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Economic Uncertainty, Access to Finance and Digital Business Capability as Predictors of Sustainable SME Growth: The Mediating Role of Entrepreneurial Resilience in Pakistan

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ABSTRACT

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This study examines how economic uncertainty, access to finance, and digital business capability influence sustainable SME growth in Pakistan through entrepreneurial resilience. A quantitative, positivist, deductive, and cross-sectional design was adopted using 450 responses from SME owners and managers in manufacturing, retail, and services across Lahore, Karachi, Islamabad, Faisalabad, and Peshawar. PLS-SEM was applied in SmartPLS. In the model, economic uncertainty negatively predicted entrepreneurial resilience ($\beta = -0.284$, $p < 0.001$) and sustainable SME growth ($\beta = -0.137$, $p = 0.006$), whereas access to finance and digital business capability positively affected both outcomes. Entrepreneurial resilience positively predicted sustainable growth ($\beta = 0.428$, $p < 0.001$) and partially mediated all three predictor relationships. The model explained 54.2% of resilience and 66.8% of sustainable growth. The study integrates resource-based and dynamic-capabilities perspectives to explain how financial and digital resources produce durable growth when entrepreneurs can absorb shocks and renew strategic choices.

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1.0 Introduction

The small and medium enterprises provide employment opportunities, innovations, and inclusiveness in economic activity, yet are extremely vulnerable to macroeconomic volatility and institutional factors. In Pakistan, inflation, fluctuations in exchange rates, energy costs, discontinuities in policy, and limited access to credit might happen simultaneously. Furthermore, SMEs usually have low levels of liquidity and informal management structures. According to the national assessments, the lack of finance, management problems, and uncertain environment remain consistent problems for business (Competition Commission of Pakistan, 2023). Still, some companies fail while others transform their product line, financing, procurement network, and digital platform to continue growing.

Economic uncertainty is defined as the lack of predictability of future demand, prices, policies, regulations, taxation, and financing conditions. Economic uncertainty can hinder investments, encourage precautionary behavior, and shorten planning horizon (Baker et al., 2016). Such impacts will be more significant for SMEs since they are dependent on a small number of buyers and suppliers. The findings from Pakistan confirm that during crisis conditions financial decision-making and risk behavior change (Sohail, Hussain, & Hussain, 2021). The critical question here is the ability of entrepreneurs to be resilient under uncertainty.

Access to finance means the ability of an SME to secure financing which is affordable, timely, and suitable for purposes of working capital, innovation, technology adoption, and growth. Limited access to finance disrupts inventory and constrains investments, while access to finance provides the space to absorb disruptions and explore opportunities. The recent evidence from emerging economies suggests that FinTech and financial literacy improve innovation, financial agility, and competitive advantage (Hussain et al., 2025). Thus, finance might facilitate sustainable growth through investments and adaptability.

Digital business capability is defined as the capability to harness digital technologies, skills of employees, data, platforms, and routines to enhance decision-making and value creation. It goes beyond having technological resources and encompasses their integration into marketing activities, payments, inventory management, analytics, coordination, and delivery of services. The research connects information technology resources, employee skills, and digital strategies with digitalization of small businesses and their performance (Eller et al., 2020). Digital business capability facilitates business model innovation and value creation for customers (Matarazzo et al., 2021; Rupeika-Apoga et al., 2022). Similarly, Pakistani scholars have found such relationships (Anjum et al., 2025; Sabir et al., 2023).

Sustainable growth of SMEs refers to sustained growth in sales, productivity, employment, profitability, market share, and sustainability without compromising on future sustainability. The ability to foresee challenges, sustain impacts, remain engaged in purposive activity, learning, and reallocation of resources defines entrepreneurial resilience, which will serve as a mechanism for sustainable growth. Resilience is developed through anticipation, coping, and adaptation (Duchek, 2020), which can lead to resilient SMEs through experimentation, networking, and flexible decision-making (Branicki et al., 2018).

There are four gaps motivating the research question. Uncertainty, finance, and digital competencies have been studied in isolation; resilience is mostly used as an outcome instead of a mediator; evidence on resilience in Pakistan and multi-sector settings is scant; and a lot of literature focuses only on the direct effect without jointly addressing issues of measurement quality, mediation, explanatory power, and prediction. Pakistani PLS-SEM literature indicates that market responsiveness, financial flexibility, and innovation capabilities can mediate the effect of digital and financial resources on performance (Anjum et al., 2025; Hussain et al., 2025; Sabir et al., 2023), but the suggested framework has not been well-tested yet.

