

Organizational Ambidexterity in Family-Owned Digital Businesses

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Abstract

Family-owned businesses increasingly operate in environments where digital technologies alter customer expectations, operating processes, competitive boundaries, and the economics of innovation. Their continuity therefore depends not only on protecting established capabilities but also on developing new digital opportunities without destabilizing the resources, relationships, identity, and governance arrangements that sustain the family enterprise. This study examines organizational ambidexterity in family-owned digital businesses, conceptualizing ambidexterity as the organizational capacity to pursue exploitation of established competencies while simultaneously supporting exploration of new digital technologies, business models, markets, and knowledge.

The study integrates organizational ambidexterity theory with family-business research, socioemotional wealth reasoning, dynamic capabilities, and digital-transformation scholarship. Because no primary organizational dataset was supplied, a transparent simulation-based explanatory design was adopted. A synthetic analytical dataset comprising 360 hypothetical family-owned digital business profiles was constructed around exploration, exploitation, digital capability, family-governance adaptability, organizational ambidexterity, and renewal performance. Simulated analysis indicated positive relationships between organizational ambidexterity and renewal performance ($r = 0.575$), digital capability and renewal performance ($r = 0.590$), and governance adaptability and renewal performance ($r = 0.437$).

A multivariate model incorporating organizational ambidexterity, digital capability, and governance adaptability explained approximately 46.3% of the simulated variation in renewal performance. Mean renewal performance increased from 3.61 among very-low-ambidexterity profiles to 4.92 among very-high-ambidexterity profiles. These values are methodological demonstrations rather than observations from real firms. The study argues that family-owned digital businesses are likely to benefit when continuity and experimentation are treated as interdependent strategic requirements rather than mutually exclusive choices. Ambidexterity is therefore positioned as a governance-enabled capability through which family enterprises can preserve valuable legacy strengths while remaining sufficiently adaptive for digital renewal.

Keywords: organizational ambidexterity, family business, digital business, exploration, exploitation, digital transformation, family governance, organizational renewal



1. Introduction

Family-owned businesses occupy a distinctive strategic position because organizational decisions frequently combine economic objectives with continuity, identity, family influence, reputation, control, and transgenerational considerations. These characteristics can provide unusually strong commitment, patient capital, accumulated knowledge, and relational continuity, yet they can also create tension when established routines must be challenged. Gómez-Mejía and colleagues' socioemotional wealth perspective demonstrated that family-controlled organizations may evaluate strategic choices partly through their implications for family-centered nonfinancial value, while later family-innovation research identified substantial heterogeneity in how such firms approach innovation. Digitalization intensifies this strategic problem because technological change can simultaneously threaten established competencies and generate new opportunities that cannot be captured through incremental improvement alone. Vial's synthesis of digital-transformation research emphasizes that digital transformation involves organizational change extending beyond the simple adoption of individual technologies.

The organizational-ambidexterity literature offers a useful theoretical lens for examining this challenge. March's distinction between exploration and exploitation established one of the foundational tensions in organizational learning: firms must refine and extend existing competencies while also experimenting with unfamiliar alternatives. Subsequent ambidexterity research developed this tension into an organizational capability involving the simultaneous or contextually balanced pursuit of both activities. Exploration is generally associated with experimentation, discovery, variation, new knowledge, and uncertain future opportunities, whereas exploitation emphasizes refinement, efficiency, implementation, execution, and the productive use of established knowledge. Empirical and theoretical research has repeatedly treated an appropriate relationship between these activities as significant for adaptation and sustained competitiveness.

This tension is especially consequential for family-owned digital businesses. A family enterprise may need to exploit trusted customer relationships, accumulated industry experience, proprietary routines, brand heritage, and established cash-generating operations while simultaneously exploring artificial intelligence, data-driven services, digital platforms, automated processes, cloud systems, new digital channels, or digitally enabled business models. Digital transformation scholarship suggests that meaningful transformation requires organizational capabilities and strategic renewal rather than isolated technological investments. Warner and Wäger specifically conceptualized digital transformation as an ongoing process requiring dynamic capabilities for sensing, seizing, and transforming, while Vial's review similarly located digital technologies within wider processes of strategic and organizational change.

