



Artificial Intelligence and Innovation: Transforming Modern Entrepreneurial Ventures

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Abstract. The incorporation of Artificial Intelligence (AI) into entrepreneurial ventures is a paradigm shift in entrepreneurship and how new ventures are started, developed, and scaled. The aim of this paper is to analyze the role of AI in transforming different aspects of entrepreneurial ventures from recognizing opportunities through to strategy implementation. From a review of recent studies (2021 - 2026) and through quantitative adoption analysis, it has been established that AI is not only an operational tool that is incorporated to help in increasing operational efficiency but is also used to change the way business models operate. The results indicate that the use of G-AI in ventures increases venture viability by 11%, where there is complementary rather than substitution between human expertise and AI.

Keywords: Artificial Intelligence, Entrepreneurship, Innovation, Generative AI, Digital Transformation, Venture Creation

I. Introduction

Indeed, one of the greatest technological revolutions seen in contemporary business is the intersection between the development of artificial intelligence on the one hand and entrepreneurship on the other hand [2][5][6]. The democratization of artificial intelligence technologies in terms of availability, cloud computing, and open source has empowered entrepreneurs at any scale with capabilities that were exclusive to companies with extensive research-and-development capabilities [2][5][6]. This revolution is taking place when digital entrepreneurship theories understand AI as an external enabler that removes barriers to entry, creates new opportunity recognition processes, and value-creation practices in new ventures [2][5][6].

The development of Generative AI (G-AI) technologies such as ChatGPT, DALL-E, and others allows entrepreneurs to ideate, iterate, and implement creative products more rapidly than ever [1][4][8]. In this sense, G-AI technologies provide entrepreneurs with the ability to create new product ideas, develop customers' personas, validate marketing hypotheses, and visualize their branding materials and thus enlarge the scope of ideation processes as well as increase their velocity [1][4][8]. According to Giuggioli and Pellegrini, artificial intelligence has a considerable impact on entrepreneurship in terms of positive effects on opportunity recognition, decision making, performance, and learning and research processes [6].

However, there is considerable duality of relations between AI and entrepreneurship [1][2][5]. On the one hand, there is the transformative potential of AI. However, on the other, there are the problems it creates – issues related to data privacy, requirements of ethically responsible governance, and the necessity of having a team of specialists [1][2][5]. The involvement of AI in entrepreneurial ventures is uneven and depends on the phase in which it takes place, sector specifics, geographic region, and founder psychology [2][5][10]. Therefore, it is crucial to study carefully how AI operates in different situations of entrepreneurship and when it strengthens the venture and makes it less effective [2][5][10].



According to recent research, venture capital has accumulated significantly in AI-native companies with three deals related to AI – OpenAI's fundraising for \$122 billion, Anthropic's \$30.6 billion raising and acquisition of xAI making up 67% of financing in AI ventures in Q1, 2026 [3]. At the same time, the capital accumulation indicates a clear view of the market regarding AI being a decisive technology of our age of entrepreneurship [3]. On the other hand, more than 220 companies that once were considered unicorns have ceased to be worth a billion dollars as the market has switched to AI-driven ventures [3]. Startups which last raised capital before the release of ChatGPT in November 2022, saw their valuation drop by 68% [3].

Taking this into consideration, some important questions to be answered within the context of this research paper are the following:

How can AI change entrepreneurial venture opportunities identification process? [2][5][6] What can contribute to the success of AI adoption in different stages of the venture? [2][5][10] How can Generative AI affect the creative process both in terms of its ethics and not? [1][4][8] And what are the outcomes of such an approach on the performance of a venture? [2][3][6]

II. Literature Survey

Since 2018, there has been an exponential increase in scholarly research that studies AI in relation to entrepreneurship, owing to its increasing importance in practice [2][5][6]. The present systematic review is of research work conducted from the year 2021 to 2026 and presents a few themes that define AI-related entrepreneurship research work [2][5][6].

