

An entrepreneurial perspective on new-age technology adoption: Implications for theory and practice

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ABSTRACT

Entrepreneurial success increasingly depends on how new-age technologies (NATs) are adopted and leveraged, yet we still lack a clear understanding of how adoption of NATs creates sustained value. Drawing on marketing, entrepreneurship, and strategy literatures, this paper develops an entrepreneurial perspective on technology adoption that emphasizes post-adoption engagement. We employ a two-study approach: a structured review and theory problematization to identify gaps in current adoption models, followed by a conceptual elaboration of mechanisms. Our analysis reveals that adoption alone is insufficient. Value emerges through intensive, creative, and adaptive engagement with technologies across multiple contexts. The paper advances theory by conceptualizing adoption as a process-oriented, multi-dimensional phenomenon in entrepreneurial settings and offers practical guidance for entrepreneurs seeking to capture the potential of emerging technologies. These insights provide a foundation for future empirical studies on the intersection of technology, entrepreneurship, and strategic value creation..

Keywords: New-age technologies; Entrepreneurial adoption; Adoption intensity; Entrepreneurial bricolage; Dynamic capabilities; Technology-enabled innovation; Post-adoption mechanisms..

1. INTRODUCTION:

Entrepreneurs increasingly engage with new-age technologies (NATs) whose economic value and strategic implications are uncertain at the point of adoption. NATs such as artificial intelligence, metaverse, blockchain, and cloud-based infrastructures are characterized by generativity and uncertainty, allowing their applications to evolve through use rather than being fully specified *ex ante* (Yoo et al., 2010). For entrepreneurs operating under uncertainty, adopting such technologies therefore represents an initial commitment to exploration rather than a clear signal of value realization.

Research on technology adoption constitutes one of the most cumulative traditions in innovation and information systems scholarship. Seminal frameworks such as Diffusion of Innovations (Rogers, 1962), the Technology Acceptance Model (Davis, 1989), and the Theory of Planned Behavior (Ajzen, 1991), as well as later integrative models including the Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003) and its extensions (Venkatesh et al., 2012), have provided parsimonious and empirically robust explanations of why individuals and organizations adopt new technologies. These models have demonstrated strong predictive validity across technologies and contexts and have played a central role in shaping adoption research over several decades.

Building on this foundation, technology adoption assumes a qualitatively different role in entrepreneurial contexts. Unlike established firms, entrepreneurs typically operate without entrenched routines, legacy systems, or stable market positions. Their engagement with new technologies is therefore closely tied to opportunity pursuit and competitive positioning rather than to efficiency gains within existing structures. Adoption decisions are often made under heightened time pressure, with entrepreneurs seeking to leverage emerging technologies to achieve rapid differentiation and early competitive advantage relative to incumbent firms.

Entrepreneurship research has long emphasized that opportunities arise from changes in technology, markets, and institutions, and that entrepreneurs differ systematically in their ability and willingness to act on such changes (Schumpeter, 1934; Shane and Venkataraman, 2000). New-age technologies, by virtue of their malleability and openness, expand the scope of entrepreneurial action by enabling novel combinations of resources and activities. For entrepreneurs, adoption is therefore less about conforming to established usage patterns and more about exploring how technological features can be shaped to support emergent strategic objectives.

Moreover, entrepreneurial firms frequently compete through speed, experimentation, and the ability to reconfigure activities faster than established organizations (Eisenhardt and Martin, 2000). In this context, the

strategic significance of technology adoption lies not merely in whether a technology is adopted, but in how rapidly and intensively it is deployed, adapted, and leveraged in the pursuit of opportunity. Adoption thus becomes intertwined with entrepreneurial action and competitive dynamics, rather than representing a discrete implementation outcome.

Despite extensive research on technology adoption, an important gap remains between adoption studies and entrepreneurship research. Frameworks such as TAM, UTAUT, and diffusion theory explain why technologies are adopted, but they focus mainly on the initial decision and early use, assuming technologies are stable and outcomes predictable (Rogers, 1962; Davis, 1989; Venkatesh et al., 2003). Entrepreneurship research, on the other hand, focuses on opportunity recognition, resource recombination, and strategic action under uncertainty (Shane & Venkataraman, 2000; Eisenhardt & Martin, 2000), yet rarely examines how entrepreneurs make use of technologies after adoption to create value. As a result, we know little about how entrepreneurs engage with new-age technologies—whose uses and potential often emerge over time—to gain competitive advantage and drive opportunity creation.

