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A Critical Analysis of Utilisation of Artificial Intelligence Among the Rural Entrepreneurs

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Abstract

Entrepreneurship is a key paradigm for strategic management that promotes economic growth in particular regions and countries. The entrepreneurs in rural areas are extremely crucial. The artificial intelligence is necessary that for smooth functioning and progress for rural entrepreneurs. This paper is an attempt to analyse the utilisation of AI in rural entrepreneurs. The primary data is collected from two hundred and seventy-eight entrepreneurs in rural areas. It is found that entrepreneurs are not aware about AI.

Keywords: AI, awareness of AI, Rural Entrepreneurs

Introduction

In the view of Entrepreneurs in India are the primary forces behind economic expansion, employment creation, and innovation. They improve productivity, generate income, and boost the standard of living for a large number of people, making them a crucial component of India's economic expansion. The rural entrepreneurs is the entrepreneurship which is taken. Rural entrepreneurship is essential to the expansion of the economy (Chaudhari, 2021). It is the time they should spread their business beyond the rural sector. The utilisation of modern techniques will make rural entrepreneurship more profitable and attractive. The social media, online marketing platforms and Artificial intelligence are going to be the key factors in nourishing the entrepreneurship and rural entrepreneurship is not an exception to this. It is often found that the rural entrepreneurs are utilising the social media like WhatsApp for their business. (Chaudhari, 2023) have reported that a large number of academics, researchers, and government organisations have studied entrepreneurship. Artificial intelligence (AI) is the term used to describe the imitation of human intellect in robots that have been built to mimic human cognitive abilities and think like humans (Artificial Intelligence (AI) Policies in India-A Status Paper, 2020). In the report by (Turing et al., 2024) it is stated that AI can stimulate economic growth by facilitating: Intelligent automation; capital and labour augmentation and Diffusion of innovations. (Obschonka et al., 2025) reported that AI and entrepreneurship come with previously unheard-of prospects and difficulties. Leading the charge in comprehending and utilising AI's potential to stimulate innovation, improve decision-making, and promote long-term entrepreneurial success is our responsibility as academics. In the view of (Talebi et al., 2025) Startups should spend money on developing their teams' AI literacy and skills in order to optimise the advantages of AI. To ensure that current employees are able to use AI technologies efficiently, this entails not just hiring AI specialists but also giving them continual education and training. (Dowell, 2024)Pointed out the characteristics of today's AI users point to more involved companies, which are typically bigger, more innovative, and more inclined to export. This research is about judging the awareness of rural entrepreneurs about artificial intelligence

Review of Literature

(Chaudhari, 2024)mentioned that Artificial intelligence is changing human existence in a way that has never been seen before. Studying the idea of artificial intelligence is essential. AI will affect many areas of knowledge, and no person or business can thrive without adequate understanding of AI.

(Giuggioli & Pellegrini, 2023) demonstrates the significant effects of AI on entrepreneurship, namely the four ways it benefits entrepreneurs: through opportunity, performance, decision-making, and research and education.

(Vijay Manohar Tiwari, Avinash Bajpai Kapil Chandoriya, 2025) Tried to answer Do AI companies have access to the tools they need to get started and thrive, such as training datasets and supercomputers? At the same time, do laws mandating open-source algorithms or data sharing give business owners broader access to AI or make it more challenging to safeguard inventions and secure funding? What makes a good policy for AI entrepreneurship? The resolution of these and additional research problems posed in this review will offer crucial direction for entrepreneurship policy and practitioners in their endeavours to direct AI-related entrepreneurship towards beneficial applications while averting any societal harm.