Family ownership can make this balancing process more complex. Research on family-firm innovation has identified an ability–willingness paradox in which family organizations can possess resources and discretion conducive to innovation while differing substantially in their willingness to undertake uncertain technological investments. Family firms may have long decision horizons, concentrated authority, committed owners, social capital, and specialized knowledge, yet their desire to preserve family control or avoid outcomes that threaten socioemotional wealth can influence innovation choices. The implication is that low digital experimentation should not automatically be interpreted as lack of capability, just as strong exploitation should not automatically be interpreted as strategic

conservatism. The relevant issue is whether governance systems enable the organization to deploy its established strengths while creating legitimate space for experimentation.

The present study addresses this issue by conceptualizing organizational ambidexterity as a strategically important capability for family-owned digital businesses. It proposes that renewal performance depends not simply on maximizing exploration or exploitation independently but on developing an architecture in which both are coordinated through digital capability and adaptable family governance. Because no primary firm-level dataset was available, the analytical component is explicitly simulation based. The study uses synthetic organizational profiles to demonstrate the statistical behavior expected under the proposed theoretical framework and does not present simulated values as field evidence. The resulting framework provides a foundation for future empirical validation through surveys, longitudinal family-business panels, comparative case studies, and multilevel research designs.

2. Objectives of the Study

2.1 To Conceptualize Ambidexterity in the Context of Family-Owned Digital Businesses

The first objective is to clarify how organizational ambidexterity should be understood when family ownership and digital transformation coexist. Conventional descriptions of ambidexterity emphasize simultaneous exploration and exploitation, but family-owned digital businesses introduce additional governance considerations. Exploration may include experimentation with unfamiliar digital markets, technologies, partnerships, platform models, data strategies, or digital products, whereas exploitation can involve optimization of established processes, customer relationships, proprietary knowledge, and proven digital assets. Ambidexterity consequently refers to the capacity to coordinate these distinct modes rather than indiscriminately maximizing both.

This conceptualization also recognizes that the family system can influence how the balance is achieved. Family ownership may provide patient capital and strategic continuity, but family-centered priorities can also influence willingness to accept uncertainty. The study therefore treats ambidexterity not only as an operational innovation capability but also as a governance problem. An organization can possess technical expertise for exploration yet fail to deploy it if decision rights, family expectations, or resource-allocation practices systematically favor established activities.

2.2 To Examine the Relationship Between Ambidexterity and Organizational Renewal

The second objective is to assess the theoretical relationship between organizational ambidexterity and renewal performance. Renewal performance is defined in this study as the organization's capacity to adapt its products, processes, capabilities, and strategic priorities while maintaining sufficient operational stability to sustain implementation. The concept does not represent short-term financial performance alone. Instead, it captures the combined adaptive outcome expected when exploitation protects present viability and exploration develops future options.

The simulation tests whether higher ambidexterity maturity is associated with stronger renewal performance under the assumptions of the proposed model. Rather than treating exploration and exploitation as opposite endpoints on a single continuum, the analytical framework permits both to coexist. This is consistent with ambidexterity research in which the strategic problem lies in managing competing demands rather than selecting one permanently over the other.

2.3 To Evaluate Digital Capability and Family-Governance Adaptability as Complementary Conditions

The third objective is to examine whether organizational ambidexterity becomes more valuable when supported by digital capability and adaptable family governance. Digital capability refers to the organization's capacity to integrate digital technologies, knowledge, data, and skills into operational and strategic activity. Digital-transformation research indicates that technology becomes strategically meaningful when it is embedded within broader organizational changes rather than treated simply as an acquisition decision.

