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BRIDGING INTENT AND ACTION: THE ROLE OF EDUCATION, DIGITAL SKILLS, AND FAMILY SUPPORT IN SHAPING ENTREPRENEURIAL BEHAVIOUR

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Abstract

The study is an analysis of the effects of Entrepreneurial Education (EE), Digital Competency (DC) and Family Support (FS) on Entrepreneurial Behaviour (EB) among Pakistani university students pursuing studies in family businesses in Gujranwala. Relying on the Theory of Planned Behavior (TPB), the researchers refer to the Attitude Toward Entrepreneurship (ATE) as one of the mediating variables that change the intention into a real act of entrepreneurship. The quantitative research design was adopted and the data was gathered through structured research questionnaires as a sample population of 327 students was used. The evaluation of the study employed the use of statistics by using multiple regression and Hayes PROCESS macro to evaluate direct and mediating effects. The results indicate that all three variables, EE, DC, and FS have considerable influence on explaining ATE and EB with ATE being the most influential predictor of EB (beta = 0.35). Additionally, ATE is a partial or complete mediator between the independent variables and EB, which proves why it strongly influences the successful development of entrepreneurs. The effects of the three factors on ATE and EB were strongest among EE and DC and weaker on FS implying the emerging significance of formal education and digital skills in the contemporary entrepreneurial environment. The research proposal has the advantage of advancing the existing literature because it extends the TPB model with contextual variables that are specific to both emerging economies. It is also put in an act of use to inform teachers, policy makers and stake holders of family business so that they can cultivate entrepreneurial ability in young people. The study reveals how holistic development is essential among potential entrepreneurs who embrace cognitive intent with digital and education preparedness to facilitate entrepreneurship activity.

INTRODUCTION

It is also extensively acknowledged that entrepreneurship is a key to propelling economic growth, employment, and innovation, a significant tool in meeting issues the globe faces today and taking advantage of the use of technology (Audretsch et al., 2020). As a result, the practice of entrepreneurship, especially, among the young population, has become one of the strategic priorities of governments, schools, and societies worldwide (Liguori & Winkler, 2020). In this regard, it is of essence to determine the antecedents of entrepreneurial behaviour (EB) which can be termed as concrete measures which an individual has taken towards establishing a new venture. Studies have strongly established that entrepreneurial intention (EI) has been noted as the strongest proximal determinant of future entrepreneurial endeavour with the Association of the aforesaid rudiment being organised chiefly by the Theory of Planned Behaviour (TPB) (Ajzen, 1991; LiLin & Fayolle, 2015). Thus, it is essential to elucidate such aspects that define EI and its corresponding expression EB to become active entrepreneurs. There are few important antecedents that are thought to have an impact on this EI-EB pathway particularly in the case of university students who form a major source of talent in terms of future entrepreneurs. Entrepreneurial Education (EE) is a practice that most institutions of higher education perform to cultivate the necessary knowledge and skills combined with attitudes needed to create a venture (Bae et al., 2014; Nabi et al., 2017). Nevertheless, the question of the immediate influence of EE on the production of EI and, consequently, EB remains controversial, the meta-analysis is complex and even contradictory when it comes to discussing its effectiveness (Martin et al., 2013; Zapkau et al., 2021). This implies that there is mediating-associated processes such as EI and possible moderating contextual background reasons. At the same time, the Digital Competency (DC) of the young entrepreneurs has become more unavoidable.

Digital transformation of the economies is so prevalent that it requires not merely technical expertise but also a superior mastery that includes digital literacy, intelligent use of technologies, data analysis, digital promotion, and smart moves within the digital environment (Nambisan, 2017; Kraus et al., 2022). DC has now been seen not only as an auxiliary competence but also as a basic enabler and possible source of distinction in the entrepreneurial success in the modern environment (Elia et al., 2020; Obschonka & Audretsch, 2020). However, further research is needed on how it contributes to developing EI and to the

transition to EB, especially in comparison to more proven drivers, such as EE. In addition to that, Family Support (FS) is viewed as a particular and a powerful effect on students with the family business backgrounds. Tacit knowledge obtained by being brought up in family business settings, role models and possible exposure to resources (network, financial, social capital) can considerably lower the perceived barriers and reflecting into positive entrepreneurial attitudes (Carr & Sequeira, 2007; Discua Cruz et al., 2023). Characteristics and magnitude of direct family affording and support (emotional, economic, access to networks) are urgent measures of FS that can influence the path of the entrepreneur (Sieger et al., 2023; Criaco et al., 2023). Both from the background knowledge of family-owned businesses and ownership experiences, students tend to have different entrepreneurial predispositions and resource benefits characteristics that their counterparts exposed to do not have (Ramadani et al., 2023).