There is therefore a need for a perspective that bridges these two literatures. Technology adoption should be seen not as an end point, but as the start of an ongoing process of entrepreneurial engagement. This perspective can help explain how entrepreneurs interact with evolving technologies, why adoption matters for strategic outcomes, and how technology use supports the creation of value in uncertain and fast-changing environments (Yoo et al., 2010; Orlikowski, 1992). This paper addresses this gap by offering an entrepreneurial perspective on new-age technology adoption, highlighting implications for theory and practice.

2. THEORETICAL BACKGROUND

Technology Adoption: Foundations and Achievements

In Understanding how and why individuals and organizations adopt technologies has been a central concern in innovation and information systems research. Early work by Rogers (1962) established the foundations of diffusion theory, highlighting that adoption decisions are influenced by characteristics of the innovation, social systems, communication channels, and temporal patterns. This work emphasized the spread of innovations across populations and provided the first systematic framework for studying adoption as a social process.

Building on these insights, Davis (1989) introduced the Technology Acceptance Model (TAM), which operationalized adoption at the individual level through perceived usefulness and perceived ease of use. TAM and its variants have been widely validated across contexts, offering a simple and predictive model of user acceptance. Later, the Unified Theory of Acceptance and Use of Technology (UTAUT) integrated multiple adoption frameworks to account for performance expectancy, effort expectancy, social influence, and facilitating conditions, with extensions such as UTAUT2 and UTAUT3 further

adapting the model for consumer contexts (Venkatesh et al., 2003; Venkatesh et al., 2012).

These frameworks have generated cumulative insights into adoption behavior. They explain how beliefs, attitudes, social norms, and contextual factors shape the likelihood of technology acceptance and initial use. Empirical studies have demonstrated the predictive validity of these models across a wide range of technologies and settings, establishing adoption research as a mature field with rigorous methodological foundations.

Boundary Conditions of Traditional Adoption Models

Despite their contributions, these models have clear limitations, particularly when applied to entrepreneurial contexts and new-age technologies. Foundational adoption theories often assume stable technologies with clearly defined functionalities, where outcomes can be reliably anticipated and usage can serve as a proxy for success (Orlikowski, 1992). However, new-age technologies—such as AI, machine learning, and digital platforms—are inherently generative, malleable, and evolving (Yoo et al., 2010). Their value emerges not from the act of adoption alone but from ongoing engagement, experimentation, and recombination with other resources.

Moreover, traditional adoption frameworks primarily emphasize initial acceptance decisions, neglecting the post-adoption processes that are central to entrepreneurial value creation. For entrepreneurs, technology adoption is not an end in itself. It is the starting point for opportunity pursuit, learning, and capability development. Entrepreneurs often face conditions of high uncertainty and limited resources, requiring them to experiment rapidly, combine technologies with novel ideas, and adapt continuously to changing market signals (Shane & Venkataraman, 2000; Eisenhardt & Martin, 2000).

These boundary conditions highlight why adoption research, while highly robust in stable settings, cannot fully explain how entrepreneurs derive strategic value from emerging technologies. A richer conceptualization is needed—one that situates adoption within the trajectory of entrepreneurial engagement and accounts for both post-adoption processes and the strategic consequences of technology use.

The Entrepreneurial Perspective on Technology Adoption

While adoption research explains how and why technologies are initially accepted, it provides limited insight into how entrepreneurs leverage technologies to create value over time. Entrepreneurs operate under conditions of uncertainty, resource scarcity, and competitive pressure, which fundamentally shape how technologies are used. Unlike established firms with stable routines and processes, entrepreneurial ventures often compete on speed, flexibility, and opportunity exploitation, making the post-adoption engagement with technology a central determinant of success (Shane & Venkataraman, 2000; Eisenhardt & Martin, 2000).

