



IMPACT OF ENTREPRENEURIAL MINDSET AND DIGITAL TRANSFORMATION ON THE PERFORMANCE OF FAMILY BUSINESSES IN JOS NORTH LOCAL GOVERNMENT AREA, PLATEAU STATE.

Gofwan John^{1,*}, Emeka Ogidi¹

¹University of Jos

*Corresponding author: gjohnngolgak@gmail.com; 08038361507

DOI: <https://doi.org/10.67862/jmres.2026.ul51apoe>

Keywords:

Entrepreneurial mindset;
Digital transformation; Family business performance;
Dynamic Capabilities Theory; Diffusion of Innovations Theory; Effectuation Theory.

Article History:

Received: 3 August 2026

Revised: 16 September 2026

Accepted: 18 September 2026

Published: 3 October 2026

Article Info:

Homepage:

<https://jmres.org.ng>

Volume: 1, No. 1, 2026

Pages: 188-199

ABSTRACT

Family businesses contribute significantly to employment generation, wealth creation, and economic development in Nigeria. However, many family-owned enterprises continue to face performance challenges arising from limited entrepreneurial capabilities and slow adoption of digital technologies. This study examined the relationship between entrepreneurial mindset and the performance of family businesses in Jos North Local Government Area of Plateau State, with digital transformation serving as a mediating variable. A quantitative cross-sectional survey design was adopted, and primary data were collected from 300 owners and managers of family businesses using structured questionnaires. Data were analysed using descriptive statistics, Pearson correlation, ordinary least squares regression, and bootstrap mediation analysis (5,000 samples) in SPSS with the PROCESS macro (Model 4). The findings revealed that entrepreneurial mindset is positively associated with family business performance ($\beta = 0.713, p < .001$) and with digital transformation ($\beta = 0.717, p < .001$). Digital transformation is also positively associated with business performance ($\beta = 0.563, p < .001$) and partially mediates the relationship between entrepreneurial mindset and family business performance (indirect effect = 0.404, 95% CI [0.311, 0.509]; approximately 57% of the total association). The study concludes that entrepreneurial-minded business owners who embrace digital technologies are better positioned to improve operational efficiency, competitiveness, and long-term sustainability. The study recommends that family business owners strengthen entrepreneurial capabilities while investing in appropriate digital technologies to support business growth and resilience.

1. Introduction

Family businesses are a key driver of economic growth across the world. They make up a large part of the business landscape, help create jobs, encourage innovation, and support the overall development of the economy. In Nigeria, family-owned businesses are a major part of the micro,

small, and medium enterprise (MSME) sector and play a vital role in reducing poverty and generating wealth. However, despite their importance to the economy, many family businesses face challenges such as declining performance, limited growth, and poor sustainability. These issues often stem from weak entrepreneurial skills, poor strategic planning, reluctance to innovate, and a slow adoption of digital technologies. The growing complexity of today's business environment calls for entrepreneurs to develop abilities that allow them to spot opportunities, keep innovating, adapt to changes in the market, and use new technologies effectively. As a result, having an entrepreneurial mindset has become a key strategic strength that allows business owners to think creatively, spot opportunities, manage uncertainty, and drive innovation. Businesses run by owners with an entrepreneurial mindset tend to be more active, resilient, and better at responding to customer needs and competitive pressures. Digital transformation is also a major factor influencing business success. Integrating digital technologies into daily operations helps companies improve productivity, build stronger customer relationships, cut costs, and open up new market opportunities. Tools like digital payment systems, cloud computing, social media marketing, and customer relationship management software have changed how businesses operate and compete. Therefore, family businesses that successfully adopt digital technologies are more likely to gain a sustainable competitive edge. Although past research has shown positive links between entrepreneurial mindset, digital transformation, and business performance, there is little attention given to how an entrepreneurial mindset affects family business performance. Especially in Northern Nigeria, there is limited evidence on the role digital transformation plays as a mediator between entrepreneurial mindset and family business performance.

This study addresses this gap by exploring the direct and indirect connections between entrepreneurial mindset, digital transformation, and family business performance in the Jos North Local Government Area of Plateau State. The specific goals of this study are: (1) to examine the relationship between entrepreneurial mindset and family business performance; (2) to look at the relationship between entrepreneurial mindset and digital transformation; (3) to assess the connection between digital transformation and family business performance; and (4) to determine whether digital transformation plays a mediating role between entrepreneurial mindset and family business performance.