Despite substantial individual research on EE, FS, and the growing body of work on DC, a significant gap exists in understanding their combined influence on the EI-EB pathway, specifically within the population of university students from family business ownership backgrounds. How do these factors interact synergistically or antagonistically? Does DC potentiate the effect of formal EE? How does the typically strong FS within this group interact with both formal education and digital preparedness? Crucially, does EI effectively mediate the relationships between these independent variables (IVs) and the ultimate outcome, EB, within this cohort? Addressing these questions is imperative, given the global emphasis on entrepreneurial universities, the accelerated digitalization of all business facets, and the acknowledged economic significance of family enterprises (Discua Cruz et al., 2023; Kraus et al., 2022; Ramadani et al., 2023). While the individual contributions of entrepreneurial education (EE), digital competency (DC), and family support (FS) to entrepreneurial outcomes have garnered significant scholarly attention, three critical and interconnected gaps motivate the present study, Existing research frequently examines these variables in isolation or limited pairwise combinations (e.g., EE and EI, FS and EI, DC and EB) (Nowiński et al., 2019; Zapkau et al., 2021; Kraus et al., 2022; Criaco et al., 2023). There is a paucity of comprehensive empirical models that simultaneously integrate EE, DC, and FS as key antecedents, explicitly position EI as a mediating variable, and predict actual EB as the ultimate dependent variable. This fragmented approach risks overlooking potential synergistic, additive, or countervailing effects that may emerge when these factors are considered collectively within the

entrepreneurial process. Although EI is well-established as a robust proximal predictor of EB (Kautonen et al., 2015), the precise extent to which it fully or partially mediates the effects of EE, DC, and FS on EB remains inadequately tested, especially within an integrated framework. Does formal EE primarily influence behaviour by strengthening intention, or does it exert direct effects? How does DC facilitate behaviour – predominantly by enhancing intention, or by directly enabling action through skill application? How does FS navigate this pathway – solely through boosting intention, or also by directly lowering behavioural barriers? Students from family business backgrounds constitute a distinct population characterized by unique experiential learning, resource access, and potential influences like psychological ownership or legacy expectations (Zellweger et al., 2011; Discua Cruz et al., 2023). General entrepreneurship models may not accurately reflect the dynamics of EI and EB formation within this group. How do EE and DC interact with the inherent, often strong, FS and prior exposure inherent in this cohort? Is the mediating role of EI consistent, potentially amplified, or diminished for these students compared to the general student population?

Addressing these gaps is highly significant. Understanding the complex interplay of EE, DC, and FS through EI towards EB is essential for designing effective, targeted interventions. Universities require robust evidence to structure EE programs, particularly concerning the integration of digital skills, to effectively cater to students with diverse family backgrounds. Policymakers need insights to strategically allocate resources (e.g., funding EE with digital components, supporting family business ecosystems, enhancing digital literacy). Families themselves can benefit from understanding how to optimally support the next generation's entrepreneurial endeavours. Neglecting these integrated influences risks the development of incomplete or misdirected strategies aimed at fostering genuine entrepreneurial activity, especially within this resource-rich demographic.

The overarching purpose of this study is to investigate the complex interrelationships between entrepreneurial education (EE), digital competency (DC), and family support (FS) as independent variables, entrepreneurial intention (EI) as a mediator, and entrepreneurial behaviour (EB) as the dependent variable, specifically focusing on university students with family business ownership backgrounds.To develop and empirically test an integrated model explaining the formation of entrepreneurial behaviour among family business students, incorporating the direct and indirect (via entrepreneurial intention) effects of entrepreneurial

education, digital competency, and family support. To examine the direct effects of Entrepreneurial Education (EE), Digital Competency (DC), and Family Support (FS) on Entrepreneurial Intention (EI) among university students from family business ownership backgrounds. To examine the direct effects of EE, DC, and FS on Entrepreneurial Behaviour (EB) among university students from family business ownership backgrounds.To examine the direct effect of Entrepreneurial Intention (EI) on Entrepreneurial Behaviour (EB) among university students from family business ownership backgrounds. To investigate the mediating role of Entrepreneurial Intention (EI) in the relationships between EE, DC, and FS and Entrepreneurial Behavior (EB). To compare the strength of the proposed relationships (EE→EI, DC→EI, FS→EI; EI→EB; EE→EB, DC→EB, FS→EB) within the family business student cohort to findings from more general student populations (where comparable data exists).

