

Fintech Adoption in Rural Trading Micro Enterprises: An Explorative Study of Kagal Taluka**Mr. Harish V. Kamble**

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Abstract:

This study explores the adoption of FinTech among rural trading micro-enterprises in Kagal Taluka, focusing on its impact on daily financial activities of businesses. The findings reveal that most businesses have embraced digital transactions, leading to increased customer reach and transaction efficiency. However, several challenges including limited digital literacy, internet connectivity issues, trust issues continue to hinder seamless adoption. Despite these barriers, the study highlights the growing necessity of FinTech in modernizing rural businesses. The research emphasizes the need for financial literacy programs, awareness camps and supportive policies to enhance FinTech accessibility.

Keywords: FinTech Adoption, Rural Trading Micro Enterprises, Financial Inclusion.

Introduction:

The emergence of Financial Technology (FinTech) has transformed the financial landscape, providing vital scope for financial inclusion and economic empowerment, especially in rural regions. This study seeks to investigate the use of FinTech by rural trading micro enterprises. Despite, the increasing spread of fintech services, there is still a wide gap in the knowledge regarding the particular challenges and opportunities involved in its adoption in rural area. This research aims to bridge this gap by analyzing the determinants of fintech adoption and its effect on the financial health and development on micro-enterprises. Rural Communities can benefit from the efficient and accessible services offered by financial technologies like UPI, Mobile Banking Applications, Micro- Lending Services etc. the adoption and implementation of these FinTech tools can boost the financial potential of rural micro enterprises. But, their adoption also depends on trust, digital literacy, regulatory support and technological infrastructure.

The Reserve Bank of India focuses on the facilitation of micro lending, digital payments and mobile banking to foster rural economic growth. They have also set guidelines for the effectual integration of these services via mobile application

and other devices to enhance the economic potential of rural areas.

FinTech:

Financial Technology is commonly known as FinTech. It refers to the integration of technology with financial services to enhance and automate banking financial processes. It encompasses a broad spectrum of applications, including digital payments, online banking, mobile wallets, crypto currencies, and investment platforms, which are fundamentally transforming the traditional financial ecosystem. (Mishra, Jain, & Gohil, 2023). Reserve Bank of India has actively supported fintech adoption by introducing various initiatives and regulatory frameworks to bridge the gap between urban and rural financial eservices and fostering greater financial inclusion.

Review of Literature:

(Small Enterprise India, 2024) The article effectively highlighted the transformative potential of micro finance in rural India; it defined its role in bridging the gap between rural entrepreneurs and financial resources. This study employed a historical and analytical approach to reviewing the development of microfinance in India. It used qualitative data from case studies of various entrepreneurs and reports from institutions like NABARD, SIDBI, etc to illustrate the transformative effects of micro finance on rural entrepreneurship. This study found the integration of technology in

microfinance has expanded its reach improved service deliver in rural areas.(Samrat Investment, 2024) This article emphasizes the vital role of fintech in rural India. It showcases the benefits of fintech for economic empowerment and financial inclusion. This study used a mixed methods approach; the study combines both qualitative and quantitative data. It incorporates findings from surveys and various reports. This study highlights the necessity of addressing issues such as financial literacy and infrastructure gaps to fully utilize the advantages of fintech in rural regions.(Naidu & Babu, 2025)The study examines how digital banking technologies impact financial inclusion among rural communities in India. It applied theoretical framework like the UTAUT (Unified theory of Acceptance and Use of Technology) and the TAM (Technology Acceptance Model) to evaluate the factors influencing adoption of financial technology. The study utilized a mixed method approach, combining both quantitative and qualitative data. Although there is a beneficial effect, the report highlighted several obstacles to the broad of digital banking in rural areas. (Reserve Bank of India, 2024) The annual report on Recent Trend and Progress of Banking in India 2023-24 provides in-depth analysis of the Indian banking sector, with a particular emphasis on financial inclusion and the embracement of new technologies such as digital banking. It looks at the operations of different banking entities such as commercial banks, cooperative banks and non- banking finance companies (NBFC), and looks at their contribution toward facilitating financial inclusion in rural India. It found the use of digital banking technologies like mobile banking and online payment systems has played a crucial role in narrowing the gap between rural and urban India.

Objectives:

- 1) To assess the adoption rate of FinTech tools among rural trading micro enterprises.
- 2) To analyze the influencing factors in adoption of FinTech tools among selected rural trading micro enterprises.
- 3) To identify challenges faced by selected rural trading micro enterprises in adopting and using FinTech Tools.