2. Theoretical Foundation

This study draws on three complementary theories—Dynamic Capabilities Theory (DCT), Diffusion of Innovations Theory (DOI), and Effectuation Theory—to explain the proposed associations among entrepreneurial mindset, digital transformation, and family business performance. Rather than treating the theories as interchangeable descriptions, each is assigned a primary explanatory role. Diffusion of Innovations Theory (Rogers, 2003) and Effectuation Theory (Sarasvathy, 2001, 2008) jointly provide the main theoretical basis for the expected positive association between entrepreneurial mindset and digital transformation (EM → DT). Owners who exhibit innovativeness, proactiveness, opportunity recognition, calculated risk-taking and autonomy are more likely to perceive digital tools as relatively advantageous, compatible with existing practices and easy to trial (DOI). Under conditions of uncertainty typical of the Jos North operating environment, such owners are also more inclined to experiment with low-cost digital tools, accept affordable losses and expand digital use as evidence of benefit accumulates (Effectuation). Dynamic Capabilities Theory (Teece et al., 1997; Teece, 2007, 2018) primarily explains the expected positive association between digital transformation and family business performance (DT → FBP). Digital tools enable the seizing and transforming capabilities through which sensed opportunities are converted into operational improvements, wider market reach

and improved financial outcomes. The overall mediation mechanism is therefore understood as an integrated capability pathway: entrepreneurial mindset supplies the cognitive orientation that facilitates digital adoption (primarily DOI and Effectuation), while digital transformation supplies the operational platform that converts that orientation into performance outcomes (primarily DCT). The framework is presented as a theoretically proposed set of associations rather than an established causal process, consistent with the cross-sectional design of the study.

3. Literature Review and Hypotheses Development

3.1 Entrepreneurial Mindset and Family Business Performance

Entrepreneurial mindset refers to a type of thinking and behaviour characterized by being innovative, proactive, able to spot opportunities, taking calculated risks, and having a sense of independence (Covin & Slevin, 1989; Lumpkin & Dess, 1996; McMullen & Shepherd, 2006). While it is closely related to the concept of entrepreneurial orientation at the firm level, this study focuses on the individual-level thinking and actions of the business owner. In the context of family businesses, an entrepreneurial mindset is linked to better strategic decisions and is associated with greater innovation and more efficient use of available resources. Previous research has repeatedly shown a positive link between an entrepreneurial mindset (or entrepreneurial orientation) and how well an organisation performs (Rauch et al., 2009; Martinez & Chen, 2023; Daspit et al., 2023; Ramadani et al., 2024). However, there is not much information available about family-owned businesses in Northern Nigeria. H1: An entrepreneurial mindset is positively connected to the performance of family businesses.

3.2 Entrepreneurial Mindset and Digital Transformation.

Digital transformation refers to the planned use of digital technologies in the ways a business operates, its products, and its overall business model. Business owners with an entrepreneurial mindset are typically more open to using new technologies because they see technology as a chance to gain an advantage rather than something that brings uncertainty. Studies have found that an entrepreneurial orientation is a strong predictor of how likely small and medium-sized businesses are to adopt digital technologies (Kraus et al., 2023; Troise et al., 2025; Okeke & Ibrahim, 2024). H2: An entrepreneurial mindset is positively linked to digital transformation.

3.3 Digital Transformation and Family Business Performance.

Using digital technologies helps businesses automate tasks, better connect with customers, increase productivity, cut costs, and respond more effectively to changes in the market. Studies show that digital transformation is consistently linked to innovation, better efficiency, higher profits, and long-term business success (O'Brien & Chen, 2024; Calabrò et al., 2024; Adebayo & Ojo, 2025). H3: Digital transformation is positively linked to the performance of family businesses.

3.4 Mediating Role of Digital Transformation.

Recent studies suggest that an entrepreneurial mindset is associated with business performance not only directly but also indirectly through digital transformation. Entrepreneurial owners are more likely to adopt innovative technologies that improve operational efficiency and competitiveness. Consequently, digital transformation is theorised to function as a key mechanism through which entrepreneurial capabilities are associated with improved business outcomes (Nasiri et al., 2024;

Okeke & Nwosu, 2024; Mwangi & Akinola, 2025). H4: Digital transformation plays a significant mediating role in the association between entrepreneurial mindset and the performance of family businesses.

