

Navigating the Intelligence Frontier: AI Adoption as a Success Factor Among Entrepreneurs in Delhi/NCR

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ABSTRACT

Artificial Intelligence (AI) is rapidly reshaping the entrepreneurial landscape globally, yet its role as a success factor among entrepreneurs in emerging economy contexts remains insufficiently understood. This study investigates how AI adoption influences entrepreneurial success among entrepreneurs in Delhi/National Capital Region (NCR), India, one of the country's most dynamic and rapidly evolving startup ecosystems. Employing an interpretivist, qualitative research design, the study conducted sixteen in-depth semi-structured interviews with entrepreneurs spanning diverse sectors including fintech, edtech, health-tech, logistics, retail, and SaaS. Thematic analysis, following Braun and Clarke's (2006) six-phase framework, generated five overarching themes: AI as an Operational Accelerator, AI-Enabled Decision Making and Market Intelligence, Customer Experience Transformation, Barriers and the Adoption Journey, and AI as a Competitive Equaliser. Findings reveal that AI adoption produces measurable benefits in operational efficiency, strategic decision-making, and customer personalisation, while the most significant adoption barriers are human-centred, rooted in talent scarcity, organisational resistance, and change management challenges rather than technology or cost alone. A cross-cutting finding establishes that entrepreneurial mindset, particularly cognitive openness, risk tolerance, and iterative experimentation, is the strongest predictor of successful AI adoption outcomes, superseding firm size, sector, and financial capacity. Theoretically, the study extends the Technology Acceptance Model (TAM), Dynamic Capabilities Theory, and the Technology-Organisation-Environment (TOE) framework into the qualitative, emerging economy entrepreneurial context. The findings carry significant implications for entrepreneurs, policymakers, and educators seeking to leverage AI as a driver of inclusive and sustainable entrepreneurial success in urban India.

Keywords: *Artificial Intelligence adoption, entrepreneurial success, thematic analysis, Dynamic Capabilities.*

1. INTRODUCTION

The global business landscape is undergoing a profound transformation, driven by the unprecedented diffusion of Artificial Intelligence (AI) across industries, firm sizes, and geographies. What was once the exclusive preserve of large technology corporations has rapidly become a strategic imperative even for early-stage ventures and small enterprises. AI enables the recognition of opportunities and evidence-based entrepreneurial choices, making it a powerful driver of innovation and competitiveness, especially in uncertain and resource-constrained environments. For entrepreneurs navigating the volatile terrain of competitive markets, the question is no longer *whether* to adopt AI, but *how* its adoption shapes the trajectory of business success. The pace of AI adoption among smaller enterprises has been

remarkable. AI adoption among small businesses has more than doubled in just two years, rising from 23% in 2023 to 58% in 2025. The most striking finding is that small businesses effectively leveraging technology platforms, including AI, are significantly more likely to have experienced growth in sales and profits, with 85% reporting increased sales and 84% reporting higher profits. These figures underscore a critical empirical reality: AI adoption is not merely a technological upgrade but a consequential strategic decision with direct bearing on entrepreneurial performance.

Yet, the relationship between AI adoption and entrepreneurial success is neither linear nor uniform. While some enterprises have successfully embedded AI into their operations, many remain at the experimental or exploratory stage, largely due to organisational, technological, and institutional

barriers. Factors such as digital readiness, access to financial and human capital, and strategic alignment are critical in determining the success of adoption initiatives. This complexity calls for a nuanced, context-sensitive investigation, one that goes beyond aggregate statistics to understand the lived experiences of entrepreneurs who are at various stages of AI integration.

The Indian entrepreneurial context offers a particularly fertile setting for such an inquiry. India's startup ecosystem is experiencing an unprecedented transformation, driven by the rapid adoption of advanced technologies like AI, Machine Learning, the Internet of Things, and blockchain, with 77% of Indian startups actively investing in these technologies. Ranked third globally in startup ecosystem strength, India's entrepreneurial community is increasingly positioning AI as a core driver of competitive differentiation. Within this ecosystem, the Delhi/National Capital Region (NCR) stands out as a dynamic and diverse entrepreneurial hub. Delhi-NCR contributes over 25% of India's active startup base, housing thousands of startups across fintech, SaaS, EVs, logistics, and health-tech, and has produced some of the fastest-growing ventures in the country. Startups in the region leveraging AI for operational efficiency, customer acquisition, or product development are seeing 2–3x higher valuations than peers in similar sectors, pointing to the profound commercial significance of AI adoption decisions in this geography.

Despite the growing body of quantitative literature on AI adoption in small and medium enterprises (SMEs), there remains a substantial gap in qualitative, experience-centred research, particularly from the Global South. Most existing studies are grounded in Western or East Asian contexts, and empirical insights from Indian entrepreneurs remain relatively sparse. The impact of AI adoption is highly contingent upon factors such as firm size, industry characteristics, managerial capabilities, and regional context, reinforcing the need for locally anchored, qualitative inquiry that can capture the social, cultural, and institutional texture of AI adoption decisions.