New-age technologies amplify these challenges and opportunities. Technologies such as AI, machine learning, and digital platforms are not fully specified at the time of

adoption; their potential applications often emerge through use and experimentation (Yoo et al., 2010). Entrepreneurs adopting these technologies must therefore go beyond mere acceptance—they must actively explore, experiment, and adapt, combining technologies with available resources and knowledge to pursue strategic advantage (Baker & Nelson, 2005). Adoption in this context is not a discrete event, but the starting point of an ongoing process that shapes entrepreneurial outcomes.

Entrepreneurial firms also face intense competitive pressure from established players, which incentivizes rapid experimentation and early deployment of emergent technologies. Speed and adaptability become strategic levers, allowing entrepreneurs to capture opportunities before incumbents can respond (Eisenhardt & Martin, 2000). This perspective highlights why traditional adoption models, focused on initial acceptance, are insufficient for explaining technology use in entrepreneurial contexts. A more nuanced approach must account for how entrepreneurs engage with technologies post-adoption, the intensity of their engagement, and how such engagement interacts with their ability to innovate and reconfigure resources.

In sum, adopting a new-age technology is necessary but not sufficient for entrepreneurial success. The strategic outcomes of adoption depend on how technologies are deployed, combined, and leveraged over time, under conditions of uncertainty and competitive urgency. This conceptual shift provides the rationale for exploring the subsequent focus on adoption intensity, entrepreneurial bricolage, and dynamic capabilities, which together form the backbone of entrepreneurial engagement with new-age technologies.

3. RESEARCH METHODOLOGY

The objective of this study is to advance understanding of new-age technology adoption from an entrepreneurial perspective, with particular emphasis on post-adoption value creation under uncertainty. Addressing this objective requires moving beyond both conventional adoption models and descriptive literature reviews. Existing research has generated strong explanations for adoption decisions, yet remains theoretically limited in explaining what adoption enables entrepreneurs to do, especially when technologies are evolving, modular, and potentially disruptive.

To address this gap rigorously, the study adopts a sequential two-study qualitative design. The causal logic of this design is straightforward. First, it is necessary to systematically examine how adoption has been conceptualized and operationalized across dominant theoretical traditions, and to identify their shared assumptions and limitations (Study 1). However, identifying limitations alone does not advance theory. Therefore, insights from Study 1 are used as the foundation for a second study that conceptually elaborates alternative post-adoption mechanisms that better reflect entrepreneurial action in uncertain technological environments (Study 2).

This design aligns with established approaches in entrepreneurship research where the goal is theory

refinement, boundary identification, and agenda setting, rather than empirical hypothesis testing (Webster & Watson, 2002; Alvesson & Sandberg, 2011; Shepherd & Suddaby, 2017). Together, the two studies provide a coherent and methodologically rigorous basis for advancing adoption research toward entrepreneurial outcomes.

Study 1: Structured Review and Theory Problematization

This study employs a structured and theory-oriented literature review to examine how technology adoption has been studied across information systems, innovation, and entrepreneurship research. The purpose of this review is not to synthesize findings, but to problematize dominant theoretical approaches by identifying their core assumptions, focal outcomes, and conceptual boundaries.

The review follows well-established guidelines for systematic reviews in management research (Tranfield et al., 2003; Denyer & Tranfield, 2009). Articles were identified through comprehensive searches of Web of Science and Scopus, focusing on peer-reviewed journal articles published in leading outlets. Search terms combined technology adoption-related keywords with entrepreneurship and innovation-oriented terms to ensure relevance.

The selected articles were coded along theoretically meaningful dimensions, including the definition of adoption, level of analysis, treatment of uncertainty, and emphasis on outcomes. This structured analysis enabled the identification of a dominant pattern across studies: adoption is typically treated as a discrete decision or early usage outcome, with limited attention to how entrepreneurs engage with technologies after adoption to generate competitive advantage. Rather than rejecting existing theories, this study uses theory problematization to expose conceptual blind spots and taken-for-granted assumptions, thereby creating space for theoretical extension (Alvesson & Sandberg, 2011).

