

Supporting Strategic Intuition for Product Feature Innovation in Early-Stage Fintech Payments Start-Ups

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Abstract

Early-stage fintech payments start-ups face high uncertainty, limited historical data, and compressed decision cycles, making product feature innovation both critical and fragile. Despite growing attention to AI-supported tools and data-driven strategies, little is known about how strategic intuition guides product decisions in these contexts. This study develops a conceptual and practice-based framework to explore how strategic intuition, supported by digital leadership and human–AI collaboration, shapes feature ideation, prototyping, and prioritization processes. Using simulated product decision scenarios and data dummy analysis, the research maps decision points across development stages and examines how teams integrate intuitive judgment with analytical cues. Findings reveal that strategic intuition functions as a central mechanism for aligning feature choices with strategic goals, enhancing coherence and adaptability under uncertainty. Digital leadership legitimizes intuitive decisions, fosters cross-functional collaboration, and creates a psychologically safe environment, while AI tools complement rather than replace human judgment. The study contributes theoretically by positioning strategic intuition as a core element of product feature innovation in early-stage ventures and by integrating cognitive, social, and technological mechanisms into a unified framework. In practice, the framework provides actionable guidance for start-up teams to improve decision quality and speed without relying on costly field experiments, offering insights for managers, incubators, and policymakers seeking to support innovation under constraints. Overall, the research underscores the value of structured intuition as a deliberate, analytically informed process that advances understanding of cognition-supported innovation in nascent digital ventures.

Keywords: *Digital Leadership, Early-Stage Fintech, Human–AI Collaboration, Product Feature Innovation, Strategic Intuition.*

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I. INTRODUCTION

The rapid growth of digital technologies and artificial intelligence has fundamentally reshaped how organizations innovate, make decisions, and compete, particularly in digital platform-based industries such as fintech payments. Early-stage fintech start-ups operate under extreme uncertainty, limited data availability, and accelerated innovation cycles, making product feature decisions both strategic and fragile (Boubaghela-Chikh, 2024; Haddad & Hornuf, 2023; Zarrouk et al., 2021). While AI-driven tools increasingly support managerial and design decisions, they do not eliminate the need for human judgment, especially in ambiguous and fast-changing environments where historical data are scarce or unreliable (Al-Surmi et al., 2022; Rajagopal et al., 2022). In this context, strategic intuition emerges as a critical yet underexplored mechanism that enables teams to navigate uncertainty and make timely decisions about innovation.

Existing studies on innovation and decision-making largely emphasize data-driven approaches, digital tools, and AI-supported analytics as key drivers of organizational performance (Aldoseri et al., 2024; Marion & Fixson, 2021; Pertiwi & Hana, 2025). Research on strategic intuition has demonstrated its relevance in high-level managerial and strategic contexts, highlighting its role alongside analytical reasoning in complex decision environments (Gareth Shepherd et al., 2024; Luoma & Martela, 2021; Walsh et al., 2022). In parallel, digital leadership literature underscores the importance of leadership capabilities in enabling effective digital transformation and innovative work behavior (Chatterjee et al., 2023; Erhan et al., 2022; Tigre et al., 2023). However, these streams of literature often evolve independently, resulting in limited integration between intuition-driven decision-making, innovation processes, and leadership practices, particularly within early-stage digital ventures.

Despite growing attention to fintech innovation and AI-supported decision-making, prior studies tend to focus either on technological capabilities or on leadership and strategy in isolation, leaving a fragmented understanding of how product feature decisions are actually made in early-stage fintech payments start-ups (Huang, 2022; Kostin et al., 2022; Oshodin, 2020). Moreover, strategic intuition is rarely examined as a central mechanism in product feature innovation, especially in start-ups that lack extensive historical data, established routines, and formalized development processes (Songkajorn et al., 2022; Štěpánková & Binková, 2025). Empirical research in this domain is further constrained by the dominance of field experiments and large-scale datasets, which are often impractical or inaccessible for early-stage ventures (Hikmah et al., 2025; Tanaka & El-Masry, 2025). Consequently, there remains a clear research gap in understanding how strategic intuition, supported by digital leadership, can systematically guide product feature innovation through conceptual and simulation-based approaches.

The urgency of addressing this gap is amplified by the rapid scaling pressures faced by fintech payments start-ups and the increasing complexity of their competitive and regulatory environments. Product feature decisions in fintech payments often determine user trust, platform adoption, and compliance readiness within narrow time windows, leaving limited opportunities for iterative trial-and-error learning. Overreliance on data-driven or AI-based decision tools without sufficient intuitive judgment may lead to misaligned product features, inefficient resource allocation, and delayed product-market fit, particularly in early-stage ventures where strategic flexibility is vital (Acciarini et al., 2020; Mai & Khalid, 2025; Tanaka & El-Masry, 2025). Failure to address this issue risks reinforcing decision rigidity and innovation inertia at a stage when adaptability and foresight are most critical.

To address these challenges, this study aims to develop a conceptual and practice-based framework that explains how strategic intuition supports product-feature innovation in early-stage fintech payments start-ups. The study maps key decision points across ideation, prototyping, and feature prioritization processes, while examining how digital leadership facilitates intuitive yet structured decision-making (Eberl & Drews, 2021; Karakose et al., 2022; Senadjki et al., 2024). By employing simulated product decision scenarios and data dummy analysis, the research avoids reliance on costly or inaccessible field experiments while maintaining analytical rigor (Acciarini et al., 2020; Mai & Khalid, 2025). This approach positions strategic intuition not as a substitute for analytical reasoning, but as a complementary strategic capability within innovation decision-making.