Family-governance adaptability refers to the capacity of owners and family decision makers to modify decision rights, professionalize expertise where necessary, delegate appropriately, and protect long-term family objectives without making existing governance arrangements immune to revision. The study proposes that family governance can either enable or constrain ambidexterity. Governance mechanisms that preserve strategic continuity while granting credible discretion for experimentation are expected to provide a more favorable foundation for digital renewal.

3. Review of Literature

3.1 Exploration, Exploitation, and Organizational Ambidexterity

The theoretical origins of organizational ambidexterity are closely connected with organizational learning. March's distinction between exploration and exploitation framed the problem as one of allocating attention and resources between activities whose returns differ in timing, uncertainty, and measurability. Exploitation generates relatively proximate benefits through refinement and implementation, whereas exploration generates less certain and more temporally distant possibilities. This asymmetry can create a self-reinforcing preference for exploitation because its outcomes are often easier to observe and justify.

Subsequent scholarship expanded ambidexterity from a learning dilemma into an organizational-design and strategic-capability problem. Some organizations structurally separate exploratory activities from established operations, while others cultivate contextual conditions that permit individuals and units to allocate attention between alignment and adaptation. Research has also examined balanced, combined, and sequential approaches. Evidence summarized in later studies indicates that organizational performance depends on context and that ambidexterity should not be interpreted as a universally costless condition. Small and resource-constrained organizations can face particularly difficult allocation problems because exploration and exploitation compete for managerial attention, human resources, finance, and technological expertise.

For digital businesses, this dilemma is intensified by technological speed and recombination. Established digital products require security, reliability, customer service, process discipline, and continuous improvement, while future competitiveness may require experimentation with technologies whose value remains uncertain. The effective organization must therefore create separation where necessary without allowing exploration and exploitation to become disconnected. Ambidexterity should be evaluated by the firm's ability to create strategic complementarity between learning modes rather than by the absolute volume of experimental activity.

3.2 Family Ownership, Innovation, and the Ability–Willingness Tension

Family-business scholarship shows that family involvement cannot be reduced to a simple positive or negative effect on innovation. The socioemotional wealth perspective explains why family owners may protect noneconomic values associated with control, identity, family reputation, and continuity. Such priorities can alter the perceived attractiveness of uncertain strategic alternatives even when those alternatives possess significant economic potential. Family-firm innovation research consequently emphasizes heterogeneity in innovation behavior and rejects the assumption that all family organizations respond identically.

Chrisman and colleagues' ability–willingness paradox is especially relevant to ambidexterity. Their analysis argues that family firms can possess strong ability to innovate because concentrated ownership provides discretion over resources, yet their willingness to use this ability may be constrained by family priorities and perceived threats to socioemotional wealth. This distinction provides an important explanation for why family firms with apparently similar resources may exhibit very different levels of exploratory innovation.

Ambidexterity provides a potential organizational response to this tension. Exploitation can preserve competencies, identity, and cash-generating activities that support family continuity, while exploration can be bounded through portfolios, separate teams, staged investment, pilot projects, or partnerships. Such designs allow uncertain initiatives to develop without immediately requiring wholesale abandonment of established activities. Family governance therefore becomes part of the ambidexterity architecture because owners determine which uncertainties are tolerable, which capabilities can be delegated, and how experimental initiatives are evaluated.

3.3 Digital Transformation and Strategic Renewal in Family Enterprises

Digital transformation differs from simple digitization because it can alter value creation, organizational structures, customer relationships, decision processes, and competitive boundaries. Vial's review synthesized digital transformation as a process in which digital technologies contribute to significant organizational change, while Warner and Wäger emphasized dynamic capabilities and continuous strategic renewal. These perspectives suggest that digital success depends on organizational adaptability rather than technology acquisition alone.