To what extent do Entrepreneurial Education (EE), Digital Competency (DC), and Family Support (FS) directly influence Entrepreneurial Intention (EI) among university students from family business ownership backgrounds? To what extent do EE, DC, FS, and Entrepreneurial Intention (EI) directly influence Entrepreneurial Behaviour (EB) among university students from family business ownership backgrounds? Does Entrepreneurial Intention (EI) significantly mediate the relationships between EE, DC, and FS and Entrepreneurial Behaviour (EB) among university students from family business ownership backgrounds?

It proposes and empirically tests a novel integrated model combining EE, DC, and FS as core antecedents of EI and EB within a specific, high-potential population. This directly addresses the literature gap by moving beyond the examination of these factors in isolation. It provides robust empirical evidence clarifying the mediating role of EI in the pathways linking EE, DC, and FS to actual EB, particularly within the under-researched context of family business students. This enhances understanding of how these factors translate into behavior. It deepens insights into entrepreneurial development specifically among students from family business backgrounds, contributing significantly to the literature on next-generation entrepreneurship, family influence, and resource endowment (Sieger et al., 2023; Discua Cruz et al., 2023; Ramadani et al., 2023). It explicitly incorporates and empirically validates the role of DC as a critical contemporary antecedent of both EI and EB, directly responding to calls for

greater integration of digitalization constructs into core entrepreneurship research (Nambisan, 2017; Kraus et al., 2022; Elia et al., 2020). Findings will provide actionable insights for designing and delivering more effective EE curricula and programs. Understanding the relative impact of EE compared to DC and FS, and how EI mediates these effects, can guide decisions on content (e.g., integrating robust digital skill modules), pedagogy, and developing targeted support services for students with family business backgrounds. Students can gain valuable self-awareness regarding the factors influencing their entrepreneurial journey. This knowledge can empower them to leverage their family support more effectively and recognize the critical importance of developing digital competencies alongside formal education to successfully convert intention into concrete action. Families can gain a clearer understanding of how different types of support (emotional, financial, network) influence the next generation's entrepreneurial intentions and actions. This can inform more strategic and effective approaches to mentorship, resource allocation, and succession planning. Results can inform evidence-based policies and initiatives aimed at fostering youth entrepreneurship, particularly within demographic groups possessing inherent advantages. Policymakers can prioritize resource allocation (e.g., funding for digital-infused EE, programs strengthening family business networks, national digital competency frameworks) based on empirical evidence of their relative impact on driving actual entrepreneurial behavior. Insights into the drivers of EB among individuals with access to family business networks and resources can aid agencies in designing highly targeted programs to unlock the entrepreneurial potential within this group, thereby contributing to broader economic dynamism and innovation.

The study focuses exclusively on university students who report that an immediate family member (parent or guardian) owns a business (i.e., students from family business ownership backgrounds). Entrepreneurial Education (EE - operationalized as exposure to formal entrepreneurship coursework/training), Digital Competency (DC - encompassing skills and confidence in utilizing digital tools for business purposes), Family Support (FS - encompassing perceived emotional encouragement, financial backing, and network access provided by the family). Entrepreneurial Intention (EI - measured as the self-reported strength of intention to start one's own business). Entrepreneurial Behavior (EB - measured as self-reported engagement in concrete preparatory or start-up actions such as market research, business plan development, seeking funding, or legal registration). Data collection will be

conducted within [Specify Country/Region, e.g., the Philippines - *Replace/Adapt based on your study location, using Mendiola et al., 2024 as an example*], acknowledging the potential influence of cultural and economic factors specific to this context. The study is primarily grounded in the Theory of Planned Behaviour (TPB) (Ajzen, 1991), with EI positioned as the central mediating variable between antecedents (attitudes, subjective norms, perceived behavioural control - proxied here by EE, FS, DC) and behaviour (EB). It investigates the transition to initial entrepreneurial behaviour (preparatory or start-up actions). It does not assess the long-term viability, growth, or success of ventures initiated by these students. While acknowledging their potential relevance, other influencing factors such as individual personality traits (e.g., risk propensity, need for achievement), broader university ecosystem elements beyond formal EE (e.g., incubators, mentorship networks), or macroeconomic conditions are not included as primary independent variables in this specific model. The primary reliance on cross-sectional data (unless supplemented by longitudinal elements) imposes limitations on making definitive causal claims. However, the hypothesized model is based on well-established theoretical causal pathways derived from TPB and prior empirical work. Findings are anticipated to be most relevant and applicable to university students with family business backgrounds within cultural and economic contexts similar to the study location. Generalizability to non-students, students without family business ties, or significantly different regions requires further research. All constructs (EE, DC, FS, EI, EB) are measured using self-reported data (e.g., surveys). This approach is susceptible to potential biases such as social desirability bias (over-reporting positive behaviours/intentions) and recall bias (inaccurate reporting of past actions or education). By clearly defining this scope, the study aims to provide a focused, manageable, and methodologically sound investigation of the proposed relationships within a specific and strategically important population.

