



Empowering Rural Economies through a Moderated Mediation Analysis of A I and Fin Tech in Driving Financial Inclusion and Rural destination Promotion

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Abstract. The rural economy is based on agriculture and is the base of national economy. Hence, improvement in quality of life of rural population helps to achieve national development. The rural community of Bangalore rural districts are blessed with plenty of natural resources such as agricultural crops, Scenic beauties such as valleys, waterfalls, adventure spots, temples and festivals, culture and cuisines and many more. AI, fintech and their applications in this case are used to bring the characteristics of rural destinations to the world market and to build the brand. Fin tech can make cashless payments and digital wallets possible, can manage the orchestration of payments, can offer Personalized financial services, can execute Automated refunds and Facilitate Flexible booking of accommodation and transportation. When the community in the rural area was ready for the adaptation of AI and financial (fintech) technology, a tremendous change and development can be achieved for the Rural community. It makes their way of living better, develop their economy and bring national integration and more tourists to rural areas.

Keywords: Artificial Intelligence(AI), Fintech, Rural economy, Rural Destinations

1 Introduction:

The rural economy is agriculture-centric, raw-material providers for the industries, is foundation to national economy. So, enhancement of quality of life of rural community especially lives in remote areas lead to the national development of the country. (Yosabah Zahro, Sri Hartiningsih, 2025) Fintech is enabling the rural destinations automated and smooth business operations. (Kriti Kishore, Sanjeev K Bansal & Roshan Kumar, 2024) The key uses of Fintech in Rural industries are mainly cashless transactions and digital wallets, payment orchestration platforms, Personalized financial services Automated refunds and Flexible Booking, Financial inclusion and small business conversational commerce and many more. (Nicola Del Sarto & Peterson K Ozili, 2025) These features improve all business activities in rural destinations by giving more customer satisfaction and more efficient business and marketing with less operational costs. (Jena, 2025)

The emergence of Artificial Intelligence brought a tremendous transformation in all sectors of life. The inclusion of A I made the Rural community more active and innovative in their business field and improve their decision-making skills gradually (Chandra, 2025) A I transforms the financial technology more Automated by providing more security to the data and improved efficiency in business operations (Pavneet Singh, 2025). AI enables smart agriculture and Farming through automated irrigation system, proper monitoring of crops, increasing the yield and reducing the cost (Rajendra Kumar Sharma & Amit Kumar Bhardwaj, 2022) AI helps to forecasts health trends and services in Rural areas, enhancing local administration.

Rural destinations need high promotion and publicity to get noticed, even if they have rich culture, nature, and unique experiences to offer. (Jose Luis Ruiz, Juan Uribe, Juan Carloz Gazquez, 2020) The application of AI and Fintech play crucial role in understanding people's preferences and promoting places in a smarter way. (Trends and challenges of sustainable Rural Tourism in the Face of Artificial Intelligence: A bibliometric Analysis, 2026) AI can analyze the demand of customers who search for online portals such as eco-tourism, adventure activities, enjoying fairs and festivals and can suggest suitable rural destinations to them through social media, travel apps, or websites. It can also help to create travel recommendations, making rural tourism more enthusiastic and accessible. (Suneel Kumar & Sekhar, 2020)

On the other hand, fintech makes financial transactions easier, faster, and safer at rural destinations through digital payment systems like mobile wallets, UPI, or online banking, so that the tourists can book their accommodations, spend for local experiences, or purchase handicrafts. For local communities, fintech opens up opportunities to receive payments directly, access microloans, and manage their earnings more efficiently without having burdens of traditional banking systems. (Sadana Kritawati et al., 2025)

The application of AI and fintech definitely bring transformation at rural destinations in its promotion and creating a brand. (Anfeng Su et al., 2024) AI attracts the right tourists by targeting their interests, while fintech ensures smooth and secure transactions. Together, they help build smooth, improved convenience with security, and support local economies. (Rosilawati Zainol & Faroz Fadzira Roslan, 2025) AI and Fintech are the effective tools that can bridge the gap between rural communities and urban communities, making rural destinations more visible, competitive, and sustainable in today's digital world. (Warinder Kumar, Tanuja Agarwala & Suneel Kumar, 2026)

