

ORGANIZATIONAL AGILITY AS A PATHWAY TO ENTREPRENEURIAL RENEWAL: STRATEGIC AND CONTEXTUAL CONDITIONS IN KIVU'S FAMILY SMALL AND MEDIUM ENTERPRISES



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ABSTRACT

Family small and medium-sized enterprises (SMEs) in turbulent, institutionally fragile environments face challenges in renewing their entrepreneurial activities. However, how organizational agility (OA) contributes to entrepreneurial renewal (ER), and how this relationship depends on market and financial conditions, remains insufficiently understood. Drawing on dynamic capabilities theory, this study examines the relationships among the entrepreneurial environment (EE), competitive strategy (CS), OA, and ER in family SMEs in Kivu, Democratic Republic of the Congo, while assessing the moderating roles of market conditions and financial structure. Survey data from 493 family SMEs were analyzed using hierarchical regression models. The analysis included both direct effects and interaction terms to assess these relationships. The results show that EE ($\beta = 0.176$; $t = 5.112$; $p \leq 0.001$) and CS ($\beta = 0.076$; $t = 8.369$; $p \leq 0.001$) are positively associated with OA. OA is also positively associated with ER ($\beta = 0.205$; $t = 5.260$; $p \leq 0.001$). The mediation analysis indicates that OA fully mediates the relationship between CS and ER ($\beta = 0.018$; $p \leq 0.05$; becomes $\beta = 0.002$; $p > 0.10$). Furthermore, debt financing weakens the positive OA–ER relationship ($\beta = -0.222$; $t = -2.612$; $p \leq 0.01$). These findings identify OA as a mechanism linking strategic orientation to ER and show that its association with renewal depends on financial structure. Overall, the results indicate that ER among Kivu family SMEs is associated with environmental and strategic factors, while debt financing constrains the contribution of agility to renewal.

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INTRODUCTION

Small and medium-sized enterprises (SMEs) operating in African economies face persistent institutional weaknesses, resource constraints, and market disruptions that limit their capacity to adapt and pursue new entrepreneurial opportunities (Hansen-Addy et al., 2024; Madzikanda et al., 2022; Pindado et al., 2023). These challenges are particularly consequential in environments where access to finance, reliable infrastructure, and institutional support remains uneven (Abdulai & Hussain, 2024; Ledi, 2024). Under such conditions, organisational continuity requires more than preserving existing activities: firms must be able to adjust their strategic priorities, mobilise available resources, and renew their approaches to creating and capturing value. Entrepreneurial renewal (ER) is therefore an important issue for understanding how SMEs remain viable under persistent turbulence. However, the capacity to renew cannot be explained solely by the intensity of external constraints or the strategic choices firms make in response to them.

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An important unresolved issue concerns how entrepreneurial ecosystem (EE) conditions and competitive strategies (CS) are translated into organizational capabilities that enable ER. EE can provide resources, networks, knowledge, and market opportunities, but their availability does not guarantee that firms can effectively mobilize and exploit them (Egere et al., 2026). Research on African entrepreneurial ecosystems highlights the constraints arising from institutional weaknesses and uneven access to resources (Hansen-Addy et al., 2024; Madzikanda et al., 2022; Pindado et al., 2023). Similarly, CS may help firms establish market positions, but their effectiveness can diminish when environmental conditions change rapidly (Poi & Lebura, 2022). Although recent research examines adaptation, flexibility, and resource constraints among African SMEs (Amoa-Gyarteng et al., 2025; Oduro Owusu et al., 2026), an important explanatory question remains: how do contextual conditions and strategic choices become organizational capabilities that generate entrepreneurial renewal rather than merely short-term responses to disruption?

Organizational agility (OA) provides a potential explanation for this conversion process. By enabling firms to recognize changes, coordinate responses, and reconfigure resources, agility may connect ecosystem conditions and competitive strategies to substantive changes in entrepreneurial activity. Recent research on family firms has examined organisational agility as an intervening capability in the relationship between organisational conditions and adaptive capacity (Razzak et al., 2025). Nevertheless, agility should not automatically be equated with renewal: rapid responses may help firms cope with disruption without necessarily producing new products, entering new markets, or transforming their business models. Moreover, the capacity to translate agility into renewal may depend on access to finance and the strategic discretion afforded by financing arrangements. Evidence on SME financing in Africa demonstrates the importance of institutional conditions in shaping firms' access to external capital (Hansen-Addy et al., 2024), while research on family SMEs shows that debt financing decisions are influenced by firm-specific characteristics and ownership considerations (Boumlik et al., 2026). These arguments suggest that the relationship between agility and renewal should be examined alongside the conditions under which firms can finance and implement strategic change. Similarly, market growth potential may have a dual effect on the relationship between CS and OA. While credible growth opportunities, evolving customer needs and underserved market segments may encourage firms to adjust strategic priorities, reallocate resources and respond rapidly to market changes (Okon et al., 2026; Oduro Owusu et al., 2026), anticipated expansion may also generate overcommitment, strategic dispersion and demands that exceed firms' available capabilities (Xing et al., 2025). Market growth potential may therefore strengthen CS's contribution to OA when growth prospects support feasible strategic adjustments, but weaken it when expansion expectations encourage commitments that undermine firms' capacity to adapt.

Against this background, this study examines how EE conditions and CS relate to ER through OA in family SMEs in Kivu. It investigates the mediating role of OA and examines whether financing structure conditions the relationship between OA and ER, while market growth potential conditions the relationship between CS and OA. Empirically, the study draws on survey data collected in December 2021 from 493 formally registered family SMEs operating in Goma, Bukavu, Uvira, and surrounding accessible localities in the Kivu region of the Democratic Republic of the Congo. The data were analysed using exploratory and confirmatory factor analyses to assess the measurement properties of the constructs, followed by hierarchical regression models to test the hypothesised direct, mediating, and moderating relationships. This approach enables the study to examine how entrepreneurial ecosystem conditions and competitive strategies relate to organizational agility and entrepreneurial renewal, while accounting for the contingent roles of market growth potential and capital structure.

The importance of this research lies in the challenge family SMEs face in sustaining business continuity while renewing their activities under changing and turbulent conditions. Their economic objectives coexist with family control, long-term orientation, and concerns about preserving family influence and legacy. Recent research on family business succession and innovation indicates that intergenerational continuity does not necessarily guarantee innovation and that succession processes can constrain investment in it (Baltazar et al., 2023). Family involvement may provide relational resources and long-term commitment, but it may also restrict strategic reconfiguration when preserving control takes precedence over uncertain opportunities. These tensions are particularly consequential in resource-constrained environments, where institutional weaknesses and limited access to finance can restrict firms' capacity to turn emerging opportunities into viable entrepreneurial initiatives. In Kivu, in the eastern Democratic Republic of the Congo, prolonged insecurity, institutional fragility, and recurrent disruptions further intensify the challenges of resource mobilization and business continuity (Binwa et al., 2023). Understanding how EE conditions and CS are translated into ER through OA is therefore important for explaining how family SMEs can move beyond short-term adaptation towards substantive strategic change. Examining the financing structure and market growth potential further clarifies the strategic and contextual conditions under which this conversion is more or less effective. Kivu consequently provides a relevant context for investigating these relationships under persistent turbulence and resource constraints.