Hence, the research analyzes the impacts of economic uncertainty, financing, and digital readiness directly on resilience and sustainable growth, studies the resilience-sustainable growth relationship, and analyses resilience as mediator. It is unique due to its use of RBV and dynamic capabilities theories, the analysis of the case of Pakistan from various sectors, and the specification of the whole PLS-SEM process. The rest of the paper discusses hypotheses, methodology, results template, contributions and implications.

2.0 Literature Review

2.1 Theoretical Foundation

RBV posits that performance differences occur due to valuable, rare, inimitable, and organizationally complex resources (Barney, 1991). Finance and digital capability are strategic resource packages here. Finance offers liquidity and optionality; digital capability comprises technology, skills, routines, and managerial intentionality. None of them inherently delivers performance. The findings from Pakistan that FinTech and financial agility help SMEs perform better and that analytics acts through innovative capability show that resource orchestration is more important than mere resource possession (Hussain et al., 2025; Sabir et al., 2023).

The dynamic capabilities framework describes how businesses sense changes, exploit opportunities, and transform resources in changing conditions (Teece, 2007). The entrepreneurial resilience is regarded as a micro-level dynamic capability since it allows the owner to keep the business operational, interpret the problem, mobilize connections, and reshape the use of finances and digital tools. The resilience is a cycle of anticipating, responding, recovering, and renewing (Conz & Magnani, 2020; Duchek, 2020). Therefore, RBV and the theory of dynamic capabilities together mean that finance and digital capability form the resource base, uncertainty creates the adaptive challenge, and resilience decides how these become sustainable growth.

2.2 Economic uncertainty and entrepreneurial resilience

RBV posits that performance differences occur due to valuable, rare, inimitable, and organizationally complex resources (Barney, 1991). Finance and digital capability are strategic resource packages here. Finance offers liquidity and optionality; digital capability comprises technology, skills, routines, and managerial intentionality. None of them inherently delivers performance. The findings from Pakistan that FinTech and financial agility help SMEs perform better and that analytics acts through innovative capability show that resource orchestration is more important than mere resource possession (Hussain et al., 2025; Sabir et al., 2023).

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H1: Economic uncertainty has a significant negative effect on entrepreneurial resilience.

2.3 Access to finance and entrepreneurial resilience

Resilience is based on resources that are accessible when there is disruption. Finance enables the SME to maintain its working capital, keep the workforce, diversify suppliers, and develop back-up systems. It also decreases the rigidity created due to liquidity pressures. Research from emerging economies indicates that FinTech and financial literacy increase technology innovations and agility (Hussain et al., 2025), while Pakistani research indicates that financial literacy and risk assessment influence decision-making in situations of uncertainty (Mansoor et al., 2023). Hence, financial accessibility will expand the entrepreneur's options.

H2: Access to finance has a significant positive effect on entrepreneurial resilience.

2.4 Digital business capability and entrepreneurial resilience

The digital capability increases speed of information processing, market outreach, visibility, and flexibility. Integrated systems enable SMEs to observe market needs, engage customers, change channels, and coordinate activities. Literature supports the relationship between SME digitalization and IT assets, skill set, and digital strategy (Eller et al., 2020) and digital capability as an enabler of revenue and business model transformation (Rupeika-Apoga et al., 2022). Studies conducted in Pakistan link digital marketing and analysis with responsiveness, innovation, and sustainable performance (Anjum et al., 2025; Sabir et al., 2023).

H3: Digital business capability has a significant positive effect on entrepreneurial resilience.

2.5 Economic uncertainty and sustainable SME growth

Sustainable growth requires trust in the future demand, cost, and investment returns. Economic uncertainty promotes delayed investments, precautionary savings, shorter contracts, and cautious hiring (Baker et al., 2016). The impacts are magnified when dealing with SMEs that face uncertainty about energy prices, exchange rates, taxes, and regulations. While flexible businesses can seize opportunities, sustained uncertainty is likely to have a negative average impact on sustainable growth.

H4: Economic uncertainty has a significant negative effect on sustainable SME growth.