Objectives

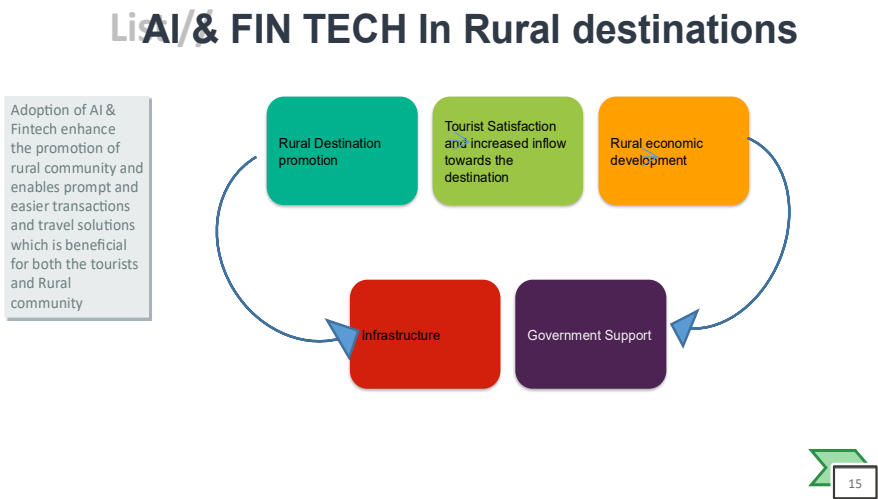
1. To examine the impact of AI on promoting rural destinations and Investigate how AI is used to promote rural destinations.
2. To assess the contribution of AI and fintech to rural economic development
3. To raise awareness about the issues encountered in the acceptance of AI and fintech in rural areas.

4. To propose solutions and approaches on how AI and fintech can be effectively integrated in rural Destinations.

Hypothesis

H1: Adopting AI and fintech will have a strong positive effect on rural destination promotion and rural economic development.
H0: Adopting AI and fintech will have no effect on rural destination promotion and rural economic development.
H2: The use of fin tech solutions greatly improves the convenience and frequency of tourists' transactions in the countryside.
H0: The use of fintech solutions do not improve the convenience and frequency of tourists' transactions in the countryside

Conceptual Frame work



1. Figure-1- AI and Fintech in Rural Destinations

2 Research Methodology

2.1 Research Design

A well prepared plan that guides the ideas and actions of a researcher is termed a research strategy. It allows the researcher to execute the study in an organized and timely

manner. This study adopts a Mixed methos approach including **descriptive and analytical research design**. It aims to examine the role and impact of Artificial Intelligence (AI) and Financial Technology (fintech) on rural destination promotion and rural economic development. A **quantitative approach** is primarily used, supported by limited qualitative insights where necessary.

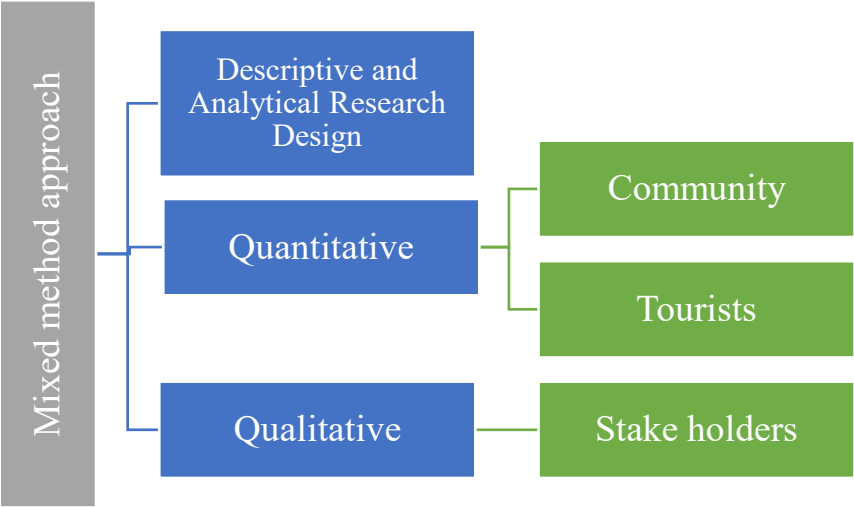


Figure-2- Research Methodology

Data Sources

2.2 Primary Data

In the current study Primary data is collected from – Community (local people in the rural destination), Tourists and Stake holders.

Primary data is collected through:

- Structured questionnaires and Schedules
- Direct observation and Surveys of tourists, local residents, and rural tourism stakeholders

2.3 Secondary Data

The data is collected from existing sources such as government reports, academic journals, and surveys conducted by other organizations. It provides a broader perspec-

tive and allows researcher to compare and validate the primary data collected. By analyzing secondary data, researcher can identify trends, patterns, and gaps in the literature that can further enhance the understanding of Rural economy development through rural destination marketing and promotion with the application of AI And fintech.

Secondary data is gathered from:

- Research journals and articles
- Government reports on rural tourism
- publications on AI and fintech

Study Area

Bangalore Rural district is one of the 31 districts in the state of Karnataka, India. It was established in 1986, when Bangalore District was partitioned into Bangalore Rural and Bangalore Urban. Currently, the Bangalore Rural district comprises four talukas: Devanahalli, Nelamangala, Doddaballapura, and Hoskote. It comprises 20 hoblis, 294 villages, 3 towns, and 2 tier-three cities, governed by 66 Village Panchayats (Grama Panchayitis), 3 Town Municipal Councils (Purasabes), and 2 City Municipal Councils (Nagarsabes).

The district is significantly influenced by its proximity to Bangalore, resulting in a substantial daily commuting population. The rural population primarily consists of agriculturists; however, the establishment of Special Economic Zones in the region has led to a surge in service and IT companies. Devanahalli will host a ₹95 billion Business Park adjacent to Kempegowda International Airport.