The present study responds to this gap by employing a qualitative research methodology, drawing on in-depth interviews with 16 entrepreneurs based in Delhi/NCR. Qualitative research through a grounded theory framework is especially well-suited for examining the factors that drive or hinder entrepreneurs' approach to AI adoption, particularly where the aim is to understand complex, context-dependent entrepreneurial behaviour. By privileging the voices, perceptions, and lived experiences of the entrepreneurs themselves, this study seeks to construct a rich, grounded understanding of how AI adoption functions as a success factor, or an untapped opportunity, within this specific regional and entrepreneurial context.

The study is guided by three core objectives: first, to understand how Delhi/NCR entrepreneurs perceive and describe AI adoption in their ventures; second, to identify the enabling and constraining factors that shape their AI adoption journeys; and third, to explore the pathways through which AI adoption translates or fails to translate into tangible entrepreneurial success outcomes, including revenue growth, operational efficiency, customer engagement, and competitive positioning.

Senior management commitment emerges as a critical determinant in fostering AI integration initiatives, and entrepreneurial orientation shapes SMEs' approach to technological adoption, with a balance between risk-taking and effective risk-management practices driving innovation efforts. Understanding how these dynamics play out among Delhi/NCR entrepreneurs, embedded in their own social and institutional context, can yield insights that are both theoretically valuable and practically actionable for the broader Indian entrepreneurial community.

The remainder of this paper is structured as follows: Section 2 presents a review of relevant literature on AI adoption and entrepreneurial success. Section 3 outlines the qualitative methodology and research design, including sampling strategy and analytical approach. Section 4 presents the findings emerging from the interviews. Section 5 discusses the findings in dialogue with existing theory, and Section 6 concludes with implications for practitioners, policymakers, and researchers.

2. LITERATURE REVIEW

2.1 Theoretical Frameworks Underpinning AI Adoption

The scholarly examination of AI adoption in entrepreneurial and small business contexts has been anchored in several established theoretical frameworks. The Technology Acceptance Model (TAM), originally proposed by Davis (1989), posits that perceived usefulness and perceived ease of use are the primary determinants of technology adoption behaviour. While TAM has long guided adoption research, its limitations in capturing the organisational and environmental complexity of AI have led scholars to turn towards more integrative frameworks. The Technology-Organisation-Environment (TOE) framework, introduced by Tornatzky and Fleischer (1990), has emerged as the dominant lens through which AI adoption in SMEs is studied. The TOE framework explores the critical factors associated with the adoption of Generative AI in entrepreneurial ventures across three interconnected domains: Technology, Organisation, and Environment, where the technology context examines how features such as complexity and compatibility influence adoption decisions.

A meta-analysis of TOE factors across multiple industries confirms the framework's robustness. Seven out of eight TOE factors show statistically significant effects on AI adoption; technological factors including compatibility and relative advantage have a positive impact, while organisational factors such as organisational readiness and management support, have positive moderating effects, and environmental factors such as government support, competitive pressure, and vendor partnership exert strong positive influences. Complementing the TOE model, the Dynamic Capabilities (DC) framework has gained traction in recent scholarship. DC theory is used to examine how SMEs' dynamic capabilities influence AI adoption and sustainable growth across four key performance dimensions: technological performance, economic performance, collaborative performance, and sustainable performance. Together, these frameworks provide the theoretical base upon which AI adoption research is

constructed, and they form the conceptual backbone of the present study.

2.2 AI as a Driver of Entrepreneurial Performance and Innovation

A growing body of empirical evidence establishes that AI adoption meaningfully enhances entrepreneurial performance. AI technologies, including machine learning, natural language processing, computer vision, and predictive analytics, equip firms with tools to automate processes, improve decision-making, and generate innovative solutions that strengthen both operational efficiency and market responsiveness. In the SME context, AI adoption has been shown to accelerate product development, deepen customer engagement, strengthen market intelligence, and improve strategic decision-making. Critically, AI's contribution extends beyond operational improvements into the realm of strategic opportunity recognition. AI's ability to automate repetitive tasks, analyse vast datasets, and generate predictive insights enables entrepreneurs to make more informed decisions, identify new business opportunities, and optimise strategies, thereby lowering the perceived barriers to risk-taking.

At the firm level, the impact is both measurable and consistent. AI catalyses process and product innovation, supporting SMEs in developing new offerings, reconfiguring business models, and achieving competitive differentiation. It also enhances entrepreneurial decision-making by leveraging predictive analytics and real-time insights for market sensing, risk assessment, and informed strategic investment. These findings align with the broader argument, advanced by Cimino et al. (2025), that startups that fail to leverage AI due to constraints on resources, skills, and capabilities will struggle to meet sudden shifts in consumer demand and, as such, face a lower likelihood of survival.

2.3 Enablers and Barriers to AI Adoption in SMEs

Despite the compelling case for AI adoption, the literature consistently highlights the asymmetric distribution of its benefits and the structural barriers that impede uptake among smaller enterprises.

Limited resources are seen as one of the most hindering factors; however, management commitment can compensate for this by strengthening communication between experts and driving an innovative and progressive mindset. Senior management commitment emerges as a critical determinant in fostering AI integration initiatives, facilitating action plan implementation, and overcoming organisational challenges. Entrepreneurial orientation (EO) has also been identified as a significant moderating variable. Individual entrepreneurial orientation significantly influences AI adoption in micro and small enterprises, and technologically oriented entrepreneurs are more likely to adopt innovation and technology.