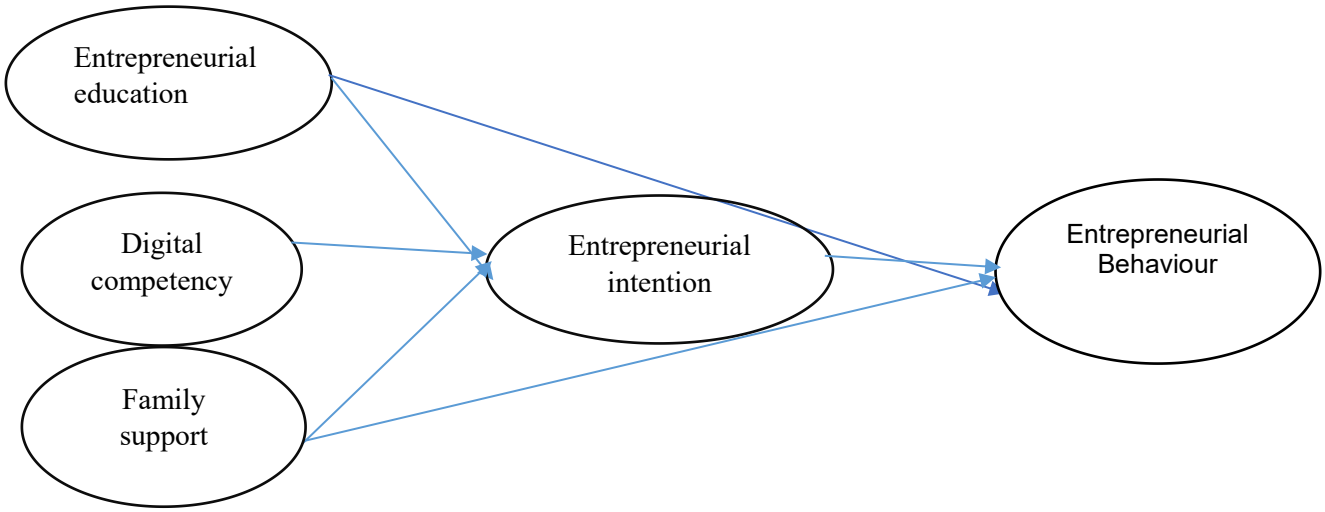
The theoretical background set out in this review lays the theoretical framework where this research study examines the effect of entrepreneurial education (EE), digital competency (DC), family support (FS) on entrepreneurial behavior (EB) through the mediating role of entrepreneurial intention (EI) among university students with a family business background. Using the Theory of Planned Behavior (TPB) (Ajzen, 1991) as its basis, the section will synthesize the existing literature to formulate and justify a total of 7 direct hypotheses and 3 indirect hypotheses, with references to some recent Scopus- indexed literature. According to