Research Methodology:**Research Design:**

This study has applied a mixed method approach that combined quantitative analysis of the adoption rate of fintech and qualitative aspects of the challenges which are faced by rural trading micro enterprises. Data was analyzed using descriptive statistics to summarize adoption rates. Open ended responses of the survey were analyzed thematically to identify shared challenges. The population for this study included all rural trading micro enterprises (Small shops, Kirana Stores etc.) which is using FinTech tools and operating in Kagal taluka which is located in Kolhapur District, Maharashtra.

Sampling Frame:

In this study 15 micro-enterprises were selected. While the sample size is limited, it provides valuable initial insights into digital transaction trends, challenges, and adoption patterns in rural area. These enterprises were selected to ensure relevance of the study by using purposive sampling method. This means enterprises were chosen based on following specific criteria-

1. The either currently using or have previously use of FinTech tools.
2. They agreed to participate in the survey for this study.

Data Collection:

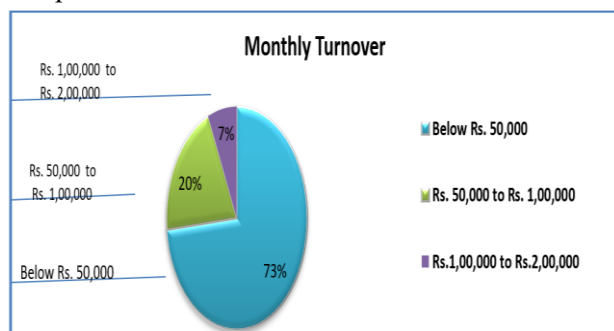
The data was collected using a structured questionnaire distributed through google forms and some responses collected meeting with owners by the researcher. The survey framed with close ended questions to measure fintech adoption rates, transaction percentages, and business demographics. And also asked open ended questions to gather qualitative insights on challenges and difficulties encountered while utilizing FinTech tools.

Limitations:

1. This study's scope is limited to Kagal Taluka (Maharashtra) only, which could influence the applicability of the findings.
2. The small sample size (N=15) limits statistical strength but provides initial insights for future studies.

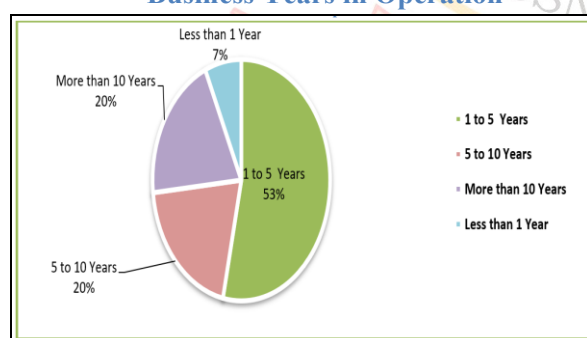
Data Analysis and Interpretation:

The study conducted survey in 15 rural micro-enterprises in Kagal Taluka. It primarily comprises Kirana Stores (80%), with the rest in sectors like electrical, medical, and clothing stores. Following data shows the range of monthly turnover of selected enterprises.



Ref: (Fieldwork) Figure No. 1

The majority of 73% of businesses (11 of 15) reported monthly turnover of less than Rs.50,000, suggesting that rural micro-enterprises are generally small-scale with limited financial resources. And 20% (3 businesses) fell in the range of Rs. 50,000 to Rs. 1, 00,000, these businesses are probably slightly larger and have more stable customer relationships. and only one business has above Rs.1, 00,000, which reflects the inadequacy of larger business in the rural area.

Business years in operation of selected micro enterprises.**Business Years in Operation**

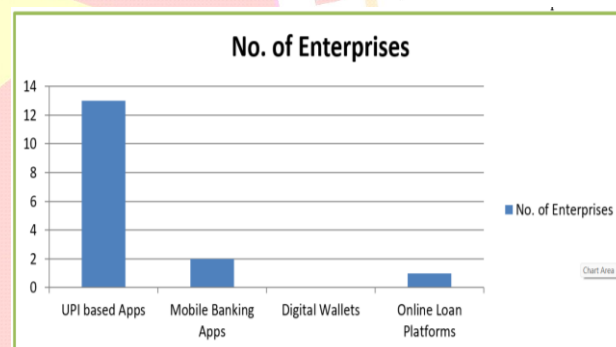
Ref: (Fieldwork) Figure No. 2

The data in Figure No. 2 reveals that most businesses in the study area are relatively young, with 53% of them operating for 1 to 5 years. This indicates an active and entrepreneurial environment where new enterprises are being formed and maintained beyond startup stage. The second largest segment comprises businesses that have been in operation for 5 to 10

years (20%), and another 20% have been in existence for more than 10 years. A smaller percentage of businesses, 7% have been operating for less than a year, indicating that new micro enterprises are being established, but at a slower rate compared to more established business.