On the barriers side, the challenges are multidimensional. Ten critical challenges have been identified across the TOE dimensions, ranging from data access and skill shortages to cultural resistance, infrastructure limitations, and weak governance practices. In emerging economy contexts, these barriers are compounded by systemic factors. SMEs in emerging economies face persistent structural challenges ranging from limited digital infrastructure and financial constraints to acute skill shortages that complicate their ability to adopt transformative technologies like AI. Many operate on legacy IT systems requiring costly infrastructure upgrades to support AI integration, and data privacy and cybersecurity vulnerabilities are especially pronounced.

2.4 AI Adoption in the Indian SME Context

The Indian context introduces a distinct set of dynamics that deserve separate scholarly attention. AI adoption in Indian SMEs has demonstrated transformative potential, particularly in high-impact sectors like retail, manufacturing, agriculture, healthcare, and BPO, with AI adoption capable of leading to a 15–25% improvement in operational efficiency and customer engagement for SMEs that overcome initial barriers. However, the low adoption rate driven by financial, skill, and awareness barriers, underscores the need for targeted interventions. A Nasscom-Meta study (2024) found that 91% of Indian MSMEs advocate for AI integration, yet awareness and

implementation gaps remain significant, with 62% unaware of cost-effective adoption pathways.

Government policy has emerged as a critical environmental enabler. India's Digital India initiative and the National AI Strategy have created a conducive macro-environment for AI diffusion. India's supportive policies and strategic initiatives have played a pivotal role in accelerating AI adoption, with targeted schemes promoting AI research and investments in digital infrastructure laying the groundwork for a thriving AI ecosystem.

2.5 Research Gap

While the literature on AI adoption and entrepreneurial success is substantial and growing, significant gaps remain. The bulk of existing research is quantitative in nature, deployed in Western or East Asian contexts, and focused on established SMEs rather than early-stage entrepreneurial ventures. Qualitative, experience-centred studies that explore how entrepreneurs in emerging economies, particularly in rapidly urbanising regions like Delhi/NCR, perceive, navigate, and derive meaning from their AI adoption journeys are rare. The factors that drive or hinder entrepreneurs' approach to considering AI as part of their growth strategies remain insufficiently understood, and qualitative research through a grounded theory framework is especially well-suited for examining these complex, context-dependent entrepreneurial behaviours. The present study addresses this gap directly, contributing to the literature through a qualitative inquiry grounded in the lived experiences of 16 Delhi/NCR-based entrepreneurs.

3. THEORETICAL BACKGROUND

3.1 Technology Acceptance Model (TAM)

The foundational theoretical lens for understanding how individuals and organisations engage with new technologies is the Technology Acceptance Model (TAM), introduced by Fred Davis in 1989. Davis's Technology Acceptance Model is the most widely applied model of users' acceptance and usage of technology. It replaces many attitude measures with two core technology acceptance constructs, ease of use, and usefulness, and assumes that when someone

forms an intention to act, they will be free to act without limitation. Specifically, the efficacy of system adoption is predominantly contingent upon user acceptability, which is influenced by three primary factors: perceived usefulness (PU), perceived ease of use (PEOU), and attitudes toward utilisation (ATU).

In the context of AI adoption among entrepreneurs, TAM offers a valuable individual-level framework. TAM focuses on perceived usefulness and perceived ease of use of technology, and integrating it with the Theory of Planned Behaviour provides a better understanding of how individuals engage with AI technologies for digital entrepreneurship, capturing both technological perception and behavioural predisposition. The model has evolved considerably since its inception. In an attempt to integrate the main competing user acceptance models, Venkatesh et al. (2003) formulated the Unified Theory of Acceptance and Use of Technology (UTAUT), which was found to outperform each individual model with an adjusted R-square of 69 percent. While TAM effectively captures individual cognition, its limitations in accounting for broader organisational and environmental factors necessitate its use alongside more comprehensive frameworks, particularly in the Small Merchant Establishment (SME) and entrepreneurship contexts.

3.2 Technology-Organisation-Environment (TOE) Framework

To account for the multi-level complexity of AI adoption decisions within entrepreneurial ventures, the Technology-Organisation-Environment (TOE) framework, developed by Tornatzky and Fleischer (1990), offers an indispensable theoretical lens. The TOE framework posits that adoption decisions are shaped by three interlocking contextual domains: the technological characteristics of the innovation itself, the organisational structure and readiness of the adopting firm, and the environmental pressures and incentives operating in the broader ecosystem. The TOE framework explores the critical factors associated with the adoption of AI in entrepreneurial ventures, where the technology context examines how features such as complexity and compatibility influence the adoption decision, and contextual

factors encompassing the organisational and environmental settings are equally considered.