For family-owned businesses, digital transformation can create a distinctive temporal tension. The organization must preserve an existing business sufficiently long to finance experimentation, while experimentation may itself challenge routines that produced earlier success. Family enterprises may therefore need to use established relational assets and accumulated tacit knowledge as foundations for digital development rather than treating legacy capabilities as obstacles to be discarded. Digital exploration can involve new platforms, analytics, data-based services, digitally enabled customer experiences, or partnerships with technology providers, while digital exploitation can improve existing processes through automation, information integration, and incremental enhancement.

The literature nevertheless leaves an important conceptual space between family-business innovation theory and digital-transformation research. The former explains why family preferences, control, and governance shape innovation willingness; the latter explains why sustained digital transformation requires organizational capabilities and renewal. Organizational ambidexterity provides a

bridge between the two traditions. It allows the analytical focus to move from the binary question of whether a family firm is innovative toward the more informative question of how it allocates organizational attention between current digital efficiency and future digital opportunity.

4. Research Methodology

4.1 Research Design and Simulation Rationale

The study employs a quantitative simulation-based explanatory design. No primary survey responses, company records, digital-performance data, or family-governance observations were supplied. Consequently, the study does not claim to report behavior from real family firms. A synthetic analytical dataset was generated solely to demonstrate how the proposed theoretical relationships could be operationalized and tested in a future empirical study.

A total of 360 hypothetical family-owned digital business profiles was created. The unit of analysis represents an organizational profile rather than an individual manager or identifiable firm. Constructs were measured conceptually on seven-point scales ranging from weak to strong presence. Random variation was incorporated into the data-generation procedure so that renewal performance was not mechanically determined by any single variable.

Table 1: Operationalization of the Simulation Framework

Construct	Analytical Scale	Operational Interpretation	Expected Relationship
Exploration	1–7	Experimentation with new digital technologies, markets, business models, partnerships, and knowledge	Positive component of ambidexterity
Exploitation	1–7	Refinement and efficient use of established competencies, digital processes, products, and customer relationships	Positive component of ambidexterity
Organizational Ambidexterity	1–7	Joint capacity to sustain exploration and exploitation without allowing either to become systematically dominant	Positive → Renewal
Digital Capability	1–7	Capacity to integrate digital technologies, skills, data, and knowledge into strategic and operational activity	Positive → Renewal
Family-Governance Adaptability	1–7	Capacity to revise decision processes, delegate expertise, and reconcile family continuity with strategic change	Positive → Renewal
Organizational	1–7	Capacity to update capabilities and	Dependent variable



Construct	Analytical Scale	Operational Interpretation	Expected Relationship
Renewal Performance		strategic activities while preserving sufficient operational continuity	

Note: All constructs and numerical observations are simulated. No real family business, owner, executive, employee, or respondent is represented.

4.2 Construction of the Analytical Variables

Exploration and exploitation were generated as separate but compatible constructs. This treatment reflects the assumption that an organization can simultaneously exhibit high levels of both activities. Ambidexterity was calculated from their joint presence so that extreme strength in one dimension could not fully compensate for severe weakness in the other. The analytical logic therefore rewards complementarity rather than simple addition.

Digital capability was modeled as an enabling organizational resource associated with both exploration and exploitation. Digitally capable firms can potentially exploit technologies to improve established operations while also exploring new digital opportunities. Family-governance adaptability was modeled as a partially independent organizational condition influencing the firm's ability to allocate authority and resources across current and future-oriented activities.

Renewal performance was generated as a function of organizational ambidexterity, digital capability, family-governance adaptability, and a stochastic residual component. The residual ensures that the simulation recognizes unmodeled influences including industry structure, competition, financial resources, leadership quality, workforce capability, regulation, ecosystem relationships, and market timing.

4.3 Statistical Procedures and Reproducibility

The analytical procedure included descriptive statistics, Pearson correlation analysis, maturity-group comparison, and ordinary least squares regression. Organizational renewal performance was specified as the dependent variable. Organizational ambidexterity, digital capability, and family-governance adaptability were entered simultaneously as predictors in the multivariate model.