Fintech Adoption Patterns:

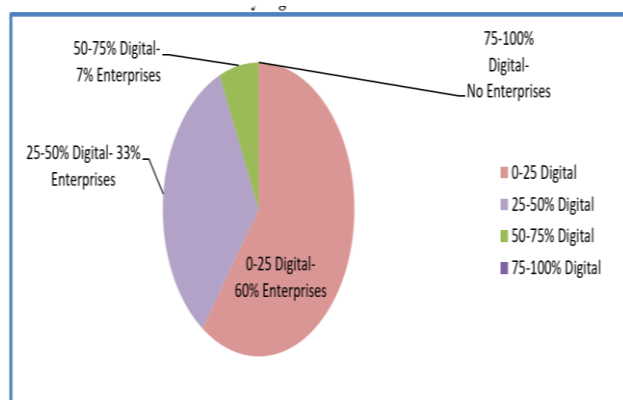
The researcher has chosen those micro-enterprises that are utilizing fintech tools, which is what all surveyed enterprises have adopted fintech tools. However, the data reveals that they are not fully utilizing the fintech tools; they are using some popular and easily accessible tools but are not aware of other fintech tools. The figure mentioned below illustrates the adoption patterns of fintech among rural trading micro enterprises. Following data shows the adoption rate of fintech solution in selected enterprises.



Ref: (Fieldwork) Figure No.3

The presented data highlights the adoption patterns of various FinTech tools. The data revealed a significant preference for Unified Payments Interface (UPI) based applications such as PhonePe and Google Pay 86.7%. In contrast mobile banking apps like BHIM and Paytm used only by 2 enterprises (13.3%), indicates a lower adoption rate for these platforms. Notably, digital wallets are entirely absent from the daily operations of the surveyed enterprises, which may reflect a preference for more integrated payment solutions like UPI over standalone wallet services. The data also shows that online loan platforms (Lendingkart) are minimally utilized, with only one enterprise leveraging this FinTech solution.

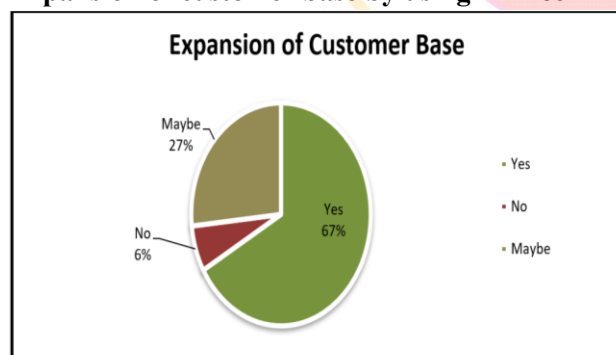
Daily Digital Transactions:



Ref: (Fieldwork) Figure No. 4

The information regarding cash and digital transactions among rural trading micro enterprises in Kagal Taluka indicates a considerable dependency on cash, as the majority of businesses (9 out of 10) state that their daily 0-25% transactions are digital, implying that 75-100% are based on cash. Nevertheless, a moderate transition towards digital payments is apparent with 33% enterprises reporting daily 25-50% digital transactions. Despite only 7% Enterprises having 50-75% daily digital transactions. The information emphasizes a considerable digital gap, with most businesses still significantly dependent on cash, restricting their access to a broader range of financial services.

Expansion of customer base by using FinTech

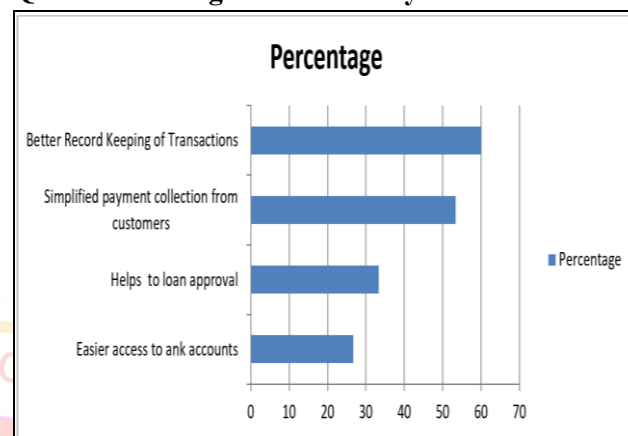


Ref: (Fieldwork) Figure No.4

The survey reveals that 67% of rural micro enterprises experienced customer expansion after adopting FinTech, indicating that digital payments have improved accessibility and business reach. However, 27% were uncertain about its impact, suggesting a lack of awareness and difficulty in tracking customer expansion. A small 6% reported no change, possibly due to customer preferences for cash or limited digital literacy. Overall, FinTech has played key role in expanding the customer base, but

better awareness and training are needed to maximize its benefits for all businesses.