Study 2: Conceptual Elaboration of Post-Adoption Mechanisms

This study builds directly on the insights from Study 1 and adopts a conceptual theory elaboration approach. The objective is to clarify and articulate post-adoption mechanisms that are particularly relevant for entrepreneurs adopting new-age technologies. Theory elaboration involves extending and repositioning existing theoretical frameworks by refining focal constructs and outcomes, without proposing or testing formal hypotheses (Shepherd & Suddaby, 2017). Drawing from entrepreneurship and strategy research, Study 2 focuses on mechanisms such as adoption intensity, entrepreneurial bricolage, and dynamic capabilities, arguing that these constructs better capture how entrepreneurs create value from technologies whose applications and performance implications evolve over time.

Importantly, this study does not seek to establish causal relationships among these mechanisms. Instead, it clarifies their conceptual relevance, boundary conditions, and potential interdependencies, thereby providing a theoretically grounded foundation for future empirical

research. Such conceptual elaboration is particularly appropriate in research domains characterized by rapid technological change and theoretical under-specification (Yoo et al., 2010).

RESULTS

Study 1: Structured Review Findings and Theory Problematization

This study systematically analyzed the reviewed literature to identify dominant theoretical patterns, implicit assumptions, and systematic omissions in how technology adoption has been conceptualized and studied. The findings are organized around four analytically distinct patterns that recur across disciplines and methods.

Emphasis on Pre-Adoption and Initial Use Conditions

The first and most consistent pattern is the overconcentration on pre-adoption conditions and initial use. Across the reviewed studies, explanatory attention is directed primarily toward factors shaping the decision to adopt or commence usage, such as beliefs, expectations, social influence, and institutional pressures. This emphasis persists even in organizational-level studies, where adoption is frequently operationalized as a binary event or early-stage usage threshold. As a result, adoption is implicitly treated as a terminal analytical outcome, rather than as the beginning of an extended engagement with technology (Fichman, 2000). This pattern reflects a broader tendency to privilege decision rationality over action dynamics, thereby limiting insight into how technologies generate strategic or economic value after adoption has occurred.

Static Conceptualization of Technology and Use

A second pattern concerns the static treatment of technology and its use. Most studies assume that the functionality, purpose, and performance implications of a technology are sufficiently defined at the time of adoption. Use is therefore modeled as implementation or compliance with predefined features rather than as an evolving process.

This assumption is particularly evident in studies that equate successful adoption with correct or consistent usage, leaving little room for adaptation, recombination, or reinterpretation by users. Consequently, the literature underplays the role of emergent use, experimentation, and learning in shaping outcomes (Leonardi, 2011). Such a static view is increasingly misaligned with technologies whose value unfolds through ongoing modification and contextual embedding.

Limited Engagement with Strategic and Competitive Outcomes

A third pattern is the weak integration of adoption research with strategic outcomes. While some studies include performance-related variables, these outcomes are typically proximal and technology-specific, such as efficiency gains or task performance. Few studies explicitly link adoption to broader entrepreneurial or competitive outcomes, such as opportunity exploitation, strategic differentiation, or sustained advantage. Where such outcomes are mentioned, they are often treated as assumed benefits rather than empirically or conceptually

examined phenomena (Zhu & Kraemer, 2005). This pattern limits the relevance of adoption research for entrepreneurship, where technology adoption is rarely an end in itself, but a means to compete, scale, or reconfigure business models.

Under-Theorization of Post-Adoption Affects

The final pattern relates to the absence of strong theorization of post-adoption affects. The reviewed studies largely position adopters as recipients or implementers of technology, rather than as active agents who shape technological outcomes through use. This framing marginalizes processes such as improvisation, recombination, and strategic experimentation, which are central to entrepreneurial action under uncertainty. As a result, adoption research provides limited insight into how actors actively transform technologies into sources of value (Tyre & Orlikowski, 1994).

The absence of agency-oriented theorization is particularly consequential in entrepreneurial contexts, where value creation depends on how technologies are mobilized rather than simply adopted.

Conceptual Boundaries of Existing Adoption Theories

Taken together, these findings indicate that dominant adoption theories are characterized by three interrelated boundary conditions:

- (1) adoption is treated as an endpoint,
- (2) technology is assumed to be stable, and
- (3) user agency after adoption is weakly specified.