4. Conceptual Framework

The conceptual framework proposes that entrepreneurial mindset (independent variable) is associated with family business performance (dependent variable) both directly and indirectly through digital transformation (mediating variable). The four hypothesised associations are theoretically grounded as follows. H1 (Entrepreneurial Mindset → Family Business Performance) is supported primarily by Dynamic Capabilities Theory: sensing capabilities embedded in an entrepreneurial mindset (innovativeness, proactiveness, and opportunity recognition) are expected to be positively associated with performance outcomes even in resource-constrained settings. H2 (Entrepreneurial Mindset → Digital Transformation) is supported primarily by Diffusion of Innovations Theory and Effectuation Theory: entrepreneurial owners are expected to perceive digital tools as advantageous and trialable and to experiment with them under uncertainty, resulting in a positive association between entrepreneurial mindset and digital transformation. H3 (Digital Transformation → Family Business Performance) is supported primarily by Dynamic Capabilities Theory: digital tools enable seizing and transforming capabilities that are expected to be positively associated with revenue growth, profitability, cash-flow stability and market-share expansion. H4 proposes that digital transformation partially accounts for the association between entrepreneurial mindset and family business performance. The overall mediation mechanism integrates the three theories: entrepreneurial mindset facilitates digital adoption (DOI and Effectuation), and digital transformation in turn is associated with performance outcomes (DCT). The framework is therefore advanced as a theoretically informed associational and indirect mechanism, not as an established causal process.

H1: Entrepreneurial Mindset → Family Business Performance (direct association)

H2: Entrepreneurial Mindset → Digital Transformation

H3: Digital Transformation → Family Business Performance

H4: Digital Transformation mediates the relationship between Entrepreneurial Mindset and Family Business Performance

The four hypothesised associations and the mediating role of digital transformation are summarised in Figure 1. All paths are specified as associations consistent with the cross-sectional design.

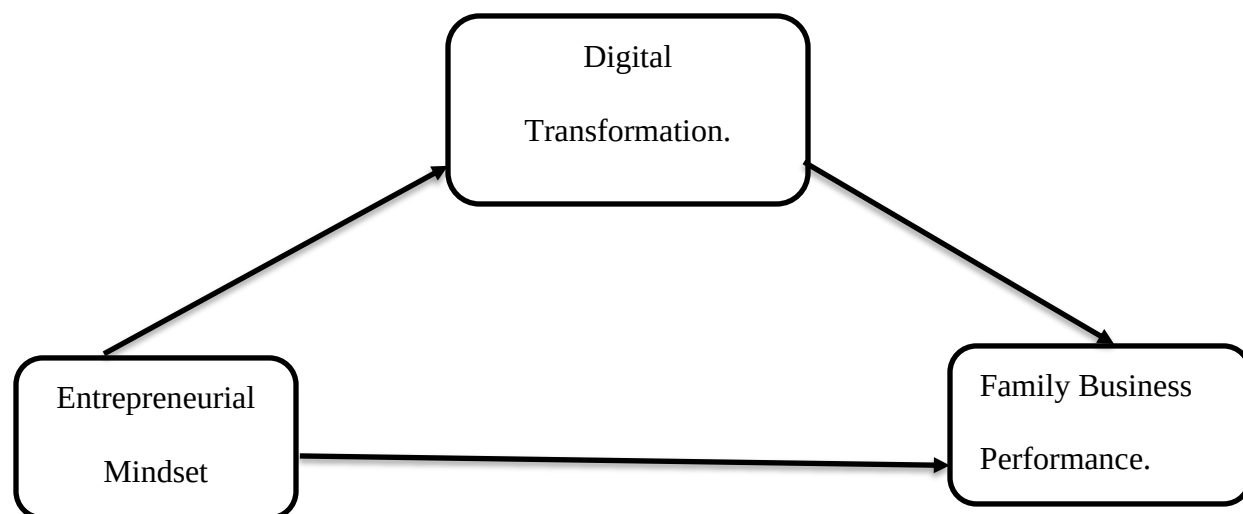


Figure 1
Conceptual Framework of the Study

Source: Researcher's conceptualisation based on the reviewed literature (2026).