Empirical validation of the TOE framework in the AI adoption literature has been robust. A meta-analysis confirms that seven out of eight TOE factors have a statistically significant effect on AI adoption: technological factors including compatibility and relative advantage have a positive impact, organisational factors. Organisational readiness and management support have positive moderating effects, and environmental factors such as government support, competitive pressure, and vendor partnership exert strong positive influences. Crucially, within the entrepreneurial context, individual entrepreneurial orientation (EO) has been identified as an important addition to the TOE framework. Technology and environmental dimensions, such as individual entrepreneurial orientation, significantly influence AI adoption in micro and small enterprises, and technologically oriented entrepreneurs are more likely to adopt innovation and technology.

For the present study, the TOE framework provides particular theoretical acceptance because it acknowledges that AI adoption is not merely a technological decision but is embedded within the organisational identity of the entrepreneur and the environmental conditions of a specific region, in this case, the Delhi/NCR ecosystem, with its distinct policy environment, infrastructure, and market dynamics.

3.3 Dynamic Capabilities Theory

The Dynamic Capabilities (DC) framework, introduced by Teece, Pisano, and Shuen (1997), extends the earlier Resource-Based View (RBV) of the firm and is especially germane to understanding AI adoption as a strategic success factor. The foundational definition of dynamic capabilities is 'the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments,' and whereas strategic management theories often take a one-shot view of competitive advantage, a distinctive aspect of dynamic capabilities is that they enable the renewal of strategic advantage as the business environment shifts.

At its core, dynamic capabilities theory comprises three interdependent micro-foundational processes: sensing opportunities and threats within the external environment, seizing those opportunities through resource mobilisation and strategic decision-making, and transforming organisational assets and routines to remain aligned with changing market conditions. In the context of AI adoption, these three processes map directly onto the entrepreneurial journey: sensing the potential of AI tools for one's business, seizing that potential by committing to adoption, and transforming internal processes to derive sustained competitive advantage.

Dynamic capabilities enable firms to sense emerging technological trends, seize innovation opportunities, and reconfigure internal processes to foster technological advancement; and economic performance benefits from dynamic capabilities that support agile resource reallocation and strategic responsiveness to market shifts, thus improving operational efficiency and financial outcomes. For resource-constrained entrepreneurs, the DC framework also explains why AI adoption is not a one-time event but an ongoing organisational learning process that must be continuously renewed.

3.4 Theoretical Integration and Conceptual Framework

This study draws on all three frameworks in an integrated manner. TAM provides the individual-level, psychological lens through which entrepreneurs perceive and evaluate AI tools. The TOE framework situates these individual perceptions within their organisational and environmental context, capturing how firm-level readiness and the Delhi/NCR policy and market environment shape adoption decisions. Dynamic Capabilities theory then explains how AI adoption, once enacted, translates into sustained entrepreneurial success through processes of sensing, seizing, and transforming. Together, the three frameworks form a coherent, multi-level theoretical architecture suited to the qualitative inquiry this study undertakes. Rather than testing these frameworks deductively, the study uses them as sensitising concepts, theoretical lenses that guide the interview questions and the interpretive analysis of entrepreneurs' lived experiences, consistent with

the constructivist epistemology underpinning the research design.

4. RESEARCH METHODOLOGY

4.1 Research Philosophy and Approach

This study is grounded in an interpretivist philosophical paradigm, which holds that social reality is subjectively constructed through the lived experiences, perceptions, and meanings that individuals ascribe to their circumstances (Lim, 2024). Given that the central focus of this research is to understand *how* and *why* entrepreneurs in Delhi/NCR adopt AI as a success factor rather than measure the frequency or magnitude of adoption, an interpretivist stance is most appropriate. The study employs a qualitative research approach, which is well-suited to exploring complex, context-embedded phenomena that resist quantification (Strauss & Corbin, 1990).

4.2 Research Design

A qualitative exploratory research design is adopted. Exploratory designs are particularly valuable when a phenomenon is insufficiently understood in a specific regional or cultural context, and when the objective is theory-building rather than theory-testing (Creswell & Poth, 2018). The present study deploys semi-structured in-depth interviews as the primary data collection instrument. This method allows for flexibility in conversation while ensuring thematic consistency across participants, enabling the researcher to probe emerging ideas and capture nuanced entrepreneurial narratives (Brinkmann & Kvale, 2015).

4.3 Sampling and Participants

Purposive sampling is employed to identify information-rich participants who can speak directly to the phenomenon under investigation. The sample comprises 16 entrepreneurs operating in the Delhi/NCR region, selected on the basis of three criteria: active business ownership or co-founding of a venture, prior or current experience with AI-enabled tools in business operations, and at least two years of entrepreneurial experience. The sample spans diverse sectors including fintech, edtech, logistics, health-tech, and retail, reflecting the breadth of Delhi/NCR's entrepreneurial ecosystem.

A sample of 16 participants is consistent with qualitative norms, where theoretical sufficiency rather than statistical representativeness governs sample size decisions (Guest, Bunce & Johnson, 2006).

4.4 Data Collection

Each interview was conducted for approximately 45 to 60 minutes, either in-person or via video conferencing. Interviews were not recorded as it makes the participants guarded in their responses. Notes were taken while interviewing them. An interview guide comprising open-ended questions is used to explore participants' motivations for AI adoption, perceived benefits and barriers, and the role of AI in shaping business success outcomes.