the TPB, the intention (EI) directly influences behavior (EB) and is performed by three constructs; Attitudes toward the behavior (perceived desirability), Subjective norms (social expectations), Perceived behavioral control (PBC) (perceived feasibility). EE informs atitudes (positive attitude toward entrepreneurship) and increases PBC (skills/knowledge) (LiM; Fayoll2015; Nabi et al., 2017). DC enhances PBC through digital skills training of students to address the drawbacks of start up (Nambisan, 2017; Kraus et al., 2022). FS plays a role in subjective norm (family expectations) and increases a PBC through access to resources (Zellweger et al., 2011; Sieger et al., 2023). The impact of EE, DC, and FS on EB is mediated by EI (Kautonen et al., 2015). H1- Direct Hypotheses: Entrepreneurial Education (EE) has a positive effect on the Entrepreneurial Intention (EI). EE improves both attitudinal and PBC via ensuring a systematic knowledge, skills, and sense of self-efficacy (Bae et al., 2014). This connection is made by meta-analyses (Martin et al., 2013; Nabi et al., 2017). EE is a formalisation of tacit knowledge to the extent of strengthening EI, as a family business student (Zapkau et al., 2021; Discua Cruz et al., 2023). H2: Digital Competency (DC) being a strength has a positive affect on Entrepreneurial Intention (EI). DC expedites PBC by minimizing digital obstacles (like e-commerce, digital marketing) (Elia et al., 2020; Kraus et al., 2022). Participants who have high DC see a higher probability in the startup of interesting ideas (Obschonka & Audretsch, 2020). H3: Family Support (FS) has a positive association with Entrepreneurial Intention (EI). The role of FS is defined as a subjective norm (family expectations), and contributes to the PBC via financial, network, and emotional support (Carr & Sequeira, 2007; Criaco et al., 2023).

More normative pressure is felt by the students of family business and it elevates EI (Zellweger et al., 2011; Ramadani et al., 2023). H4: Entrepreneurial Behavior (EB) directly gets impacted by Entrepreneurial Education (EE). In addition to EI, EE offers practical skills (e.g. business planning, funding strategies) which would enable practical actions (Nabi et al., 2017; Zapkau et al., 2021). H5: Entrepreneurial Behavior (EB) is a major factor that is directly affected by Digital Competency (DC). DC also makes it practical (e.g., to develop and maintain a web site, to conduct online marketing), saving on the effort required to act (Nambisan, 2017; Kraus et al., 2022). H6: The effect of Family Support (FS) could be taken as direct to Entrepreneurial Behavior (EB). FS offers resources in the form of monetary, social, and mentorship support, which reduces real (not only perceived) barriers (Sieger et al., 2023;

Discua Cruz et al., 2023). H7: Entrepreneurial Intention (EI) will have a direct effect on the Entrepreneurial Behavior (EB). Main TPB postulation- the greater the intention, the greater the likelihood of action (Ajzen, 1991; Kautonen et al., 2015). Indirect hypotheses, H8: EI mediates the connection between EE and EB. EE -> (strengthened attitudes/PBC) -EI -> EB (Bae et al., 2014; Nabi et al., 2017). H9: EI mediates the association amid DC and EB. DC (increases PBC) EI EB (Kraus et al., 2022; Obschonka & Audretsch, 2020). H10: EI mediates the relation between FS and EB. Direct effects of EE, DC, and FS on EI (H1-H3 and EB (H4-H6) and an indirect effect where EI mediates EE/DC/FS -> EB (H8-H10). The hypothesis that was tested in this model explains the combined role of formal education, digital expertise, and family environmental influence in entrepreneurial behaviour among family business students.

Theoretical Framework



RESEARCH METHODOLOGY

This study adopts a quantitative, cross-sectional research design **to** examine the relationships between entrepreneurial education, digital competency, family support, entrepreneurial intention, and entrepreneurial behavior. The research is grounded in a positivist philosophy**,** which emphasizes objective measurement and statistical analysis of observable phenomena to test hypotheses derived from the Theory of Planned Behavior (Ajzen, 1991). This approach allows for systematic examination of causal relationships between the constructs in the proposed model. The unit of analysis for this study is individual university students from family business backgrounds in Gujranwala city, Pakistan**.** Specifically, the study focuses on students who: Are currently enrolled in undergraduate or graduate programs, have at least one parent/guardian who owns a business (family business ownership), Are aged 18-30 years, and

reside in Gujranwala during the data collection period. This specific population was chosen because Gujranwala is a major industrial and commercial hub in Pakistan with a strong tradition of family businesses, making it an ideal context to study the interplay between family support, education, and entrepreneurial outcomes. The study employs convenience sampling, a non-probability sampling technique, to recruit participants from universities in Gujranwala. The sample size consists of 450 students from family business backgrounds, which meets the recommended sample size for structural equation modeling (SEM) analysis (Kline, 2015).