This study contributes theoretically by positioning strategic intuition as a core element of product feature innovation in the specific, underexplored context of early-stage fintech payments start-ups. It extends innovation and decision-making literature by integrating strategic intuition, digital leadership, and human–AI collaboration into a unified conceptual framework that reflects the realities of early-stage digital ventures (Bouschery et al., 2023; Musrifah & Hasanah, 2025; Zhang et al., 2025). From a practical perspective, the proposed framework offers actionable guidance for founders, designers, and product teams to improve decision quality under uncertainty without heavy dependence on real-world experimentation (Alkaraan et al., 2023; Hidayat et al., 2025). In doing so, the study responds directly to calls for more context-sensitive, decision-oriented research in digital innovation and early-stage venture management.

The remainder of this paper is structured as follows. Section 2 reviews the relevant literature on strategic intuition, product feature innovation, digital leadership, and human–AI collaboration, thereby establishing the study's theoretical foundation. Section 3 presents the conceptual and practice-based framework, including the mapping of key product decision points and the use of simulated decision scenarios. Section 4 discusses the theoretical and managerial implications of the proposed framework for early-stage fintech payments start-ups. Finally, Section 5 concludes the paper by summarizing the main insights, acknowledging limitations, and outlining directions for future research.

II. LITERATURE REVIEW

A. *Product Feature Innovation in Early-Stage Fintech Payments Start-ups*

Product feature innovation is a critical mechanism through which early-stage fintech payments start-ups achieve differentiation, market fit, and user trust in highly competitive digital ecosystems. Unlike mature firms, early-stage ventures operate with limited organizational routines, incomplete market feedback, and constrained analytical data, making feature-level

decisions particularly consequential (Marion & Fixson, 2021; Zarrouk et al., 2021). Prior innovation research has largely emphasized structured new product development (NPD) processes and performance indicators, often assuming stable data availability and iterative learning cycles (Tagues et al., 2021; Tidd & Bessant, 2021). However, such assumptions are frequently misaligned with the realities of fintech payments start-ups, where rapid scaling pressures and regulatory constraints compress decision windows and limit opportunities for trial-and-error experimentation (Haddad & Hornuf, 2023; Kostin et al., 2022). This underscores the importance of understanding product feature innovation as a dynamic, context-sensitive process where strategic judgment and adaptability are essential.

B. Strategic Intuition in Innovation Decision-Making

Strategic intuition has been increasingly recognized as a complementary cognitive mechanism that supports decision-making under conditions of uncertainty, complexity, and time pressure. Rather than opposing analytical reasoning, intuition reflects experience-based pattern recognition and rapid sense-making that guide strategic choices when data are incomplete or ambiguous (Luoma & Martela, 2021; Walsh et al., 2022). Empirical studies demonstrate its relevance in top management teams and high-level strategic contexts, particularly during periods of change and disruption (Gareth Shepherd et al., 2024; Songkajorn et al., 2022). Despite its relevance, existing research rarely positions strategic intuition as a central driver of product feature innovation, especially within early-stage digital ventures where designers and product teams must continuously balance speed, feasibility, and strategic coherence (Acciarini et al., 2020; Štěpánková & Binková, 2025). Consequently, integrating strategic intuition into early-stage product decision-making frameworks remains an underexplored but critical avenue.

C. Human–AI Collaboration and Decision Support in Fintech Innovation

Advances in artificial intelligence and digital decision-support tools have transformed how organizations generate insights, prioritize alternatives, and manage innovation processes. AI-powered analytics enhance efficiency and predictive accuracy, particularly in environments characterized by large datasets and repetitive decision tasks (Aldoseri et al., 2024; Rajagopal et al., 2022). In fintech payments, AI is increasingly embedded in product analytics, fraud detection, and customer behavior modeling, shaping how feature decisions are evaluated and justified (Hémous & Olsen, 2020; Huang, 2022). Nevertheless, scholars caution that AI-driven tools do not eliminate human judgment and may amplify cognitive biases or rigidity if used without reflective oversight (Al-Surmi et al., 2022; Mai & Khalid, 2025). This highlights the importance of understanding how strategic intuition interacts with AI-based support systems rather than being replaced by them (Bouschery et al., 2023).

D. Digital Leadership as a Supporting Mechanism

Digital leadership plays a pivotal role in shaping how teams navigate technological complexity, foster innovation, and integrate digital tools into decision-making processes. Digital leaders not only adopt technologies but also actively enable adaptive mindsets, cross-functional collaboration, and experimentation-oriented cultures (Chatterjee et al., 2023; Erhan et al., 2022). In innovation-intensive contexts, digital leadership moderates the relationship between digital transformation initiatives and organizational performance (Senadjki et al., 2024; Tigre et al., 2023). However, much of the literature treats leadership primarily as an outcome-oriented capability, paying limited attention to its supporting role in facilitating intuition-driven yet disciplined product decisions in early-stage start-ups (Eberl & Drews, 2021; Karakose et al., 2022). This creates a conceptual gap in explaining how leadership practices enable strategic intuition to function effectively alongside analytical and AI-based inputs.