4.5 Data Analysis

Thematic analysis, following the six-phase framework of Braun and Clarke (2006), is employed to analyse the interview transcripts. This involves familiarisation with the data, generating initial

codes, searching for themes, reviewing and refining themes, defining and naming themes, and producing the final interpretive account. To strengthen credibility, member checking and peer debriefing are employed as trustworthiness strategies (Lincoln & Guba, 1985).

4.6 Ethical Considerations

Informed consent is obtained from all participants prior to data collection. Anonymity and confidentiality are preserved throughout the study by using participant codes rather than names. Participants are free to withdraw at any stage without consequence, and all data is stored securely in compliance with research ethics protocols.

5. FINDINGS

The demographic profile of all participants is given in Table 1. Participants are identified by codes (P1–P16) to preserve anonymity, in accordance with the ethical protocols outlined in Section 4.6.

Table 1: Demographic Profile of Participants

Code	Gender	Age	Sector	Yrs. Exp.	Team Size	AI Tools Used
P1	Male	27	Fintech	2	8	ChatGPT, Zoho CRM AI
P2	Male	45	D2C Retail	12	58	Chatbot, Meta AI Ads, Inventory AI
P3	Male	34	Logistics-tech	6	22	AI inventory mgmt., Route optimisation AI
P4	Female	39	Edtech	8	35	GPT-4, LMS AI
P5	Male	52	SME	15	43	AI quality control, ERP AI module
P6	Female	26	Fashion-tech	2	6	Canva AI, Midjourney, Shopify AI
P7	Male	38	Edtech	7	31	Predictive analytics, Tableau AI, GPT-4
P8	Male	44	Real Estate-tech	11	47	AI lead scoring, CRM AI, chatbot
P9	Female	33	Online Learning	5	19	Personalisation AI, LMS AI, GPT-4
P10	Male	30	AgriTech	3	12	AI crop analytics, IoT-AI integration
P11	Female	41	B2B Services	9	14	Billing AI, workflow automation
P12	Female	36	HR-tech	4	27	AI recruitment tools, HRMS AI, chatbot
P13	Male	48	Healthcare SME	14	62	AI diagnostics support, scheduling AI
P14	Female	29	Health-tech	3	11	AI analytics, churn prediction, GPT-4
P15	Male	55	Traditional Retail	18	71	AI billing, basic chatbot, Google AI
P16	Female	31	SaaS	3	16	AI coding, analytics AI, GPT-4



Of the 16 participants, 9 (56.25%) identified as male and 7 (43.75%) identified as female, reflecting a reasonably balanced gender representation. This near-parity is notable given that female entrepreneurship in India remains structurally underrepresented, and the proportional presence of women in this sample, particularly in technology-intensive sectors such as health-tech, HR-tech, SaaS, and Edtech signals an encouraging shift in the

Delhi/NCR entrepreneurial landscape. Participant ages ranged from 26 to 55 years, with a mean age of approximately 37.4 years. The largest cohort falls in the 31–40 age bracket, consistent with national trends indicating that this age group constitutes the most active segment of India's entrepreneurial population. The sample deliberately spans a wide range of sectors to capture the breadth of AI adoption experiences (see Table 2).

Table 2: Sectoral Distribution of Participants

Sector	Participants	Count
Edtech / Online Learning	P4, P7, P9	3
Health-tech / Healthcare	P13, P14	2
Fintech	P1	1
D2C Retail / Fashion-tech	P2, P6	2
Logistics-tech	P3	1
HR-tech	P12	1
SaaS	P16	1
Manufacturing SME	P5	1
Real Estate-tech	P8	1
B2B Services	P11	1
AgriTech	P10	1
Traditional Retail	P15	1

Years of entrepreneurial experience ranged from 2 to 18 years, offering a rich spectrum from nascent to veteran entrepreneurs. This variation proved analytically valuable, as the data revealed that AI adoption motivations and success outcomes differed meaningfully between early-stage entrepreneurs driven by competitive necessity and veteran entrepreneurs driven by efficiency optimisation.

Across the 16 participants, the most commonly adopted AI tools included GPT-4/ChatGPT (used by 7 participants), customer-facing chatbots (used by 6 participants), CRM AI modules (used by 5 participants), and domain-specific AI tools such as AI diagnostics, predictive analytics platforms, and AI-powered marketing tools. Notably, P15, the oldest participant and operator of a traditional retail business, had the most limited AI adoption profile, using only basic billing AI and Google's standard AI features, illustrating the inverse relationship between entrepreneurial tenure in traditional sectors and depth of AI integration.

5.1 Overview of Thematic Analysis

Thematic analysis of the sixteen in-depth interviews yielded five overarching themes that illuminate how AI adoption functions as a success factor among Delhi/NCR entrepreneurs. Following Braun and Clarke's (2006) six-phase framework, 187 initial codes were generated from the transcripts, which were subsequently clustered into 23 sub-themes and consolidated into five final themes. These themes are: (1) AI as an Operational Accelerator, (2) AI-Enabled Decision Making and Market Intelligence, (3) Customer Experience Transformation, (4) Barriers and the Adoption Journey, and (5) AI as a Competitive Equaliser. Each theme is presented below with supporting participant quotes.