5. Methodology

This study used a quantitative cross-sectional survey approach. The focus was on owners and managers of family-owned businesses based in Jos North Local Government Area of Plateau State. Since it was not possible to access a complete list of all family businesses in the area, a multi-stage sampling method was used. First, major commercial areas in Jos North were identified. Within each area, family businesses that met the criteria, such as having at least two family members involved in ownership or management and operating for at least three years, were approached systematically. A total of 385 structured questionnaires were given out. Out of these, 300 were successfully returned and used for analysis, resulting in a response rate of 77.9%. The data were collected through questionnaires administered by researchers, followed by visits and direct interaction with respondents in the selected commercial areas. The primary data were gathered using a structured questionnaire. Entrepreneurial mindset was assessed through five items related to innovativeness, proactiveness, opportunity recognition, taking calculated risks, and autonomy (based on Covin & Slevin, 1989; Lumpkin & Dess, 1996). Digital transformation was measured through five items, including digital marketing (via social media), mobile payments, digital tools for operations and inventory, customer data tools, and overall digital integration. Family business performance was measured through four financial indicators: revenue growth, profitability margin, net-profit growth compared to costs, and expansion of market share. All these constructs were measured on a five-point Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

Face and content validity were checked by having three senior academics in entrepreneurship and family business review the questionnaire. The measurement model's reliability, convergent validity, and discriminant validity were assessed using SPSS. Indicator loadings were obtained from item-construct correlations. Cronbach's alpha, composite reliability, and average variance extracted were calculated from these loadings. Discriminant validity was assessed using the Fornell–Larcker criterion and HTMT ratios. Because the study aimed to test a regression-based mediation model, not a full latent-variable structural model, these reliability and validity indices were computed directly from item correlations and OLS-derived loadings in SPSS, rather than through a dedicated SEM package. Full measurement model results are presented in Tables 1–3. Path coefficients were estimated using ordinary least squares regression in SPSS. Mediation analysis was conducted using the PROCESS macro (Model 4) for SPSS (Hayes, 2022) with 5,000 bootstrap samples. Cronbach's alpha values ranged from 0.878 to 0.909, composite reliability from 0.912 to 0.936, and average variance extracted from 0.674 to 0.786. All item loadings were above 0.75. Discriminant validity was confirmed using the Fornell–Larcker criterion and HTMT ratios that were below standard thresholds.

Because data were collected from a single respondent per business at one point in time, the potential for common-method variance (CMV) was carefully considered. Several procedural remedies were applied to minimise CMV. First, respondents were assured of anonymity and confidentiality, and no personal identifiers were collected, reducing evaluation apprehension. Second, the questionnaire was structured with clear section breaks and distinct instructions for the independent, mediating and dependent variables, creating psychological separation among the constructs. Third, item wording was kept simple and concrete, and the instrument was pre-tested for clarity. Fourth, participation was voluntary, and respondents were informed that there were no right or wrong answers. Statistically, Harman's single-factor test was conducted. An unrotated principal-component analysis of the 14 measurement items showed that the first factor accounted for 60.1% of the total variance, which exceeds the conventional 50% threshold. This result indicates that common-method variance cannot be ruled out and constitutes a limitation of the study. As an additional assessment using the available data, the highest inter-construct correlation was examined (DT–FBP $r = 0.785$). Although elevated, this correlation remains below 0.90, and discriminant validity was supported by the Fornell–Larcker criterion and HTMT ratios (all HTMT < 0.90). Nevertheless, these checks do not eliminate the possibility of CMV. The findings should therefore be interpreted with appropriate caution, and future research should employ multi-source or multi-wave designs, or incorporate a marker variable, to provide a more rigorous assessment of common-method variance.

Ethical standards were followed. Participants were informed about the research purpose, assured of their anonymity and confidentiality, and gave their consent before participating. No personal identifiers were collected

6. Results and Discussion

6.1 Descriptive Statistics and Measurement Model

Descriptive analysis indicated positive mean scores for entrepreneurial mindset ($M = 4.06$, $SD = 0.81$), digital transformation ($M = 3.84$, $SD = 0.93$) and family business performance ($M = 3.84$, $SD = 0.85$). The measurement model met standards of reliability and validity as reported below.

