurship cognition literature in an enriching manner, from a high-stakes developing-economy context, it also theoretically enriches the process-oriented model of entrepreneurial intention formation, placing curiosity at the beginning of a series of developmental processes. In practice, the study offers a strong argument for restructuring university entrepreneurship education in Pakistan, moving away from the delivery of entrepreneurial theories and concepts toward

cultivating curiosity, fostering competency development, and recognizing experiential opportunities.

To overcome the critical problem of Pakistan's youth unemployment, diversifying the economy and engaging in knowledge-driven international markets require, amongst other factors, that the country convert its large number of educated young people into active job creators rather than passive job seekers. The cognitive process from curiosity to capability development, opportunity recognition, to entrepreneurial intention, as illustrated in this study, is the psychological architecture of this process. Future studies are recommended to longitudinally extend the present model, examine the moderating variables, and examine the generalizability of the sequential mediation pathway across other disciplinary and geographic settings in Pakistan and beyond.

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