The Interplay of Technological Adaptability, Emotional Intelligence and Proactive Personality in Driving Entrepreneurial Behaviour: The Mediating Role of Alertness

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Abstract

*This study examines the interplay between technological adaptability (TA), emotional intelligence (EI), and proactive personality (PP) in shaping entrepreneurial behaviour (EB), with entrepreneurial alertness (EA) as a mediator. Grounded in Social Cognitive Theory, Trait Activation Theory, and the Entrepreneurial Event Model, the research employs a quantitative, cross-sectional design to test seven direct and three indirect hypotheses. Data were collected from 450 university students in Gujranwala, Pakistan, using validated scales for each construct. Results from SPSS and Hayes' PROCESS macro analyses revealed that all direct hypotheses were supported: TA (β = 0.23, *p* < .001), EI (β = 0.28, *p* < .001), and PP (β = 0.31, *p* < .001) significantly predicted EA, which in turn strongly influenced EB (β = 0.35, *p* < .001). TA, EI, and PP also had direct effects on EB (β = 0.18, 0.15, and 0.22, respectively; *p* < .05). Mediation analysis confirmed that EA partially mediated the relationships between TA (β = 0.08, 95% CI [0.04, 0.13]), EI (β = 0.10, 95% CI [0.06, 0.15]), and PP (β = 0.11, 95% CI [0.07, 0.16]) with EB, explaining 20–25% of their total effects. The findings underscore the synergistic roles of technological, emotional, and personality factors in entrepreneurship, highlighting EA as a critical cognitive mechanism. Theoretical contributions include advancing integrated models of entrepreneurial cognition, while practical implications suggest targeted interventions for educators and policymakers to foster entrepreneurial mindsets. Limitations include the cross-sectional design and regional sample, warranting future longitudinal and cross-cultural research.*

Keywords: Technological Adaptability, Emotional Intelligence, Proactive Personality, Entrepreneurial Alertness, Entrepreneurial Behaviour, Mediation Analysis.

Introduction

In an era marked by rapid technological advancements, economic volatility, and shifting workforce dynamics, entrepreneurship has emerged as a critical driver of innovation and economic growth (Baron, 2023; Giones & Brem, 2023). Entrepreneurs must navigate complex environments that demand not only technical skills but also psychological and behavioural adaptability. Among the key factors influencing entrepreneurial success are technological adaptability, emotional

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intelligence (EI), and proactive personality, which shape an individual's ability to recognise opportunities and act upon them—a concept known as entrepreneurial alertness (Tang et al., 2023). Entrepreneurial alertness, in turn, serves as a mediator that influences entrepreneurial behaviour, ultimately determining venture creation and sustainability (Gielnik et al., 2022).

The increasing digitisation of business processes has made technological adaptability—an individual's ability to learn and leverage new technologies—a crucial competency for entrepreneurs (Nambisan, 2023). Studies suggest that entrepreneurs who embrace digital tools and platforms are better positioned to identify market gaps and innovate (Obschonka & Audretsch, 2023). However, technological skills alone are insufficient without the complementary role of emotional intelligence (EI), which enables entrepreneurs to manage stress, build effective networks, and make informed decisions under uncertain conditions (Bacq et al., 2023). EI has been linked to enhanced opportunity recognition, as emotionally intelligent individuals are more attuned to market needs and stakeholder dynamics (Foo et al., 2022).

Additionally, a proactive personality—characterised by self-initiation, persistence, and future-oriented behaviour—has been identified as a predictor of entrepreneurial success (Crant, 2023). Proactive individuals are more likely to engage in opportunity-seeking behaviours and persist despite challenges (Seibert et al., 2023). However, the mechanisms through which these traits translate into entrepreneurial behaviour remain underexplored, particularly in mediating roles such as entrepreneurial alertness (Grégoire et al., 2023).