This study contributes to research on entrepreneurship under turbulence by showing how OA mediates the relationship between CS and ER in family SMEs operating under persistent insecurity, institutional fragility, and resource constraints in Kivu. It further demonstrates that debt financing weakens the relationship between OA and ER, highlighting how financing structure conditions the translation of adaptive capabilities into renewal in a highly turbulent environment.

The remainder of the article develops the theoretical framework and hypotheses, describes the methodology, presents the empirical results, discusses their theoretical and practical implications, and concludes with the study's limitations and directions for future research.

LITERATURE REVIEW

This study draws on dynamic capabilities theory to examine how EE conditions and CS relate to OA and ER in family SMEs. Rather than treating OA as an invariably beneficial capability, the theoretical framework considers both its potential to facilitate renewal and the constraints that may limit its effectiveness. The discussion therefore proceeds from the conceptual foundations of OA to its antecedents, its relationship with ER, and the contextual conditions under which these relationships may be strengthened or weakened.

Organizational Agility: Conceptual Foundations and Theoretical Anchoring

OA emerged from concerns about firms' ability to remain competitive in increasingly volatile environments. Although some early reflections on agility have been associated with Koskela's work in construction and project management, its formal development is commonly linked to the challenges confronting US manufacturing in the early 1990s. Research conducted at the Iacocca Institute contributed to the development of the agile enterprise paradigm, emphasizing responsiveness, flexibility, and the capacity to adapt to changing market demands (Barzi, 2011; Charbonnier-Voirin, 2011; Yeganegi & Azar, 2012). Initially associated primarily with manufacturing systems, agility subsequently became a broader organizational concern as firms faced accelerating technological change, global competition and increasingly differentiated customer requirements. Early work on agile manufacturing highlighted the importance of integrating production flexibility, responsiveness and resource coordination to address these challenges (Yusuf et al., 1999). More recent research extends this perspective to organizations as a whole, positioning agility as a strategic concern amid environmental uncertainty and rapid change (Asghar et al., 2025; Franco et al., 2024).

At the organizational level, OA refers to a firm's capacity to sense, anticipate and respond rapidly and effectively to changes in its environment (Xu et al., 2024). This capability involves more than reacting to immediate disruptions: it also entails adjusting strategic priorities, mobilising resources, and modifying organisational arrangements as circumstances evolve. Yusuf et al. (1999) emphasize the capacity of agile firms to adapt continuously to anticipated and unforeseen transformations, while Asghar et al. (2025) distinguish between macro-agility, which concerns strategic orientation and partnerships, and micro-agility, which encompasses operational processes, innovation and human resources. These perspectives highlight the systemic nature of OA, which depends on the coordination of strategic and operational responses rather than on isolated acts of flexibility.

Dynamic capabilities theory provides a relevant foundation for explaining how OA can contribute to organizational adaptation and renewal. Teece (2007) conceptualises dynamic capabilities as the interrelated activities of sensing opportunities and threats, seizing opportunities, and reconfiguring organisational assets. From this perspective, OA can be understood as an organizational capacity that supports timely responses to environmental change and the reconfiguration of resources. Teece et al. (2016) further emphasize the role of dynamic capabilities in enabling firms to adapt their resource configurations and strategic positions as competitive conditions evolve. OA is therefore particularly relevant to family SMEs operating in turbulent and resource-constrained environments, where the ability to adjust existing arrangements may be critical to sustaining business activity (Ahmad et al., 2025). Nevertheless, possessing an agile orientation does not necessarily ensure substantive renewal. Its effects depend on the strategic choices, resources and contextual conditions through which adaptive responses are implemented.

Entrepreneurial Ecosystem Conditions, Competitive Strategies and Organizational Agility

EE conditions constitute an important contextual basis for understanding the development of OA. EEs encompass interdependent actors, institutions, networks, and resources that shape the opportunities available to firms and their capacity to pursue them (Spigel, 2017; Stam, 2015). For family SMEs, these conditions can influence access to knowledge, business networks, institutional support and complementary resources. Such resources may strengthen firms' ability to identify environmental changes and adjust their activities accordingly. From a dynamic capabilities perspective, the value of the ecosystem lies not only in the availability of external resources but also in the firm's capacity to recognise, mobilise, and integrate them into its activities (Teece, 2007). In environments characterised by institutional uncertainty and market volatility, these demands may heighten the importance of organisational responsiveness and resource reconfiguration (Franco et al., 2024; Gerald et al., 2020). However, ecosystem participation does not invariably enhance firms' adaptive capacity. Dependence on external resource providers may restrict strategic discretion when access to critical resources is controlled by a limited number of actors. Resource dependence theory highlights how organizations' reliance on external stakeholders can expose them to power asymmetries and constraints on managerial autonomy (Pfeffer & Salancik, 2015). Similarly, Terstriep et al. (2025) draw attention to unequal power relationships within EEs. These perspectives suggest that ecosystem embeddedness can provide valuable resources while simultaneously generating dependencies that constrain firms' ability to act independently. Consequently, the contribution of EE to OA depends not only on the resources and opportunities available but also on the extent to which firms can mobilize them without compromising their capacity to respond autonomously to changing conditions.

H₁: *Entrepreneurial ecosystem conditions are positively associated with organizational agility.*

CS constitute a second potential antecedent of OA because they shape managerial priorities, resource allocation and the types of organizational adjustments required to maintain a competitive position. Porter (1980) highlights the role of competitive positioning in guiding firms' choices, while Miles et al. (1978) demonstrate that strategic orientations differ in how organizations respond to environmental conditions. Strategies involving innovation, diversification or the exploration of new market opportunities may increase the need for flexibility and resource reconfiguration. From a dynamic capabilities

perspective, strategic orientations can therefore stimulate OA when they require firms to reassess existing arrangements and respond to emerging opportunities (Teece et al., 2016). Zahra (1993) also links strategic orientation to entrepreneurial activity, highlighting the relevance of firms' strategic choices to their capacity to pursue new opportunities. Nevertheless, CS can also constrain agility when strategic consistency becomes excessive or when established competitive positions are defended despite changing environmental conditions. Leonard-Barton (1992) explains that capabilities supporting current effectiveness may become core rigidities when their underlying routines and assumptions inhibit innovation and adaptation. Conversely, frequent changes in strategic direction may fragment resources, undermine coordination and prevent firms from consolidating their responses into coherent action. Research on strategic agility also highlights tensions between flexibility and stability, suggesting that continuous adjustment must be balanced with organizational coherence (Lewis et al., 2014). CS should therefore be understood as a potential driver of OA when they provide strategic direction while leaving sufficient room for adaptation. In this study, the expected positive association reflects the overall proposition that CS can encourage the adjustments required to respond to changing market conditions, rather than the assumption that every strategic orientation necessarily enhances agility.