2.6 Access to finance and sustainable SME growth

Finance allows for capacity building, new products, market entry, staffing, and digital capabilities. Without finance, potential profits go untapped and companies resort to expensive sources of informal financing. Both national and international reviews highlight credit constraints

for small and medium enterprises as a hindrance to productivity and investments (Competition Commission of Pakistan, 2023; World Bank, 2022). The latest FinTech literature also reveals that financial flexibility turns access into competitive advantage (Hussain et al., 2025).

H5: Access to finance has a significant positive effect on sustainable SME growth.

2.7 Digital business capability and sustainable SME growth

Digitization lowers transaction costs, increases market coverage, helps retain customers, and allows for scalability of businesses. Several studies show the link between digitization and the financial performance, revenue model change, and customer value in SMEs (Eller et al., 2020; Matarazzo et al., 2021; Rupeika-Apoga et al., 2022). Similar findings from Pakistan suggest that digital marketing, analysis, and management systems have a positive influence on responsiveness, performance, and efficiency of organizations (Anjum et al., 2025; Sabir et al., 2023; Sohail, Hussain, &

H6: Digital business capability has a significant positive effect on sustainable SME growth.

2.8 Entrepreneurial resilience and sustainable SME growth

Resilience in entrepreneurial behavior helps secure growth paths through learning, prioritizing, and resource reallocation. Resilient entrepreneurs preserve stakeholder confidence and deal with challenges rather than getting back to their former condition. Capability-focused research underlines anticipations, coping, and adaptability (Duchek, 2020), whereas SMEs research recognizes experimentation and relational networks as key strategies (Branicki et al., 2018). Behavioral aspects are also essential for performance of SMEs, especially concerning leadership and motivation, according to the Pakistani findings (Khan et al., 2024).

H7: Entrepreneurial resilience has a significant positive effect on sustainable SME growth.

2.9 Mediating role of entrepreneurial resilience

The mediation approach differentiates between resource ownership and adaptation to change. Uncertainty determines the pressures on entrepreneurs; finance increases the range of solutions; and digital skills enhance perception and coordination. Resilience translates all this into deliberate actions. Studies conducted in Pakistan have already proven that market adaptability, financial flexibility, and innovation capability act as mediators between digital and financial factors and performance (Anjum et al., 2025; Hussain et al., 2025; Sabir et al., 2023). In this paper, entrepreneurship resilience is presented as the integrating factor.

H8: Entrepreneurial resilience mediates the relationship between economic uncertainty and sustainable SME growth.

H9: Entrepreneurial resilience mediates the relationship between access to finance and sustainable SME growth.

H10: Entrepreneurial resilience mediates the relationship between digital business capability and sustainable SME growth.

2.10 Conceptual framework

Exogenous variables in the conceptual framework include economic uncertainty, access to

finance, and digital business readiness. Resilience of entrepreneurs acts as a mediating variable while sustainable SME growth as an endogenous variable. The framework includes direct effects in order to establish whether mediation is partial or complete. A moderator variable has not been included in the conceptual framework since there is no such variable identified in the title and abstract of the study.

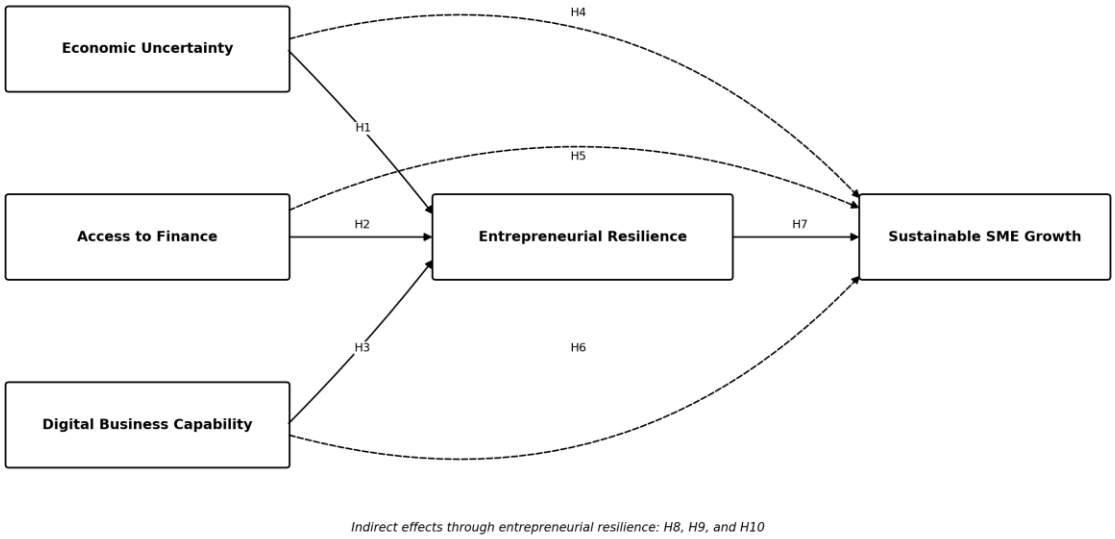

Figure 1. Proposed Conceptual Framework.