For comparative interpretation, the 360 synthetic profiles were divided into five equal groups according to organizational-ambidexterity maturity: very low, low, moderate, high, and very high. Each group contained 72 profiles. A fixed random-generation procedure was maintained for reproducibility. Statistical significance within the simulated environment is reported only as a property of the synthetic dataset and must not be interpreted as population-level evidence.

5. Analysis

5.1 Correlational Relationships Among the Simulated Constructs

The simulated dataset displayed moderate dispersion across all constructs, providing sufficient variability for analytical comparison. Mean family-governance adaptability was approximately 4.32 on

the seven-point scale, while mean organizational renewal performance was approximately 4.18. The objective of the simulation was not to reproduce a known family-business population but to evaluate whether the hypothesized relationships remained visible under realistic random variation.

The results should not be interpreted as evidence that one predictor is universally more important than another. The coefficients reflect parameters embedded within the synthetic design. Their methodological value lies in illustrating that ambidexterity can be distinguished analytically from digital capability and governance adaptability rather than being treated as another name for technological sophistication.

5.2 Ambidexterity Maturity and Renewal Performance

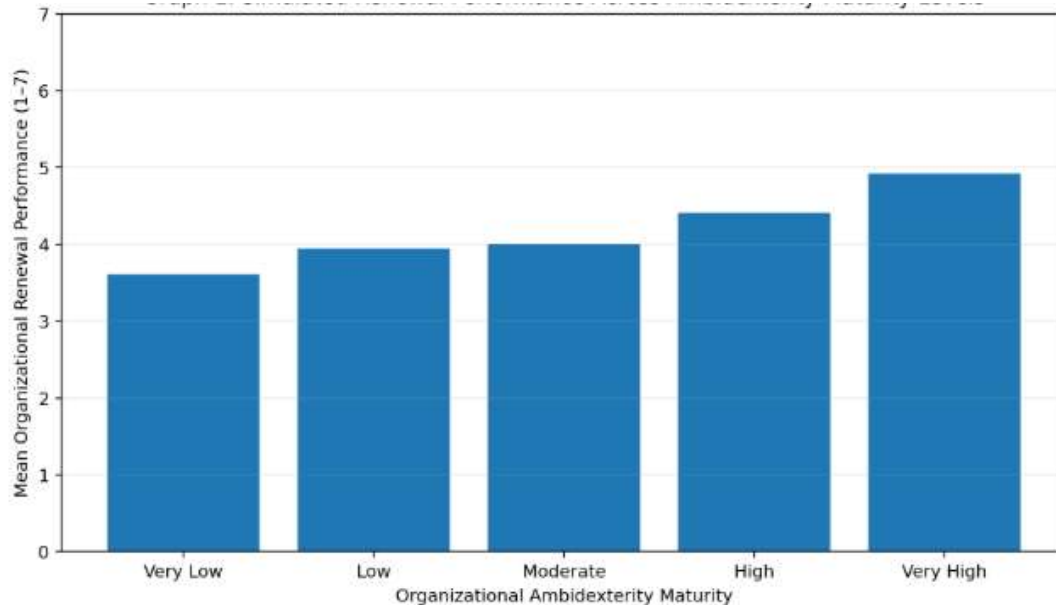
The maturity-group analysis produced a progressive pattern. The mean renewal-performance score for very-low-ambidexterity profiles was 3.61. This increased to 3.95 for the low group, 4.01 for the moderate group, 4.41 for the high group, and 4.92 for the very-high group. The difference between the lowest and highest maturity groups was therefore 1.31 points on the seven-point scale.