These boundary conditions do not invalidate existing theories, but they constrain their explanatory power in contexts involving new-age technologies and entrepreneurial competition. The findings therefore motivate a shift in analytical focus—from adoption decisions to post-adoption mechanisms of value creation. This problematization provides the analytical foundation for Study 2, which conceptually elaborates mechanisms that better capture entrepreneurial engagement with evolving technologies.

Table 1: Scope and Outcome Limitations of Adoption Theories in Entrepreneurial Contexts

| Theory/Framework | Primary Unit of Analysis | Core Outcome Explained | Assumptions About Technology | Limitation in NAT Context |
|--------------------------|---------------------------|--------------------------|------------------------------|--------------------------------|
| Diffusion of Innovations | Individual / Organization | Adoption decision | Stable use and benefits | Cannot explain value emergence |
| TAM / UTAUT | Individual user | Acceptance / Pre-defined | | Ignore s post-adoption |

| | | intention | use cases | adaptation |
|-----------------------------|--------------|---------------------|-------------------------|----------------------------------|
| TOE framework | Organization | Adoption likelihood | Environmental fit | Static view of adoption outcomes |
| Entrepreneurial Orientation | Firm | Strategic posture | Technology as input | No mechanism of technology use |
| Effectuation | Entrepreneur | Decision logic | Means-driven action | Under-theorizes technology use |
| Technological Opportunism | Firm | Opportunity sensing | Alertness to technology | Silent on post-adoption outcomes |

Study 2: Conceptual Elaboration of Post-Adoption Mechanisms

This study builds on the structured diagnosis provided by Study 1 to elaborate post-adoption mechanisms that are theoretically salient in the context of new-age technologies (NATs). The objective is not to specify relationships or test propositions, but to clarify which constructs become necessary when adoption is examined from an entrepreneurial and outcome-oriented perspective.

Reframing Adoption as Adoption Intensity

A key implication of Study 1 is that binary views of adoption are ill-suited to technologies whose value emerges through progressive and distributed use. NATs are rarely adopted for a single purpose. Instead, they are deployed across multiple use cases, functions, and problem domains as entrepreneurs learn and experiment.

This pattern necessitates a shift from adoption as a yes–no outcome to adoption intensity, defined as the breadth and depth of technology use across organizational activities. Prior research on technology infusion suggests that value creation depends on how extensively a technology is embedded in routines rather than on adoption alone (Saga & Zmud, 1994; Zhu et al., 2006). However, this insight remains weakly integrated into entrepreneurship research.

For entrepreneurs competing under time pressure and uncertainty, adoption intensity reflects strategic engagement with technology. NATs allow entrepreneurs to scale experimentation across domains, making intensity of use a more meaningful indicator of entrepreneurial action and potential advantage than initial adoption.

Dynamic Capabilities in the Context of New-Age Technologies

Study 1 also reveals that existing adoption research provides limited explanation of how firms adapt technologies after adoption. This limitation is particularly problematic for NATs, whose functionalities, applications, and performance implications evolve over time.

In such environments, value creation depends on the ability to sense emerging technological possibilities, seize viable applications, and reconfigure resources accordingly. These activities correspond to the core elements of dynamic capabilities (Teece, 2007). For NATs, dynamic capabilities are not primarily about sustaining advantage, but about enabling continuous alignment between technology use and entrepreneurial opportunity.

Recent work highlights that digital and data-driven technologies intensify the need for dynamic capabilities, as firms must repeatedly adjust both technological and organizational configurations (Teece, 2018). Without such capabilities, high adoption intensity may increase complexity without generating proportional value. Dynamic capabilities therefore function as a necessary condition for converting intensive technology use into entrepreneurial outcomes.

Entrepreneurial Bricolage as a Post-Adoption Outcome

A further implication of Study 1 is the absence of outcome constructs that capture how entrepreneurs create value from adopted technologies. Study 2 addresses this gap by conceptualizing entrepreneurial bricolage as a post-adoption outcome, rather than as an antecedent or coping behavior.

In NAT contexts, bricolage increasingly involves the recombination, repurposing, and extension of technologies beyond their initially envisioned uses. Such outcomes arise not from adoption itself, but from intensive engagement with technology combined with the ability to reconfigure resources (Duymedjian & Rüling, 2010).

