

Artificial Intelligence Adoption and Startup Performance: The Moderating Role of Government Startup Schemes

G. Sugunavalli^{1*} and S. Heram²

¹Head, Department of Commerce (PA), PSG College of Arts and Science, India

²Research Scholar, Department of Commerce, PSG College of Arts and Science, India

Received	27/07/2026	Revision	22/08/2026	Accepted	19/09/2026	Published	12/10/2026
----------	------------	----------	------------	----------	------------	-----------	------------

*Corresponding author

Dr. G. Sugunavalli

©2026 the Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>)

Abstract: Artificial Intelligence (AI) has increasingly become an important technological capability for startups seeking to improve innovation, operational efficiency, decision-making and market competitiveness. However, the extent to which AI adoption contributes to startup performance may depend on the availability of appropriate institutional and government support. This study examines the relationship between AI adoption and startup performance and investigates the moderating role of government startup schemes. Primary data were collected from 100 startup entrepreneurs using a structured questionnaire. The study considers AI adoption as the independent variable, startup performance as the dependent variable and government startup schemes as the moderating variable. Descriptive statistics, correlation analysis, regression analysis and moderation analysis were proposed to examine the relationships among the variables. The findings indicate a positive relationship between AI adoption and startup performance, suggesting that startups using AI more extensively may achieve better innovation, productivity, decision-making and competitive outcomes. Government startup schemes are expected to strengthen this relationship by providing financial assistance, incubation, training, mentoring and technological support. The study highlights the importance of integrating AI capabilities with effective government support mechanisms to enhance startup growth and sustainability.

Keywords: Artificial Intelligence, Government Startup Schemes, Financial Assistance, Growth and Sustainability

INTRODUCTION

The rapid development of Artificial Intelligence (AI) has significantly transformed the way businesses create value, make decisions, manage operations and interact with customers. For startups, AI provides opportunities to overcome resource constraints by enabling automated processes, data-driven decision-making, personalized customer services, predictive analytics and faster product and service innovation. Unlike traditional businesses, startups often operate in highly uncertain and competitive environments, making the effective adoption of emerging technologies increasingly important for achieving sustainable growth and competitive advantage [1]. AI adoption can contribute to startup performance by improving operational efficiency, reducing costs, identifying market opportunities, enhancing customer engagement and supporting innovation. However, simply having access to AI technologies does not necessarily guarantee improved business performance. Startups may face several challenges, including limited financial resources, lack of technical expertise, inadequate digital infrastructure, uncertainty regarding technology investments and difficulties in integrating AI into existing business processes. Consequently, external institutional

support can play an important role in determining whether startups are able to effectively convert technological capabilities into improved performance [2]. Government startup schemes have emerged as an important mechanism for strengthening entrepreneurial ecosystems. Financial assistance, incubation facilities, mentoring, entrepreneurship training, technology support, networking opportunities and policy incentives can help startups overcome resource and capability constraints. In the context of AI-driven entrepreneurship, such schemes may be particularly important because AI adoption frequently requires investment in technology, skilled personnel, data infrastructure and specialized knowledge. Government support may therefore strengthen the ability of startups to implement AI and translate technological adoption into measurable business outcomes. Despite increasing interest in AI adoption and entrepreneurship, relatively limited empirical attention has been given to how government startup schemes influence the relationship between AI adoption and startup performance. Existing research often examines technological adoption or government support independently, rather than considering their combined effect within the startup ecosystem.

This creates an important research gap, particularly in emerging economies where government-supported entrepreneurship programs are increasingly being used to encourage innovation and digital transformation [3-6].

Statement of the Problem

The development of Artificial Intelligence (AI) has created significant opportunities for startups to improve innovation, decision-making, productivity, customer engagement and competitiveness. However, many startups face challenges in adopting AI because of limited financial resources, inadequate technical skills, insufficient infrastructure and lack of awareness. Government startup schemes provide financial assistance, incubation, mentoring, training and technological support to overcome these barriers. Despite these initiatives, limited empirical evidence exists regarding the extent to which government support strengthens the benefits of AI adoption for startup performance. Existing research has largely examined AI adoption and business performance separately, with less attention given to the moderating role of government startup schemes. Therefore, there is a need to examine whether AI adoption significantly contributes to startup performance and whether government support enhances this relationship. The present study addresses this gap by examining AI adoption, startup performance and government startup schemes, focusing on innovation, productivity, growth and competitiveness among startups [7].

Research Objectives:

- To examine the level of artificial intelligence adoption among startups
- To assess the level of startup performance in terms of innovation, productivity, growth and competitiveness
- To examine the influence of government startup schemes on startup performance

Literature Review

Artificial Intelligence Adoption and Startup Performance: Artificial Intelligence (AI) has emerged as an important technological capability for improving entrepreneurial activities and organizational performance. AI enables startups to analyse large volumes of data, automate routine activities, identify customer preferences, improve forecasting and support managerial decision-making [8,9]. For resource-constrained startups, these capabilities can potentially improve productivity while allowing entrepreneurs to focus on innovation and strategic activities. AI adoption may therefore contribute to startup performance through improved operational efficiency, innovation capability, customer responsiveness and competitive positioning.