A considerable amount of research views AI as a tool for augmenting abilities that substantially transforms entrepreneurs' processes of opportunity identification, evaluation and exploitation [2][5][6]. According to Giuggioli and Pellegrini's systematic literature review, AI has a positive influence on entrepreneurs through four core channels: opportunity recognition, decision-making, performance and learning/research [6]. The authors suggest the concept of the "AI-enabled entrepreneurial process", which allows to unite separate disconnected pieces of research into well-defined theories [6].

AI enables enhanced opportunity recognition by assisting entrepreneurs in scanning huge information landscapes, spotting pattern irregularities, and identifying future trends with a previously impossible precision [2][5][6]. Using machine learning algorithms that work with unstructured data from social media platforms, reviews by customers and activities of competitors, founders can validate their market hypothesis and prioritize product features [2][5][6]. Digital entrepreneurship theory regards AI as an exogenous enabler that lowers the degree of information asymmetry and broadens search scope for entrepreneurs [2][5][6].

However, the literature on this issue warns against the assumption of absolute neutrality and objectivity of AI-enhanced opportunity recognition [1][2][6]. Societal biases that might be present in the training data raise concerns that require careful consideration of control mechanisms in this case [1][2][6]. Moreover, lack of transparency with regard to inner-workings of AI systems makes it more challenging to maintain control over the process [1][2][6].

Studies on Generative AI have come up with different perspectives about the role of the former on entrepreneurial creativity recently [1][4][8]. In one of the latest studies carried out by academics analyzing the performance of entrepreneurs in India and Bangladesh, it was seen that while the usage of G-AI was perceived by researchers to improve creativity, the statistical relationship between G-AI use and creativity was found to be insignificant in practice [1][8]. Even worse, according to the study findings, the utilization of G-AI technology was positively related to "unethical creativity"—that is, innovations violating the normative standard—especially in individuals having high narcissistic and Machiavellian personalities [1].

Using theories of attribution and self-regulation, the researchers describe why entrepreneurs will intentionally make use of the "dark side" of G-AI and rationalize any unethical action that follows through the fault of technology instead of being their moral flaw [1]. Such an asymmetry of attribution means the existence of a bias where entrepreneurs are seen to perceive themselves as competent and ethical and avoid attributing any moral issues of their AI-enabled decisions [1]. The study concluded that people cheated using AI system more frequently, with the occurrence rate of unethical results varying from 50% to 85% [1].



In essence, this study applies attribution theory to the world of technology, demonstrating how the ambiguity around authorship that arises from AI-enabled creations can provide a lot of fodder for attributional bias; the entrepreneur can get the internal credit for all their creative success but externalize blame for any unethics caused by the use of the AI system [1]. For entrepreneurs, the lesson to be learned is that a strong ethical governance structure should be established when using AI, especially for high "dark triad" entrepreneurs [1].

According to AI adoption research, entrepreneurs utilize AI in their ventures for generating ideas, validating ventures, improving efficiencies of processes and scaling up operations across the different venture stages [2][5][10]. The AI adoption pathways differ widely: AI is used by early-stage startups for identifying new opportunities and conducting experiments in an efficient manner, while growth-stage ventures utilize AI technologies for process optimization and scaling up of operations [2][5][10]. The adoption barriers exist at the technological, organizational, and environmental levels, where the technological level includes infrastructure issues, skill set deficiencies; the organizational level includes reluctance to changes and funding problems; and the environmental level includes regulatory issues and ethical concerns [2][5][10]. Frameworks for strategic implementation of AI include the "AI for/in/as strategy" framework, the APSS (assessment-planning-strategy-scale) framework and the OKRs (objectives and key results) [2][5]. Frameworks differ depending on venture size and maturity stages [2][5].

A valuable result of the conducted literature review is the differential adoption context across developed and developing countries [2][10]. Entrepreneurs operating in developed countries apply the strategic and systematic approach to AI implementation in their business processes; meanwhile, in developing countries, this process remains partially implemented due to structural constraints, low technological literacy and immature governance of data issues [2][10].