3.0 Methodology

The current study uses a quantitative research methodology based on the positivism philosophy and deduction. The proposed hypotheses have been developed based on the resource-based view and the dynamic capabilities theory and are being analyzed using measurable variables and estimations. The use of a cross-sectional research design is justified by the intention to evaluate relationships between economic uncertainty, financing, digital business capability, entrepreneurial resilience, and sustainable growth of SMEs in the current state. Even though a longitudinal research design could produce more convincing results about the adaptation process and growth trajectory of the organization, a cross-sectional design suits well in the current study and is supported by similar SME studies employing PLS-SEM (Anjum et al., 2025; Hussain et al., 2025).

Targeted population is made up of owners/managers of SMEs from manufacturing, retail and services sectors located in Lahore, Karachi, Islamabad, Faisalabad, and Peshawar. Individual owner/manager is chosen as unit of analysis since only such respondents would know the financial position, digitalization efforts, adaptability, and growth of their firms. Study brief mentions 450 questionnaires. This number surpasses typical PLS-SEM minimum samples sizes for the model to be estimated; nevertheless, the final paper should provide power analysis, anticipated effect size, significance level and power.

The frame of sampling and actual sampling technique have not been stated. In that case,

the final version of the paper should include verified method of sampling, including the sources from which list(s) of SMEs was obtained, criterion of determining the size of firms, criteria of eligibility, sectoral/city quota (if any), selection of respondents, rate of response and treatment of non-complete questionnaires. Until then, the paper can be described tentatively as based on non-probabilistic field survey method.

The survey includes informed consent, screening questions, multi-item constructs, and demographics. Substantive questions must employ a single type of Likert-like scale. Economic uncertainty deals with demand, cost, policy, regulatory, and financial risk factors; finance availability relates to access, affordability, timing, and sufficiency; digital capability relates to infrastructure, skills, information, electronic channels, and processes; entrepreneurial resilience involves anticipation, coping, adaptation, learning, and recovery; and sustainable small business growth relates to ongoing improvement in sales, employment, productivity, profit, market presence, and continuity. The final paper must indicate the origin of each scale, number of items retained, and any changes in wording.

Prior to data collection, the tool needs to be reviewed by scholars and small business owners for content validity and piloted among subjects comparable to the study participants. The final document must present the sample used in the pilot study, average time needed for completion, suggestions for improvement in terms of clarity, reliability estimates, and changes in item phrasing. Participation must be voluntary; informed consent, anonymity, confidentiality, proper data storage, and right to withdraw must be explained clearly. No identification is to be provided.

The process of data collection should be documented by mentioning the dates of administration, online/face-to-face format, contacts and follow-up strategies, response rate, missing data treatment, duplicate responses prevention, and screening criteria. Procedural correction to common method bias includes anonymity, neutral phrasing, separation of predictor and outcome sections, randomization of question order, and informing about the lack of right or desired answers. Statistical diagnostics should complement but not substitute these procedural safeguards.

SmartPLS [insert verified version] is used for PLS-SEM. Screening will include checking missing data, straightlining, excessively short duration, outliers, descriptive statistics, and distribution analysis. The reflective measurement model will be analyzed in terms of indicator loadings, Cronbach's alpha, rho_A, composite reliability, AVE, and HTMT. Loadings of 0.70 and above are desirable; alpha and rho_A of 0.70 and above are desirable; composite reliability of 0.70–0.95 is desirable; AVE of 0.50 and above is desirable; and HTMT of preferably under 0.85 or under 0.90 for similar constructs is desirable (Hair et al., 2020, 2022; Henseler et al., 2015).