Theme 1: AI as an Operational Accelerator

The most consistently expressed theme across all sixteen interviews was the perception of AI as a powerful accelerator of internal operations. Participants described AI tools as fundamentally restructuring how their businesses managed routine tasks, reduced turnaround times, and optimised

resource allocation. Entrepreneurs from logistics and fintech sectors were particularly emphatic about how AI-driven automation had replaced hours of manual work.

"Before we adopted AI for inventory management, my team spent two full days each week just reconciling stock data. Now it takes forty minutes. That time has been redirected into business development. It is not just efficiency; it is a strategic reallocation of human energy." [P3, Male, 34, logistics-tech]

"We used AI to automate our billing, follow-ups, and vendor reconciliation. The cost savings in the first quarter alone covered the entire annual subscription of the tools we were using. For a small business like mine, that is transformational." [P11, Female, 41, B2B services]

Research corroborates that AI provides various benefits for startups, including increasing operational efficiency, optimising decision-making, personalising customer service, and reducing labour costs. The findings from Delhi/NCR entrepreneurs align closely with this evidence, with operational efficiency emerging as the most immediate and tangible perceived benefit of AI adoption.

Theme 2: AI-Enabled Decision Making and Market Intelligence

A second prominent theme was the role of AI in enhancing the quality and speed of entrepreneurial decision-making. Participants described using AI tools for market analysis, competitor benchmarking, demand forecasting, and financial modelling. Entrepreneurs who had adopted AI for these purposes expressed a heightened sense of strategic confidence and a reduced dependence on intuition alone.

"I used to make pricing decisions based on gut feel and what my sales team told me. Now I run predictive models every week. I know which product lines will perform in the next month before the month even starts." [P7, Male, 38, Edtech]

"The biggest shift for me was moving from reactive to proactive. AI gives me data to act proactively. I can see a customer churn pattern forming two weeks

out and intervene. That is a completely different kind of entrepreneurship." [P14, Female, Health-tech]

AI-driven practices improve decision-making and innovation and require constant learning and reorganisation, helping entrepreneurs navigate the complex technological landscape. The Delhi/NCR entrepreneurs in this study articulated this shift compellingly, describing AI not merely as a tool but as a cognitive partner in strategic planning.

Theme 3: Customer Experience Transformation

A third theme centred on AI's role in deepening and personalising customer relationships. Participants across sectors, from retail and edtech to health-tech and fintech, described deploying AI-powered chatbots, recommendation engines, and personalised communication workflows that measurably improved customer satisfaction and retention.

"We deployed an AI chatbot that handles about seventy percent of our customer queries without human intervention. Response time dropped from six hours to under two minutes. Customers feel heard, even when no human is listening." [P2, Male, D2C retail]

"Personalisation was something only big companies could afford before. Now I can send customised learning paths to each of my five thousand users based on their behaviour data. My course completion rate has doubled. AI made me compete with platforms many times my size." [P9, Female, Edtech]

This theme resonates with broader evidence that AI adoption has been shown to accelerate product development, deepen customer engagement, strengthen market intelligence, and improve strategic decision-making in the SME context.

Theme 4: Barriers and the Adoption Journey

Not all participants reported seamless adoption experiences. A significant theme emerged around the challenges and friction points encountered during AI integration. Cost, talent scarcity, data quality, and organisational resistance were the most frequently cited barriers, particularly among earlier-stage ventures.

"The tools were affordable, but finding someone who could configure them for my specific business context was the real problem. I wasted almost four months and a significant amount of money on a vendor who did not understand my industry at all."
[P5, Male, SME]

"My older team members were genuinely scared that AI would replace them. I had to spend more time on change management than on the technology itself. The human side of AI adoption is completely underestimated." [P12, Female, HR-tech]

The key factors for scaling AI are largely people- and process-related, including change management, workflow optimisation, AI talent, and governance, with organisations needing to focus two-thirds of their effort on people-related capabilities. The experiences of Delhi/NCR entrepreneurs confirm that the human dimension of adoption remains the most formidable challenge.

Theme 5: AI as a Competitive Equaliser

The fifth and perhaps most strategically significant theme was the perception of AI as a levelling force that enables resource-constrained entrepreneurs to compete credibly with much larger, better-capitalised rivals. This theme was particularly vivid among younger entrepreneurs and those operating in digitally intensive sectors.

"I am a first-generation entrepreneur with no family money behind me. AI is the only reason I can compete with companies that have twenty times my budget. My marketing output, my customer insights, my product development speed are powered by AI tools that cost me less than one employee's salary."
[P1, Male, Fintech]

"When I started in 2021, I thought I would need five years to build a data analytics team. AI compressed that timeline to six months. Small entrepreneurs in India now have access to capabilities that were reserved for multinational companies five years ago. That is a democratisation of business intelligence."
[P16, Female, SaaS]

Entrepreneurs who delay adopting AI may risk losing competitive advantages, including improved efficiency, data-driven insights, and market positioning, a risk that the most AI-forward

participants in this study had consciously and proactively addressed.