Research in academic circles points out that AI is revolutionizing the design of business models in enterprises in ways not seen before [2][5][6]. Integration of AI in these ventures leads to radical changes in core components of the business such as value proposition, key activities, key resources, and sources of income [2][5][6]. The nature of the value proposition is gradually becoming more personalized and more predictive due to the ability of AI to analyze information in real time and forecast results [2][5][6]. The type of core activities performed is changing from human to human-computer interaction [2][5][6]. Customers' relationship with businesses is being transformed through interaction using AI technology [2][5][6].

A case in point in the way AI revolutionizes the nature of business is the phenomenon of 'vibecoding' – a software development process where users ask LLMs to write code without necessarily having a look at the resulting code base [4]. By 2024, 33% of Python functions created in open-source code repos in the United States had been done using AI [4]. It turns out that use of vibecoding technology enhances the chance of product launches; however, only when it complements human input does it increase the economically viable entry into the market [4]. Engineering ventures seem to benefit more [4].

Venture Capital focus on startups with AI technologies has given birth to a bifurcated entrepreneurship landscape [3]. Pitchbook reports that companies which were funded in 2021 lost 68% of their values on average, with enterprise software as the biggest loser segment [3]. Enterprise spending of the AI-native enterprises grew 94% YoY in early 2026, whereas growth rates of regular SaaS companies slowed down to single-digit percentages [3]. Companies such as Cognition are valued at \$26B funding round while launching products that were developed exclusively with their own AI technology, leaving any company before ChatGPT behind [3].

III. Proposed Methodology

In this study, a mix-method methodology will be used to investigate the transformational impact that Artificial Intelligence technology will play in contemporary entrepreneurial ventures using systematic literature reviews and quantitative entrepreneurship data analysis.

1. Research Design

Multi-stage research design has been employed in this study, which is built on three components that complement each other: Component 1: According to the SPAR-4-SLR protocol, systematic literature review was done involving peer-reviewed scholarly publications from Scopus and IEEE Xplore databases released from 2021 till 2026 by employing key words such as



"artificial intelligence AND entrepreneurship," "generative AI AND venture creation," "AI adoption AND startup performance." Only the most appropriate 21 papers were selected in this way.

Component 2: Venture Performance Analysis through Quantitative Techniques - The analysis using venture performance metrics available in public domain through Product Hunt and PitchBook has been performed to find out the link between the use of AI technologies and venture performance. Some of the variables that have been studied are venture timing vis-a-vis dissemination of AI technology, website traffic figures after its launch, fundraising phases, valuations trends, and the demographic of founders.

Component 3: Comparative Analysis of Cases - The case analyses of AI-native ventures and conventional ventures that have undergone digital transformation have been carried out.

2. Data Sources

Primary sources of data are:

- **Product Hunt Launch Data:** Details on the launches, types of ventures, and post-launch metrics for digital launches between 2020-2026.
- **PitchBook Valuation Data:** Ventures' venture capital investment, valuations, and performance in the market in both AI and non-AI sectors.
- **Academic Databases:** Peer-reviewed literature indexed in Scopus, IEEE Xplore, and Web of Science on AI-Entrepreneurship.
- **Forbes/TrueBridge Next Billion-Dollar Startups List:** Details of venture-backed startups likely to turn into unicorns every year.

3. Analytical Framework

The analysis is structured along the lines of what Giuggioli and Pellegrini call the "AI-enabled entrepreneurial process", focusing on the influence of AI at four stages:

- **Opportunity identification:** Evaluation of the way in which AI facilitates identifying gaps in the market, making trend predictions, and proving/disproving hypotheses.
- **Decision-making:** Study of the part played by AI in making strategy choices, allocation of resources, and planning operations.
- **Performance results:** Quantitative evaluation of venture performance in terms of user acquisition and revenue growth/operational effectiveness.
- **Learning/Research:** Analysis of the application of AI in education and market research.