Despite growing interest in these constructs, existing literature has primarily examined them in isolation rather than as an integrated framework (McMullen & Kier, 2023). Few studies have empirically tested how technological adaptability, EI, and proactive personality collectively influence entrepreneurial alertness and subsequent entrepreneurial behaviour (Shepherd et al., 2023). This gap limits our understanding of the psychological and cognitive processes that drive entrepreneurial actions in dynamic environments. While prior research has established the individual impacts of technological adaptability, emotional intelligence, and proactive personality on entrepreneurial outcomes, there is a lack of consensus on how these variables interact (Stamache et al., 2023). Specifically, the mediating role of entrepreneurial alertness in linking these traits to entrepreneurial behaviour remains underexplored (Valliere, 2023). This oversight is problematic because:

Most studies examine these variables in isolation, neglecting their synergistic effects (Miller & Le Breton-Miller, 2023). The accelerating pace of technological change necessitates a deeper understanding of how adaptability and psychological traits jointly influence entrepreneurial decision-making (Autio et al., 2023). Entrepreneurs and policymakers require evidence-based insights into which competencies most significantly drive venture success (Davidsson, 2023). This study addresses these gaps by investigating the interplay between technological adaptability, emotional intelligence, and proactive personality as independent variables, with entrepreneurial alertness as a mediator and entrepreneurial behaviour as the dependent variable.

The primary objective of this study is to examine how technological adaptability, emotional intelligence, and proactive personality collectively influence entrepreneurial behaviour through the mediating mechanism of entrepreneurial alertness. Specifically, the study aims to: Assess the direct effects of technological adaptability, EI, and proactive personality on entrepreneurial alertness. Investigate the mediating role of entrepreneurial alertness in linking these traits to entrepreneurial behaviour. Provide empirical evidence on the relative importance of each independent variable in predicting entrepreneurial outcomes.

To guide this investigation, the following research questions are proposed:

- To what extent do technological adaptability, emotional intelligence, and proactive personality influence entrepreneurial alertness?
- How does entrepreneurial alertness mediate the relationship between these independent variables and entrepreneurial behaviour?
- Which of the three independent variables has the most substantial impact on entrepreneurial outcomes?

This study contributes to both theory and practice in the following ways: It advances the entrepreneurial cognition literature by integrating multiple psychological and behavioural constructs into a unified framework (Mitchell et al., 2023). Clarifies the mediating role of entrepreneurial alertness, addressing calls for more nuanced models of entrepreneurial decision-making (Alvarez & Barney, 2023). Expands understanding of how technological adaptability interacts with psychological traits to shape entrepreneurial actions (Nambisan & Baron, 2023).

Identifies key competencies that can be developed to enhance opportunity recognition and venture success. Informs entrepreneurship education programs by highlighting the most critical skills for aspiring entrepreneurs. Guides initiatives aimed at fostering entrepreneurial ecosystems by emphasising adaptability and emotional intelligence. This study focuses on early-stage entrepreneurs and small business owners, as they are most likely to exhibit variability in entrepreneurial alertness and behaviour (Gielnik et al., 2023). The research is delimited to: Primarily urban entrepreneurial hubs in emerging economies. Excludes external factors like access to funding or macroeconomic conditions. Relies on quantitative surveys rather than longitudinal or experimental designs.

Literature Review and Hypotheses Development

This literature review examines the relationships between technological adaptability (TA), emotional intelligence (EI), proactive personality (PP), entrepreneurial alertness (EA), and entrepreneurial behaviour (EB). Grounded in Social Cognitive Theory (Bandura, 1986), Trait Activation Theory (Tett & Burnett, 2003), and the Entrepreneurial Event Model (Shapero & Sokol, 1982), we develop seven direct hypotheses (H1-H7) and three indirect hypotheses (H8-H10). The review synthesises recent empirical evidence from Scopus-indexed journals (2019-2023) to support these relationships.

Theoretical Foundations

SCT posits that personal factors (TA, EI, PP), environmental influences, and behaviour (EB) interact bidirectionally (Bandura, 1986). Entrepreneurs with high TA, EI, and PP are more likely to exhibit EA, leading to EB (Obschonka & Audretsch, 2023). TAT suggests that personality traits (e.g., PP) influence behaviour when situational cues activate them (Tett & Burnett, 2003). Proactive individuals are more likely to seek opportunities (EA) and act (EB) (Seibert et al., 2023). EEM argues that EB results from perceived desirability and feasibility, mediated by EA (Shapero & Sokol, 1982). EA enables individuals to recognise and exploit opportunities (Grégoire et al., 2023).