The district possesses agricultural and horticultural crops like ragi, rice, peanuts, sugarcane, castor, grapes, and mulberry. There are sufficient infrastructural amenities, including transportation, communication, banking, credit, and marketing. For many years, weaving has been a significant occupation for a substantial portion of the population. The soil and climatic conditions are favourable for mulberry farming, silkworm rearing, and silk manufacture, as well as other agro-based industries. Numerous wineries exist, and wine production has been on the rise.

Table 1. Table captions should be placed above the tables.

Taluk- wise Hoblies and Villages

Talukas	No. of Hoblies	No. of Villages
Doddaballapura	5	298
Devanahalli	4	214
Hosakote	3	197
Nelamangala	3	243

(Source: Bangalore Rural district at a glance- 2014-15, Government of Karnataka.)

(Table-1: Selected Area of the study)

Sampling Design

Population

- Tourists visiting rural destinations
- Local community (homestay owners, artisans, guides)
- Stake holders including Govt. Officials

Sampling Technique

Convenience sampling method used to Community (Local People). While the total Population remained unknown, convenience sampling was employed by randomly approaching equal numbers of local people from predefined research locations.

Sample Size

- Typically, **100–150 respondents**

Ethical Considerations

- Informed consent from respondents
- Confidentiality of data
- Use of data strictly for academic purposes

Limitations of the Study

Time constrain is the main limitation of this study and the study cover only Bangalore Rural district. Some respondents in the local community were un aware about the advantages of AI & Fintech were not able to answer properly for the questions. Network availability at the rural destinations are also one of the main constraints for the study

- Limited geographical coverage
- Possible respondent bias
- Constraints in measuring long-term economic impact

- Network availability at the rural districts

Analytical Technique

Multiple Regression Analysis was conducted to test the hypothesis
For H1: Independent Variables: AI Adoption, Fintech Adoption,
Dependent Variables: Rural Destination Promotion, Rural Economic Development
For H2: Independent Variables: Fintech Adoption
Dependent Variables: Tourist Transaction Convenience & Frequency

3.Results and Discissions

Model 1: Impact on Rural Promotion & Economy (H1)

Variable	Beta (β)	t-value	p-value
AI Adoption	0.45	5.12	0.000
Fintech Adoption	0.38	4.67	0.001
R ² = 0.62			

(Table2: Regression analysis result of H1)

Model 2: Impact on Tourist Transactions (H2)

Variable	Beta (β)	R ²	t-value	p-value
Fintech Adoption	0.52	0.48	6.10	0.000

(Table3: Regression Analysis result on H2)

For H1:

- AI adoption (β = 0.45) shows a **strong positive influence** on rural destination promotion and economic development.
- Fintech adoption (β = 0.38) also contributes **significantly and positively**.
- The **R² value of 0.62** indicates that 62% of variation is explained by these technologies.
- **p-values (< 0.05)** confirm statistical significance.

Inference: AI and fintech together play a major role in improving visibility, tourist inflow, and rural economic outcomes.

For H2:

Fintech adoption (β = 0.52) has a **very strong positive impact** on tourist transaction convenience and frequency.

- The **R² value of 0.48** shows substantial explanatory power.

- The **p-value (0.000)** confirms the relationship is statistically significant.

Inference: Fintech significantly improves ease of payment, increases spending behavior, and enhances overall tourist experience.

Table4: Hypothesis Decision)

Hypothesis Decision	
H1	Accepted
H0 (for H1)	Rejected
H2	Accepted
H0 (for H2)	Rejected

(The results show that AI-powered promotion is effective in driving more tourists, using personalization and digital visibility.

- Smaller and more convenient transactions, like via mobile payment and digital wallet, make it easier for tourists to spend more.
- The convenience of transactions is directly improved to boost tourists' satisfaction and engagement.
- The synergies translate into better rural economic development, including income generation and job creation.

Recommendations:

- AI and fintech are two examples of areas where they play a crucial role in promoting rural tourism and driving economic growth.
- One such area—especially relevant to improving tourist transaction behavior is fintech.

Overall, the use of technology has had a significant impact on the strength of the rural tourism ecosystem.

3 Conclusion

The focus on rural development started with the realization that the rural sector was under developed economically, socially, politically and needed special attention from the government. Tourism is one of the most profitable industries in the developed as well as developing countries. This particular sector generates employment opportunities and adds up revenues to the country’s national economy. The Role of AI and Fintech in the development of rural economy is crucial. The stake holders can identify the unexplored potentials of rural destinations and can promote through the social media. The AI platforms help the tourists to find out exact rural destinations as per their need to spend a holiday away from the urban bustle. The Fintech provides safe and

convenient transactions to the tourists at rural destinations. The combination of AI and Fintech enables hurdle free booking of Transportations, accommodation and itinerary preparations. Once the rural community became ready to adapt the AI and financial technology, it will be beneficial for both tourists and the service providers to take the advantage from it

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