Table 2: Simulated Organizational Outcomes by Ambidexterity Maturity

Ambidexterity Maturity	Synthetic Profiles	Mean Exploration	Mean Exploitation	Mean Digital Capability	Mean Governance Adaptability	Mean Renewal Performance
Very Low	72	3.25	3.34	3.50	3.85	3.61
Low	72	3.91	3.98	4.14	4.04	3.95
Moderate	72	4.23	4.46	4.19	4.32	4.01
High	72	4.74	4.86	4.64	4.46	4.41
Very High	72	5.48	5.51	5.17	4.94	4.92

The table also shows that higher ambidexterity maturity was accompanied by greater digital capability and governance adaptability within the simulated model. This pattern reinforces the conceptual argument that ambidexterity should not be viewed solely as an innovation portfolio. It depends on organizational infrastructure capable of supporting learning modes that differ in uncertainty, time horizon, and managerial requirements.

Graph 1: Simulated Renewal Performance Across Organizational Ambidexterity Maturity Levels



Interpretation: The column graph demonstrates a progressive increase in organizational renewal performance as ambidexterity maturity rises. The pattern is comparatively gradual between low and moderate maturity but becomes more pronounced at the high and very-high levels.

Key Finding: Within the simulated framework, family-owned digital businesses characterized by stronger joint exploration and exploitation exhibit higher organizational renewal performance.

5.3 Multivariate Assessment of Renewal Performance

The multivariate regression model included organizational ambidexterity, digital capability, and family-governance adaptability simultaneously. The simulated model produced an R^2 of approximately 0.463 and an adjusted R^2 of approximately 0.458, indicating that the three constructs jointly accounted for around 46.3% of the variation in simulated renewal performance.

Organizational ambidexterity produced an unstandardized coefficient of approximately 0.311, digital capability approximately 0.289, and family-governance adaptability approximately 0.164. All coefficients were positive within the synthetic model. The result illustrates a central theoretical proposition of this study: renewal is unlikely to depend on technological capability alone. Organizations must also create arrangements through which exploratory and exploitative activities can coexist and through which family governance can accommodate strategically justified change.

The remaining unexplained variance is theoretically important. Family-owned digital businesses exist within heterogeneous industries, markets, generations, ownership structures, technological environments, and competitive positions. Renewal performance is therefore expected to depend on numerous variables not represented in this simplified framework. The simulation should consequently be treated as a model-development exercise rather than a comprehensive predictive system.

6. Discussion

6.1 Ambidexterity as a Mechanism for Combining Continuity and Digital Experimentation

The first major implication is that organizational ambidexterity offers a more useful interpretation of family-business adaptation than a simple contrast between traditional and innovative firms. Family businesses do not necessarily need to abandon established competencies in order to become digitally adaptive. Their existing customer relationships, reputation, operating knowledge, supplier networks, brand identity, and organizational routines may continue to provide significant strategic value. The relevant challenge is ensuring that these assets do not consume all managerial attention and investment to the exclusion of future opportunities.

This interpretation is consistent with the broader ambidexterity literature, which conceptualizes sustained organizational performance around the management of exploration and exploitation rather than permanent commitment to either one. Research examining the balance between these learning modes indicates that the performance consequences of exploration and exploitation depend on how firms combine them and on the organizational context in which the combination occurs. The simulated progression in renewal performance is therefore theoretically plausible, although it remains to be validated with real family-business data.

In practical terms, family-owned digital businesses may require differentiated arrangements for the two activity systems. Core operations can be managed through clear accountability, process discipline, service reliability, security, cost control, and incremental improvement. Exploratory digital initiatives may require faster learning cycles, provisional metrics, small-scale experimentation, partnerships, multidisciplinary teams, and greater tolerance for failure. Ambidexterity does not eliminate tension between these systems; it creates an organizational means of governing that tension.

6.2 Family Governance as an Enabler or Constraint on Ambidextrous Strategy

The second implication concerns family governance. The ability–willingness perspective suggests that a family firm may possess resources, authority, and knowledge required for innovation while nevertheless choosing not to deploy them because of perceived risks to family objectives. Digital exploration can intensify such concerns because new technologies may require unfamiliar external partners, non-family specialists, new financing arrangements, changes in decision authority, or business models that reduce dependence on established family expertise.