H₂: *Competitive strategies are positively associated with organizational agility.*

The relationship between CS and OA may depend on firms' market growth potential (MG). Growth opportunities, changing customer needs and underserved market segments can increase the value of responsiveness by encouraging firms to adjust strategic priorities, reallocate resources and explore new opportunities (Arokodare et al., 2023). When market growth prospects are favourable, competitive strategies become more relevant to identifying and exploiting emerging opportunities, thereby increasing firms' incentives to adapt their structures, processes and resource configurations. However, favourable growth expectations may also encourage premature expansion, excessive commitments or resource allocation beyond firms' operational capabilities, potentially undermining their responsiveness. This ambivalence suggests that growth prospects do not automatically enhance OA. Nevertheless, when favourable market growth prospects offer credible opportunities for expansion, they are expected to strengthen the positive relationship between CS and OA by increasing the strategic value of responsiveness and adaptation (Child, 1972; Teece, 2007). MG may therefore condition the relationship between CS and OA, rather than uniformly strengthening it. Its effect depends on whether anticipated opportunities encourage feasible strategic adjustments or commitments that exceed the firm's adaptive capacity.

H₃: *Market growth potential positively moderates the relationship between competitive strategies and organizational agility, such that this relationship strengthens as firms' market growth prospects become more favourable.*

Organizational Agility and Entrepreneurial Renewal

ER involves substantive changes in firms' strategic orientations, activities or approaches to creating and capturing value. In family SMEs, renewal may include developing new offerings, entering new markets, changing business models, or reconfiguring established activities. Such changes are particularly consequential in turbulent environments, where preserving existing routines may be insufficient to sustain business activity. Dynamic capabilities theory provides a basis for explaining how firms can move beyond adaptation to immediate pressures and undertake more substantive changes. Teece (2007) argues that firms must be able to identify opportunities, mobilize resources and transform their asset base to remain aligned with evolving environments. Teece et al. (2016) similarly emphasise that dynamic capabilities enable the reconfiguration of resources and organisational arrangements as circumstances change. OA can contribute to ER by enabling firms to detect emerging opportunities, respond to market changes, and reconfigure resources to support new activities. In this sense, agility can help bridge the gap between recognising the need for change and implementing organisational responses. Recent work also associates OA with firms' capacity to respond to environmental turbulence and to adjust their strategic and operational arrangements (Roblek et al., 2022; Zighan & Dwaikat, 2023). For family SMEs, this capacity may be particularly important when external instability and resource limitations make it difficult to pursue new initiatives through established routines alone. OA may thus facilitate the transition from immediate adaptation to entrepreneurial renewal by supporting the reorganization of existing resources and the exploration of alternative developmental trajectories. However, OA should not be equated with ER. The capacity to adjust rapidly can generate costs, repeated experimentation and strategic instability when changes are not consolidated into viable initiatives. Lewis et al. (2014) highlight the tensions between stability and flexibility, commitment and change that accompany strategic agility. These tensions are especially relevant to family SMEs, in which strategic change may intersect with concerns about family influence, control and continuity. Gómez-Mejía et al. (2007) show that family firms' risk-related decisions cannot be explained simply by assuming they are uniformly risk-averse; their choices may reflect the simultaneous pursuit and protection of SEW. Accordingly, family involvement may shape how firms evaluate renewal opportunities and the consequences of changes to established activities. OA is expected to facilitate ER, but its contribution depends on whether adaptive responses lead to substantive and viable changes rather than change for its own sake.

H₄: *Organizational agility is positively associated with entrepreneurial renewal.*

Direct and Indirect Relationships Between Entrepreneurial Ecosystem Conditions, Competitive Strategies and Entrepreneurial Renewal

In sub-Saharan Africa, EEs often operate under conditions that may constrain rather than facilitate entrepreneurial renewal. Limited access to finance, inadequate support infrastructure, institutional weaknesses, and restricted access to knowledge

and business networks can reduce firms' capacity to identify and exploit new entrepreneurial opportunities (Abdulai & Hussain, 2024; Amoa-Gyarteng et al., 2025; Barnard et al., 2024; Okon et al., 2026). These constraints are particularly consequential for family SMEs, whose renewal efforts may depend on external resources and complementary capabilities that are not readily available within their business environment. From a dynamic capabilities perspective, the strategic value of ecosystem resources depends on firms' ability to access, integrate, and reconfigure them to support new activities (Eisenhardt & Martin, 2017; Teece, 2007). When the ecosystem provides insufficient support, firms may face greater difficulties in mobilizing the resources and relationships required for entrepreneurial renewal. Furthermore, unequal access to ecosystem resources may reinforce these constraints and limit firms' opportunities for renewal (Terstriep et al., 2025). Accordingly, in the challenging, institutionally and resource-constrained environments that characterize many sub-Saharan African contexts, less favourable conditions in the entrepreneurial ecosystem are expected to hinder entrepreneurial renewal.

H₅: Entrepreneurial ecosystem conditions are negatively associated with entrepreneurial renewal.

CS may also be associated with ER by directing entrepreneurial efforts towards new offerings, market positions and business activities. Strategic choices influence the opportunities firms prioritize, the resources they commit and the activities they seek to develop. Porter (1985) highlights the role of competitive positioning in shaping firms' value-creation activities, while dynamic capabilities theory explains how strategic choices may need to be revised as market conditions and opportunities evolve (Teece et al., 2016). Strategies oriented towards innovation, differentiation or market exploration may support renewal by encouraging firms to pursue alternatives to established activities. Nevertheless, strategies can also reinforce existing positions when they prioritize protecting current performance over exploring new opportunities. Leonard-Barton (1992) shows how established capabilities may become rigidities that impede innovation. The relationship between CS and ER is therefore expected to be positive overall. However, its strength may depend on the strategic orientations pursued and the conditions under which they are implemented.

H₆: Competitive strategies are positively associated with entrepreneurial renewal.

The relationships between EE conditions, CS and ER may also operate indirectly through OA. In many sub-Saharan African contexts, institutional weaknesses, resource scarcity and limited access to finance, infrastructure and business support constrain firms' capacity to pursue entrepreneurial renewal. These challenges are particularly acute in Kivu, where family SMEs operate amid prolonged insecurity, institutional fragility, and recurrent economic and infrastructural disruptions (Binwa et al., 2023; Cojocar, 2022). Under such conditions, deficiencies in the EE may not merely limit access to external resources and opportunities; they may also undermine firms' ability to transform available opportunities and strategic initiatives into substantive renewal. From a dynamic capabilities perspective, OA may help firms respond to these constraints by identifying environmental changes, mobilising scarce resources, and reconfiguring organisational arrangements (Teece, 2007; Teece et al., 2016). However, agility cannot fully compensate for persistent ecosystem deficiencies, particularly when external constraints restrict the resources required to implement and consolidate new activities. Consequently, adverse EE conditions may be associated with lower ER, partly through their relationship with OA.