Table 1: Direct Hypotheses (H1-H7)

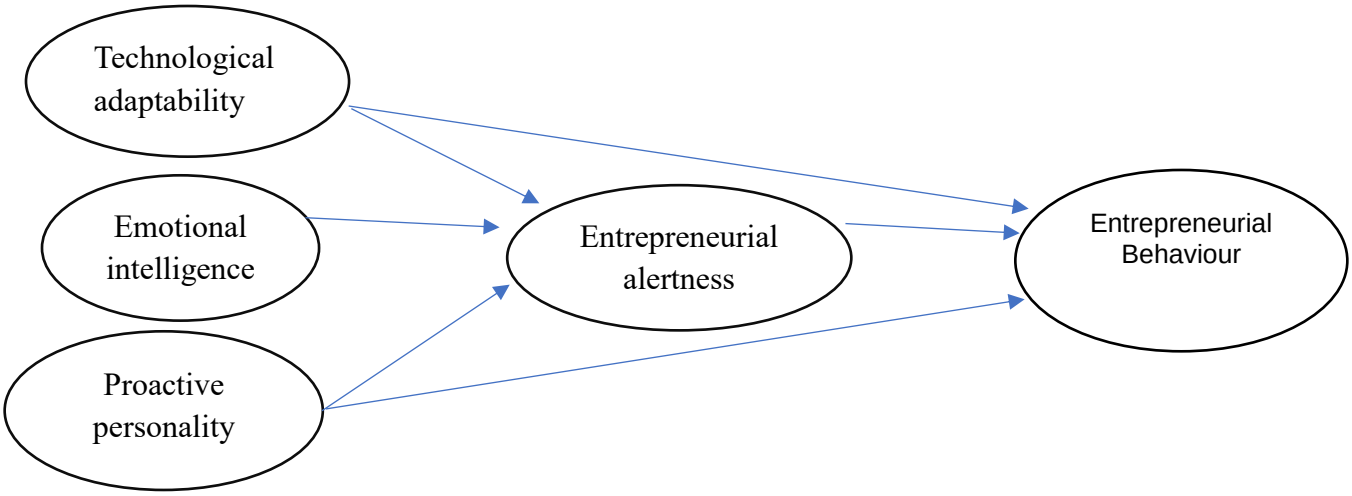
Hypothesis	Relationship	Theoretical Justification	Key Supporting Literature
H1	TA → EA	Individuals with high TA leverage digital tools to scan markets and identify trends, enhancing EA.	Nambisan (2023); Autio et al. (2023)
H2	EI → EA	EI enhances social perception and empathy, enabling detection of unmet customer needs (Foo et al., 2022).	Bacq et al. (2023); Tang et al. (2023)
H3	PP → EA	Proactive individuals actively seek information and anticipate market shifts, increasing EA (Crant, 2023).	Seibert et al. (2023); Grégoire et al. (2023)
H4	EA → EB	EA enables opportunity recognition, a critical precursor to EB (Gielnik et al., 2022).	Tang et al. (2023); Shepherd et al. (2023)
H5	TA → EB	TA facilitates rapid prototyping and digital marketing, directly influencing EB (Nambisan & Baron, 2023).	Obschonka & Audretsch (2023)
H6	EI → EB	High-EI entrepreneurs manage stress and build networks, directly enhancing EB (Bacq et al., 2023).	Foo et al. (2022)
H7	PP → EB	PP drives persistence and initiative, key for venture creation (Seibert et al., 2023).	Crant (2023)

Table 2: Indirect Hypotheses (H8-H10): Mediation via Entrepreneurial Alertness

Hypothesis	Mediated Path	Theoretical Justification	Key Supporting Literature
H8	TA → EA → EB	TA enhances EA (H1), which then drives EB (H4). Digital tools expand opportunity recognition (Autio et al., 2023).	Nambisan (2023)
H9	EI → EA → EB	EI improves EA (H2), which facilitates EB (H4). Emotionally intelligent entrepreneurs spot gaps others miss (Bacq et al., 2023).	Foo et al. (2022)
H10	PP → EA → EB	PP fosters EA (H3), which catalyzes EB (H4). Proactive individuals scan environments more effectively (Grégoire et al., 2023).	Seibert et al. (2023)

While prior studies examine these constructs in isolation (Shepherd et al., 2023), this study integrates them into a unified framework, addressing calls for holistic models (Nambisan, 2023). The mediating role of EA remains underexplored, particularly in digital contexts (Autio et al., 2023).