Table 1*Measurement Items, Indicator Loadings, Reliability and Convergent Validity*

Construct / Item	Loading	α	CR	AVE	Indicator VIF
Entrepreneurial Mindset (EM)		0.878	0.912	0.674	
EM1: Innovativeness	0.804				2.12
EM2: Proactiveness	0.850				2.35
EM3: Opportunity recognition	0.828				2.21
EM4: Calculated risk-taking	0.836				2.28
EM5: Autonomy	0.785				1.98
Digital Transformation (DT)		0.906	0.930	0.728	
DT1: Digital marketing use	0.889				2.67
DT2: Mobile payment adoption	0.756				1.85
DT3: Digital operations/inventory	0.877				2.54
DT4: Customer-data tools	0.890				2.71
DT5: Overall digital integration	0.846				2.33
Family Business Performance (FBP)		0.909	0.936	0.786	
FBP1: Revenue growth	0.876				2.41
FBP2: Profitability margin	0.890				2.58
FBP3: Net-profit growth vs costs	0.881				2.47
FBP4: Market-share expansion	0.898				2.65

Note. α = Cronbach's alpha; CR = Composite Reliability; AVE = Average Variance Extracted; Indicator VIF = Variance Inflation Factor computed at the individual-item level to check indicator-level multicollinearity (distinct from the predictor-level regression VIFs reported for the hypothesis-testing models in Section 5 and Appendix Table A1). All loadings > 0.75. Source: Author's analysis of survey data (2026).

Table 2*Discriminant Validity – Fornell–Larcker Criterion*

Construct	EM	DT	FBP
Entrepreneurial Mindset (EM)	0.821		
Digital Transformation (DT)	0.717	0.853	
Family Business Performance (FBP)	0.713	0.785	0.887

Note. Diagonal elements are the square roots of AVE. Off-diagonal elements are inter-construct correlations. Discriminant validity is established because each construct's $\sqrt{\text{AVE}}$ exceeds its correlations with other constructs. Source: Author's analysis (2026).

Table 3
Discriminant Validity – Heterotrait–Monotrait Ratio (HTMT)

Construct Pair	HTMT	Decision
EM – DT	0.798	< 0.90
EM – FBP	0.792	< 0.90
DT – FBP	0.858	< 0.90

Note. All HTMT values are below the conservative threshold of 0.90, supporting discriminant validity.
Source: Author's analysis (2026).

6.2 Hypotheses Testing

All path coefficients are standardised β coefficients obtained from ordinary least squares regression. Mediation was tested using the PROCESS macro (Model 4) with 5,000 bootstrap samples (Hayes, 2022). Results are summarised below.

H1: Entrepreneurial mindset is significantly and positively associated with family business performance ($\beta = 0.713$, $SE = 0.041$, $t = 17.55$, $p < .001$; $R^2 = 0.508$). The null hypothesis is rejected. Family business owners possessing stronger entrepreneurial capabilities tend to report higher organisational performance outcomes.

H2: Entrepreneurial mindset is significantly and positively associated with digital transformation ($\beta = 0.717$, $SE = 0.040$, $t = 17.74$, $p < .001$; $R^2 = 0.514$). The null hypothesis is rejected. Entrepreneurial-minded business owners are more likely to adopt digital technologies that improve business operations and competitiveness.

H3: Digital transformation is significantly and positively associated with family business performance after controlling for entrepreneurial mindset ($\beta = 0.563$, $SE = 0.048$, $t = 11.65$, $p < .001$). The null hypothesis is rejected. Businesses reporting higher levels of digital transformation also report improvements in operational efficiency, customer satisfaction and overall organisational performance.

H4: Bootstrap mediation analysis (5,000 samples) confirmed that digital transformation partially mediates the relationship between entrepreneurial mindset and family business performance. The indirect effect was 0.404 (95% CI [0.311, 0.509]); the residual direct effect in the uncontrolled model remained significant ($\beta = 0.310$, $p < .001$; see Appendix Table A1 for the corresponding controlled-model estimate, $c' = 0.298$). Approximately 57% of the total association was transmitted through digital transformation. The null hypothesis is rejected.