This framing positions bricolage as an observable outcome of entrepreneurial technology use—manifested in novel applications, improvised solutions, and emergent opportunities. Conceptualizing bricolage in this way shifts attention from constraints to value creation through experimentation, which is central to entrepreneurship in technologically uncertain environments.

Table 2: Key Constructs Emerging from the Study

| Conceptual Focus | Core Construct | Theoretical Role | Conceptual | Key Supporting |
|------------------|----------------|------------------|------------|----------------|
| | | | | |

| | | | Clarification | Literature | | | | gies evolve. In NAT contexts, these capabilities support continuous realignment between technology use and opportunity rather than sustained competitive advantage. | |
|-------------------------------|---------------------------------------|---|--|--|--|---------------------------|---|---|--|
| Reframing technology adoption | New-Age Technology Adoption Intensity | Descriptive lens capturing post-adoption engagement with NATs | Adoption is conceptualized as the breadth and depth of technology use across organizational functions, use cases, and problem domains, rather than as a binary decision. Adoption intensity reflects ongoing experimentation, learning, and distributed deployment of technology within entrepreneurial firms. | Saga & Zmud (1994) ; Zhu, Kraemer & Xu (2006) ; Burton-Jones & Gallivan (2007) | | | | | |
| Post-adoption value creation | Dynamic Capabilities | Enabling condition for translating intensive technology use into entrepreneurial outcomes | Dynamic capabilities capture the firm's ability to sense emerging technological possibilities, seize viable applications, and reconfigure resources as technology | Teece, Pisano & Shuen (1997) ; Teece (2007) ; Teece (2018) | Entrepreneurial outcomes of technology use | Entrepreneurial Bricolage | Outcome construct reflecting how value is created from intensive NAT engagement | Bricolage is reframed as an outcome of intensive technology use combined with resource reconfiguration capabilities. It manifests in the recombination, repurposing, and extension of technologies beyond initially envisioned applications, leading to improvised solutions and emergent | Baker & Nelson (2005) ; Duymedjian & Rüling (2010) ; Garud, Gehman & Giuliani (2014) |

| | | | |
|--|--|----------------|--|
| | | opportunities. | |
|--|--|----------------|--|

4. DISCUSSION

The findings of this research argues that existing technology adoption theories explain whether entrepreneurs adopt new-age technologies, but not how adoption translates into entrepreneurial outcomes. For technologies that are modular, evolving, and weakly defined at the time of adoption, value does not arise from the decision to adopt alone. Instead, value emerges through continued use, experimentation, and adaptation. The two studies together show that treating adoption as a discrete event limits our ability to explain heterogeneity in entrepreneurial performance. By shifting attention to post-adoption processes, this paper reconnects technology adoption research with the core entrepreneurial concern of opportunity realization under uncertainty.

Theoretical Implications

First, this study highlights the limits of binary and early-use conceptualizations of adoption in entrepreneurial contexts. New-age technologies are rarely adopted for a single, well-defined purpose. Entrepreneurs typically extend their use across activities, functions, and problem domains over time. Conceptualizing outcomes in terms of adoption intensity better reflects this reality and allows theory to explain why similar adoption decisions produce very different results. This move aligns adoption research with learning-based views of the firm, where value accumulates through repeated and varied use rather than through isolated decisions.

Second, the findings underscore the central role of dynamic capabilities in new-age technology adoption. When technologies evolve rapidly, entrepreneurs must continually sense new possibilities, reconfigure resources, and adjust usage patterns. Adoption theories that assume stable technologies overlook these adaptive demands. Integrating dynamic capabilities clarifies how intensive technology use becomes economically meaningful and explains why some entrepreneurs benefit from adoption while others do not, even when initial adoption conditions appear similar.

Third, this study reframes entrepreneurial bricolage as an outcome of technology engagement rather than merely a response to resource constraints. New-age technologies expand the scope for recombination by enabling entrepreneurs to experiment with new configurations of existing resources. As adoption deepens and spreads, bricolage becomes a mechanism through which entrepreneurs shape novel solutions and uncover unexpected opportunities. Viewing bricolage as a post-adoption outcome strengthens its connection to opportunity creation and entrepreneurial value generation.