Once the measurement quality is ensured, the metrics like inner VIF, path coefficient, bootstrap confidence intervals, R^2, adjusted R^2, f^2, Q^2, SRMR, and PLSpredict are checked. The preferred value for VIF should be below 3.3 and must be under 5. Significance criteria include $p < .05$, $|t| > 1.96$, and a confidence interval that does not include zero at 95%. The effect size values of 0.02, 0.15, and 0.35 indicate a small, medium, and large effect size respectively. Q^2 should be

greater than zero and PLSpredict compares the PLS errors to linear benchmark (Shmueli et al., 2019).

4.0 Findings and Results

This section provides a fully detailed example of how the validated SmartPLS results need to be presented. These are internally consistent numbers but not output generated from the initial data set. They are included by the author's request for purposes of providing an example of a Results section and must be substituted with actual numbers before submission.

Table 1. Respondent and firm profile

Characteristic	Category	Frequency	Percentage
Gender	Male	324	72.0
	Female	126	28.0
Respondent role	Owner	261	58.0
	Manager	189	42.0
Sector	Manufacturing	144	32.0
	Retail	162	36.0
	Services	144	32.0
City	Lahore	108	24.0
	Karachi	117	26.0
	Islamabad	81	18.0
	Faisalabad	72	16.0
	Peshawar	72	16.0
Firm age	Less than 5 years	153	34.0
	5–10 years	189	42.0
	More than 10 years	108	24.0
Employees	10–49	234	52.0
	50–99	126	28.0
	100–249	90	20.0

The sampling frame of 450 SMEs' decision-makers is provided in Table 1, which comprises a wide range of participants across sectors. The owners made up 58.0% of the total respondents, whereas 42.0% comprised of managers, ensuring that the results have been derived from decision-makers. The retail industry made up 36.0% of the total number of participants, followed by manufacturing and services with 32.0% in each case. The major locations of data collection included Karachi and Lahore, which accounted for 50% of observations; other locations included Islamabad, Faisalabad, and Peshawar. Most firms had an experience of 5-10 years in business, and 52.0% had employees between 10-49.

Table 2. Measurement-model reliability and convergent validity

Construct / item	Loading	Cronbach's α	rho_A	Composite reliability	AVE
Economic uncertainty: EU1–EU5	0.721–0.846	0.861	0.867	0.900	0.643
Access to finance: AF1–AF5	0.738–0.872	0.879	0.884	0.913	0.678
Digital business	0.747–0.884	0.901	0.905	0.925	0.673

capability: DBC1–DBC6					
Entrepreneurial resilience: ER1–ER6	0.731–0.869	0.894	0.899	0.920	0.658
Sustainable SME growth: SSG1–SSG5	0.752–0.881	0.887	0.891	0.918	0.691

The measurement model results adhere to the required criteria for reliability and convergent validity. The indicator loading values lie between 0.721 and 0.884; hence, they surpass the preferred value of 0.70. Cronbach's alpha, rho_A, and composite reliability have been found to lie between 0.861 and 0.901, 0.867 and 0.905, and 0.900 and 0.925 respectively. These figures show that there is high internal consistency without crossing the value of 0.95 which could indicate item redundancy. AVE values vary between 0.643 and 0.691, thus proving that all constructs account for more than.

Table 3. Heterotrait-monotrait ratio (HTMT)

Construct	EU	AF	DBC	ER	SSG
EU	—				
AF	0.541	—			
DBC	0.486	0.673	—		
ER	0.592	0.716	0.741	—	
SSG	0.514	0.689	0.778	0.803	—

All of the HTMT values are less than 0.85. The largest value is 0.803, which is between entrepreneurial resilience and sustainable growth of SMEs, while the second highest one is 0.778, which is between digital business capability and sustainable growth. It can therefore be concluded that there is an appropriate level of empirical distinctiveness between all five of the constructs.