6.3 Discussion of Findings

The findings demonstrate that entrepreneurial mindset is a critical correlate of family business performance. Business owners who exhibit opportunity recognition, innovation, creativity and calculated risk-taking tend to report better organisational outcomes. These findings support Dynamic Capabilities Theory, which argues that sensing capabilities are associated with competitive advantage under uncertainty.

The study also confirms that entrepreneurial mindset is positively associated with digital transformation, supporting Diffusion of Innovations Theory (owners with entrepreneurial mindsets perceive digital tools as advantageous and trailable) and Effectuation Theory (effectual logic encourages low-cost digital

experimentation). Furthermore, the significant association of digital transformation with family business performance highlights the growing importance of digital technologies in improving productivity, customer engagement, and business competitiveness even in infrastructure-constrained settings.

The mediating role of digital transformation constitutes the central theoretical contribution of this study. Approximately 57% of the total association between entrepreneurial mindset and family business performance operates through digital transformation. This finding builds on previous research by showing a specific way of recognizing and taking advantage of digital opportunities that connects an entrepreneurial mindset with performance results. There is also a direct link that remains, showing that traditional entrepreneurial skills like managing relationships, knowing the local area, and being able to adapt operations are still important in the Jos North area. Therefore, family businesses aiming for long-term growth should include an entrepreneurial approach along with ongoing digital improvements.

7. Conclusion

This study looked at how entrepreneurial mindset, digital transformation, and family business performance are connected in Jos North Local Government Area of Plateau State. The results show that an entrepreneurial mindset is positively linked to both business performance and digital change. Digital transformation is also positively related to family business performance and partly explains the relationship between an entrepreneurial mindset and overall business performance (about 57% of the total connection). The study concludes that entrepreneurial abilities and digital transformation are complementary resources that help family businesses stay competitive, resilient, and sustainable in the long term. As a result, business owners should think about developing an entrepreneurial mindset and investing in digital technologies that improve how the business runs and the value it offers to customers.

The main theoretical contribution of this study is the empirical examination of a mediated associational pathway: entrepreneurial mindset is associated with the identification and utilisation of digital opportunities, which is associated with digital transformation, which in turn is associated with family business performance. By integrating Dynamic Capabilities Theory, Diffusion of Innovations Theory and Effectuation Theory, the study clarifies how individual entrepreneurial cognition is linked to digital adoption at the organisational level and, ultimately, to performance outcomes. This shifts the literature beyond simple direct-effect models and offers a more differentiated understanding of how an entrepreneurial mindset operates in family-business settings.

Practical Implications: The findings offer useful advice for family business owners, policymakers, and agencies that support entrepreneurship. Family business owners can improve their entrepreneurial skills through ongoing learning, innovation, and identifying opportunities, while using accessible digital tools such as electronic payment systems, social media marketing, basic digital record-keeping, and customer data tools. Government agencies and institutions that support entrepreneurship should expand digital training and programs that develop an entrepreneurial mindset, provide access to affordable technology, and offer financial support that encourages digital change in family-owned businesses. These efforts will help family businesses remain sustainable and competitive, contributing to broader economic growth in Nigeria.

Several limitations should be noted. First, the cross-sectional design limits strong causal conclusions; the relationships examined are associational. Longitudinal or experimental methods would strengthen causal inference. Second, data were collected from a single informant per firm at one point in time. Harman's single-factor test indicated that the first factor accounted for 60.1% of total variance, exceeding the

conventional 50% threshold. Although procedural remedies (anonymity, psychological separation of constructs, clear instructions) were applied and discriminant validity was established, common-method variance cannot be ruled out. The magnitude of the observed associations may therefore be inflated to some degree. Future studies should employ multi-source data, temporal separation, or a marker-variable approach. Third, the study is limited to Jos North Local Government Area, so generalisation to other parts of Nigeria or other African contexts should be undertaken with caution. Fourth, family business performance was measured solely through self-reported financial indicators; future research could incorporate objective performance data and non-financial outcomes such as socioemotional wealth and succession readiness. Finally, the inclusion of additional mediators or moderators (for example, generational stage, digital literacy and institutional support) would further refine the model.