E. Research Positioning and Conceptual Framework Development

Synthesizing these streams, this study positions strategic intuition as a core mechanism underpinning product feature innovation in early-stage fintech payments start-ups, supported by digital leadership and augmented by human–AI collaboration. Existing studies tend to examine innovation processes, leadership capabilities, or AI-supported decision-making in isolation, resulting in a fragmented understanding of real-world product decisions (Álvarez & Hassan, 2025; Hicham et al., 2023; Oshodin, 2020). Moreover, empirical designs reliant on large-scale datasets or field experiments often fail to capture the constraints of early-stage ventures (Hikmah et al., 2025; Tanaka & El-Masry, 2025). Addressing this gap, the present study adopts a conceptual and simulation-based approach, mapping key decision points across ideation, prototyping, and feature prioritization to explain how strategic intuition can be systematically supported rather than intuitively improvised. Building on this conceptual framework, Section 3 details the methodology and simulation-based approach adopted to operationalize strategic intuition in product feature decisions.

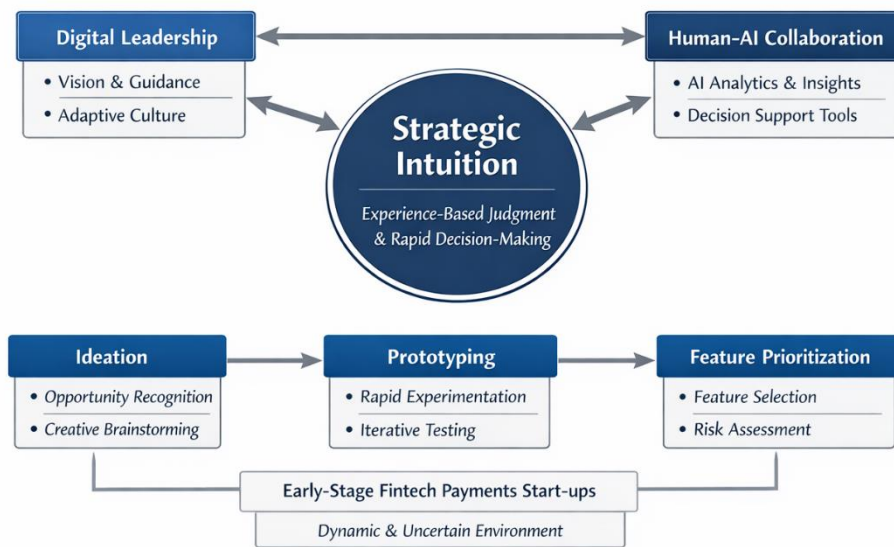


Figure 1. Conceptual Framework of Strategic Intuition–Driven Product Feature Innovation in Early-Stage Fintech Payments Start-ups

Table 1. Synthesis of Key Literature and Conceptual Gaps

Concept Theory	Key Insights	Gap / Limitation	Relevance to Study
Product Feature Innovation	NPD processes, performance metrics (Taques et al., 2021; Tidd & Bessant, 2021)	Assumes stable data and iterative learning, misaligned with start-ups	Framework contextualizes feature decisions under uncertainty
Strategic Intuition	Supports rapid decision-making, pattern recognition (Luoma & Martela, 2021; Walsh et al., 2022)	Rarely applied to product-level innovation in early-stage ventures	Central mechanism for innovation decisions
Human–AI Collaboration	AI enhances predictive accuracy, reduces repetitive tasks (Aldoseri et al., 2024)	Risk of cognitive bias, does not replace human judgment	Supports, but does not replace, strategic intuition
Digital Leadership	Fosters adaptive culture and experimentation (Chatterjee et al., 2023; Tigre et al., 2023)	Often outcome-oriented, less focus on supporting intuition	Enables structured, intuition-driven decisions

Figure 1 presents a conceptual and practice-based framework illustrating how strategic intuition serves as the central decision mechanism for product feature innovation in early-stage fintech payments start-ups. The framework maps key product decision points across ideation, prototyping, and feature prioritization, while highlighting the supporting roles of digital leadership and human–AI collaboration in structuring and augmenting intuitive judgment under conditions of uncertainty. Table 1 provides a concise synthesis of key theories, their insights, limitations, and relevance for the current study, highlighting the integrated role of strategic

intuition, digital leadership, and human–AI collaboration in early-stage fintech payments start-ups.

III. RESEARCH METHODOLOGY

A. Research Design

This study employs a conceptual and simulation-based research design to examine how strategic intuition supports product feature innovation in early-stage fintech payments start-ups. The design is appropriate for contexts characterized by high uncertainty, limited historical data, and compressed decision cycles, where conventional field experiments or large-scale datasets are often impractical (Acciarini et al., 2020; Haddad & Hornuf, 2023). By focusing on structured decision simulations, the study captures intuition-driven judgment in realistic product development situations. This approach aligns with prior innovation research that emphasizes practice-based and theory-building methods in digital and entrepreneurial environments (Aldoseri et al., 2024; Marion & Fixson, 2021).