The above discussion has brought to following hypothesis

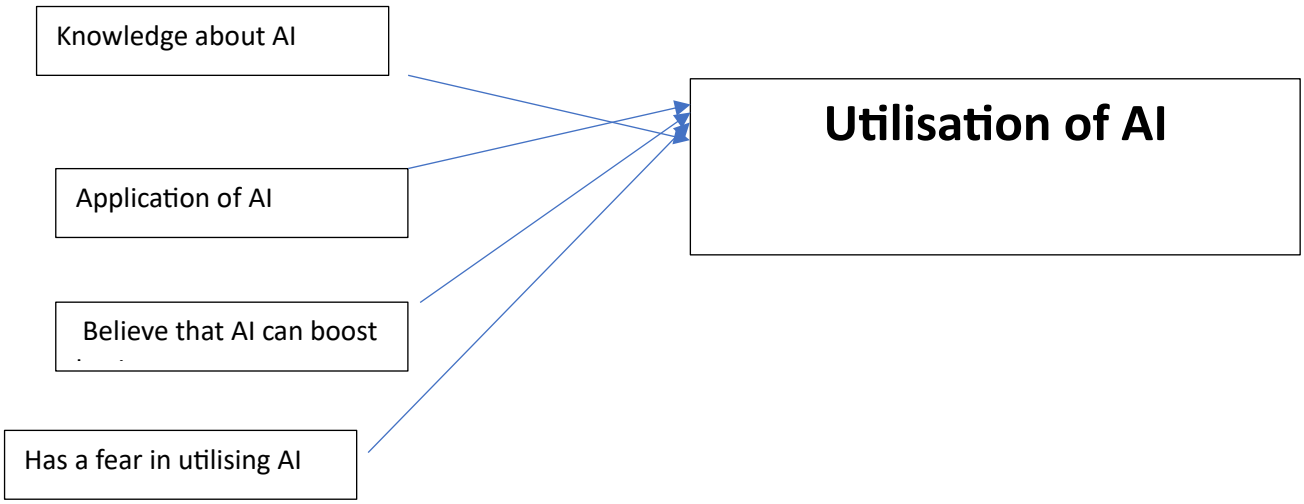
H1 The rural entrepreneurs have knowledge about Artificial Intelligence

H2 The rural entrepreneurs have applied artificial intelligence

H3 The rural entrepreneurs believe that artificial intelligence can boost their business

H4 The rural entrepreneurs have fear in applying artificial intelligence

Mechanism of Exploration



Approaches of Research

The questionnaire's design was informed by the theoretical framework mentioned above. The pilot study was conducted in the initial phase. After carefully evaluating the responses and incorporating some crucial suggestions, the final questionnaire was created. The core data was gathered by having people complete out questionnaires in person. 300 was the final sample that was collected. Following examination, the responses from 278 people were deemed to be legitimate. Every primary piece of information was gathered from rural areas of Nagpur district. This was accomplished through the use of convenience sampling.

Variables	Categories	Frequency	Percentage
Gender	Male	194	70
	Female	84	30
Age	25 to 30	58	21
	31 to 40	173	62
	Above 40	47	17
Education Level	Graduate	149	53
	Post Graduate	103	37
	Above	26	10
Types	Agro entrepreneurs	112	40
	Handicrafts and Artisanal Work	57	20
	Tourism and Hospitality	36	13
	Other	73	27

Reliability

Each indicator's loading with a latent variable was calculated and contrasted with the assessment model's starting value. Indicator reliability is deemed satisfactory only when it surpasses 0.7. According to the table, loadings for the majority of indicators are higher than 0.7 for every latent variable. Additionally, the CR coefficient—which needs to be higher than 0.7—is used to evaluate paradigm dependability.

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
AP	0.789	0.789	0.864	0.617
BL	0.871	0.88	0.912	0.723
EI	0.806	0.816	0.873	0.633
FE	0.894	0.896	0.927	0.762
K	0.822	0.834	0.882	0.652

The Fornell-Larcker standard

It is urged that the square root of AVE be higher than the correlation with any other construct in the framework in order to demonstrate discriminant validity using the Fornell-Larcker criterion. Table #3

	AP	BL	EI	FE	K
AP	0.785				
BL	0.742	0.851			
EI	0.624	0.665	0.796		
FE	0.473	0.707	0.525	0.873	
K	0.68	0.631	0.86	0.427	0.808