References

- Adebayo, O., & Musa, I. (2025). Entrepreneurial mindset and family business performance in northern Nigeria. *African Journal of Business Management*, 19(1), 22–41.
- Adebayo, O., & Ojo, T. (2025). Social media, e-commerce and profitability of family businesses in Jos North. *Nigerian Journal of Management Studies*, 12(3), 88–105.
- Calabrò, A., Torchia, M., & Pukall, T. (2024). Digitalisation and performance in European family businesses. *Journal of Family Business Strategy*, 15(1), 100–118.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75–87.
- Daspit, J. J., Long, R. G., & Pearson, A. W. (2023). Entrepreneurial mindset and performance in US family firms: Balancing innovation and socioemotional wealth. *Family Business Review*, 36(2), 145–167.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.
- Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (3rd ed.). Guilford Press.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135.
- Kraus, S., Vonmetz, K., Bullini Orlandi, L., Zardini, A., & Rossignoli, C. (2023). Digital entrepreneurship: The role of entrepreneurial orientation and digitalisation for innovation and growth. *Technological Forecasting and Social Change*, 193, 122638.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135–172.
- Martinez, M., & Chen, L. (2023). Entrepreneurial mindset and resilience in family businesses: A five-country longitudinal study. *Family Business Review*, 36(3), 278–301.

- McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132–152.
- Mwangi, J., & Akinola, O. (2025). Digital transformation and performance mediation in African family firms. *African Journal of Management*, 11(2), 89–112.
- Nasiri, M., et al. (2024). Digital transformation as a mediator between entrepreneurial mindset and SME performance in the Middle East. *Journal of Business Research*, 172, 114–128.
- O'Brien, D., & Chen, Y. (2024). Multi-technology digital adoption and revenue growth in SMEs and family firms. *Journal of Strategic Information Systems*, 33(1), 101–120.
- Okeke, C., & Ibrahim, A. (2024). Entrepreneurial mindset, social media adoption and customer engagement in northern Nigerian SMEs. *Journal of Small Business and Entrepreneurship*, 36(4), 512–534.
- Okeke, C., & Nwosu, B. (2024). Digital transformation mediates entrepreneurial orientation and performance among Nigerian SMEs. *International Journal of Entrepreneurial Behavior & Research*, 30(5), 1123–1145.
- Ramadani, V., Chang, E. P. C., Palalić, R., & Memili, E. (2024). *Entrepreneurial family businesses* (2nd ed.). Springer.
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3), 761–787.
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
- Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26(2), 243–263.
- Sarasvathy, S. D. (2008). *Effectuation: Elements of entrepreneurial expertise*. Edward Elgar.
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350.
- Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, 51(1), 40–49.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
- Troise, C., et al. (2025). Entrepreneurial mindset as antecedent of digital transformation intensity: Evidence from Italian SMEs. *Technological Forecasting and Social Change*, 201, 123–140.

Appendix

Table A1. Hierarchical Regression Results with Control Variables (Standardised β Coefficients)

Model	DV	Predictor	β	SE	t	p	R ²
H1 uncontrolled	FBP	EM	0.713	0.041	17.55	<.001	0.508
H1 controlled	FBP	EM	0.710	0.042	17.01	<.001	0.513
H2 uncontrolled	DT	EM	0.717	0.040	17.74	<.001	0.514
H2 controlled	DT	EM	0.705	0.041	17.20	<.001	0.522
Mediation unctrl.	FBP	DT EM	0.563	0.048	11.65	<.001	0.663
Mediation ctrl.	FBP	DT EM+ctrls	0.551	0.049	11.24	<.001	0.668
Direct c' ctrl.	FBP	EM DT+ctrls	0.298	0.049	6.08	<.001	0.668

Note. $N = 300$. All coefficients are standardised β . Controls = business age (years of operation), number of full-time employees, and sector (agriculture dummy). DV = dependent variable. EM = Entrepreneurial Mindset; DT = Digital Transformation; FBP = Family Business Performance. “Controlled” models include Age, Employees and Sector. All key path coefficients remain statistically significant and of similar magnitude after inclusion of the controls. Multicollinearity diagnostics (VIF) for the full controlled mediation model were all below 3.0. Source: Author’s computation from survey data (2026).