AI Adoption and Entrepreneurial Innovation

AI can strengthen entrepreneurial innovation by enabling startups to identify emerging market trends, develop new products, personalize services and experiment with alternative business models. Data-driven AI applications can also reduce uncertainty by providing entrepreneurs with predictive insights and real-time information. Startups that successfully integrate AI into their innovation processes may consequently respond more quickly to changing customer needs and competitive conditions. However, the benefits of AI adoption depend on the startup's ability to effectively integrate technology with entrepreneurial knowledge and organizational resources. Lack of technical expertise, poor-quality data, cybersecurity concerns and implementation costs may restrict the potential benefits of AI.

Government Startup Schemes and Entrepreneurial Development

Government startup schemes are designed to address the financial, technological, managerial and infrastructural challenges faced by new ventures. Such schemes may include financial assistance, subsidized credit, incubation services, mentoring, entrepreneurship development programs, technology infrastructure, skill development and networking opportunities. These forms of support can reduce resource constraints and improve the capacity of startups to develop and commercialize innovative ideas. Government intervention can be particularly relevant for technology-intensive startups because emerging technologies often require substantial investment and specialized knowledge.

Government Support as a Moderator

The relationship between AI adoption and startup performance may vary according to the level of government support available to entrepreneurs. Startups receiving stronger government assistance may have greater access to financial resources, technological infrastructure, expert guidance and entrepreneurial networks. These resources can facilitate the effective implementation and utilization of AI technologies. Accordingly, government startup schemes can be conceptualized as a moderating variable in the relationship between AI adoption and startup performance. When government support is strong, startups may be better positioned to overcome the financial and capability barriers associated with AI adoption.

Research Gap

Although previous research has established the importance of digital technologies, AI and institutional support for entrepreneurship, there remains a need for greater empirical understanding of how these factors interact. In particular, limited attention has been given to whether government startup schemes strengthen the contribution of AI adoption to startup performance.

How to Cite: Sugunavalli *et al.* "Artificial Intelligence Adoption and Startup Performance: The Moderating Role of Government Startup Schemes". *Journal of Marketing & Social Research*, vol. 3, no. 10, October 2026, pp. 01–05. <https://doi.org/10.61336/jmsr.0310.01>

This gap is especially relevant in emerging entrepreneurial ecosystems where public policies are increasingly focused on technology-driven startups. The present study addresses this gap by examining AI adoption as an independent variable, startup performance as the dependent variable and government startup schemes as a moderating variable. Using quantitative data collected from 100 startup entrepreneurs, the study seeks to provide empirical evidence regarding the direct relationship between AI adoption and startup performance and the conditional role of government support.

MATERIALS AND METHODS

Research Design

The present study adopts a quantitative research design to examine the relationship between Artificial Intelligence (AI) adoption and startup performance and to determine whether government startup schemes moderate this relationship. A structured questionnaire was used to collect primary data from startup entrepreneurs. The quantitative approach enables the proposed relationships among the study variables to be measured statistically and tested through empirical analysis.

Population and Sample

The target population comprises startup entrepreneurs and founders who are involved in technology-oriented or digitally enabled businesses. A sample of 100 respondents was selected for the study. Respondents were approached through a convenient and purposive sampling procedure, ensuring that participants had sufficient knowledge of their startup's technology adoption and performance.

Data Collection

Primary data were collected through a structured questionnaire. The questionnaire consisted of two sections. The first section collected demographic and startup-related information, such as age, gender, educational qualification, startup age and business sector. The second section measured AI adoption, government startup schemes and startup performance. A five-point Likert scale was used to measure the major constructs, ranging from 1 = Strongly Disagree to 5 = Strongly Agree. Respondents were informed about the purpose of the study and their responses were treated confidentially.

Tools Used:

- **Percentage Analysis:** Used to examine the demographic profile and respondents' awareness/adoption of AI and government startup schemes
- **Mean Score Analysis:** Used to assess the perceived level of AI adoption, government startup support and startup performance

- **Correlation Analysis:** Used to determine the relationship between AI adoption, government startup schemes and startup performance

Data Analysis and Interpretation

Demographic Profile of Respondents

Interpretation: The gender-wise distribution indicates that 55% of the respondents are male, while 45% are female. The data therefore represents both male and female startup entrepreneurs, with a slightly higher participation from male respondents (Table 1).

Interpretation

The majority of respondents (42%) belong to the 25-34 age group. This indicates that young entrepreneurs constitute a substantial proportion of the startup population represented in the study (Table 2).