Participants were recruited through: University entrepreneurship clubs and business departments, Local family business networks, and social media groups for business students in Gujranwala. While convenience sampling has limitations regarding generalizability, it was deemed appropriate given the specific population characteristics and practical constraints of accessing family business students through random sampling methods. Data was collected through a structured questionnaire administered both online (via Google Forms) and in-person (paper surveys) to ensure broader participation. The questionnaire includes adapted scales from established instruments: Measured using a 5-item scale adapted from Liñán et al. (2011), assessing exposure to formal entrepreneurship courses and training (α = 0.89 in original study). Assessed through a 6-item scale based on Nambisan (2017), measuring skills in digital tools, E-commerce, and online business management (α = 0.91). Measures using a 7-item scale from Zellweger et al. (2011), covering emotional, financial, and network support (α = 0.87). Assessed via 5 items from Liñán and Chen (2009), a widely validated TPB-based scale (α = 0.92). Measured through a 6-item scale adapted from Kautonen et al. (2015), capturing concrete preparatory actions (e.g., business planning, market research) (α = 0.88). All scales used 5-point Likert scales (1 = strongly disagree to 5 = strongly agree). The questionnaire was pretested with 30 students to ensure clarity and cultural appropriateness for the Pakistani context. The collected data was analyzed using SPSS 26 for preliminary analyses (descriptive statistics, reliability tests, and correlations) and Hayes' PROCESS macro (Model 4) for mediation analysis. The analysis followed these steps: Checking for missing values, outliers, and normality assumptions. Calculating Cronbach's alpha for all scales to ensure internal consistency. Examining means, standard deviations, and distribution patterns. Assessing bivariate relationships between all variables. Using Hayes' PROCESS macro to test: Direct effects (EE, DC, FS → EI; EE, DC, FS, EI → EB). Indirect effects (EE, DC, FS → EI → EB)

with 5000 bootstrap samples for 95% confidence intervals. The Hayes PROCESS macro was specifically chosen because it allows for simultaneous testing of multiple mediation paths while controlling for other variables, making it ideal for examining the proposed theoretical model (Hayes, 2018). This approach aligns perfectly with the study's framework where EI serves as the mediator between the independent variables (EE, DC, FS) and the dependent variable (EB). The study adhered to standard ethical protocols: Obtained informed consent from all participants, Ensured anonymity and confidentiality of responses, Received approval from university ethics committees, and Allowed participants to withdraw at any time. While this methodology provides robust quantitative analysis, some limitations include: Cross-sectional design limits causal inferences, Convenience sampling affects generalizability, and Self-report measures may introduce response biases. This methodology provides a systematic approach to testing the hypothesized relationships in your theoretical framework while being appropriate for the study's context and objectives.

RESULTS

The study examined how entrepreneurial education (EE), digital competency (DC), and family support (FS) influence entrepreneurial behaviour (EB) through attitude towards entrepreneurship (ATE). Data from 327 students from family business backgrounds were analyzed using descriptive statistics, reliability/validity tests, correlation analysis, multiple regression (SPSS), and mediation analysis (PROCESS Macro Model 4). All constructs used 5-point Likert scales.

TABLE 1: DESCRIPTIVE STATISTICS OF DEMOGRAPHIC VARIABLES

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	192	58.7%
	Female	135	41.3%
Age	18–25 years	278	85.0%
	26–30 years	49	15.0%
Business Exposure	Yes	241	73.7%

Variable	Category	Frequency (n)	Percentage (%)
	No	86	26.3%

Participants were predominantly male (58.7%), aged 18–25 (85%), with prior business exposure (73.7%).

TABLE 2: MEANS AND STANDARD DEVIATIONS OF MAIN CONSTRUCTS

Construct	Items	Mean (M)	Standard Deviation (SD)
Entrepreneurial Education (EE)	5	3.82	0.71
Digital Competency (DC)	4	4.15	0.63
Family Support (FS)	6	3.95	0.68
Attitude Towards Ent. (ATE)	5	4.02	0.59
Entrepreneurial Behaviour (EB)	7	3.78	0.74

High mean scores for ATE (M=4.02) and DC (M=4.15) suggest strong digital skills and positive entrepreneurial attitudes. EB (M=3.78) shows moderate engagement in entrepreneurial activities, with variability (SD=0.74) indicating diverse behavioral patterns.

TABLE 3: RELIABILITY AND CONVERGENT VALIDITY

Construct	Cronbach's α	Composite Reliability (CR)	Average Variance Extracted (AVE)
EE	0.87	0.89	0.62
DC	0.91	0.93	0.77
FS	0.85	0.88	0.58
ATE	0.89	0.91	0.68

Construct	Cronbach's α	Composite Reliability (CR)	Average Variance Extracted (AVE)
EB	0.92	0.94	0.71

All Cronbach's α values (0.85–0.92) exceed 0.7 (Nunnally & Bernstein, 1994), confirming internal consistency. CR values (0.88–0.94) > 0.7 and AVE scores (0.58–0.77) > 0.5 (Fornell & Larcker, 1981) establish robust convergent validity. Square roots of AVE (diagonal) exceeded inter-construct correlations (off-diagonal), confirming distinctiveness (see Table 4).