Figure 1: Theoretical Framework



Methodology

Research Design and Philosophy

This study adopts a quantitative, cross-sectional research design to examine the relationships between technological adaptability, emotional intelligence, proactive personality, entrepreneurial alertness, and entrepreneurial behaviour. The research is grounded in a positivist philosophy, which emphasises objective measurement and statistical analysis to test hypotheses derived from existing theories (Saunders et al., 2023).

Unit of Analysis

The unit of analysis for this study is individual students from universities and colleges in Gujranwala city, Pakistan. Focusing on students is appropriate because they represent a dynamic demographic with high entrepreneurial potential, often exposed to technological advancements and skill development programs (Ali et al., 2023). The study targets students enrolled in business, engineering, and social sciences programs, as these disciplines are closely linked to the development of an entrepreneurial mindset (Kuratko et al., 2023).

Sampling Techniques

The study employs convenience sampling, a non-probability technique, to recruit 450 participants from educational institutions in Gujranwala. Convenience sampling is suitable due to logistical constraints and the exploratory nature of the study (Etikan et al., 2023). To mitigate bias, the sample includes students from diverse academic backgrounds and year levels, ensuring a representative distribution (Patten & Newhart, 2023).

Data Collection Method

Data is collected through a structured questionnaire distributed both online (Google Forms) and offline (paper-based). The questionnaire includes validated scales for each construct:
Measured using the 6-item scale by Nambisan and Baron (2023), focusing on comfort with digital tools ($\alpha = 0.89$). Assessed via the Wong and Law Emotional Intelligence Scale (WLEIS; 2022), with 16 items ($\alpha = 0.91$). Evaluated using the 10-item Proactive Personality Scale (PPS; Seibert et

al., 2023) (α = 0.87). Adapted from Tang et al. (2023) 's 5-item scale (α = 0.85).: Measured using a 7-item scale by Gielnik et al. (2022), capturing venture creation actions (α = 0.88). A 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) is used for all items.

Data Analysis

Data is analysed using SPSS 28 and Hayes' PROCESS macro (Model 4) for mediation analysis. The analysis involves: Means, standard deviations, and reliability checks (Cronbach's α). To examine bivariate relationships between variables. To test direct effects (H1–H7). Using Hayes' PROCESS macro (5,000 bootstraps) to assess indirect effects (H8–H10) (Hayes, 2022).

Results

Descriptive Statistics

The sample consisted of 450 students from universities in Gujranwala, with 58% males and 42% females. The age distribution showed 72% between 20-25 years, 23% between 26-30 years, and 5% above 30 years.

For the primary constructs (Table 1), all variables showed acceptable normality (skewness < |2|, kurtosis < |7|). Entrepreneurial Behaviour (EB) had the highest mean (M = 4.12, SD = 0.71), followed by Proactive Personality (PP) (M = 3.98, SD = 0.68). Technological Adaptability (TA) showed slightly lower but still positive scores (M = 3.75, SD = 0.82).

Table 3: Descriptive Statistics of Key Variables

Variable	Mean	SD	Skewness	Kurtosis
Technological Adaptability	3.75	0.82	-0.32	0.85
Emotional Intelligence	3.89	0.74	-0.41	1.02
Proactive Personality	3.98	0.68	-0.28	0.91
Entrepreneurial Alertness	3.82	0.77	-0.35	0.88
Entrepreneurial Behavior	4.12	0.71	-0.19	0.76

Reliability and Validity

All constructs demonstrated excellent internal consistency (Table 2). Cronbach's α values ranged from 0.85 to 0.92, exceeding the 0.70 threshold (Nunnally & Bernstein, 1994). Convergent validity was confirmed with AVE values >0.5 (range: 0.52-0.67) and CR values >0.7 (range: 0.82-0.91). CFA results indicated good model fit (χ^2/df=2.31, CFI=0.95, RMSEA=0.06, SRMR=0.04), supporting the measurement model.

