REVIEW ARTICLE

Impact of E-wallets usage in agriculture: A Survey

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The adoption of e-wallets in agriculture has brought about significant transformations, enhancing financial inclusion, improving transaction efficiency, and offering greater security. This research examines the impact of e-wallets in the agriculture sector by comparing their efficacy to traditional cash-based systems. Prior to the introduction of e-wallets, agriculture faced challenges such as limited access to financial services, reliance on cash, and slow transaction processes. However, the integration of e-wallets has enabled faster and more secure transactions, reducing the dependency on cash and providing broader financial access for farmers and agricultural stakeholders.

This study used a survey methodology, involving stratified random sampling and a combination of closed and open-ended questions, to assess the impact of e-wallet usage on key factors like financial inclusion, transaction efficiency, digital adoption, risk management, and market access. The results highlight significant gender and age disparities in e-wallet usage, with males and younger individuals (18-30 years) showing higher adoption rates. Additionally, 76% of rural workers have internet access, creating opportunities for digital financial adoption, though a 24% digital gap remains.

Key findings show that 81.3% of respondents find e-wallets beneficial, particularly for their convenience and security, although 18.8% expressed concerns. Issues such as repetitive data entry and security concerns were identified as obstacles. Furthermore, e-wallets have opened new markets, reduced transaction costs, improved access to financial products like insurance, and enhanced risk management.

E-wallets have the potential to revolutionize the agricultural sector by improving financial inclusion, transaction efficiency, and market access while also fostering financial literacy. However, challenges like digital literacy, cybersecurity, and infrastructure gaps must be addressed to fully realize their potential in transforming agriculture into a more efficient and financially inclusive industry.

Key Words: E-wallets; Agriculture; Agricultural stakeholders; Risk management; Security

INTRODUCTION

The adoption of e-wallets in agriculture has emerged as a revolutionary force, ushering in a new era of financial inclusion, efficiency, and security. This abstract does a comparison analysis to examine the impact of e-wallets in the agriculture industry, comparing their efficacy to traditional cash-based approaches. Prior to the introduction of e-wallets, the agriculture business struggled with restricted access to financial services, reliance on cash, and inefficient transaction efficiency. However, with the advent of e-wallets, there has been a considerable shift. Farmers and agricultural stakeholders have seen increased access to financial services, faster transaction procedures, and a reduction in cash dependency [1].

This comparison examines critical factors such as financial inclusion, transaction efficiency, digital adoption, transaction costs, market access, risk management, security, regulatory compliance, and financial literacy [2].

LITERATURE REVIEW

Methodology using in this research paper

Our research intends to examine the impact of e-wallet use in the agriculture business in depth. To do this, we created a solid survey methodology:

Our major goal is to assess the impact of e-wallets on financial inclusion, transaction efficiency, risk management, and other relevant elements in the agriculture sector.

Sampling strategy: We want to survey a wide range of people, including farmers, agricultural workers, and industry stakeholders. We will assure a representative sample from diverse locations and demographics by using stratified random sampling.

Our organized questionnaire will include both closed and open-ended questions. We will pilot-test the questionnaire before full deployment to improve clarity and remove ambiguity.

Data collection: Our survey will be given through a variety of methods, including online platforms, in-person interviews, and questionnaires [3].

Survey on E-wallet

Q1. What is your gender?

- Male
- Female

Q2. What is your age?

- <18
- 18-23
- 24-30
- 31-40
- 41-50
- >50

Q3. Do you have mobile phone with internet connection?

- Yes
- No

Q4. How often do you use function of E-wallet payment above?

- I hardly use them
- Within five time in a month
- Within ten time in a month
- More than ten times

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Q5. Compare to other payment options what payment function of E-wallet do you feel are inconvenient mark only one oval.

- Not so secure
- Place where I can use it limited
- We have to enter all the debit and credit information every time to make a payment
- Other

Q6. Have you ever used below online/mobile payment?

- Credit card online payment
- Apps on mobile
- PayPal
- Paytm
- Other

Q7. How much do you spend on online and mobile payment per week?

- 50000-100000
- 200000-300000
- 400000-500000
- <5000000

Q8. Does the online/mobile payment helpful? Mark only one oval.

- Yes
- No

IMPLEMENTATION, RESULT AND DISCUSSION

Q1. The considerable gender discrepancy in agricultural e-wallet usage raises issues about financial inclusion and equal access. There is a significant discrepancy in digital financial participation, with 55% of males using e-wallets compared to 10% of females. This disparity might be attributed to a variety of factors, including restricted access to cell phones and digital literacy among rural women. Bridging this gap is critical for empowering female farmers and agricultural workers, encouraging financial independence, and supporting inclusive economic growth. Effective tactics, such as focused education and personalized outreach campaigns, are required to guarantee that the benefits of e-wallets are available to everybody, regardless of gender [4].