In contrast, CS can establish strategic priorities and guide resource allocation, while OA may enable firms to translate these orientations into concrete changes in activities and resource configurations. However, strategic choices alone do not guarantee renewal, as their effects depend in part on firms' capacity to implement and adjust them in response to changing circumstances. OA may therefore mediate the positive relationship between CS and ER by providing a pathway through which strategic orientations are translated into entrepreneurial action. These arguments suggest that OA may transmit the negative association between adverse EE conditions and ER, as well as the positive association between CS and ER, without necessarily accounting for either relationship in its entirety.

H₇: Organizational agility mediates the negative relationship between entrepreneurial ecosystem conditions and entrepreneurial renewal.

H₈: Organizational agility mediates the positive relationship between competitive strategies and entrepreneurial renewal.

Capital Structure As A Boundary Condition in the Relationship Between Organizational Agility and Entrepreneurial Renewal

The relationship between OA and ER may be weakened by financing constraints that characterize many developing economies, where limited access to formal credit, high borrowing costs and scarce internal funds restrict SMEs' investment capacity (Binwa et al., 2025). These difficulties may be particularly consequential for family SMEs, which often seek to preserve family control and financial autonomy when making financing decisions (Berrone et al., 2012; Gómez-Mejía et al., 2007). Although debt can provide resources for renewal, repayment obligations may intensify financial pressure and reduce the flexibility needed to implement new initiatives. Moreover, the preference for internal financing over external capital, as described by the pecking-order theory (Myers & Majluf, 1984), may further constrain the resources available to translate agile responses into substantive renewal. Thus, where debt financing increases financial pressure without providing sufficient flexibility for sustained investment, it is expected to weaken the positive relationship between OA and ER.

H₉: Debt financing negatively moderates the relationship between organizational agility and entrepreneurial renewal, such that this relationship weakens as reliance on debt financing increases.

Theoretical Synthesis and Research Objective

Taken together, the literature suggests that EE conditions and CS can contribute to OA, which may in turn facilitate ER in family SMEs. However, these relationships are not necessarily uniform: market growth potential may condition the relationship between competitive strategies and agility, while debt financing may weaken the translation of agility into renewal. Building on dynamic capabilities theory, Figure 1 examines both the potential contribution of organizational agility and the contextual conditions that may constrain its effectiveness.

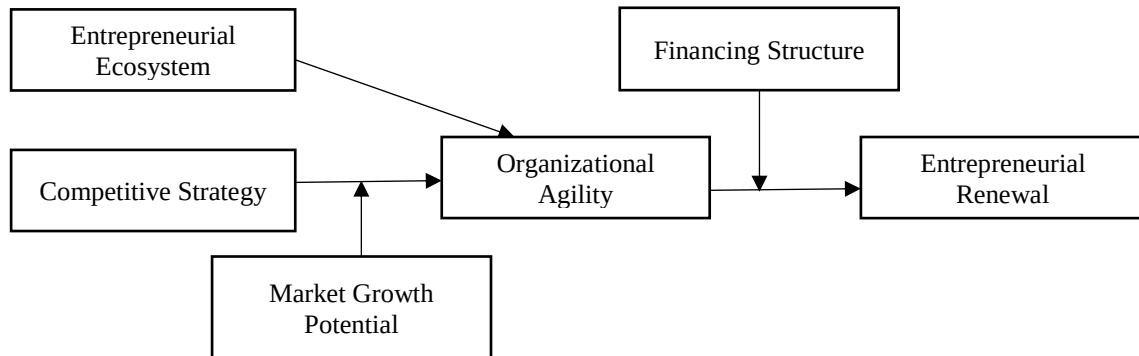


Figure 1. Theoretical Model

MATERIALS AND METHODS

This section presents the methodological approach adopted in this study. It describes the data collection procedure, the operationalization and measurement of variables, and the data processing and analytical techniques used to test the research hypotheses.

Data Collection

Data for this study were collected in the Kivu region, which includes the provinces of North Kivu and South Kivu. The survey was conducted in the main urban centres of Goma, Bukavu, and Uvira, as well as in several accessible surrounding localities. This choice is justified by the region's highly contrasting nature, characterized by persistent security instability, recurrent armed conflicts, and enduring institutional fragility, but also by a relatively dynamic entrepreneurial environment compared to other regions of the DRC. Family SMEs play a significant role in the local economic fabric and therefore provide a relevant context for examining OA and ER mechanisms in highly turbulent environments.

To distinguish SMEs from large firms, this study relies on the legal definition provided by the DRC Ministry of SMEs, as confirmed by Ordinance-Law No. 22/030 of 2022. SMEs are defined as firms that maintain standardized accounting records, employ no more than 200 employees, generate annual turnover of no more than USD 600,000, have an initial investment of no more than USD 350,000, and exhibit relatively informal governance structures (DRC, 2022). Family SMEs are identified based on three criteria adapted from Gómez-Mejía et al. (2011): (1) family ownership of at least 50% of capital; (2) active involvement of at least one family member in governance; and (3) the existence of family meetings concerning business affairs. At least two of these criteria must be met, and only formally registered firms (with an RCCM or business license) are included.

Data collection was conducted in three phases. An exploratory phase (May 2021) involved 37 interviews (32 family SMEs owners/managers, 2 support organisations, and 3 public institutions), conducted on-site to contextualise the constructs (CS, OA, ER) and adapt measurement scales. A snowball sampling procedure was used to identify firms. A pilot study (September 2021) was conducted to pre-test the questionnaire and determine the sample size, resulting in an initial sample of 675 SMEs, of which 493 were family SMEs, retained after applying the inclusion criteria. The questionnaire was validated by two methodological experts. The quantitative survey (December 2021) was administered to these firms using a stratified sampling approach covering Goma, Bukavu, and Uvira, with random selection within strata. Questionnaires were administered to firm owners/managers using tablets (KoBoCollect), ensuring response control, secure data transmission, and reduced input errors. Data were exported to Excel and subsequently analyzed using SPSS.

Measurement of Variables

EE is conceptualized as the set of institutional, economic, and social conditions that shape the opportunities and constraints firms face. It is measured using scales adapted from Isenberg (2010), Spigel (2017), and Stam and Van de Ven (2021), based on a four-point Likert scale. Exploratory factor analysis (EFA) ($KMO = 0.77$; Bartlett's test $p < 0.001$) revealed a seven-dimensional structure—family interference, logistical support, entrepreneurial financing, risk-taking, market structure, fiscal governance, and dispute management—explaining 67.8% of the total variance ($\alpha = 0.80$). This structure was confirmed through confirmatory factor analysis (CFA) ($\chi^2/df = 4.4$; CFI = 0.90; IFI = 0.90; RMSEA = 0.08), with satisfactory levels of composite reliability ($CR \geq 0.76$), convergent validity ($AVE \geq 0.53$), and discriminant validity. OA was measured using scales developed by Barzi (2011) and Charbonnier-Voirin (2011). Exploratory factor analysis ($KMO = 0.812$; Bartlett's test $p < 0.001$) revealed a seven-dimensional structure—customer orientation, workforce flexibility, information fluidity, supplier cooperation, market scanning, organizational commitment, and innovation—explaining 69% of the total variance, with good internal consistency ($\alpha = 0.85$). This structure was confirmed by confirmatory factor analysis ($\chi^2/df = 4$; CFI = 0.91; IFI = 0.91; RMSEA = 0.087), with acceptable levels of composite reliability ($CR \geq 0.74$), convergent validity ($AVE \geq 0.50$), and