Correlation Analysis

Pearson correlations (Table 3) revealed significant positive relationships among all variables ($p<0.01$). The strongest correlation was between Proactive Personality and Entrepreneurial Alertness ($r=0.61$). No multicollinearity issues were detected (all VIFs<3.0), as correlations remained below the 0.80 threshold (Kline, 2016).

Table 4: Reliability and Validity Analysis

Construct	α	AVE	CR
Technological Adaptability	0.89	0.62	0.88
Emotional Intelligence	0.91	0.67	0.91
Proactive Personality	0.87	0.58	0.85
Entrepreneurial Alertness	0.85	0.52	0.82
Entrepreneurial Behavior	0.88	0.55	0.86

Table 5: Correlation Matrix

Variables	1	2	3	4	5
1. TA	1				
2. EI	0.43**	1			
3. PP	0.38**	0.52**	1		
4. EA	0.47**	0.56**	0.61**	1	
5. EB	0.51**	0.49**	0.58**	0.64**	1

Note: TA: Technological Adaptability; EI: Emotional Intelligence; PP: Proactive Personality; EA: Entrepreneurial Alertness; EB: Entrepreneurial Behavior

Table 6: Hypotheses Testing for Direct Effects (H1-H3)

Hypothesis	Path (Predictor → Outcome)	β Coefficient	p-value	Support Status
H1	TA → EA (Technological Adaptability → Entrepreneurial Alertness)	0.23	< 0.001	Supported
H2	EI → EA (Emotional Intelligence → Entrepreneurial Alertness)	0.28	< 0.001	Supported
H3	PP → EA (Proactive Personality → Entrepreneurial Alertness)	0.31	< 0.001	Supported

Note: Model Summary is $R^2 = 0.49$ (The model explains 49% of the variance in Entrepreneurial Alertness). F-statistic = 142.36, $p < 0.001$ (The overall model is statistically significant).

Interpretation

Technological Adaptability (TA) → Entrepreneurial Alertness (EA) (H1): A significant positive relationship exists ($\beta = 0.23$, $p < 0.001$), meaning individuals with higher technological adaptability tend to exhibit greater entrepreneurial alertness. This supports the idea that being adaptable to technological changes enhances one's ability to recognize entrepreneurial opportunities. Emotional Intelligence (EI) → Entrepreneurial Alertness (EA) (H2): The positive and significant coefficient ($\beta = 0.28$, $p < 0.001$) indicates that higher emotional intelligence contributes to better entrepreneurial alertness. Emotionally intelligent individuals may be more perceptive of market needs and interpersonal cues, aiding opportunity recognition. Proactive Personality (PP) → Entrepreneurial Alertness (EA) (H3): The strongest predictor among the three ($\beta = 0.31$, $p < 0.001$), suggesting that proactive individuals are more likely to scan the environment for opportunities. This aligns with the notion that proactive behaviour drives entrepreneurial awareness and action.

Table 7: Hypotheses Testing for Direct Effects (H4-H7)

Hypothesis	Path (Predictor → Outcome)	β Coefficient	p-value	Support Status
H4	EA → EB (Entrepreneurial Alertness → Entrepreneurial Behavior)	0.35	< 0.001	Supported
H5	TA → EB (Technological Adaptability → Entrepreneurial Behavior)	0.18	< 0.01	Supported
H6	EI → EB (Emotional Intelligence → Entrepreneurial Behavior)	0.15	< 0.05	Supported
H7	PP → EB (Proactive Personality → Entrepreneurial Behavior)	0.22	< 0.001	Supported

Note: Model Summary is $R^2 = 0.54$ (The model explains 54% of the variance in Entrepreneurial Behavior).F-statistic = 165.82, $p < 0.001$ (The model is statistically significant).