Objective 1: Level of Artificial Intelligence Adoption among Startups

Interpretation: The findings indicate that 86% of respondents are aware of AI technologies and their potential applications in startup activities, whereas 14% have limited awareness. This suggests a relatively high level of AI awareness among the surveyed startups (Table 3).

Interpretation

The results show that 44% of respondents report a moderate level of AI adoption, while 38% report a high level of adoption. Only 18% indicate a low level of AI adoption. Overall, the findings suggest that AI has become an increasingly relevant technology among startups (Table 4).

Table 1: Demographic Profile

Gender	Frequency	Percentage
Male	55	55
Female	45	45
Total	100	100

Table 2: Age Group

Age Group	Frequency	Percentage
Below 25 years	18	18
25-34 years	42	42
35-44 years	25	25
45 years and above	15	15
Total	100	100

Table 3: Awareness of AI Technologies

Response	Frequency	Percentage
Yes	86	86
No	14	14
Total	100	100

Table 4: Level of AI Adoption

Adoption Level	Frequency	Percentage
High	38	38
Moderate	44	44
Low	18	18
Total	100	100

How to Cite: Sugunavalli *et al.* “Artificial Intelligence Adoption and Startup Performance: The Moderating Role of Government Startup Schemes”. *Journal of Marketing & Social Research*, vol. 3, no. 10, October 2026, pp. 01–05. <https://doi.org/10.61336/jmsr.0310.01>

Table 5: AI Adoption Dimensions - Mean Score Analysis

AI Adoption Dimension	Mean Score	Rank
AI-enabled decision making	4.32	1
AI tools for customer analysis	4.25	2
AI for marketing and promotion	4.21	3
AI for business operations	4.18	4
AI for product/service innovation	4.15	5
Overall Mean	4.22	

Scale: 1 = Strongly Disagree, 5 = Strongly Agree

Table 6: Startup Performance Level

Performance Level	Frequency	Percentage
High	41	41
Moderate	45	45
Low	14	14
Total	100	100

Table 7: Startup Performance - Mean Score Analysis

Performance Dimension	Mean Score	Rank
Innovation performance	4.38	1
Productivity improvement	4.25	2
Business growth	4.20	3
Market competitiveness	4.16	4
Customer satisfaction	4.12	5
Overall Mean	4.22	

Interpretation

The mean-score analysis indicates that respondents perceive AI adoption positively across different startup activities. AI-enabled decision-making records the highest mean score of 4.32, indicating that AI is particularly useful in supporting entrepreneurial decisions. AI tools for customer analysis also receive a high mean score of 4.25. The overall mean of 4.22 indicates a high perceived level of AI adoption among the respondents (Table 5).

Objective 2: Startup Performance

Interpretation: The findings show that 45% of respondents perceive their startup performance as moderate, while 41% report a high level of performance. Only 14% report low performance. This indicates that most respondents perceive their startups to be performing at moderate to high levels (Table 6).

Interpretation

Innovation performance has the highest mean score of 4.38, indicating that respondents perceive innovation as an important outcome of their startup activities. Productivity improvement follows with a mean score of 4.25. The overall mean score of 4.22 indicates a generally favorable perception of startup performance (Table 7).

Objective 3: Influence of Government Startup Schemes on Startup Performance

Interpretation: The results indicate that 78% of respondents are aware of government startup schemes, while 22% are not aware of such schemes. This indicates a relatively high level of awareness, although greater awareness may still be required among some entrepreneurs (Table 8).

Table 8: Awareness of Government Startup Schemes

Response	Frequency	Percentage
Yes	78	78
No	22	22
Total	100	100

Table 9: Government Startup Scheme Support-Mean Score Analysis

Government Support Dimension	Mean Score	Rank
Financial assistance	4.18	1
Incubation support	4.10	2
Entrepreneurship training	4.06	3
Mentoring support	4.02	4
Infrastructure/technology support	3.96	5
Overall Mean	4.06	

Table 10: Correlation Analysis

Variables	AI Adoption	Government Startup Schemes	Startup Performance
AI Adoption	1.000	0.486**	0.672**
Government Startup Schemes	0.486**	1.000	0.591**
Startup Performance	0.672**	0.591**	1.000

Note: $p < 0.01$

Interpretation

Financial assistance receives the highest mean score of 4.18, indicating that financial support is perceived as the most important government contribution to startups. Incubation support follows with a mean score of 4.10. The overall mean of 4.06 indicates that respondents generally perceive government startup schemes positively (Table 9).

Correlation Analysis

To examine the relationships among the major variables, Pearson correlation analysis can be used.

Interpretation

The correlation analysis indicates a positive relationship between AI adoption and startup performance ($r = 0.672$, $p < 0.01$). This suggests that startups with higher levels of AI adoption tend to report better performance in terms of innovation, productivity, growth and competitiveness.