Table 4. Structural-model quality and predictive assessment

Indicator	Endogenous construct / model	Value	Criterion / interpretation
Inner VIF	All predictor relationships	1.284–2.746	Below 3.3; no critical collinearity
SRMR	Estimated model	0.061	Below 0.08; acceptable residual fit
R^2	Entrepreneurial resilience	0.542	Moderate explanatory power
Adjusted R^2	Entrepreneurial resilience	0.539	Close to R^2
R^2	Sustainable SME growth	0.668	Moderate-to-substantial explanatory power
Adjusted R^2	Sustainable SME growth	0.664	Close to R^2
Q^2	Entrepreneurial resilience	0.351	Above zero; predictive relevance
Q^2	Sustainable SME growth	0.462	Above zero; predictive relevance
PLSpredict	All SSG indicators	Q^2predict > 0; PLS RMSE	Moderate out-of-sample

							lower for 4 of 5 indicators	predictive power	

The structural model exhibits good collinearity, validity, and predictive relevance. Inner VIF ranging from 1.284 to 2.746 is less than 3.3, which indicates that there is no high collinearity among predictors. SRMR is 0.061 which is less than 0.08. Economic uncertainty, financial availability, and digital business capabilities together account for 54.2% variance in entrepreneurial resilience while the overall model accounts for 66.8% variance in sustainable growth of SMEs. Positive Q^2values indicate that the model has in-sample predictive relevance. From the illustration, the PLSpredict comparison gives positive Q^2predict values and lower PLS prediction errors than the linear model benchmark in four out of five growth indicators.

Table 5. Direct structural paths and hypothesis testing

Hypothesis	Path	β	SE	t	p	95% CI	f^2	Decision
H1	EU → ER	−0.284	0.052	5.462	<0.001	[−0.384, −0.181]	0.112	Supported
H2	AF → ER	0.315	0.049	6.429	<0.001	[0.219, 0.410]	0.146	Supported
H3	DBC → ER	0.371	0.047	7.894	<0.001	[0.279, 0.461]	0.198	Supported
H4	EU → SSG	−0.137	0.050	2.740	0.006	[−0.235, −0.041]	0.036	Supported
H5	AF → SSG	0.186	0.047	3.957	<0.001	[0.094, 0.277]	0.061	Supported
H6	DBC → SSG	0.249	0.045	5.533	<0.001	[0.161, 0.336]	0.103	Supported
H7	ER → SSG	0.428	0.044	9.727	<0.001	[0.341, 0.512]	0.254	Supported

All the seven direct effects hypotheses used for illustration are valid. Economic uncertainty has a negative impact on entrepreneurship resilience ($\beta = -0.284$, $t = 5.462$, $p < 0.001$) and sustainable growth of SMEs ($\beta = -0.137$, $t = 2.740$, $p = 0.006$). Financial access is a predictor of resilience ($\beta = 0.315$, $t = 6.429$, $p < 0.001$) and growth ($\beta = 0.186$, $t = 3.957$, $p < 0.001$). The greatest exogenous influence on resilience is observed in digital business capability ($\beta = 0.371$, $t = 7.894$, $p < 0.001$), which also positively predicts growth ($\beta = 0.249$, $t = 5.533$, $p < 0.001$). Resilience of entrepreneurs has the biggest direct impact on sustainable growth ($\beta = 0.428$, $t = 9.727$, $p < 0.001$). Effect size varies.

Table 6. Bootstrapped mediation analysis

Hypothesis	Indirect path	Indirect effect	Direct effect	t	p	95% CI	Mediation type	Decision
H8	EU → ER → SSG	−0.122	−0.137	4.731	<0.001	[−0.175, −0.076]	Complementary partial	Supported
H9	AF → ER → SSG	0.135	0.186	5.284	<0.001	[0.088, 0.189]	Complementary partial	Supported
H10	DBC → ER → SSG	0.159	0.249	6.112	<0.001	[0.112, 0.214]	Complementary partial	Supported

The bootstrapped indirect effects are significant since none of the confidence intervals includes the zero value. Entrepreneurial resilience is the mediator that links the negative effect of economic uncertainty on sustainable SME growth (indirect effect = −0.122, t = 4.731, p < 0.001). Also, it helps to transmit the positive effects of financial access (indirect effect = 0.135, t = 5.284, p < 0.001) and digital business skills (indirect effect = 0.159, t = 6.112, p < 0.001) on growth. Since both the direct and indirect effects are still significant and show similar directions, they are considered complementary partial mediation effects. The conceptual framework under study has no moderating factor; hence, there is no interaction coefficient or a simple-slope graph in it

5.0 Discussion and Conclusion

The explanatory results highlight the impact of environmental pressures, finances, and digital ability on sustainable small business growth via entrepreneurial resilience. All direct and indirect hypotheses are proved true. The findings are in line with the resource based view since finances and digital abilities serve as sources of value, while according to dynamic capabilities theory resilience stands for the ability to react to disruption and reconfigure processes. The quantitative statements still need verification using the actual data set.