discriminant validity. CS refers to the set of choices through which a firm builds and sustains a sustainable competitive advantage in its markets (Porter, 1985; Teece et al., 1997). It reflects decisions regarding the organization of activities, resource allocation, and the scope of operations. In this study, CS is operationalized as product–market diversification, a key expression of strategic choices in family SMEs (Ansoff, 1957; Rumelt, 1982). It is measured using a diversification index adapted from Binwa et al. (2023), combining the number of business activities, their degree of relatedness, and the breadth of markets served. The combination of these dimensions identifies six strategic configurations ranging from pure specialization to advanced diversification. ER refers to the process by which a firm renews its activities, products, markets, or organizational modes to maintain competitiveness and ensure long-term survival in a changing environment (Agarwal & Helfat, 2009; Covin & Miles, 1999; Teece, 2007). It reflects the firm's capacity to engage in strategic transformations beyond routine operational adjustments. In this study, ER is operationalized as a composite index capturing the intensity of renewal actions undertaken over the past three years, including productive investments, R&D activities, the introduction of new products or services, and entry into new markets. The five indicators, adapted from Balfoussia and Gibson (2019), and Ismail et al. (2010), are coded dichotomously (0 = no; 1 = yes) and aggregated into a global intensity score. Market growth potential (MG) is measured through managers' perceptions of expansion opportunities, consistent with the literature on environmental munificence (Dess & Beard, 1984). MG is coded as 1 when managers express optimism about market growth opportunities and 0 otherwise. Financial structure (FC) distinguishes between firms that combine self-financing with debt financing and those that rely exclusively on self-financing, in line with Myers (2001). FC is coded as 0 when firms rely exclusively on self-financing and 1 when they combine with debt financing. Finally, all variables were standardized using POMP scores (Cohen et al., 1999) to ensure comparability across constructs.

Table 1. Description, measurement, and expected effects of control variables

Variable	Label	Operational Measure	Expected Effect on OA / ER	Key References
Education level	EDUCATION	Ordinal scale: 1 = no education; 2 = primary; 3 = secondary; 4 = university	Positive effect expected on OA and ER through enhanced cognitive, analytical, and decision-making abilities	Becker (1985); Ucbasaran et al. (2008)
Workforce size	EFERS	Total number of employees	Positive effect on OA and ER due to greater resource availability and enhanced organizational capacity	Aiken and Hage (1971); Damanpour (1992)
Sector experience	EXSECT	Number of years of experience in the sector	Positive effect on OA and ER through deeper industry knowledge and better opportunity identification	Kor and Sundaramurthy (2009); Shane (2000)
Entrepreneur's age	AGENTRE	Age in completed years	Ambiguous effect: may enhance stability but reduce propensity for renewal and innovation	Bates (1990); Levesque & Minniti (2006)
Manager's gender	SEX	Binary: 0 = female; 1 = male	Potential differentiated effects on OA and ER related to management styles and access to resources	Jennings and Brush (2013); Minniti and Nardone (2007)

Data Processing and Analysis

Data processing is based on a mixed approach combining factor analyses and hierarchical regression models. In a first step, EFA was conducted to purify the measurement scales and identify their underlying structure. Data suitability was assessed using the Kaiser–Meyer–Olkin (KMO) index and Bartlett's test of sphericity, while factor extraction followed standard criteria (eigenvalues ≥ 1 ; factor loadings and communalities ≥ 0.50) (Carricano et al., 2010; Stafford & Bodson, 2006). Internal reliability was assessed using Cronbach's alpha. In a second step, CFA was performed to validate unidimensionality and assess the quality of the measurement model. Model fit was evaluated using standard indices (χ^2 , RMSEA, CFI, IFI) (Bagozzi & Yi, 2012), along with composite reliability (CR), convergent validity (AVE), and discriminant validity following the Fornell–Larcker criterion (Fornell & Larcker, 1981).

Hypotheses were tested using progressive hierarchical regression models. The first set of models examines the EE → CS relationship to empirically assess the environment's structuring role in shaping strategic choices. The second set tests the determinants of OA by sequentially introducing control variables, EE, and CS, as well as the moderating effect of market growth potential. The third set analyses the determinants of ER by introducing the direct effects of EE and CS, then OA to test mediation effects, and finally the interaction between OA and capital structure to assess moderation effects. This sequential approach allows for the identification of direct, indirect, and conditional effects within the model.

To minimize common method bias, several procedural and statistical remedies were employed, including diversification of measurement formats, comparison between retained family SMEs and the overall sample, and Harman's single-factor test (Podsakoff et al., 2012). The comparisons revealed no significant differences with respect to firm age ($t = -0.538$; $p > 0.10$), firm size ($t = 0.078$; $p > 0.10$), or industry sector ($\chi^2(16) = 12.40$; $p > 0.10$), suggesting the absence of selection bias. Furthermore, Harman's test indicated that no single factor accounted for the majority of the variance, thereby reducing concerns about dominant common method bias. Finally, regression assumptions were verified: variable distributions were consistent with normality, and variance inflation factors (VIFs < 5) confirmed the absence of multicollinearity (Hair et al., 2019).

RESULTS

This section presents the empirical findings of the study. It begins with a descriptive analysis of the sample characteristics, followed by the presentation and interpretation of regression results used to test the research hypotheses.

Sample Characteristics

This subsection presents the characteristics of the study sample using descriptive statistics, complemented by key preliminary tests. Table 2 summarises the main indicators used to describe the data structure.

Table 2. Descriptive Statistics and Sample Tests

Variable	Categories	M (Me)	Std. Dev.	EE	OA	ER
		Frequency	Percentage	T/C/F Test	T/C/F Test	T/C/F Test
Sex	Male	358	73	-0.51	-1.67*	-0.82
	Female	135	27			
FS	Self-financing	259	52.5	-2.07***	-11.36***	0.66
	Self + Debt	234	47.5			
EDUCATION	No education	2	0.5	0.89	3.068**	0.418
	Primary	23	4.5			
	Secondary	206	42			
	University	262	53			
MG	Strongly disagree	6	1	0.181	2.63*	0.515
	Disagree	13	3			
	Agree	231	47			
	Strongly agree	243	49			
AGENTRE	Count	43.12 (42)	11.14	-0.055	0.015	0.010
EFERS	Count	5.84 (4)	5.62	0.064	0.013	0.029
EXSECT	Count	7.54 (5)	6.85	-0.025	0.101**	0.013
EE	Score	2.97 (2.97)	1.26	1	0.279***	-0.010
OA	Score	3.09 (3.0)	0.34		1	-0.084
ER	Score	0.24 (0.2)	0.28			1

Note: T/C/F refer to Student's t-test, Pearson correlation test, and Fisher's test, respectively. M denotes the mean and Me the median. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

The descriptive results reveal a strong predominance of male managers (73%) compared to female managers (27%). More than 47% of respondents rely on hybrid financing (combining formal and informal debt), while 53% report having a university-level education. In addition, 96% of respondents perceive their business environment as characterized by high market growth potential. The average age of managers is approximately 42 years, with a median workforce size of 4 employees and a median sector experience of 5 years. At the perceptual level, the index of perceived EE is 66%, indicating relatively high environmental pressure.