Governance adaptability can reduce this problem without requiring family owners to relinquish legitimate strategic control. Families can preserve ownership influence while delegating technological decisions to qualified professionals, establishing digital advisory structures, defining experimentation budgets, specifying risk thresholds, and separating reversible experiments from strategic commitments that materially alter family control. The key is not unrestricted managerial autonomy but clearly designed decision rights.

The simulation's positive association between governance adaptability and renewal performance reflects this logic. It suggests that organizational ambidexterity is unlikely to be maintained through innovation units alone if governance continually redirects attention toward short-term certainty or blocks unfamiliar expertise. Conversely, governance arrangements that privilege novelty without protecting economically important core operations can also be dysfunctional. Effective family governance should

therefore operate as an integrating mechanism that protects continuity while legitimizing necessary experimentation.

6.3 Digital Capability as the Infrastructure of Ambidextrous Renewal

The third implication is that digital capability should be distinguished from digital technology ownership. A firm can purchase enterprise software, cloud infrastructure, analytics tools, artificial intelligence applications, or digital platforms without developing the organizational capacity to use them strategically. Digital-transformation research consistently emphasizes that meaningful transformation involves organizational change and capability development extending beyond technology acquisition.

Digital capability supports exploitation by allowing established processes to become more efficient, measurable, integrated, and responsive. The same capability can support exploration by lowering the cost of experimentation, increasing access to data, enabling rapid prototyping, improving external connectivity, and making new digital offerings feasible. Ambidexterity therefore does not imply maintaining separate technological infrastructures for present and future activities. Shared digital foundations can create complementarities between them.

For family-owned businesses, the managerial implication is particularly significant. Digital transformation should not be framed exclusively as a generational conflict between established family members and younger technology-oriented successors. Such framing can personalize what is fundamentally an organizational-design issue. The more productive question is whether the business possesses sufficient governance, talent, technological architecture, and strategic discipline to exploit what it already knows while systematically learning what it does not yet know.

7. Conclusion

This study examined organizational ambidexterity as a capability through which family-owned digital businesses can reconcile the strategic requirements of continuity and renewal. The central argument is that digital adaptation does not require organizations to choose permanently between exploitation of established competencies and exploration of new opportunities. Long-term viability depends on creating organizational conditions that allow both learning modes to coexist while preventing either from systematically eliminating the other.

The simulation-based analysis provided a transparent methodological illustration of the proposed relationships. Within the synthetic dataset, organizational ambidexterity was positively associated with renewal performance, and very-high-ambidexterity profiles achieved higher mean renewal scores than very-low-ambidexterity profiles. Digital capability and family-governance adaptability also contributed positively within the multivariate model. These values are not presented as empirical findings from actual family enterprises; they demonstrate the internal analytical coherence and testability of the framework.

The theoretical contribution of the study lies in integrating organizational ambidexterity, family-business innovation, family governance, socioemotional wealth reasoning, and digital-transformation research. This integration suggests that the distinctive challenge facing family-owned digital businesses is not simply whether they are willing to adopt technology. Their deeper challenge is whether ownership

and organizational systems can preserve strategically valuable continuity while repeatedly allocating resources, authority, and attention toward uncertain future possibilities.

Future research should test the framework using real family-owned digital firms across industries and generations. Longitudinal studies could determine whether ambidexterity predicts subsequent digital renewal rather than merely correlating with contemporaneous perceptions. Multilevel research could distinguish owner-family preferences from managerial and employee behavior, while comparative case studies could reveal how different governance architectures sustain exploration without weakening operational discipline. Future studies should also examine succession stage, non-family executive involvement, environmental turbulence, technological intensity, family ownership concentration, and socioemotional wealth priorities as potential boundary conditions.

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