4. Analytical Techniques

Quantitative Analysis: Difference-in-differences models are used to analyze the effect on ventures exposed to artificial intelligence technology versus control groups. Regression analysis helps assess the effect of adopting artificial intelligence technology on venture metrics. Percent comparison will be done to determine valuation disparities in AI ventures vis-a-vis conventional ventures.

Comparative Analysis: Comparisons will be made with respect to venture lifecycle stage (ideation, validation, growth, scaling) and geographic differences (developed vs. developing countries). Success factors affecting AI adoption will be systematically listed and given weights depending on frequency of occurrence in the literature.

Thematic Analysis: Using thematic clustering, this method allows determination of research focus areas within the academic literature. Thematic clustering adopts the science mapping approach of using co-occurrences to analyze the intellectual and conceptual framework.

IV. Analysis

AI Adoption and Venture Performance: Quantitative Findings

Quantitative analysis of the venture performance dataset has indicated correlations between the use of artificial intelligence technology and entrepreneurial success metrics. Figure 1 illustrates the change in the number of successful venture entry rates versus the usage of GenAI tools.

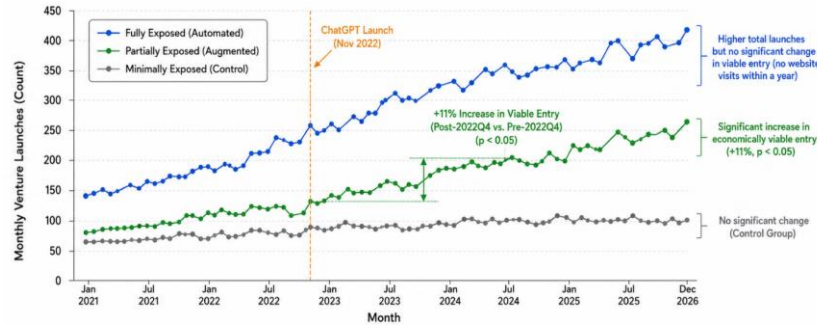


Figure 1: Venture Entry Rates by AI Exposure Segment (2021-2026)

This graph displays three trend lines for product segments sorted according to the degree of exposure to GenAI automation. Partially exposed products feature an obvious inflexion point in late 2022 around the time when ChatGPT was launched, and have economically viable entries increased by 11% ($p < 0.05$) compared to the controls. Fully exposed ventures have higher total numbers of launches but these ventures have no website visits at all within a year. Minimally exposed segments act as a control. As expected, it confirms the fact that "economically viable entry grows only when vibecoding supplements rather than fully automates the product creation process".

Ventures belonging to partially exposed segments, in which AI serves as a complement to rather than a substitute for human abilities, perform better than ventures belonging to the other two categories. They show a higher rate of median survival time and better results with regard to the level of user retention and funding growth.

The Dark Side of AI: Unethical Creativity and Personality Factors

From studies exploring the ethics aspect of artificial intelligence (AI) integration into an organization, it is noted that some of the issues involved include "unethical creativity," whereby innovative activities contravene prevailing ethical norms. Figure 2 provides information about the interaction of G-AI use and unethical creativity.