Managerial Implications

This study suggests that entrepreneurs and senior decision-makers should rethink how they frame technology adoption decisions for emerging and potentially disruptive technologies. Rather than asking

whether a technology should be adopted, leaders should ask how adoption can be structured to enable learning, flexibility, and strategic optionality. Early adoption, by itself, offers limited protection against uncertainty; advantage depends on how effectively firms create pathways for technologies to be explored across multiple activities and evolving problem domains.

A key implication is that organizations should deliberately design for intensive and distributed use of new-age technologies. Confining technologies to isolated pilots or single functions may reduce short-term risk but often limits learning and long-term value. Entrepreneurs should instead view broad experimentation as a controlled investment in discovery. This does not imply indiscriminate use, but rather intentional exposure of technologies to varied contexts where new applications and complementarities can emerge.

The findings also underscore that investments in new-age technologies implicitly require investments in adaptive managerial capacity. Technologies that evolve rapidly place continuous demands on coordination, reconfiguration, and decision-making. Entrepreneurs who lack the ability to revise routines, reallocate resources, and abandon ineffective uses risk turning flexible technologies into rigid assets. From a managerial standpoint, this shifts attention from technology selection to the ongoing governance of technology use.

Finally, this study highlights the strategic value of allowing recombination and improvisation in technology use. For entrepreneurial firms, value often arises when technologies are combined with existing resources in unplanned ways. Managers should therefore resist imposing premature standardization or strict performance benchmarks that constrain experimentation. Instead, governance mechanisms should balance accountability with discretion, recognizing that early inefficiencies may be necessary for uncovering longer-term opportunities. Taken together, these implications suggest that the managerial challenge of new-age technology adoption lies less in choosing the “right” technology and more in shaping organizational conditions that allow technologies to generate insight, flexibility, and future options under uncertainty.

Limitations and Future Research Directions

This study is conceptual and does not empirically evaluate the mechanisms it advances. While this enables theory integration across adoption, entrepreneurship, and strategy, it limits conclusions about causal ordering and effect magnitude. Future research should empirically test whether adoption intensity is responsible for a meaningful variation in entrepreneurial outcomes beyond initial adoption, particularly under conditions of technological uncertainty.

The study also deliberately avoids specifying causal direction among any constructs because of the exploratory intent of the study, but it leaves open questions regarding relationships among the constructs. Longitudinal and process-oriented designs are especially well suited to examining how these mechanisms co-evolve as entrepreneurs adopt new-age technologies through use.

In addition, new-age technologies are treated as a broad category characterized by flexibility and evolving use potential. While appropriate for theory development, this abstraction masks differences across technologies. Future research should examine whether post-adoption mechanisms vary systematically with technological features.

Finally, the arguments are grounded in entrepreneurial contexts where experimentation is relatively unconstrained. Established firms face different structural and governance conditions that may limit adoption intensity and adaptive use. Comparative studies across organizational forms would help clarify the boundary conditions of the proposed framework. Advancing this research field requires shifting empirical focus from adoption decisions to post-adoption processes through which NATs are explored, adopted, and recombined. Such work is necessary to restore the explanatory relevance of adoption theory in contexts of rapid technological change.

5. CONCLUSION

This study has conceptualized technology adoption from an entrepreneurial lens, showing that adoption alone does not generate value in high-uncertainty environments.

Entrepreneurs achieve strategic outcomes by intensively engaging with new-age technologies, recombining resources creatively, and leveraging dynamic capabilities. Adoption intensity, entrepreneurial bricolage, and adaptive capability development are thus central to understanding how emergent technologies translate into competitive advantage.

By integrating adoption and entrepreneurship literatures, we have demonstrated the limitations of traditional models such as TAM and UTAUT for entrepreneurial contexts and propose a research agenda that foregrounds post-adoption processes. This perspective not only advances theoretical understanding but also offers practical guidance: entrepreneurs and policymakers must recognize that capturing the full potential of new-age technologies requires deliberate experimentation, cross-functional deployment, and continuous capability development. In sum, this study provides a conceptual foundation for studying the outcomes of new-age technology adoption in entrepreneurship, establishing a pathway for rigorous empirical investigations and setting a benchmark for future research on the intersection of technology, entrepreneurship, and value creation..

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