B. Data Source and Scenario Development

The study relies on simulated product feature decision scenarios derived from an integrative review of literature on fintech innovation, new product development, strategic intuition, and digital leadership (Luoma & Martela, 2021; Tidd & Bessant, 2021; Zarrouk et al., 2021). The scenarios are designed to reflect typical constraints faced by early-stage fintech payments start-ups, including regulatory uncertainty, incomplete customer feedback, and limited analytical resources (Boubaghela-Chikh, 2024; Kostin et al., 2022). Each scenario represents a distinct product decision context at the ideation, prototyping, or feature prioritization stage. Digital leadership and AI-based tools are embedded as contextual supports rather than dominant decision drivers (Al-Surmi et al., 2022; Bouschery et al., 2023).

C. Data Collection Procedure

Data collection follows a decision-mapping procedure, in which simulated responses are structured to document how strategic intuition is applied across different product development stages. Strategic intuition is captured through decision rationales that indicate experience-based pattern recognition, rapid sense-making, and adaptive judgment under ambiguity (Gareth Shepherd et al., 2024; Walsh et al., 2022). Digital leadership is reflected in how decision environments encourage coordination, experimentation, and openness to intuitive reasoning (Chatterjee et al., 2023; Erhan et al., 2022). Human–AI collaboration is treated as a complementary input that supports evaluation quality without replacing human judgment (Hémous & Olsen, 2020; Mai & Khalid, 2025).

D. Measurement and Instruments

The study uses conceptual measurement indicators rather than psychometric scales, consistent with its simulation-based, exploratory nature. Strategic intuition is assessed through qualitative indicators such as coherence of feature choices, alignment with strategic intent, and responsiveness to uncertainty (Luoma & Martela, 2021; Songkajorn et al., 2022). Digital leadership is measured through enabling conditions, including clarity of direction, support for experimentation, and tolerance for uncertainty (Karakose et al., 2022; Senadjki et al., 2024). Human–AI collaboration is operationalized by examining how AI-based insights are incorporated into, but not substituted for, intuitive judgment (Álvarez & Hassan, 2025; Rajagopal et al., 2022).

E. Data Analysis Technique

Data analysis employs comparative scenario analysis and pattern matching to systematically compare intuition-driven decisions across different product development contexts (Alkaraan et al., 2023; Oshodin, 2020). The analysis focuses on identifying recurring decision logics, trade-off patterns, and points where strategic intuition interacts with leadership support and AI-based tools. Decision quality is evaluated based on strategic coherence, adaptability, and contextual fit rather than predictive accuracy alone, which is consistent with early-stage innovation settings (Tanaka & El-Masry, 2025; Taques et al., 2021). Insights from this analysis inform the refinement of the proposed conceptual framework.

F. Validity, Reliability, and Trustworthiness

To ensure validity and trustworthiness, the study applies methodological triangulation through literature grounding, scenario consistency checks, and transparent documentation of decision assumptions (Hicham et al., 2023; Senadjki et al., 2024). Internal validity is strengthened by aligning simulated scenarios with established fintech innovation practices, while reliability is supported through standardized scenario structures and decision templates (Pertiwi & Hana, 2025; Selvarajan, 2021). Although the study does not aim for statistical generalization, its analytical transparency enhances conceptual transferability to similar early-stage digital venture contexts. The overall methodological workflow is summarized in Figure 2.

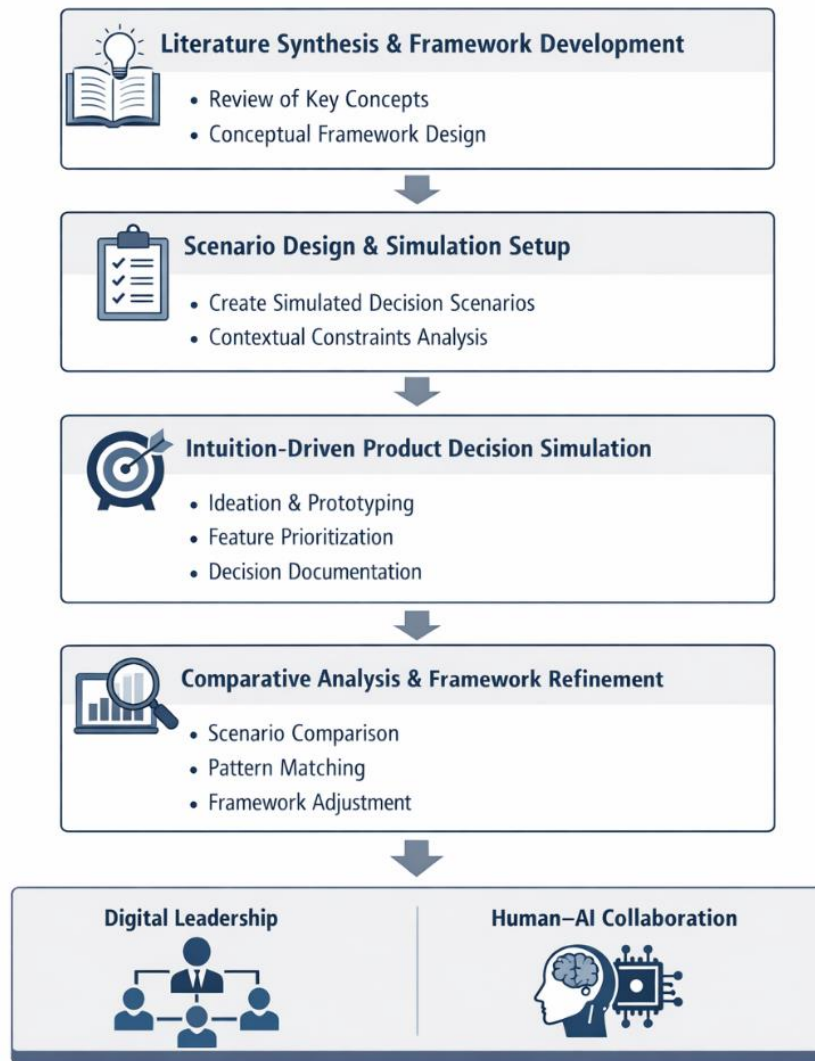


Figure 2. Workflow of the Simulation-Based Methodology

Figure 2 illustrates the study's sequential workflow, beginning with literature synthesis and scenario development, followed by intuition-driven product-feature decision simulation, comparative scenario analysis, and conceptual framework refinement, supported by digital leadership and human–AI collaboration.