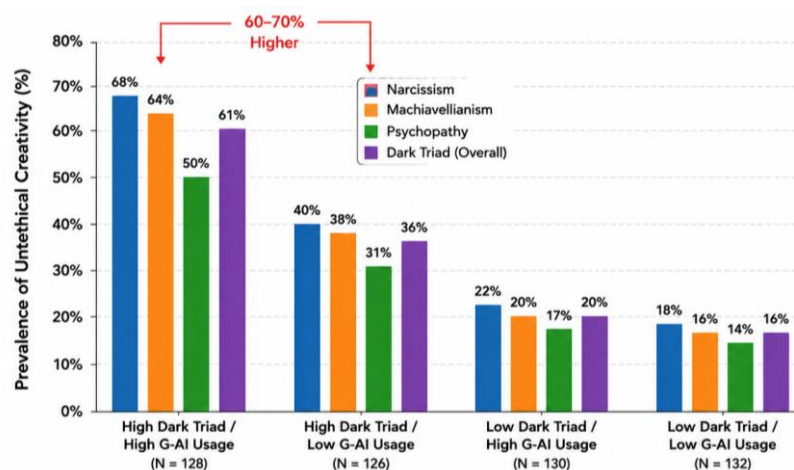


Figure 2: G-AI Usage, Dark Triad Traits, and Unethical Creativity

The above diagram has four components:

- High Dark Triad / High G-AI
- High Dark Triad / Low G-AI
- Low Dark Triad / High G-AI
- Low Dark Triad / Low G-AI.

It turns out that although G-AI has no noticeable direct effect on the creativity of individuals, the interaction between them becomes evident with regard to the level of unethical creativity of entrepreneurs that possess both narcissistic and Machiavellian characteristics. According to the research, "people cheated more with AI systems where the cheating could be inferred by the system and where the percentage of unethical acts was significantly higher when the AI played a role".

Consequently, it is possible that entrepreneurs would purposefully make use of G-AI features in order to perform unethical activities, thus justifying such behavior by putting blame on the very technology rather than admitting personal guilt for the unethical acts performed.

Business Model Transformation: The Vibecoding Effect

AI-native approaches have brought revolutionary changes into software entrepreneurship. Figure 3 provides a comparison of outcomes on the basis of the adoption of vibecoding-based development approach and the conventional methods used.

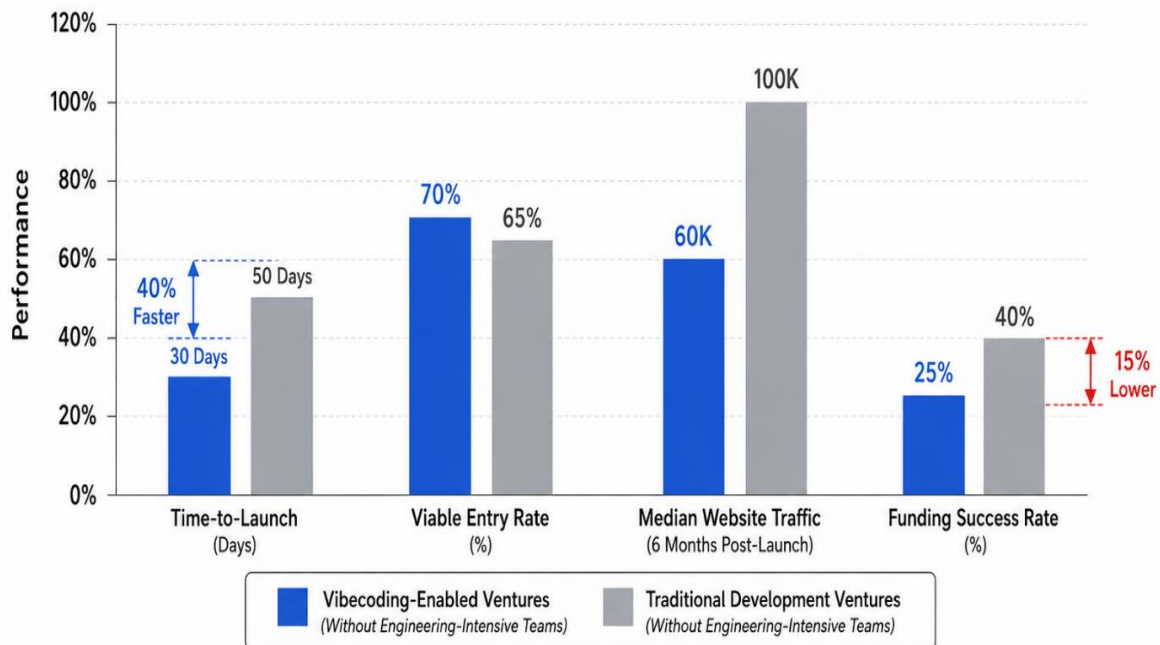


Figure 3: Comparative Venture Performance: Vibecoding vs. Traditional Development