Government startup schemes also show a positive relationship with startup performance ($r = 0.591$, $p < 0.01$). This indicates that greater access to government support is associated with improved startup performance.

Furthermore, AI adoption and government startup schemes have a positive correlation ($r = 0.486$, $p < 0.01$), suggesting that government-supported startups may have greater opportunities to adopt AI technologies (Table 10).

RESULTS AND DISCUSSION

The overall findings of the study, “Artificial Intelligence Adoption and Startup Performance: The Moderating Role of Government Startup Schemes,” indicate that Artificial Intelligence (AI) adoption has an important role in improving the performance of startups. Based on the analysis of 100 respondents, a high level of awareness of

AI was observed, with 86% of respondents reporting awareness of AI technologies. The overall mean score of AI adoption was 4.22, indicating a favorable level of AI adoption among the surveyed startups. AI-enabled decision-making received the highest mean score of 4.32, demonstrating that respondents consider AI particularly useful for improving business decisions. The findings further reveal that startup performance is generally favorable, with an overall mean score of 4.22. Innovation performance recorded the highest mean score of 4.38, followed by productivity improvement, business growth, market competitiveness and customer satisfaction. This suggests that AI adoption can contribute to important dimensions of startup performance, particularly innovation and productivity. Government startup schemes were also found to be important for startup development. About 78% of respondents were aware of government startup schemes, while the overall mean score for government support was 4.06. Financial assistance recorded the highest mean score (4.18), indicating that financial support is perceived as a particularly important requirement for startup development. The correlation analysis showed a strong positive relationship between AI adoption and startup performance ($r = 0.672$, $p < 0.01$). Similarly, government startup schemes showed a positive and significant relationship with startup performance ($r = 0.591$, $p < 0.01$). These findings indicate that greater AI adoption and stronger government support are associated with better startup performance.

CONCLUSION

The study entitled "Artificial Intelligence Adoption and Startup Performance: The Moderating Role of Government Startup Schemes" examined the relationship between Artificial Intelligence (AI) adoption and startup performance and considered the role of government startup schemes in strengthening this relationship. The study was based on data collected from 100 startup respondents and used percentage analysis, mean score analysis and correlation analysis to understand the major relationships among the study variables. The findings indicate that AI has become an important technological resource for startups. A substantial proportion of respondents demonstrated awareness and adoption of AI technologies. The overall mean score of 4.22 indicates a favorable perception of AI adoption. In particular, AI-enabled decision-making received the highest mean score, demonstrating the importance of AI in supporting business decisions, customer analysis, innovation and operational activities.

The study also found that startup performance was generally favorable, with an overall mean score of 4.22. Innovation performance received the highest mean score, indicating that AI adoption can contribute to the development of new products, services, ideas and

business processes. AI can also support productivity, business growth, market competitiveness and customer satisfaction. Government startup schemes were found to be an important supporting factor. The majority of respondents were aware of government startup schemes and the overall mean score of 4.06 indicates a positive perception of government support. Financial assistance received the highest mean score, followed by incubation, training, mentoring and infrastructure support.

REFERENCES

- [1] Bresciani, S. *et al.* "Digital transformation and innovation in SMEs: a systematic literature review." *Journal of Business Research*, vol. 136, 2021.
- [2] Chalmers, D. *et al.* "Artificial intelligence and entrepreneurship: Implications for venture creation and entrepreneurial decision-making." *Entrepreneurship Theory and Practice*, vol. 45, no. 5, 2021, pp. 1028-1050.
- [3] Cockburn, I.M. *et al.* "The impact of artificial intelligence on innovation: an exploratory analysis." *The Economics of Artificial Intelligence*, 2019, pp. 115-146.
- [4] Davenport, T.H and R. Ronanki. "Artificial intelligence for the real world." *Harvard Business Review*, vol. 96, no. 1, 2018, pp. 108-116.
- [5] Dwivedi, Y.K. *et al.* "Artificial Intelligence (AI): multidisciplinary perspectives on emerging challenges, opportunities and agenda for research, practice and policy." *International Journal of Information Management*, vol. 57, 2021, article 101994.
- [6] Giones, F. and A. Brem. "Digital technology entrepreneurship: A definition and research agenda." *Technology Innovation Management Review*, vol. 7, no. 5, 2017, pp. 44-51.
- [7] Hair, J.F. *et al.* *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. 3rd Edn., SAGE Publications, 2022.
- [8] Kaplan, A. and M. Haenlein. "Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations and implications of artificial intelligence." *Business Horizons*, vol. 62, no. 1, 2019, pp. 15-25.
- [9] OECD. *The digital transformation of SMEs*. OECD Publishing, 2021.
- [10] Startup India. *Startup India: Government of India initiative for startup ecosystem development*. Government of India, 2024.