In comparison, the average level of OA is approximately 70%, suggesting generally strong organizational responses to perceived threats. ER remains relatively low, estimated at around 20%, reflecting insufficient financial and organizational resources to sustain the dynamics of transformation and entrepreneurial expansion. Finally, statistical analyses reveal positive correlations between sector experience and OA, and between OA and EE perception. Significant differences in OA are observed according to gender, financing structure, perceived MG potential, and education level. In this regard, the Duncan post hoc test indicates that managers with a university education exhibit significantly higher levels of agility (mean = 3.4250) than those with a primary education (mean = 3.0701). Moreover, perceptions of EE vary significantly depending on FS.

Discussion of Regression Results

The results of the hierarchical regression analyses (see Table 3 below) reveal a moderately strong yet statistically significant overall explanatory power, with a final R^2 of 0.223. The control variables contribute minimally to explaining the endogenous variables. In contrast, the introduction of the main explanatory variables leads to substantial improvements in model fit ($\Delta R^2 = 0.040^{***}$ and 0.193^{***}), highlighting their substantive explanatory relevance. The inclusion of OA further enhances the model's explanatory power, albeit to a more moderate extent, suggesting a partial mediating role within the underlying causal mechanism. Finally, the introduction of the interaction term capturing FS significantly improves model fit ($\Delta R^2 = 0.054^{***}$), thereby providing strong evidence of a moderating effect. Overall, these findings support the existence of a conditional mechanism whereby the effects of contextual and strategic factors on entrepreneurial outcomes are partially mediated by OA and contingent on FS conditions.

The findings provide a more differentiated understanding of how OA contributes to ER among family SMEs operating in turbulent environments. First, OA is shaped simultaneously by EE conditions and CS, although the magnitude of these relationships differs substantially. EE has a positive and significant effect on OA ($\beta = 0.176$; $t = 5.112$; $p \leq 0.001$), while CS also exerts a significant positive effect ($\beta = 0.076$; $t = 8.369$; $p \leq 0.001$). These results indicate that agility does not develop independently of either the environment in which firms operate or the strategic orientations adopted by managers. Rather, it emerges from the interaction between external conditions and internal strategic responses. This finding is consistent with research emphasising the role of environmental conditions, strategic choices, and organisational

capabilities in enabling firms to respond to turbulent environments (Ahmad et al., 2025; Gerald et al., 2020; Govuzela & Mafini, 2019; Poi & Lebura, 2022). More importantly, however, the mediation results reveal that OA's role cannot be understood solely in terms of its antecedents. The contrasting mediation patterns show that OA is not a universal transmission mechanism linking environmental or strategic inputs to ER. Its transformative role depends on the source of the pressure that initiates organizational change.

This asymmetry is particularly evident in the relationship between EE and ER. Although EE significantly affects ER, introducing OA into the model does not attenuate this relationship. Instead, the direct effect remains significant and negative, changing from $\beta = -0.233$ ($t = -7.682$; $p \leq 0.001$) to $\beta = -0.269$ ($t = -8.876$; $p \leq 0.001$). The absence of mediation suggests that environmental conditions influence the renewal capacity of family SMEs through mechanisms that do not necessarily operate through OA. This finding adds an important qualification to the increasingly positive view of agility in turbulent environments. Recent research has emphasised that OA can help firms respond to changing conditions and translate environmental signals into organisational action (Ahmad et al., 2025; Gerald et al., 2020; Poi & Lebura, 2022). The present evidence, however, suggests that this transformation has limits when environmental constraints become sufficiently pervasive. In Kivu, institutional weaknesses, insecurity, infrastructural disruptions, resource scarcity, and market instability may directly affect investment, innovation, and business development decisions before firms can convert these pressures into agile organizational responses. Environmental turbulence may therefore function not only as a source of signals and opportunities to be sensed and exploited, but also as a direct constraint on the resources and strategic discretion required for renewal. The negative EE–ER relationship should consequently not be interpreted simply as evidence of an unfavourable ecosystem. Rather, it indicates that when environmental constraints become pervasive, they can directly narrow the boundaries within which ER remains feasible, thereby limiting the extent to which OA can compensate for structural constraints.

The contrast with CS is striking. Before OA is introduced, CS has a positive and significant relationship with ER ($\beta = 0.018$; $t = 2.259$; $p \leq 0.05$). Once OA enters the model, however, this direct relationship becomes non-significant ($\beta = 0.002$; $t = 0.299$; $p > 0.10$), indicating full mediation. Unlike environmental pressures, therefore, strategic choices do not appear to generate ER independently of the organizational capability required to implement them. Their effect is realised through the firm's capacity to translate its strategic orientation into coordinated organisational action. This finding extends research that positions OA as a mechanism by which strategic orientations and organizational resources translate into concrete outcomes (Ahmad et al., 2025; Chan & Muthueloo, 2022; Razzak et al., 2025). A strategy of specialisation or diversification establishes a direction for competition, but it does not by itself provide the organisational flexibility required to implement that direction under changing conditions. Strategic orientations must be translated into timely decision-making, resource reallocation, process adjustment, responsiveness to market signals, and organizational reconfiguration. The disappearance of the direct CS–ER relationship after OA is introduced, therefore, suggests that Strategy provides direction, whereas agility provides the organizational mechanism through which that direction becomes renewal. This distinction is important because it moves beyond treating agility as merely an additional strategic attribute, positioning it instead as a conversion capability that links managerial intention to entrepreneurial transformation.

Taken together, the contrasting mediation patterns challenge a linear interpretation of dynamic capabilities in which environmental sensing and organizational reconfiguration necessarily enable firms to overcome turbulence and achieve renewal. The findings instead indicate that the effectiveness of an adaptive capability depends on the nature of the force to which the firm responds. When the impulse for change originates within the firm through deliberate strategic choices, OA constitutes the principal mechanism through which those choices are translated into ER. When the impulse originates in a highly constrained external environment, however, agility does not necessarily intercept, neutralize, or transform the effect of those constraints. In Kivu, environmental turbulence can simultaneously stimulate agility and restrict the conditions required for agility to produce renewal. This apparent paradox is important: the same environment that increases the need for agility may also reduce the resources, opportunities, and strategic discretion necessary to exploit it. Thus, OA should not be conceptualized as a universal buffer against environmental adversity, but rather as a capability whose transformative value is contingent on the conditions under which it is deployed.