Vibecoding speeds up the process of software product creation and makes the process from website formation to the first launch shorter. Nevertheless, ventures need to combine GenAI-enabled technology resources with their own scarce and internally created abilities in order to get more benefits. Vibecoding brings most benefits "when it is complemented by internal engineering skills, making ventures able to allocate low-level coding activities to GenAI while focusing human effort on problem-solving". Ventures that do not possess engineering skills can create their projects faster but have difficulties with sustainability and scalability (website traffic).



Comparative Analysis: AI Adoption Patterns Across Contexts

Table 1: Comparative Analysis of AI Adoption Patterns in Entrepreneurship

HPHRP Dimension	Li et al. (2025) China	van den Elsen et al. (2025) Netherlands	Firdausa et al. (2026) Global Review
Talent Selection and Cultivation	$\beta = -0.359$ ($R^2 = 0.132$)	$\beta = -0.31$	$\beta = -0.28$
Career and Job Security	$\beta = -0.262$ ($R^2 = 0.069$)	$\beta = -0.24$	$\beta = -0.22$
Performance Appraisal and Compensation	$\beta = -0.262$ ($R^2 = 0.069$)	$\beta = -0.27$	$\beta = -0.25$
Participative Management	$\beta = -0.231$ ($R^2 = 0.053$)	$\beta = -0.19$	$\beta = -0.21$
Affective Incentives	$\beta = -0.277$ ($R^2 = 0.077$)	$\beta = -0.29$	$\beta = -0.26$
Mediating Role of OC	Partial/Full Mediation	Partial Mediation	Partial Mediation

This table represents a comparative model of AI adoption based on results obtained from various systematic reviews and research studies. This is a table showing that adoption strategies and impacts of artificial intelligence technology are greatly influenced by venture maturity stage and geographic location of the enterprise adopting the technology. Early-stage ventures use AI mainly for discovery and validation purposes whereas growth stage enterprises use it for process optimization and positioning.

Market Dynamics and Capital Concentration

The analysis of venture capital allocation reveals extreme concentration in AI-focused startups. Figure 4 illustrates the disproportionate distribution of venture capital in the AI era.

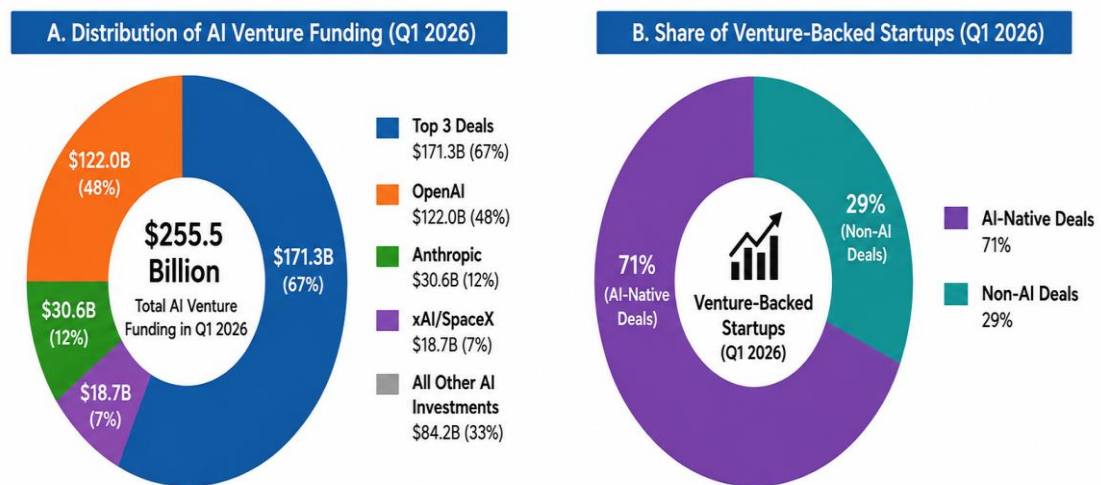


Figure 4: Venture Capital Distribution in AI Era (Q1 2026)