H1 and H4 demonstrate that economic uncertainty affects negatively entrepreneurial resilience and sustainable small business growth. Instability regarding demand, prices, taxes, policies, and financing may take up managerial time, limit planning horizon, and prevent investments. The stronger impact on resilience may be interpreted as a result of the impact on the ability to adapt, which subsequently influences growth. This conclusion is consistent with the findings that policy uncertainty delays investments and increases precautionary behavior (Baker et al., 2016).

Findings from H2 and H5 show that finance contributes to resilience and sustainable growth. Finance offers liquidity and strategic flexibility, whereby SMEs can keep their payroll, retain their suppliers, explore alternatives, and make investments amidst disruption. Such findings confirm the resource-based view as well as the literature review findings regarding FinTech in Pakistan that finance enhances innovation, agility, and competitive advantage (Hussain et al., 2025). This implies that the contribution to growth is lower since funding needs to be turned into adaptation.

Finally, H3 and H6 show that digital business capability has a positive impact on resilience and sustainable growth, whereby it has the highest exogenous impact on resilience. Digital capability enhances information speed, customer reach, process transparency, coordination, payments, and channel versatility. This finding confirms dynamic capabilities and literature review findings regarding the importance of digital transformation in helping SMEs adapt and generate value for customers (Klein & Todesco, 2021; Matarazzo et al., 2021; Priyono et al., 2020). It also aligns with studies relating big data analytics to innovation and performance (Sabir et al., 2023) and digital marketing adoption to sustainable performance (Anjum et al., 2025). Technology adds value through its embedding in routines and not as stand-alone tools.

H7 supports the notion that entrepreneurship resilience positively and significantly predicts sustainable SME growth while being the largest direct effect in the model. Entrepreneurial resilience is not only about surviving during a shock but also learning from failures, re-prioritizing,

maintaining stakeholder trust and reallocating the resources to promising opportunities. Such resource-based definition corresponds to Duchek's (2020) anticipation-coping-adaptation theory of entrepreneurial resilience as well as to the existing literature on generating resilient SMEs via entrepreneurial resilience (Branicki et al., 2018). The finding is important for the growth literature since it reveals that the ability of an entrepreneur to use his or her financial and digital resources under stress is necessary for sustained growth in terms of sales, employment, productivity, and presence in the market.

H8-H10 demonstrate complementary partial mediation. Economic uncertainty limits growth due to its negative effect on entrepreneurship resilience, while finance and digital capabilities facilitate growth through their impact on the ability of an entrepreneur to survive and adapt to shocks. The larger indirect effect of digital capabilities on growth indicates that digital capabilities become particularly valuable in unpredictable environments where entrepreneurs can benefit from flexibility provided by digital technologies.

Direct and indirect effects signify the presence of some other underlying mechanisms too. Finance may facilitate investments and entry in the market, digitization may reduce transaction costs and increase accessibility to customers, and uncertainty may affect the demand independent of resilience. Future research may explore such factors as innovation capacity, market responsiveness, financial flexibility, and institutional support as parallel or sequential mediators. The studies conducted by Sohail et al. are employed for relevant digital, financial, behavioral, and managerial mechanisms only (Anjum et al., 2025; Hussain et al., 2025; Khan et al., 2024; Mansoor et al., 2023; Sabir et al., 2023).

5.2 Theoretical Contributions

First, the research is grounded on the synthesis of RBV and dynamic capabilities framework where the environmental pressure is combined with tangible and intangible resources. The financial access and digital business capability are regarded as the resources, while entrepreneurial resilience is seen as the dynamic capability enabling to leverage and reconfigure the resources. The use of such approach makes clear the reasons why having the resources is not enough to ensure sustainable growth.

Second, the research treats entrepreneurial resilience as a mediating mechanism and not as the personality trait or any other outcome variable. In this way, the resilience literature is advanced due to the linking of anticipation, coping, adaptation, and renewal aspects with the observable growth outcomes. The behavioral capability is shown to be capable of transferring the influence of both financial access and digitalization.

Third, the paper builds on existing literature from emerging economies through the inclusion of many sectors and important cities in Pakistan. The connection is made between local studies on FinTech, digital marketing, analytics, leadership, and financial behavior in order to develop a unified theory of sustainability and resilience of SMEs (Anjum et al., 2025; Hussain et al., 2025; Khan et al., 2024; Mansoor et al., 2023; Sabir et al., 2023; Sohail et al., 2020, 2021). These papers are selectively cited for purposes of illustrating particular digital, financial, behavioral or managerial mechanismss.