Q2. An intriguing trend emerges from the age-based distribution of e-wallet usage in the agriculture business. A considerable 70% of people aged 18 to 30 are using e-wallets, which is likely due to their familiarity with digital technology and adaptation to new financial instruments. E-wallets are used by 26% of those aged 31 to 40, showing modest adoption. However, just 4% of those aged 41 and up use e-wallets, indicating a low presence in this group. The data indicates a good trend, with younger generations increasingly leveraging digital solutions in agriculture, presenting the opportunity for improved efficiency and modernization. To ensure the farm sector's thorough digital transformation, strategies to bridge the age-based e-wallet adoption gap are required.

Q3. The availability of internet access in rural regions among industrial workers is an important aspect in defining digital adoption. With 76% of rural workers having internet connection, the basis for using digital solutions in agriculture is promising. However, the remaining 24% lack connection, resulting in a digital gap that inhibits their involvement in the digital economy. The lack of information, which contributes to the 24% who do not have access to the internet, emphasizes the significance of education and digital literacy activities. Bridging this gap through training and creating knowledge about the benefits of digital tools is critical for the overall growth of the sector. Expansion of internet connectivity and promotion of digital literacy initiatives can improve possibilities for these rural workers, encouraging a more inclusive and technology-driven agriculture business.

Q4. According to the study results, e-wallets or mobile payment solutions are beneficial to the majority of industry stakeholders (81.3%). This widespread adoption reflects the perceived advantages of digital financial technologies in agriculture, such as efficiency, ease, and security. However, the 18.8% who expressed disagreement or discontent demonstrates that there is still a sizable percentage of the sector who has misgivings or issues about these digital solutions. It is critical to address the issues and preferences of this 18.3% in order to maximize the acceptance and efficacy of e-wallets in agriculture. By recognizing these opposing voices, the industry may endeavor to refine and enhance e-wallet services, resulting in a more complete and specialized solution that appeals to a larger audience and, as a result, accelerates the sector's digital transformation.

Q5. The poll findings highlight a number of worries with E-wallet payment functions. A significant 14.2% of respondents believe they are less safe, underscoring the need for improved security measures. Furthermore, 15.6% are dissatisfied with the low adoption of E-wallets, underlining the significance of increasing their usage. Furthermore, the most common worry, at 25.9%, is the repetitive entering of debit and card information, indicating a need for faster payment operations. Finally, 44.3% highlight other challenges, implying that further research is needed to address other consumer concerns and enhance E-wallet operation. Transformation to digital.

Q6. Respondents use a variety of online/mobile payment options. At 47.3%, credit card online payment is the most common, demonstrating a persistent dependence on traditional payment methods. Mobile applications come in second with 10.7%, indicating an increasing trend in digital payment acceptance. Paytm and PayPal are utilized by 17% and 7% of respondents, respectively, with the remaining 18% using alternative methods, indicating a diverse digital payment ecosystem [5].

Q7. The figures show a wide range of yearly spending on online and mobile payments. Approximately 20.3% spend between 50,000/- and 300,000/- each year, whereas 18.6% spend between 400,000/- and 500,000/-. A sizable 27% devote more than 5,000,000/- each year, demonstrating significant financial activity in the digital payment sphere (Figures 1-3).

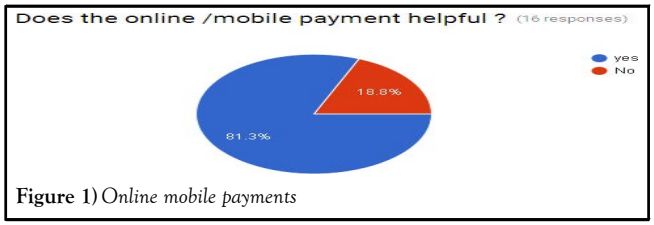

Figure 1) *Online mobile payments*

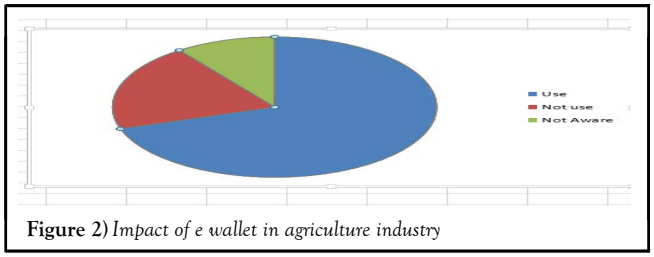

Figure 2) *Impact of e wallet in agriculture industry*

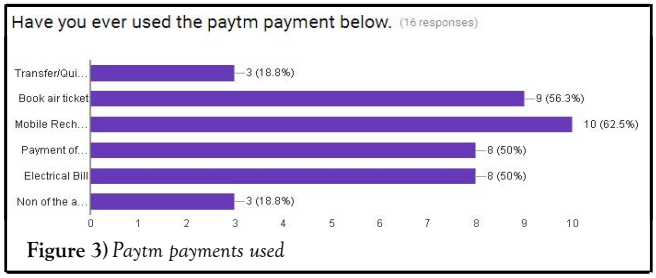

Figure 3) *Paytm payments used*

E-wallets, often known as electronic wallets, have the potential to have a substantial influence on the agriculture business in various ways:

Financial inclusion: Farmers and agricultural laborers who do not have access to regular financial services can benefit from e-wallets. They may use e-wallets to accept payments for their produce, get credit, and conduct digital transactions, reducing their reliance on cash and increasing access to financial services.

Payment efficiency: E-wallets make it easier for farmers and other players in the agriculture supply chain to make payments. They can accept payments for their products promptly and securely, lowering the risk of theft or loss connected with cash handling. E-wallets enable digital transactions for the purchase of agricultural commodities such as seeds, fertilizers, and equipment. This has the potential to increase efficiency, decrease the need for currency, and offer a digital record of transactions.

Market access: Farmers may use e-wallets to gain access to online marketplaces where they can sell their goods to a larger client base. This may result in higher pricing and market possibilities.

Crop insurance and risk management: Crop insurance schemes may be coupled with e-wallets, allowing farmers to pay premiums and receive rewards online. This enables them to more effectively manage risks connected with crop failure or other agricultural difficulties. Payments for their products are processed swiftly and securely, lowering the risk of theft or loss associated with cash handling.

Race ability and transparency: E-wallets can record transactions, providing a transparent and traceable digital trail of agricultural activities. This can help in quality control, supply chain management, and reducing fraud.

Data analytics: E-wallets can collect data on transactions, crop yields, and other agricultural metrics. This data can be analyzed to provide insights that can help farmers make informed decisions and improve their agricultural practices.

Government support and subsidies: Governments can use e-wallets to disburse subsidies and support to farmers more efficiently. This can reduce leakage and corruption in the distribution of benefits.

Reduced cash handling: Handling cash in the agriculture industry, particularly in rural locations, can be problematic. E-wallets can eliminate the need for cash transactions, improving security and lowering the danger of theft.

Financial literacy: As farmers and agricultural laborers get more acclimated to utilizing digital financial instruments, the usage of e-wallets can help promote financial literacy.

However, the influence of e-wallets on the agriculture business might vary based on factors such as technological infrastructure, smartphone availability, and the agricultural community's desire to accept digital financial services. To be effective, agricultural e-wallet solutions must be created with the sector's unique demands and difficulties in mind, and they must be inclusive, user-friendly, and secure (Table 1).

TABLE 1
Comparative study of with e wallet and without wallet of agriculture industry

Metric/aspect	Agriculture in the absence of E-wallets	Agriculture in the age of E-wallets
Inclusion in finance	Access to financial services is limited, and cash transactions are the norm.	Access to financial services has been improved, and dependency on cash has been decreased.
Transaction effectiveness	Cash transactions are widespread, as are longer payment processes.	Payments are quicker and more efficient when transactions are streamlined.
digital financial	Limited digital financial inclusion due to limited digital adoption.	Digital use is increasing, particularly in rural regions.
Transaction fees	Higher transaction fees and cash handling expenditures are possible.	Cost reductions and reduced transaction expenses.
Market entry	Market entry local trades, limited access to larger markets.	Access to internet markets and the possibility of a larger consumer base.
Risk management	Risk management tools are limited, and conventional approaches are used.	Risk management has been improved, as has access to digital insurance and credit.
	Cash theft and fraud are possible. Increased security and less fraud risk.	Increased security and less fraud risk.
Fraud and security	based transactions may face regulatory obstacles.	Compliance with digital transaction requirements is simplified.
Compliance with regulations cash	Exposure to digital financial tools is limited For data collecting and analysis are limited.	Opportunity for financial literacy and education Insights from data for informed decision-making.
Financial knowledge Data analytics capabilities Credit availability	Credit availability credit for agricultural ventures is difficult to get.	Possibility of improved access compliance with regulations cash-based transactions may face regulatory obstacles. Compliance with digital transactions is easier.

CONCLUSION

Adoption of e-wallets in agriculture improves financial inclusion, facilitates transactions, and promotes digital literacy. It lowers transaction costs, opens up new markets, and improves risk management, security, and compliance. Improved cash flow management, data analytics, and higher customer satisfaction help farmers. E-wallets boost market expansion while also providing effective government assistance and credit access. Addressing the digital gap, guaranteeing cybersecurity, and offering education, on the other hand, are critical to realizing the full potential of e-wallets in agriculture, converting it into a more efficient and financially equitable sector.

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