Qualitative Insights of the Study



Ref: (Fieldwork) Figure No. 5

The data reported that using digital payment tools has made their financial transactions smoother, the most commonly cited benefits included as follows-

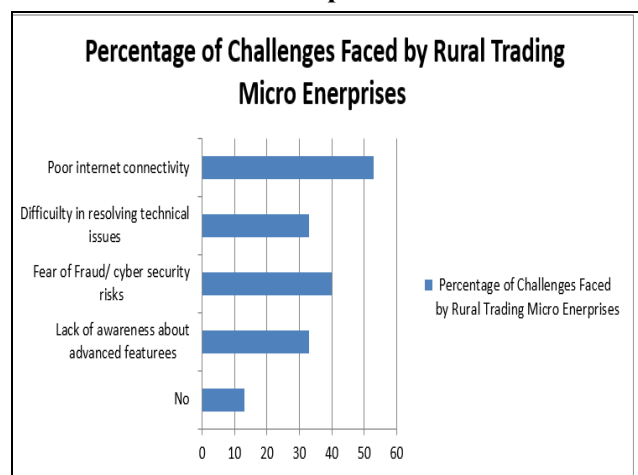
Faster Transactions- Several business owners noted that digital payments save their time in many unnecessary things. One trader explained 'Earlier, he had to wait for customers to arrange exact change but now payments happen instantly'.

Easier Record-Keeping: 60% respondents appreciated that FinTech tools provide an automatic transaction history, it reducing the need of manual bookkeeping.

Simplified Payment Collection: 53% respondents mentioned digital payments decreased their dependence on cash, it minimized errors, and streamlined transactions. During the interview many stores mentioned: 'Customers pay instantly through UPI, even if they forget cash'. This enhanced liquidity and reduced payment delays, and it also reduced the rate of selling goods on credit.

Assist in Loan Approvals: The data (33% Traders) indicates that providing direct access to credit and payment tools has enabled FinTech supported businesses to avoid predatory lending practices, especially in rural regions.

Challenges faced by Rural Trading Micro Enterprises



Ref: (Fieldwork) Figure No. 6

Poor Internet Connectivity: Unstable or slow internet affected digital transactions of traders, it leading to unsuccessful payments and frustrated customers. During the conversation with traders it found that payments get stuck during peak hours, and customers leave without buying. This highlights a critical infrastructure gap in rural areas, where unreliable internet limits the effectiveness of FinTech tools.

Fear of Fraud: Many participants avoided advanced technologies (e.g. online loans) because of concerns about fraud and risks of cyber security. For example, a business owner said, 'they use UPI only for small amounts to avoid scams.' This reflects a lack of trust in digital platforms, intensified by low digital literacy and limited awareness of security measures.

Difficulty in resolving technical issues: When issues emerged like failed transactions, the businesses found it difficult to obtain prompt assistance. During the interview 33% owners stated, occasionally payments do not go through, and they are unsure about whom to contact. After the issue was raised to relevant company or bank, the funds do not get in time, it taking 4 to 5 working days for a refund. This lack of accessible customer support discourages deeper adoption FinTech tools.

Conclusion:

The research of FinTech adoption among Rural Trading Micro Enterprises of Kagal Taluka captured both the increasing use of digital payments and the difficulties faced by enterprises in moving away from

cash transactions. The research shows that a large number of micro enterprises have embraced FinTech, with most reporting an increase in their customer base and increased efficiency in transactions. However, the study also identified key barriers such as limited digital literacy, poor internet connectivity, trust issues, and operational difficulties in using digital financial services. Businesses that have successfully integrated digital payments have experienced greater accessibility, enhanced financial transparency and operational efficiency. However, a notable portion of enterprises remains hesitant due to security concerns and a lack of familiarity with digital tools.

In order for Fintech to meet its potential for micro-enterprises in rural areas, initiatives will need to address financial literacy, upgrading digital networks and addressing trust issues related to security and transaction failures. Government initiatives, financial institutions and technology providers need to work collectively to bridge these gaps. Although the sample size is limited, the research offers meaningful exploratory insights into the evolving financial behaviors of micro entrepreneurs. Future research can study with larger sample size and focusing on evaluating long term behavioral changes in FinTech adoption and its direct impact on business growth and sustainability.

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