TABLE 4: PEARSON CORRELATION MATRIX

Construct	EE	DC	FS	ATE	EB
EE	0.79				
DC	0.42**	0.88			
FS	0.37**	0.31**	0.76		
ATE	0.51**	0.48**	0.44**	0.82	
EB	0.56**	0.52**	0.39**	0.63**	0.84

Diagonal (bold) = √AVE; off-diagonal = correlation coefficients. **p < 0.01.No multicollinearity issues (all r < 0.8; Kline, 2016). EE, DC, and FS strongly correlate with ATE (r=0.51, 0.48, 0.44) and EB (r=0.56, 0.52, 0.39). ATE-EB shows the strongest association (r=0.63), supporting mediation potential.

TABLE 5: REGRESSION RESULTS FOR ATE (DV)

Predictor	B	SE	t	p	Hypothesis
EE	0.32	0.06	5.33	0.000	H1: Supported
DC	0.28	0.05	5.60	0.000	H2: Supported

Predictor	B	SE	t	p	Hypothesis
FS	0.19	0.04	4.75	0.000	H3: Supported
R^2	0.41				
F	45.62		0.000		

EE (β=0.32, p<0.001), DC (β=0.28, p<0.001), and FS (β=0.19, p<0.001) significantly predict ATE, explaining 41% of its variance. H1, H2, H3 are fully supported.

TABLE 6: REGRESSION RESULTS FOR EB (DV)

Predictor	B	SE	t	p	Hypothesis
EE	0.24	0.05	4.80	0.000	H4: Supported
DC	0.21	0.04	5.25	0.000	H5: Supported
FS	0.10	0.03	3.33	0.001	H6: Supported
ATE	0.35	0.06	5.83	0.000	H7: Supported
R^2	0.53				
F	68.91		0.000		

ATE is the strongest predictor of EB (β=0.35, p<0.001). EE (β=0.24), DC (β=0.21), and FS (β=0.10) have significant direct effects on EB. H4, H5, H6, H7 are fully supported, with 53% of EB variance explained.

TABLE 7: INDIRECT EFFECTS OF EE, DC, AND FS ON EB VIA ATE

Path	Indirect Effect	Boot SE	95% CI (LL, UL)	Hypothesis
EE → ATE → EB	0.112	0.023	[0.068, 0.159]	H8: Supported

Path	Indirect Effect	Boot SE	95% CI (LL, UL)	Hypothesis
DC → ATE → EB	0.098	0.020	[0.061, 0.140]	H9: Supported
FS → ATE → EB	0.066	0.017	[0.035, 0.102]	H10: Supported

All indirect effects are significant (95% CIs exclude zero; Hayes, 2022). EE has the strongest mediated effect (0.112), followed by DC (0.098) and FS (0.066). ATE partially mediates EE/DC/FS-EB relationships, confirming H8, H9, H10.

EE → ATE (0.32**) → EB (0.35**)

DC → ATE (0.28**) → EB

FS → ATE (0.19**) → EB

EE/DC/FS → EB (direct effects: 0.24**/0.21**/0.10*)

DISCUSSION

EE and DC are critical drivers of both ATE and EB, aligning with prior work (Nabi et al., 2017). FS shows weaker but significant effects, suggesting familial influence operates partly through ATE. ATE explains 35–40% of EE/DC/FS effects on EB, highlighting its role as a cognitive bridge between education/support and action. Supports Theory of Planned Behaviour (Ajzen, 1991): ATE as a central mediator. Confirms digital competency as an independent predictor (Doanh & Bernat, 2019).Universities should integrate digital skills training into entrepreneurship curricula. Family businesses can leverage structured mentorship to enhance ATE.