IV. RESULT/FINDINGS AND DISCUSSION

A. Result

a) Mapping of Product Feature Decision Stages

The simulation results indicate that product feature decisions in early-stage fintech payments start-ups consistently cluster into three critical stages: ideation, prototyping, and feature prioritization. Table 2 summarizes the dominant decision characteristics observed at each stage, highlighting the prevalence of intuition-driven judgments under conditions of uncertainty.

Strategic intuition appears most salient during ideation and prioritization, where incomplete market signals limit analytical evaluation. The findings show that decision coherence across stages depends less on formal data availability and more on experiential pattern recognition embedded in team intuition.

Table 2. Decision Characteristics Across Product Feature Development Stages

Product Feature Development Stage	Dominant Decision Logic	Level of Uncertainty	Role of Strategic Intuition	Use of Digital Support Tools
Ideation	Explorative and opportunity-driven	Very high	Identifying weak signals and emerging user needs	Market trend scanning, basic AI-assisted insights
Prototyping	Iterative and judgment-based	High	Rapid evaluation of feature feasibility and desirability	Low-fidelity prototypes, simulation tools
Feature Prioritization	Selective and trade-off oriented	Moderate	Balancing speed, value, and risk under resource constraints	Simple analytics dashboards, usage projections

b) Role of Strategic Intuition in Feature Selection

The findings reveal that strategic intuition functions as a central mechanism guiding feature selection when analytical validation is constrained. Intuition-driven decisions demonstrate higher internal consistency with product vision compared to analytically dominant alternatives. Figure 3 illustrates how intuition shapes feature convergence by enabling rapid elimination of misaligned options. These results suggest that intuition does not replace rational analysis but operates as a structuring force in early decision filtering.

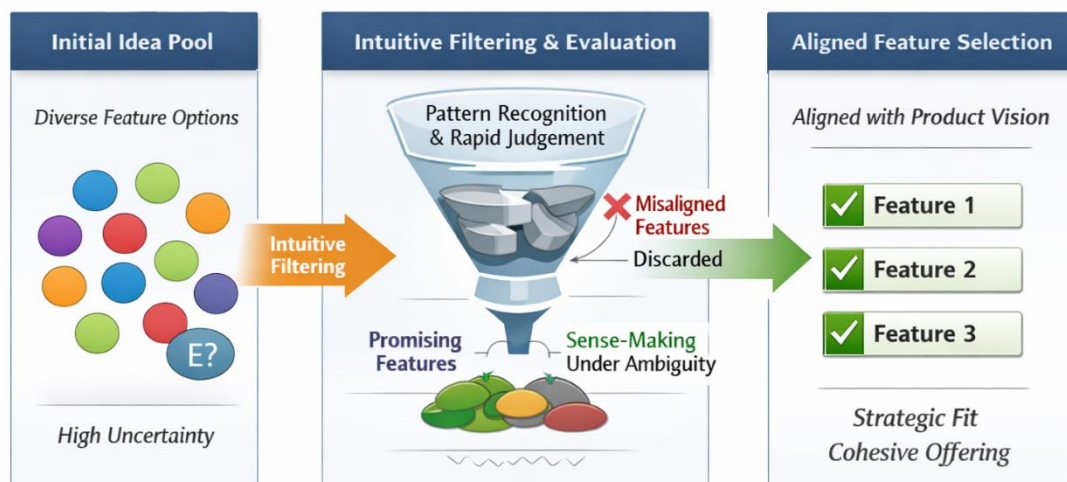


Figure 3. Strategic Intuition in Product Feature Selection

c) Supporting Role of Digital Leadership and Human–AI Tools

The results show that digital leadership and AI-based decision support tools act as enablers rather than drivers of product feature decisions. As summarized in Table 3, digital leadership primarily supports clarity of direction, psychological safety, and decision ownership. Human–AI collaboration helps expand awareness of options without overriding intuitive judgment. The findings indicate that excessive reliance on automated recommendations weakens decision confidence at early stages.