HTMT

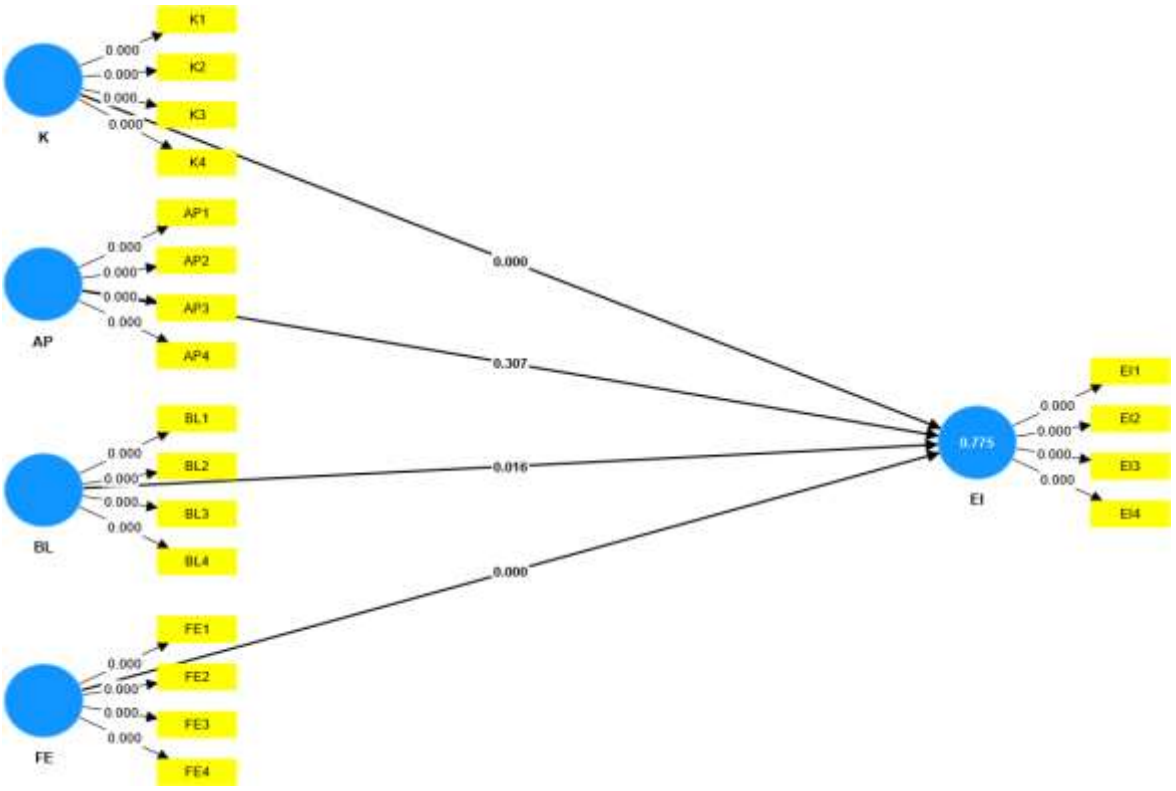
All constructions in HTMT must have loadings greater than those of any other construction, and factor loading shouldn't be greater than 0.85. The need of determining if the HTMT values are noticeably below a predetermined threshold, such 0.85 or 0.90, is also emphasised in recently published guidelines articles. The fourth table

	AP	BL	EI	FE	K
AP					
BL	0.892				
EI	0.775	0.815			
FE	0.544	0.769	0.63		
K	0.855	0.761	0.724	0.492	

Hypothesis testing

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
AP -> EI	0.051	0.049	0.05	1.022	0.007
BL -> EI	0.133	0.13	0.055	2.405	0.016
FE -> EI	0.134	0.136	0.032	4.186	0
K -> EI	0.753	0.756	0.049	15.341	0

- The analysis shows that the rural entrepreneurs have knowledge about Artificial Intelligence. Hence based on analysis (β=.051, t=1.022, p<.05) it is concluded that there is significant relationship between AP and EI.
- The analysis shows that the rural entrepreneurs have applied Artificial Intelligence. Hence based on analysis (β=.133, t=2.405, p<.05) it is concluded that there is significant relationship between BL and EI.
- The analysis shows that the rural entrepreneurs feels that AI will boost business. Hence based on analysis (β=.134, t=4.186, p<.05) it is concluded that there is significant relationship between FE and EI.
- The analysis shows that the rural entrepreneurs have fear about AI. Hence based on analysis (β=.753, t=15.341, p<.05) it is concluded that there is significant relationship between FE and EI.



Conclusion and Recommendations

It is seen that the concept of artificial intelligence is gaining popularity. The startup initiatives must reach the rural sector also (Chaudhari, 2025). The rural entrepreneurs are not utilising the AI in efficient manner. It is important to utilise AI in packaging, production and selling. The handicraft business must utilise AI to compare with the machine product. The AI training for entrepreneurs must be conducted. It is necessary that fear of utilising AI must be eliminated from their minds.

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