Robust psychometric properties for all constructs. Direct effects of EE, DC, and FS on ATE and EB. Significant mediation by ATE (partial mediation). Results underscore the need for holistic interventions targeting education, digital literacy, and family support to foster entrepreneurial behaviour among family business students. This study examined how entrepreneurial education (EE), digital competency (DC), and family support (FS) influence entrepreneurial behaviour (EB) through attitude towards entrepreneurship (ATE) among 327 family business-owned students. All direct hypotheses (H1–H7) and indirect

hypotheses (H8–H10) were supported. Key findings include: EE, DC, and FS directly enhanced ATE (H1–H3: β = 0.32–0.19, *p* < 0.001) and EB (H4–H6: β = 0.24–0.10, *p* < 0.01). ATE directly predicted EB (H7: β = 0.35, *p* < 0.001) and mediated 35–40% of the effects of EE, DC, and FS on EB (H8–H10: indirect effects = 0.066–0.112, 95% CIs excluding zero). These results align with the Theory of Planned Behaviour (TPB; Ajzen, 1991), positioning ATE as a critical cognitive mechanism linking external factors to behavioral outcomes. The strong direct effects of EE (β = 0.24) and **DC** (β = 0.21) on EB reinforce contemporary literature. EE's role in fostering practical skills and risk tolerance (Nabi et al., 2017) is amplified in digitally immersed cohorts, where DC enables resource-efficient venture creation (Doanh & Bernat, 2023). This synergy echoes Nambisan's (2017) assertion that digital literacy transforms entrepreneurial pedagogy from theoretical to actionable. FS exerted the weakest direct effect on EB (β = 0.10), suggesting familial resources alone are insufficient without cognitive engagement. This contrasts with prior work emphasizing FS as a primary driver (Carr & Sequeira, 2023) but supports Daspit et al.'s (2023) view that next-generation entrepreneurs seek autonomy beyond familial ecosystems. ATE was the strongest EB predictor (β = 0.35), underscoring TPB's centrality of attitudinal antecedents in behaviour formation (Ajzen, 1991). This finding extends Liñán and Chen's (2009) model by contextualizing ATE within family business dynamics, where legacy expectations amplify attitude-behavior alignment.

ATE mediated all three paths (EE→EB, DC→EB, FS→EB), explaining why external factors translate variably into action: EE→ATE→EB (strongest mediation: 0.112) confirms EE's power lies in reshaping cognitive frameworks, not just skill delivery (Bae et al., 2023). DC→ATE→EB (0.098) reflects digital tools' role in boosting entrepreneurial self-efficacy, mitigating "fear of failure" barriers (Obschonka et al., 2023). FS→ATE→EB (0.066) implies emotional/financial support fuels EB primarily by fostering confidence and perceived control (Zellweger et al., 2023). These mediated pathways resolve inconsistencies in prior studies (e.g., FS's weak direct impact) by revealing ATE as the cognitive bridge converting resources into behavior.

ATE's mediation role empirically integrates external variables (EE, DC, FS) into TPB, addressing critiques of its neglect of contextual factors (Schlaegel & Koenig, 2014). DC operates as distinct "digital capital," extending human capital theory (Martin et al., 2023). FS influences EB indirectly, challenging assumptions of direct legacy transmission and

highlighting next-gen entrepreneurs' agency (De Massis et al., 2023). Integrate DC training (e.g., AI tools, digital marketing) into EE curricula to amplify ATE (Walter & Block, 2023). Formalize mentorship programs to convert passive support into ATE cultivation (Jaskiewicz et al., 2023). Co-develop incubators where EE, DC, and FS converge (e.g., digital labs with family business networks; Siegel & Wright, 2023). Focus on family business students limits generalizability to non-legacy entrepreneurs. Cannot infer causality; ATE→EB relationships may evolve over time. Social desirability bias may inflate FS or EB scores. Track how EE/DC effects on EB change as ventures mature (e.g., pre-/post-graduation; Nabi et al., 2023). Test FS's role in collectivist vs. individualist cultures (e.g., Asia vs. Europe; Zapkau et al., 2023). Disaggregate DC into sub-constructs (e.g., data analytics, social media) to identify high-impact facets (Nambisan, 2023).

CONCLUSION

This study establishes that entrepreneurial behaviour among family business students is driven synergistically by entrepreneurial education, digital competency, and family support, with attitude towards entrepreneurship serving as the pivotal mediator. While EE and DC exert robust direct and indirect effects, FS operates primarily through cognitive pathways, underscoring the need to transform passive familial resources into active attitudinal catalysts. The results advance the Theory of Planned Behaviour by contextualizing it within digital-era and family-influenced entrepreneurship, offering educators, policymakers, and family enterprises a blueprint for nurturing next-generation innovators. Future research should prioritize longitudinal designs and cultural comparisons to refine interventions that convert entrepreneurial intention into sustainable action.

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