The positive and significant effect of OA on ER ($\beta = 0.205$; $t = 5.260$; $p \leq 0.001$) nevertheless confirms that agility constitutes an important organizational basis for renewal. Family SMEs that can detect changes, reallocate resources, adapt processes, coordinate responses, and react rapidly to emerging conditions are more likely to initiate new activities and pursue alternative growth trajectories. This result is consistent with dynamic capabilities theory, which conceptualises organisational capabilities as mechanisms by which firms integrate, reconfigure, and deploy resources to create and sustain value under changing conditions (Teece, 2007). It also accords with recent evidence linking agility to the transformation of environmental signals and emerging opportunities into concrete organizational responses (Asghar et al., 2025; Igwe et al., 2020). However, the present findings qualify this positive relationship by showing that agility creates the organisational possibility for renewal but does not guarantee its realisation. The capability to sense, respond, and reconfigure is therefore a necessary organizational condition for renewal. Still, its strategic value depends on whether firms possess sufficient discretion and resources to activate that capability.

This conditional character becomes particularly clear in the moderating role of capital structure. The significant negative interaction between capital structure and OA ($\beta = -0.222$; $t = -2.612$; $p \leq 0.01$) indicates that debt financing weakens the positive relationship between agility and ER. This result contrasts with the conventional expectation that external finance facilitates the exploitation of opportunities, innovation, and growth (Berger et al., 1998; Myers & Majluf, 1984). The finding should not, however, be interpreted as evidence that financial resources are irrelevant to agile firms. Rather, it highlights the importance of how resources are financed and the degree of strategic discretion associated with different financing arrangements. Debt creates repayment obligations and financial pressure that can become particularly restrictive when firms

need to experiment, reconfigure activities, or pursue opportunities with uncertain returns. In institutionally fragile environments, these obligations may narrow managerial discretion precisely when agility requires flexibility in resource allocation. The negative moderation is therefore consistent with research emphasizing that the value of dynamic capabilities depends on the institutional and resource conditions in which they are deployed (El Idrissi et al., 2023; Gerald et al., 2020).

This result takes on additional significance in family SMEs. Family firms evaluate strategic choices not only according to their expected economic returns but also in relation to family control, continuity, identity, and socioemotional wealth (Berrone et al., 2012; Gómez-Mejía et al., 2007). Debt may, consequently, represent more than a source of capital: it can impose financial obligations that constrain managerial autonomy and increase the perceived risk of strategic experimentation. Even when a family SMEs possesses the organisational agility to identify and organise a response, debt dependence may encourage more conservative decisions and reduce its willingness or ability to undertake renewal initiatives with uncertain returns.

Table 3. Hierarchical Regression Models Testing Mediation and Moderation Effects

Regression 1: Dependent Variable = CS			Regression 2: Dependent Variable: OA			Regression 3: Dependent Variable: ER			
Variables	Model 1	Model 2	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 4
EDUCATION	-.010 (.100)	-.034 (.098)	.016 (.022)	.011 (.020)	.013 (.020)	.005 (.018)	.013 (.017)	.011 (.017)	.007 (.016)
EFPEERS	.001 (.011)	-.003 (.011)	.001 (.002)	.000 (.002)	.000 (.002)	.002 (.002)	.004* (.002)	.004** (.002)	.004** (.002)
EXSECT	.008 (.009)	.009 (.009)	.004** (.002)	.004** (.002)	.004** (.002)	.002 (.002)	.001 (.002)	.001 (.001)	.000 (.001)
AGENTRE	-.002 (.006)	-.001 (.005)	-3.28 (.001)	.001 (.001)	.001 (.001)	.000 (.001)	-1.49 (.001)	.000 (.001)	.000 (.001)
SEX	.051 (.132)	.062 (.130)	-.049* (.029)	-.051* (.026)	-.050* (.026)	-.046* (.024)	-.050* (.023)	-.040* (.022)	-.042* (.022)
EE.c		.759*** (.168)	N/A	.176*** (.034)	.175*** (.034)		-.233*** (.030)	-.269*** (.030)	-.268*** (.030)
CS			N/A	.076 *** (.009)	.023 (.056)		.018** (.008)	.002 (.008)	.000 (.008)
MG					-.047 (.052)		N/A	N/A	N/A
CS x MG					.015 (.016)		N/A	N/A	N/A
OA.c							N/A	.205*** (.039)	.181*** (.048)
FS							N/A	N/A	.561** (.258)
OA x FS							N/A	N/A	-.222** (.085)
Intercept	3.005***	2.982***	3.064***	2.830***	2.985***	.516	.469***	-.112***	.005***
F	.213	3.584**	1.750***	18.425***	14.404***	1.363	9.595***	12.317***	13.841 ***
R ²	.002	.042	.018	.210	.212	.014	.122	.169	.223
ΔR ²	.002	.040***	.018	.193***	.002	.014	.108***	.048***	.054***

Note: Values in parentheses represent standard errors. "Not applicable" indicates that the Variable is not included in the model. Δ denotes the change in R². *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

The analysis of Figure 2 further indicates that debt financing significantly attenuates the positive effect of OA on ER. The estimated ER values (0.729 versus 0.402), a difference of 0.327, indicate that OA's contribution is substantially weaker among highly leveraged firms. This finding exposes a fundamental distinction between the capability to change and the financial freedom to act on that capability. Although agility may enable firms to identify opportunities and organize responses, repayment obligations can narrow the range of actions that managers can realistically implement. In family SMEs, concerns about financial risk and the preservation of family control may further encourage cautious decision-making, limiting the conversion of agile capabilities into concrete renewal initiatives. Debt financing therefore appears to function less as a lever for activating dynamic capabilities than as a constraint on their conversion into ER. This finding reinforces the view that organizational capability should not be automatically equated with renewal, particularly among family SMEs operating under institutional and financial constraints.