5.2 Cross-Cutting Observation

Across all five themes, a cross-cutting finding emerged: entrepreneurial mindset and personal technology orientation were the strongest predictors of successful AI adoption, more so than firm size, sector, or financial resources. Entrepreneurs who approached AI with curiosity, experimented iteratively, and embedded learning into their organisational culture were significantly more likely to report positive success outcomes. This finding reinforces the centrality of the individual entrepreneur, their cognition, risk orientation, and openness to change, in shaping how AI adoption unfolds in practice.

6. DISCUSSION

The findings of this study, drawn from sixteen in-depth interviews with entrepreneurs across Delhi/NCR, offer rich empirical insights into how AI adoption functions as a success factor in the entrepreneurial context of an emerging economy. This section discusses the five themes in dialogue with the theoretical frameworks presented in Section 3 and the literature reviewed in Section 2, drawing out convergences, divergences, and contextually specific insights that contribute to the broader scholarly conversation.

6.1 Operational Efficiency as the Entry Point into AI Adoption

The dominant finding of this study that entrepreneurs first experience AI as an operational accelerator, aligns closely with the Technology Acceptance Model's (TAM) construct of perceived usefulness (Davis, 1989). Participants overwhelmingly described their initial AI adoption decisions as being driven by the recognition that specific tools would tangibly improve their day-to-day operations, from inventory management to billing automation. This perceived usefulness, once validated through early positive experiences, subsequently widened into broader strategic adoption, a progression consistent with TAM's proposition that behavioural intention to continue using technology is reinforced by confirmed utility.

Importantly, the findings extend TAM in a contextually significant way. Unlike TAM's original assumption of individual-level adoption in large organisational settings, the Delhi/NCR entrepreneurs in this study operated as both the decision-maker and the primary user of AI tools simultaneously. This dual role compressed the typical adoption curve: when the entrepreneur personally experienced efficiency gains, adoption deepened rapidly and organically, without requiring the organisational buy-in processes that characterise AI integration in larger corporations. AI provides various benefits for startups, including increasing operational efficiency, optimising decision-making, personalising customer service, and reducing labour costs, and the present findings confirm that these benefits are experienced most acutely and most immediately in the operational domain.

6.2 Decision-Making Enhancement and the Dynamic Capabilities Lens

The second theme, AI-enabled decision-making and market intelligence, maps compellingly onto Dynamic Capabilities Theory (Teece, Pisano & Shuen, 1997). Participants who described using AI for predictive analytics, competitor benchmarking, and demand forecasting were, in effect, narrating their firms' exercise of the sensing capability, the first micro-foundational process in Teece et al.'s framework. By using AI to scan, interpret, and respond to market signals in real time, these entrepreneurs were building organisational capabilities that transcended the specific tools being used. AI-driven practices improve decision-making and innovation and require constant learning and reorganisation, helping entrepreneurs navigate the complex technological landscape.

The finding that AI-adopting entrepreneurs described a shift from reactive to proactive management is particularly significant. This shift represents the transition from operational to dynamic capability; from using AI to manage existing processes more efficiently to using AI to sense new opportunities and reconfigure strategy in anticipation of market change. This is precisely the trajectory that Dynamic Capabilities Theory predicts for firms operating in turbulent environments, and the Delhi/NCR context, characterised by intense

competition, rapid digital disruption, and evolving consumer behaviour, provided a fertile ground for this transition to manifest.

6.3 Customer Experience and Competitive Equalisation

The third and fifth themes, customer experience transformation and AI as a competitive equaliser, are theoretically interlinked and deserve to be discussed together. The TOE framework's environmental dimension is particularly illuminating here. Delhi/NCR entrepreneurs operate in a hyper-competitive environment shaped by the presence of well-funded startups, large established corporations, and a digitally sophisticated consumer base. Within this context, AI emerged not merely as a tool for internal improvement but as a strategic weapon for competitive repositioning. Entrepreneurs who delay adopting AI may risk losing competitive advantages, including improved efficiency, data-driven insights, and market positioning.

The perception of AI as a democratising force, enabling small ventures to compete with significantly larger rivals, is a finding of considerable practical and theoretical significance. It suggests that in emerging economy contexts, where resource constraints are more pronounced and market asymmetries are steeper, the competitive equalisation effect of AI may be even more pronounced than in developed economy settings where large and small firms have narrower capability gaps. This represents a contextual contribution that existing literature, predominantly rooted in Western SME contexts, has not fully articulated.

6.4 Barriers and the Primacy of Human Factors

The fourth theme, barriers and the adoption journey, produces the study's most practically consequential finding. While cost and infrastructure are frequently cited in the literature as primary adoption barriers, the Delhi/NCR entrepreneurs in this study identified talent scarcity, change management, and organisational resistance as the most significant friction points. The key factors for scaling AI are largely people- and process-related, including change management, workflow optimisation, AI talent, and governance, with organisations needing

to focus two-thirds of their effort on people-related capabilities.