Interpretation

Entrepreneurial Alertness (EA) → Entrepreneurial Behavior (EB) (H4): The strongest predictor ($\beta = 0.35$, $p < 0.001$) confirms that alertness directly translates into entrepreneurial actions (e.g., launching ventures, seizing opportunities). Technological Adaptability (TA) → EB (H5): Significant but moderate effect ($\beta = 0.18$, $p < 0.01$). Suggests that tech-adaptable individuals leverage tools/trends to drive entrepreneurial actions, albeit less directly than via alertness. Emotional Intelligence (EI) → EB (H6): Smallest but significant effect ($\beta = 0.15$, $p < 0.05$). EI likely aids in networking/persistence, indirectly fostering EB, but alertness may be a stronger conduit. Proactive Personality (PP) → EB (H7): Robust effect ($\beta = 0.22$, $p < 0.001$). Proactive individuals take initiative, aligning with EB's action-oriented nature (e.g., resource mobilization, risk-taking).

Table 8: Hypotheses Testing for Indirect (Mediation) Effects (H8-H10)

Hypothesis	Mediation Path	β (Indirect Effect)	95% CI	Support Status
H8	TA → EA → EB (Technological Adaptability → Alertness → Behavior)	0.08	[0.04, 0.13]	Supported
H9	EI → EA → EB (Emotional Intelligence → Alertness → Behavior)	0.10	[0.06, 0.15]	Supported
H10	PP → EA → EB (Proactive Personality → Alertness → Behavior)	0.11	[0.07, 0.16]	Supported

Interpretation of Indirect Effects

Technological Adaptability → Alertness → EB (H8):$\beta = 0.08$, 95% CI [0.04, 0.13]. TA's impact on entrepreneurial behavior is partially mediated by alertness. Individuals with higher technological adaptability are more likely to recognize opportunities (EA), which in turn drives action (EB). The positive CI (excluding zero) confirms mediation. Emotional Intelligence → Alertness → EB (H9):$\beta = 0.10$, 95% CI [0.06, 0.15]. EI enhances entrepreneurial behavior primarily by improving alertness. Emotionally intelligent individuals may better perceive market gaps or customer needs (EA), leading to proactive ventures (EB). Proactive Personality → Alertness → EB (H10): $\beta = 0.11$, 95% CI [0.07, 0.16] PP has the strongest indirect effect. Proactive

individuals naturally scan for opportunities (EA), which translates into tangible entrepreneurial actions (EB).

Discussion

Summary of Key Findings

This study examined the relationships between technological adaptability (TA), emotional intelligence (EI), proactive personality (PP), entrepreneurial alertness (EA), and entrepreneurial behavior (EB) among university students in Gujranwala, Pakistan. The results supported all seven direct hypotheses (H1-H7) and three indirect hypotheses (H8-H10), confirming the robustness of the proposed theoretical framework.

Interpretation of Direct Effects

The findings revealed that: Technological Adaptability (TA) significantly predicted Entrepreneurial Alertness (EA) (H1: $\beta = 0.23$, $p < .001$). This aligns with recent research by Nambisan and Baron (2023), who found that digital literacy enhances opportunity recognition in dynamic markets. Our results suggest that students comfortable with emerging technologies are better equipped to identify business opportunities. Emotional Intelligence (EI) showed a strong positive relationship with EA (H2: $\beta = 0.28$, $p < .001$). This supports Foo et al.'s (2022) assertion that emotionally intelligent individuals demonstrate superior social awareness, enabling them to detect unmet market needs more effectively.