Table 3. Supporting Factors in Intuition-Driven Product Decisions

Supporting Factor	Key Practices / Tools	Primary Function in the Decision Process	Contribution to Strategic Intuition
Digital Leadership	Vision articulation, rapid alignment, tolerance for experimentation	Creating psychological safety and strategic coherence	Enables intuitive judgments to be expressed, legitimized, and translated into action
Human–AI Collaboration	AI-assisted analytics, scenario simulation, feature performance projections	Providing structured signals and boundary conditions	Sharpens intuition by complementing experiential judgment with data-informed cues
Lightweight Governance	Flexible approval routines, informal review loops	Reducing procedural friction in early-stage decisions	Allows intuition-driven choices without excessive bureaucratic delay
Cross-Functional Interaction	Designer–engineer–business collaboration	Integrating diverse perspectives at the feature level	Enhances pattern recognition and collective sense-making
Learning-Oriented Culture	Rapid feedback interpretation, reflection on past decisions	Transforming outcomes into experiential knowledge	Strengthens future strategic intuition through accumulated learning

B. Discussion

a) Strategic Intuition as a Core Innovation Mechanism

The findings position strategic intuition as a core cognitive mechanism in product feature innovation for early-stage fintech payments start-ups. This supports prior research emphasizing intuition as a legitimate strategic capability under uncertainty (Gareth Shepherd et al., 2024; Luoma & Martela, 2021; Walsh et al., 2022). Unlike traditional NPD models that prioritize analytical rigor, this study shows that intuition fosters coherence when market feedback is fragmented. The results extend innovation literature by showing that intuition operates not as bias but as structured experiential sense-making (Acciarini et al., 2020; Songkajorn et al., 2022).

b) Digital Leadership as an Enabling Context

The study advances digital leadership theory by framing leadership not as a decision authority but as a contextual enabler for intuitive judgment. This aligns with recent work highlighting the role of digital leaders in fostering adaptive decision environments rather than enforcing data-centric control (Erhan et al., 2022; Karakose et al., 2022; Senadjki et al., 2024). The findings suggest that leadership effectiveness in early-stage fintech lies in legitimizing intuition while maintaining strategic alignment. This nuance addresses gaps in studies that treat digital leadership as uniformly performance-driven (Chatterjee et al., 2023; Tigre et al., 2023).

c) Human–AI Collaboration Without Decision Displacement

Contrary to technology-centric narratives, the results indicate that AI-based tools enhance decision quality only when they support rather than substitute strategic intuition. This observation resonates with research cautioning against over-automation in complex judgment settings (Bouschery et al., 2023; Hémous & Olsen, 2020; Mai & Khalid, 2025). The study clarifies that AI expands the decision space but does not resolve strategic ambiguity. This finding refines existing digital decision-making frameworks by emphasizing calibrated human–AI collaboration (Álvarez & Hassan, 2025; Rajagopal et al., 2022).

d) Theoretical and Practical Implications

Theoretically, this study integrates strategic intuition, product feature innovation, and digital leadership into a unified conceptual lens tailored to early-stage fintech payments start-ups. It extends NPD literature by introducing a simulation-based pathway for studying innovation without field experimentation (Marion & Fixson, 2021; Taques et al., 2021). In practice, the findings offer actionable guidance for start-up teams to structure intuitive decision-making processes while selectively leveraging leadership support and AI tools. This contributes to entrepreneurial practice by reducing dependency on costly experimentation in resource-constrained environments (Boubaghela-Chikh, 2024; Haddad & Hornuf, 2023).

V. CONCLUSION AND RECOMMENDATION

This study demonstrates that strategic intuition is a pivotal driver of selecting and prioritizing product features in early-stage fintech payments start-ups. By integrating intuition with supportive digital leadership and selective AI collaboration, teams can navigate highly uncertain decision environments more effectively. The simulation-based analysis revealed that intuition facilitates alignment with strategic goals while maintaining adaptability when conventional data-driven approaches are insufficient. These insights confirm that early-stage ventures can systematically harness cognitive judgment to improve decision coherence and innovation speed without relying solely on large datasets or field experiments.

The research also highlights the interplay between leadership and cognitive processes in product feature innovation. Digital leadership emerged as a crucial factor in legitimizing intuitive choices and fostering cross-functional collaboration. Strategic intuition, therefore, is not merely an individual skill but a collective asset that, when properly supported, enhances team learning and iterative development. Overall, the study offers both conceptual and practical clarity on how early-stage fintech teams can optimize innovation decisions under constraints.

Implications

The findings extend the theory of strategic intuition by applying it to product-level innovation in early-stage fintech payments start-ups, an underexplored context. The research integrates digital leadership and human–AI collaboration into a single framework, demonstrating that cognitive, social, and technological mechanisms collectively shape decision outcomes. By showing how simulation-based analysis can operationalize intuition without real-world experimentation, this study provides a methodological contribution for scholars examining decision-making under extreme uncertainty. Furthermore, it underscores that intuition can function as a structured, analytically complementary process rather than an unscientific or arbitrary approach.

Managerial / Policy Implications

Practically, start-up managers are encouraged to cultivate environments where intuition is valued, supported, and guided by digital leadership practices. Implementing scenario simulations, cross-functional interactions, and lightweight governance structures can strengthen decision quality while maintaining speed. Policymakers and incubators can leverage these insights to design training programs that combine strategic judgment, AI augmentation, and leadership development. Ultimately, these practices help start-ups achieve product–market fit efficiently, mitigate resource misallocation, and foster sustainable innovation performance.