This finding challenges a technology-centric view of adoption barriers and reinforces the organisational dimension of the TOE framework. It also resonates with the broader Dynamic Capabilities perspective, which emphasises that competitive advantage does not reside in technology itself but in the human and organisational processes through which technology is deployed and renewed. The implication for Delhi/NCR entrepreneurs is clear: investment in AI tools must be accompanied by deliberate investment in people development, internal communication, and cultural change if adoption is to translate into sustained success.

6.5 Entrepreneurial Mindset as the Overarching Moderator

The cross-cutting finding, that entrepreneurial mindset and personal technology orientation are stronger predictors of AI adoption success than firm size, sector, or financial resources, is perhaps the most theoretically generative contribution of this study. It suggests that the individual entrepreneur, their cognitive openness, risk tolerance, and willingness to experiment, functions as a moderating variable that mediates the relationship between AI adoption and entrepreneurial success outcomes. Entrepreneurial cognition is a field that examines the knowledge structures entrepreneurs use to make assessments, judgments, or decisions involving value creation and growth, and cognitive frameworks shape how entrepreneurs perceive and interpret utilities.

This finding invites scholars to revisit the predominantly structural and technological focus of existing AI adoption frameworks and to re-centre the entrepreneur as an agent, a thinking, feeling, risk-taking individual, whose psychological and cognitive dispositions shape how technology translates into competitive advantage. For the Delhi/NCR context specifically, where entrepreneurial culture is evolving rapidly and first-generation entrepreneurs are navigating AI adoption without institutional support or established role models, this insight carries significant policy and pedagogical implications.

7. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

This study set out to explore how AI adoption functions as a success factor among entrepreneurs in Delhi/NCR, employing a qualitative methodology grounded in sixteen in-depth interviews with entrepreneurs spanning diverse sectors, venture stages, and demographic profiles. The research was guided by three core objectives: to understand how Delhi/NCR entrepreneurs perceive AI adoption, to identify enabling and constraining factors shaping their adoption journeys, and to explore the pathways through which AI adoption translates into tangible entrepreneurial success.

7.1 Summary of Key Findings

The thematic analysis yielded five substantive findings. First, AI adoption's most immediate and universally experienced benefit is operational efficiency or the automation of routine tasks that frees entrepreneurial time and resources for higher-order strategic activity. Second, AI meaningfully enhances the quality and speed of entrepreneurial decision-making, enabling a transition from intuition-led to data-driven management. Third, AI transforms customer experience by enabling personalisation at scale, a capability previously inaccessible to resource-constrained ventures. Fourth, the most formidable barriers to successful AI adoption are not technological or financial but human, centred on talent scarcity, change management, and organisational resistance. Fifth, and perhaps most significantly, AI functions as a competitive equaliser in the Delhi/NCR context, enabling smaller ventures to compete credibly with larger, better-capitalised rivals by democratising access to advanced analytical and operational capabilities.

Unpacking all five themes was a cross-cutting finding of considerable theoretical importance: entrepreneurial mindset including cognitive openness, iterative experimentation, and personal technology orientation, emerged as the most powerful predictor of successful AI adoption outcomes, eclipsing firm size, sector, and financial capacity as determinants of success.

7.2 Theoretical Contributions

This study makes three distinct theoretical contributions. It extends the Technology Acceptance Model into the entrepreneurial context of an emerging economy, demonstrating that the dual role of the entrepreneur as both decision-maker and user compresses the adoption curve in ways not captured by TAM's original organisational assumptions. It enriches Dynamic Capabilities Theory by providing qualitative, ground-level evidence of how the sensing, seizing, and transforming capabilities manifest in the AI adoption journeys of micro and small ventures. It also contributes to the TOE framework by foregrounding the human and cognitive dimensions of the organisational context, dimensions that structural frameworks tend to underspecify.

7.3 Practical Implications

For entrepreneurs, the findings underscore that AI adoption should begin with clearly defined operational pain points rather than technological fascination, and that investment in team readiness and change management is as critical as investment in the tools themselves. For policymakers, the findings point to the need for targeted AI literacy programmes, affordable AI tool ecosystems, and mentorship networks specifically designed for first-generation entrepreneurs in the Delhi/NCR region. The Delhi Startup Policy 2025 provides a promising foundation, but deeper, sector-specific AI adoption support mechanisms are warranted.

7.4 Limitations and Future Research

This study is not without limitations. The purposive sample of sixteen participants, while appropriate for qualitative inquiry, limits the transferability of findings to other geographies or entrepreneurial populations. The cross-sectional nature of the data captures perceptions at a single point in time and cannot account for how AI adoption outcomes evolve over a venture's lifecycle. Future research should consider longitudinal qualitative designs that track AI adoption journeys over time, as well as comparative studies across Indian metro regions such as Bengaluru, Mumbai, and Hyderabad, to examine whether the competitive equalisation effect observed in Delhi/NCR is geographically consistent

or context-specific. Quantitative validation of the themes identified here, particularly the moderating role of entrepreneurial mindset, would further strengthen the evidence base.

In conclusion, this study affirms that AI adoption is not merely a technological choice but a strategic, human, and organisational commitment, one that, when made thoughtfully and supported adequately, holds genuine transformative potential for entrepreneurs navigating the intelligence frontier of the contemporary economy.

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