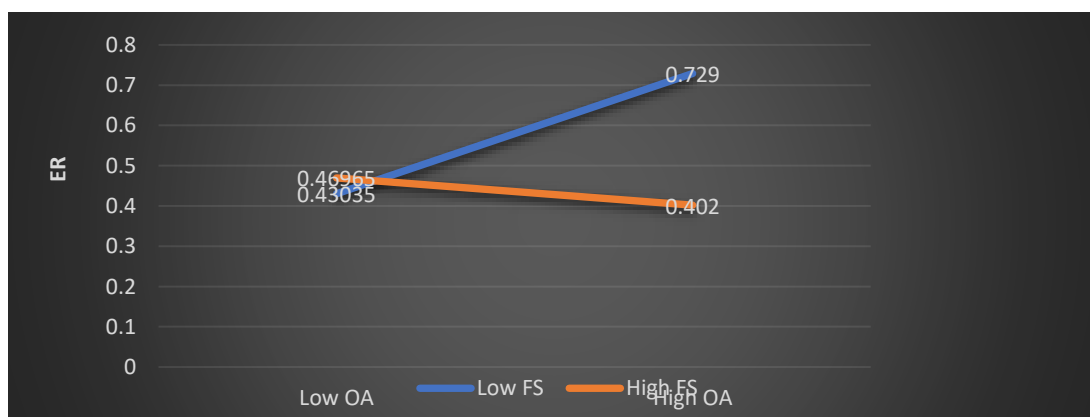


Figure 2. Interaction effect of OA × FS on ER

The strong positive effect of EE on CS ($\beta = 0.759$; $t = 4.516$; $p \leq 0.001$) further enriches this interpretation by demonstrating that the strategic orientations of family SMEs are themselves strongly embedded in their external environment. This result is consistent with research emphasizing the role of environmental conditions in shaping strategic behaviour under uncertainty and institutional weakness (Franco et al., 2024; Gerald et al., 2020). More importantly, the magnitude of this relationship suggests that CS cannot always be treated as an entirely autonomous managerial choice. In relatively stable environments, CS can be understood primarily as a deliberate positioning mechanism through which firms seek competitive advantage. In highly constrained environments, however, strategic choice may become partly endogenous to the opportunities and restrictions created by the ecosystem. Firms may adopt specialization, diversification, or other competitive configurations not simply because these alternatives are intrinsically attractive, but because institutional conditions, resource availability, market disruptions, and survival requirements make some strategic options more feasible than others. The ecosystem, therefore, does not merely provide the context in which Strategy is formulated; it also helps shape the strategic space in which firms can choose among options.

Table 4. Empirical validation of hypotheses

Hypothesis	Tested Relationship	Result	Decision
H ₁	EE $\rightarrow$ OA	Significant positive relationship	Supported
H ₂	CS $\rightarrow$ OA	Significant positive relationship	Supported
H ₃	CS $\times$ MG $\rightarrow$ OA	Not significant	Rejected
H ₄	OA $\rightarrow$ ER	Significant positive relationship	Supported
H ₅	EE $\rightarrow$ ER	Significant negative relationship	Supported
H ₆	CS $\rightarrow$ ER	Significant positive relationship	Supported
H ₇	EE $\rightarrow$ OA $\rightarrow$ ER	No mediation effect	Rejected
H ₈	CS $\rightarrow$ OA $\rightarrow$ ER	Full mediation	Supported
H ₉	OA $\times$ FS $\rightarrow$ ER	Significant negative moderation	Supported

Several control variables exhibit significant effects. Sector experience positively influences OA ($\beta = 0.004$; $t = 2.198$; $p \leq 0.05$), suggesting that the accumulation of industry-specific knowledge fosters adaptive capabilities. Conversely, male gender is associated with lower levels of both organizational agility ($\beta = -0.050$; $t = -1.902$; $p \leq 0.10$) and ER ($\beta = -0.042$; $t = -1.912$; $p \leq 0.10$). Although these effects remain modest, they indicate behavioural differences that may shape managerial strategic choices and adaptive capacities. In addition, workforce size exerts a positive effect on ER ($\beta = 0.004$; $t = 2.313$; $p \leq 0.05$), suggesting that a larger human resource base facilitates the implementation of transformation, innovation, and development initiatives.

CONCLUSIONS

This study examines the relationships among entrepreneurial ecosystem conditions, competitive strategies, organizational agility, and entrepreneurial renewal in family SMEs. Specifically, it investigates the mediating role of OA in the relationships between EE, CS and ER, as well as the moderating roles of market growth potential and debt financing. The proposed model is tested using hierarchical regression analysis on data from 493 family SMEs in Kivu.

The findings reveal a conditional conversion process rather than a linear pathway from environmental conditions to ER. EE and CS both contribute significantly to OA, confirming that firms' adaptive capacity is shaped by their external environment and strategic orientations. However, OA does not play an equivalent mediating role across these relationships. While OA fully mediates the relationship between CS and ER, it does not mediate the relationship between EE and ER. This asymmetry indicates that agility is particularly effective at translating strategic agency into renewal but less effective at transforming severe environmental constraints into renewal outcomes. The negative moderating effect of debt financing further shows that the possession of an adaptive capability does not guarantee its effective deployment: financial commitments can constrain the resources and strategic discretion needed to translate agility into renewal. OA therefore emerges not as a universal solution to turbulence, but as a conditional capability for conversion whose effectiveness depends on the trigger as organizational change and the resources available to activate it.

These findings make two main theoretical contributions. First, they refine the dynamic capabilities perspective (Teece, 2007; Teece et al., 2016) by moving beyond the assumption that agility systematically converts organizational inputs into positive outcomes. The results show that the role of OA is asymmetric and contingent: it translates CS into ER, but does not necessarily transform environmental pressures into renewal. This finding shifts the theoretical question from whether firms possess agility to when, through which pathway, and under what conditions agility can generate ER. It thereby extends contingency-based views of dynamic capabilities by emphasising that the effectiveness of organisational capabilities depends on both the source of the change they are expected to address and the context in which they are deployed. Second, the negative moderating effect of debt contributes to the literature on entrepreneurial finance (Berger et al., 1998; Myers & Majluf, 1984) by showing that financing structure can constrain the conversion of dynamic capabilities into renewal. This constraint is particularly consequential in family SMEs, where financial decisions are also shaped by concerns about control, continuity, and socioemotional wealth (Berrone et al., 2012).

The findings also carry important managerial implications. For family SMEs managers operating in fragile environments such as Kivu, developing OA should not be treated as an end in itself. Agility is most valuable when it is aligned with coherent strategic choices and supported by sufficient financial flexibility. Managers should therefore combine rapid organizational adaptation with careful evaluation of financing commitments, particularly when renewal requires investment in innovation, diversification, or new markets. The negative effects of debt suggest that financing decisions

should be assessed not only for their capacity to provide resources but also for their potential to restrict strategic discretion. For policymakers and SMEs support institutions, the findings point to the importance of financing mechanisms that provide capital without imposing excessive rigidity on firms operating amid institutional and market uncertainty. Flexible financing arrangements, adapted to the realities of fragile entrepreneurial ecosystems, may help firms convert adaptive capabilities into productive renewal.

Three limitations should nevertheless be acknowledged. First, the cross-sectional design limits the ability to establish the temporal ordering implied by the model, particularly the sequence through which CS contributes to ER via OA. Longitudinal or multi-wave designs would therefore be valuable for examining how strategic orientations, agility, and renewal evolve over time and for addressing concerns about causal ordering (Rindfleisch et al., 2008). Second, the study focuses on family SMEs in Kivu, a context characterized by institutional fragility, recurrent insecurity, and resource constraints. Although this setting provides strong theoretical leverage, it may limit the transferability of the findings to contexts with different institutional and competitive conditions (Lucas, 2003). Comparative research across African and other emerging economies could therefore test whether the conditional role of OA extends beyond Kivu. Third, the model does not capture all mechanisms that may shape the conversion of OA into ER. Family governance, SEW, organizational culture, social networks, and managerial learning may influence how agility translates into renewal, consistent with the microfoundational view of dynamic capabilities (Felin et al., 2012). Future research could incorporate these mechanisms, particularly through qualitative or mixed-method designs, to explain why firms with similar levels of OA may achieve different renewal outcomes.

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