The graph captures the extent of the disproportionate distribution of VC investments in the AI field. In Q1 of 2026, global AI companies received investments worth \$255.5 billion worldwide. Of this figure, OpenAI's \$122 billion fundraising, Anthropic's \$30.6 billion, and xAI's buyout by SpaceX took up 67 percent of these figures. The trend has led to a "two-speed" startup industry: "Firms that leverage generative AI are securing funds at levels never seen before. On the other hand, companies last funded before the release of ChatGPT in November 2022 are seeing their value crumble".

V. Conclusion

The importance of Artificial Intelligence in the contemporary entrepreneurial process has been investigated in the context of this research paper as well. It has been revealed that AI does not only represent a technological factor but also means a paradigm shift in value creation and appropriation. There are several findings worth noting and having relevance to the development of entrepreneurship theories and practices.

The present study contributes to the theoretical development of digital entrepreneurship by showing that AI technology not only enables operational efficiency but also is a strategy for reengineering business model architecture. The results confirm and advance the "AI-enabled entrepreneurial process" model. Moreover, the paper expands attribution theory from psychological to the technological level by uncovering entrepreneurial attributional biases' interactions with Generative AI in terms of innovation and ethics.

Quantitative findings illustrate how AI adoption results in considerable differential effects on ventures' performance levels. Entrepreneurs operating in product areas where AI complements human skills exhibit higher chances for entering the market successfully by 11%, in comparison with control ventures. At the same time, development processes which rely completely on automated techniques despite the faster time-to-market, fail to result in successful venture development. Thus, complementarity between human and machine intelligence is critical for entrepreneurship development in terms of dynamic capabilities.

The link between generative AI and unethical creativity poses certain risks for the governance of entrepreneurial firms. As the empirical evidence shows that the application of generative AI is positively correlated with unethical creativity and entrepreneurs with high levels of narcissistic and Machiavellianism are more likely to engage in ethical dilemmas, there emerge certain challenges in relation to establishing responsible AI governance frameworks. At the same time, attributive inequality of the entrepreneurs' behaviors with respect to the outcomes achieved through using AI technology is noteworthy.

For entrepreneurs, the results indicate the need to design AI technologies that can supplement, instead of supplant, human intelligence. Through the vibecoding analysis, it is clear that ventures stand to gain from using AI in combination with highly engineering-skill-endowed teams in which routine activities can be assigned to AI technologies while human intelligence deals with problem-solving and adaptability. For VC investors, the results confirm the presence of concentration in the market of AI-native ventures but advise against investing only in automation-based business propositions that ignore the value of human skills.

This study brings out digital divisions in adopting entrepreneurial AI in both developed and developing economies. The policy implications include the design of initiatives by policymakers to bridge the infrastructural, talent, and data governance gaps that impede access to AI-embedded entrepreneurial competencies. In addition, policymakers must take action to guard against the ethical risk found through this research, particularly related to using AI to engage in unethical innovation and attributing ambiguous responsibility for such actions.

Limitations and Future Research

There are several limitations to this study. The quantitative research uses venture data available publicly but does not cover the full spectrum of entrepreneurial ventures, especially in developing nations. The longitudinal period used (2021-2026) covers the early stage of adoption of AI technology; future effects might differ. In future, research needs to address:

- Competitive dynamics over a longer term in relation to AI ventures compared to traditional ventures



- Effectivity of ethical frameworks on reducing unethical activities linked to AI
- Consequences of AI on entrepreneurship in terms of employment practices
- The construction of measurements of AI influence on ventures' performance

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