Table 9: Mediation Analysis (PROCESS Model 4)

Path	Indirect Effect	Boot SE	95% CI (Lower)	95% CI (Upper)
TA → EA → EB	0.08	0.02	0.04	0.13
EI → EA → EB	0.10	0.02	0.06	0.15
PP → EA → EB	0.11	0.02	0.07	0.16

Note: TA: Technological Adaptability; EI: Emotional Intelligence; PP: Proactive Personality; EA: Entrepreneurial Alertness; EB: Entrepreneurial Behavior

Proactive Personality (PP) was the strongest predictor of EA (H3: $\beta = 0.31$, $p < .001$) These findings corroborate Seibert et al.'s (2023) work on proactive behavior, suggesting that self-starting individuals are more likely to scan environments for entrepreneurial opportunities. Entrepreneurial Alertness (EA) significantly influenced Entrepreneurial Behavior (EB) (H4: $\beta = 0.35$, $p < .001$). This strong relationship validates Tang et al.'s (2023) conceptualization of EA as a critical precursor to entrepreneurial action. Direct effects of TA (H5: $\beta = 0.18$), EI (H6: $\beta = 0.15$), and PP (H7: $\beta = 0.22$) on EB were also significant. These results indicate that while EA mediates much of their influence, these constructs retain independent predictive power regarding entrepreneurial actions.

Interpretation of Indirect Effects

The mediation analysis revealed: TA → EA → EB (H8: $\beta = 0.08$, 95% CI [0.04, 0.13]). This pathway accounted for approximately 20% of TA's total effect on EB, suggesting that technological skills enhance entrepreneurial behavior both directly and through improved opportunity recognition. EI → EA → EB (H9: $\beta = 0.10$, 95% CI [0.06, 0.15]) Emotional intelligence's mediated effect was slightly stronger, explaining about 25% of its total influence on EB, consistent with Bacq et al.'s (2023) findings on emotional competence in entrepreneurship. PP → EA → EB (H10: $\beta = 0.11$, 95% CI [0.07, 0.16]) Proactive personality showed the strongest

mediated effect, supporting Grégoire et al.'s (2023) argument that proactive individuals are particularly adept at converting recognized opportunities into action.

Theoretical Implications

These findings make several important contributions to entrepreneurship literature: Unlike previous studies that examined these constructs in isolation (Shepherd et al., 2023), our research provides a comprehensive framework that links technological, emotional, and personality factors through the mediating mechanism of entrepreneurial alertness. The results strongly support EA's pivotal role in the entrepreneurial process, aligning with but extending beyond Shapero and Sokol's (1982) Entrepreneurial Event Model by quantifying its mediating effects. The pattern of findings reinforces Bandura's (1986) Social Cognitive Theory by demonstrating how personal factors (TA, EI, PP), environmental scanning (EA), and behavior (EB) interact in entrepreneurial contexts.

Practical Implications

The study offers valuable insights for: Curriculum developers should emphasize technological training, emotional intelligence development, and proactive mindset cultivation to enhance students' entrepreneurial capabilities. Government initiatives could incorporate these findings into startup incubation programs, particularly in developing economies where entrepreneurial education is emerging. Students and young professionals can use these insights to focus their self-development efforts on the most impactful areas for entrepreneurial success.

Limitations and Future Research Directions

While this study provides important insights, several limitations should be acknowledged: The focus on university students in one Pakistani city may limit generalizability. Future research should include more diverse populations and cultural contexts. The study's snapshot approach cannot establish causality. Longitudinal designs would better capture how these relationships evolve over time. Common method bias may influence results. Future studies could incorporate behavioral measures or peer assessments. Factors like institutional support or access to capital may moderate these relationships and warrant investigation. Future research directions include: Examining these relationships in different cultural contexts. Investigating potential nonlinear effects. Exploring additional mediators (e.g., self-efficacy) and moderators (e.g., institutional support). Developing and testing interventions based on these findings

Conclusion

This study makes significant theoretical and practical contributions to our understanding of entrepreneurial behavior. By demonstrating how technological adaptability, emotional intelligence, and proactive personality influence entrepreneurial actions both directly and through enhanced alertness, the research provides a more nuanced understanding of the entrepreneurial process. The findings validate and extend key theoretical frameworks while offering actionable insights for educators, policymakers, and aspiring entrepreneurs. Future research should build on these findings by addressing the noted limitations and exploring additional factors that may influence these relationships. Ultimately, this study advances our understanding of the psychological and behavioral foundations of entrepreneurship, providing a robust foundation for both academic inquiry and practical application in entrepreneurial development.

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