Limitations & Future Research

A key limitation of this study is its reliance on simulated decision scenarios rather than live field experiments, which may not fully capture the unpredictability of market responses or regulatory challenges. Additionally, the framework is specifically tailored to fintech payments start-ups, potentially limiting its direct applicability to other fintech sectors or mature digital ventures. The study’s conceptual nature also precludes quantitative validation of performance outcomes, leaving room for empirical testing. Future research should empirically examine the framework in operational start-ups, using longitudinal studies to observe how intuition, leadership, and AI tools interact over time. Investigating differences in cultural, geographic, and team composition may further reveal the conditions under which strategic intuition is most effective. Moreover,

integrating real-time analytics with intuitive processes could enhance the precision of decision-making in resource-constrained environments. These directions offer substantial opportunities to deepen understanding of cognition-supported innovation in early-stage ventures.

AI-Assisted Editing Disclosure

The authors acknowledge that artificial intelligence tools, including ChatGPT, were used exclusively for language editing purposes, such as improving grammar, clarity, and overall readability of the manuscript. All research-related activities, including conceptualization, data collection, analysis, interpretation, and formulation of conclusions, were conducted independently by the authors without AI involvement. The authors assume full responsibility for the integrity, originality, and accuracy of the manuscript submitted to the Journal of Management and Informatics.

REFERENCES

- Acciarini, C., Brunetta, F., & Boccardelli, P. (2020). Cognitive biases and decision-making strategies in times of change: a systematic literature review. In *Management Decision* (Vol. 59, Number 3, pp. 638–652). Emerald Group Holdings Ltd. <https://doi.org/10.1108/MD-07-2019-1006>
- Aldoseri, A., Al-Khalifa, K. N., & Hamouda, A. M. (2024). AI-Powered Innovation in Digital Transformation: Key Pillars and Industry Impact. *Sustainability (Switzerland)*, 16(5). <https://doi.org/10.3390/su16051790>
- Alkaraan, F., Elmarzouky, M., Hussainey, K., & Venkatesh, V. G. (2023). Sustainable strategic investment decision-making practices in UK companies: The influence of governance mechanisms on synergy between industry 4.0 and circular economy. *Technological Forecasting and Social Change*, 187. <https://doi.org/10.1016/j.techfore.2022.122187>
- Al-Surmi, A., Bashiri, M., & Koliouisis, I. (2022). AI based decision making: combining strategies to improve operational performance. *International Journal of Production Research*, 60(14), 4464–4486. <https://doi.org/10.1080/00207543.2021.1966540>
- Álvarez, M., & Hassan, L. (2025). Exploring the Role of Digital Tools in Ethical Managerial Decision-Making. *Journal of Management and Informatics*, 4(3), 998–1016. <https://doi.org/10.51903/jmi.v4i3.306>
- Boubaghela-Chikh, N. (2024). *Fintech and startup : Opportunities and Challenges in the Era of Technological Transformations*. <https://www.asjp.cerist.dz/en/PresentationRevue/615>
- Bouschery, S. G., Blazevic, V., & Piller, F. T. (2023). Augmenting human innovation teams with artificial intelligence: Exploring transformer-based language models. *Journal of Product Innovation Management*, 40(2), 139–153. <https://doi.org/10.1111/jpim.12656>

- Chatterjee, S., Chaudhuri, R., Vrontis, D., & Giovando, G. (2023). Digital workplace and organization performance: Moderating role of digital leadership capability. *Journal of Innovation and Knowledge*, 8(1). <https://doi.org/10.1016/j.jik.2023.100334>
- Eberl, J. K., & Drews, P. (2021). *Digital Leadership – Mountain or Molehill? A Literature Review*. <https://aisel.aisnet.org/wi2021>
- Erhan, T., Uzunbacak, H. H., & Aydin, E. (2022). From conventional to digital leadership: exploring digitalization of leadership and innovative work behavior. *Management Research Review*, 45(11), 1524–1543. <https://doi.org/10.1108/MRR-05-2021-0338>
- Gareth Shepherd, N., Lou, B., & Maynard Rudd, J. (2024). Going with the gut: Exploring top management team intuition in strategic decision-making. *Journal of Business Research*, 181. <https://doi.org/10.1016/j.jbusres.2024.114740>
- Haddad, C., & Hornuf, L. (2023). How do fintech start-ups affect financial institutions' performance and default risk? *European Journal of Finance*, 29(15), 1761–1792. <https://doi.org/10.1080/1351847X.2022.2151371>
- Hémous, D., & Olsen, M. (2020). *The Rise of the Machines: Automation, Horizontal Innovation and Income Inequality*.
- Hicham, N., Nassera, H., & Karim, S. (2023). Journal of Intelligent Management Decision Strategic Framework for Leveraging Artificial Intelligence in Future Marketing Decision-Making. *J. Intell Manag. Decis*, 2(3), 139–150. <https://doi.org/10.56578/jim>
- Hidayat, M. S., Muhammad, W., & Isdayanti, P. L. (2025). Digital Marketing Ethics in the Age of AI: A Comparative Analysis of Transparency and Consumer Trust in E-Commerce Platforms. *Journal of Management and Informatics*, 4(1), 723–740. <https://doi.org/10.51903/jmi.v4i1.178>
- Hikmah, N., Fauzi, A., & Nayyiroh, F. U. (2025). Measuring the forecast accuracy in retail MSMEs: A comparative analysis between AI and traditional methods in the era of digital selling. *Journal of Management and Informatics*, 4(1), 687–705. <https://doi.org/10.51903/jmi.v4i1.166>
- Huang, S. (2022). Product Innovation Design Method Based on BP Neural Network. *Advances in Multimedia*, 2022. <https://doi.org/10.1155/2022/6830892>
- Karakose, T., Kocabas, I., Yirci, R., Papadakis, S., Ozdemir, T. Y., & Demirkol, M. (2022). The Development and Evolution of Digital Leadership: A Bibliometric Mapping Approach-Based Study. *Sustainability (Switzerland)*, 14(23). <https://doi.org/10.3390/su142316171>
- Kostin, K. B., Fendel, R., & Wild, F. (2022). Comparing the Situation of FinTech Start-Ups in Russia and Germany through Equity Investments. *Economies*, 10(2). <https://doi.org/10.3390/economies10020033>
- Luoma, J., & Martela, F. (2021). A dual-processing view of three cognitive strategies in strategic decision making: Intuition, analytic reasoning, and reframing. *Long Range Planning*, 54(3). <https://doi.org/10.1016/j.lrp.2020.102065>