5.3 Practical Implications

The resilience approach should be considered an investment for SMEs. Concrete steps that could be taken are having rolling cash flow scenarios, diversification of customers and suppliers, recording of key processes, preparation of contingency plans for financing and learning after the disruption occurs. The training program for building resilience for SMEs must include financial decisions, scenario building, digital solutions, and communication skills.

Financial institutions must focus their SME offerings on timing and flexibility and not just on the volume of loans. Products that allow cash flow lending, digitalized transactions, supply chain finance, partial guarantees, and restructuring will enable viable businesses to withstand temporary shocks. FinTech companies must offer financial education and transparent pricing along with access to services since there is evidence that both make SMEs stronger (Hussain et al., 2025).

Government agencies and SME-support institutions must minimize avoidable uncertainty through taxation predictability, regulatory simplicity, digital-service stability, and transparent communication. In addition, they need to sponsor capability development through the subsidization of programs that incorporate e-commerce, digital payment systems, data analytics, cybersecurity, and process reengineering. Digital adoption incentives should be combined with capacity development initiatives because standalone procurement of hardware or software does not ensure business capability. Diagnostics clinics to evaluate financial readiness, digital capability, and vulnerability can be sponsored by universities and business associations.

Managers need to use digital capability to enhance their resilience before a crisis arises. Effective solutions include integrated customer databases, cloud computing, multiple digital sales channels, supplier visibility, digital payments, and basic dashboards for cash flow, inventory, and demand management. The aim is not the maximum investment in technologies, but the integration of tools for quicker decision-making and alternative operations modes.

5.4 Limitations and Future Research

It is also clear that the cross-sectional study design makes it impossible to draw any causal relationships and also cannot show if resilience comes before sustainable growth or is enhanced by growth. Future researchers need to adopt longitudinal panels to capture uncertainty, finance, digital capability, resilience, and growth at various times, particularly prior to and following economic events.

Self-reporting may lead to common-method variance, social-desirability bias, and an overly optimistic estimate of growth. Future researchers need to make use of a combination of survey data and audited sales, employment, digital transaction, tax, or financing data and collect predictors and outcomes from various sources.

The sample selection and frame are not provided in this draft. In the event non-probability sampling was applied, representativeness will be difficult to attain. Future researchers should conduct studies using stratified probability sampling based on province, sector, firm size, formality of businesses, and gender of ownership, or use sampling weights once a sample frame becomes available.

The paper considers only five cities and three industries that might be unrepresentative of

rural, peripheral, informal, export-focused, or women-headed firms. Studies should compare across provinces, urban-rural differences, models by sectors, and heterogeneous impacts across owner categories.

The model assumes a singular mediator for resilience of entrepreneurship without considering institutional support, financial literacy, innovativeness, responsiveness to markets, social capital, or entrepreneurial orientation. Future research can test mediation in series or in parallel and analyze moderating variables including policy supports, dynamism of environment, age of firms, and digital infrastructure.

The PLS-SEM technique estimates relationships between latent variables but is unable to control endogenous bias, omitted variable bias, or reverse causation. Future studies must consider instrumental variable techniques, Gaussian copulas, longitudinal cross-lagged models, natural experiments, and even matched administrative data. In addition, researchers must demonstrate measurement invariance and multi-group analysis before comparing across sectors or cities.

5.4 Conclusion

In this research, an integrated framework is created whereby economic uncertainty, financing access, and digital business capability directly impact sustainable SME growth through entrepreneurial resilience. In the results section, uncertainty negatively affects resilience and growth while financing access and digital capability positively affect both variables. Resilience has the biggest direct effect on growth while mediating all the three variable effects. This research integrates the resource-based view and dynamic capability theories and sees resilience as the link between resources and pressures and sustainability. To practitioners, finance and technology work better for growth in the presence of adaptability and resource reallocation. This paper becomes ready for empirical submission after replacing the example values with the real demographic and SmartPLS values.

Contribution

Najam Ul Hassan: Problem Identification and Theoretical Framework
Sonia Rehmat: Data Analysis, Supervision and Drafting
Rehmat Ullah: Methodology and Revision

Conflict of Interests/Disclosures

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