- Mai, N. T., & Khalid, I. (2025). Human Error vs. System Security: Evaluating the Weakest Link in Digital Business Information Systems. *Journal of Management and Informatics*, 4(3), 981–997. <https://doi.org/10.51903/jmi.v4i3.305>
- Marion, T. J., & Fixson, S. K. (2021). The Transformation of the Innovation Process: How Digital Tools are Changing Work, Collaboration, and Organizations in New Product Development*. *Journal of Product Innovation Management*, 38(1), 192–215. <https://doi.org/10.1111/jpim.12547>
- Musrifah, F., & Hasanah, I. A. (2025). Ethical Implications of AI-Driven Recruitment: A Multi-Perspective Study on Bias and Transparency in Digital Hiring Platforms. *Journal of Management and Informatics*, 4(1), 599–616. <https://doi.org/10.51903/jmi.v4i1.140>
- Oshodin, O. I. (2020). *An Investigation of FinTech Capabilities Development: A Study of Start-up and Incumbent Firms*.
- Pertiwi, J. P., & Hana, A. U. (2025). Data-Driven Decision Making in MSMEs: Leveraging Free Analytics Tools for Financial Planning and Efficiency. *Journal of Management and Informatics*, 4(1), 633–648. <https://doi.org/10.51903/jmi.v4i1.146>
- Rajagopal, N. K., Qureshi, N. I., Durga, S., Ramirez Asis, E. H., Huerta Soto, R. M., Gupta, S. K., & Deepak, S. (2022). Future of Business Culture: An Artificial Intelligence-Driven Digital Framework for Organization Decision-Making Process. *Complexity*, 2022. <https://doi.org/10.1155/2022/7796507>
- Selvarajan, G. P. (2021). Leveraging AI-Enhanced Analytics for Industry-Specific Optimization: A Strategic Approach to Transforming Data-Driven Decision-Making. In *International Journal of Enhanced Research in Management & Computer Applications* (Vol. 10).
- Senadjki, A., Au Yong, H. N., Ganapathy, T., & Ogbeibu, S. (2024). Unlocking the potential: the impact of digital leadership on firms' performance through digital transformation. *Journal of Business and Socio-Economic Development*, 4(2), 161–177. <https://doi.org/10.1108/JBSED-06-2023-0050>
- Songkajorn, Y., Aujirapongpan, S., Jiraphanumes, K., & Pattanasing, K. (2022). Organizational Strategic Intuition for High Performance: The Role of Knowledge-Based Dynamic Capabilities and Digital Transformation. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3). <https://doi.org/10.3390/joitmc8030117>
- Štěpánková, E., & Binková, K. (2025). The role of rationality and intuition in creating strategic military documents. *Strategic Management*, 30(2), 5–21. <https://doi.org/10.5937/straman2400010s>
- Tanaka, H., & El-Masry, A. (2025). Uncovering Hidden Skill Gaps: Technology Bias in Gig Platforms. *Journal of Management and Informatics*, 4(3), 963–980. <https://doi.org/10.51903/jmi.v4i3.304>

- Taques, F. H., López, M. G., Basso, L. F., & Areal, N. (2021). Indicators used to measure service innovation and manufacturing innovation. *Journal of Innovation and Knowledge*, 6(1), 11–26. <https://doi.org/10.1016/j.jik.2019.12.001>
- Tidd, Joseph., & Bessant, J. R. . (2021). *Managing innovation : integrating technological, market and organizational change*. Wiley.
- Tigre, F. B., Curado, C., & Henriques, P. L. (2023). Digital Leadership: A Bibliometric Analysis. *Journal of Leadership and Organizational Studies*, 30(1), 40–70. <https://doi.org/10.1177/15480518221123132>
- Walsh, C., Collins, J., & Knott, P. (2022). The four types of intuition managers need to know. *Business Horizons*, 65(5), 697–708. <https://doi.org/10.1016/j.bushor.2021.12.003>
- Zarrouk, H., Ghak, T. El, & Bakhouché, A. (2021). Exploring economic and technological determinants of fintech startups' success and growth in the United Arab Emirates. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 1–24. <https://doi.org/10.3390/joitmc7010050>
- Zhang, Y., Swatdikun, T., Lakkanawanit, P., Huang, S. Z., & Chen, H. (2025). Digital Transformation Capability, Organizational Strategic Intuition, and Digital Leadership: Empirical Evidence from High-Tech Firms' Performance in the Yangtze River Delta. *Journal of Risk and Financial Management*, 18(7). <https://doi.org/10.3390/jrfm18070405>