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Impact of Cashless Transaction on Retail Business-A Case Study of Kothagiri Taluk

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Cashless transactions refer to financial exchanges that do not involve the physical transfer of cash. Instead, they utilize digital or electronic methods such as credit/debit cards, mobile banking, digital wallets, online transfer systems, and contactless payments. The shift towards cashless transactions has been driven by advancements in technology, the increasing use of smartphones, and the need for quick, secure, and convenient payment options. The advent of cashless transactions has revolutionized the retail industry, offering numerous benefits and challenges for businesses. This study examines the impact of cashless transactions on retail business, highlighting the advantages of increased efficiency, reduced costs, and enhanced customer experience. However, it also explores the challenges of security concerns, technological infrastructure, and customer adoption. The findings suggest that retailers who adopt cashless transactions can improve their operational efficiency, reduce costs, and enhance customer satisfaction, ultimately leading to increased competitiveness and profitability. This study provides valuable insights for retailers, policymakers, and technology providers seeking to understand the implications of cashless transactions on the retail industry.

Keywords
Cashless transactions, retail business, digital payments, efficiency, customer experience, security concerns.

Introduction

The retail industry has undergone significant transformations in recent years, driven by technological advancements and changing consumer behaviors. One of the most notable shifts has been the increasing adoption of cashless transactions, which have revolutionized the way consumers make payments and retailers conduct business.Cashless transactions, also known as digital payments, refer to the use of electronic payment methods, such as credit cards, debit cards, mobile wallets, and online payment platforms, to facilitate transactions. The growth of cashless transactions has been fueled by the widespread adoption of smartphones, the expansion of digital payment infrastructure, and the increasing demand for convenience and security in financial transactions.

Benefits of Cashless Transactions:

- Enhanced convenience and speed of payments
- Reduced risks associated with carrying cash
- Better tracking of spending and financial management
- Increased security through encrypted and secure payment gateways
- Promotes transparency and reduces corruption

Challenges:

- Digital divide and limited access to technology for some populations
- Security concerns related to cyber fraud and hacking
- Dependence on electricity and internet connectivity
- Privacy issues regarding data collection

This transition is rapidly transforming how consumers and businesses operate, fostering a more integrated and efficient economy.

Methods of Cashless Transactions in India

India has seen a significant rise in cashless transactions, especially after government initiatives promoting digital payments. The following are the most common methods:

1. Debit and Credit Cards

- Widely used for both online and offline payments.
- Enable quick transactions at point-of-sale terminals and online merchants.
- Include features like chip-and-PIN, contactless (NFC), and magnetic stripe.

2. Mobile Wallets

- Digital wallets store money digitally and can be used for mobile recharges, bill payments, and shopping.
- Popular wallets include Paytm, PhonePe, Google Pay, Amazon Pay, and others.
- Use QR codes or NFC for contactless payments.

3. Unified Payments Interface (UPI)

- Real-time payment system developed by NPCI (National Payments Corporation of India).
- Allows instant money transfer between bank accounts via mobile apps.
- Users can generate QR codes, send or request money directly through linked bank accounts.
- Examples: Google Pay, PhonePe, BHIM app.

4. Net Banking

- Online banking facilities provided by banks.
- Enables users to perform a variety of financial transactions such as fund transfers, bill payments, and account management via bank websites or mobile banking apps.

5. Bharat QR

- A QR code standard developed by NPCI, VISA, and MasterCard.
- Enables quick payments at merchant outlets using QR code scanning via mobile apps or cards.

6. Aadhar-Enabled Payments System (AEPS)

- Uses biometric authentication linked to Aadhar ID.
- Enables banking transactions at micro-ATMs and bank branches for those without bank accounts or smartphones.

7. USSD (Unstructured Supplementary Service Data)

- Used mostly in feature phones.
- Users dial short codes to perform banking transactions without internet access.

8. Contactless Payments (NFC)

- NFC-enabled cards or devices allow tap-and-go transactions.
- Used at supported POS terminals for quick payments.

Cashless transaction services in India

UPI

UPI is Unified Payments Interface. It is a real-time payment system developed by the National Payments Corporation of India (NPCI) that facilitates instant money transfers between bank accounts via smartphones. UPI allows users to send and receive money, pay bills, and make online purchases seamlessly through a single mobile

- **Google Pay (Tez):** One of the most popular UPI-based apps for peer-to-peer transfers, bill payments, and merchant transactions.
- **PhonePe:** Offers UPI transactions, recharges, bill payments, and investment options.
- **Paytm:** Besides UPI, provides wallet services, shopping, ticket booking, and financial products.
- **BHIM (Bharat Interface for Money):** Government-supported app for simple UPI transactions.

Digital Wallets/Prepaid Payment Instruments

- **Paytm Wallet**
- **Mobikwik**
- **Airtel Money**
- **JioMoney**
- These wallets can be loaded via bank account, card, or cash and used for various transactions.
- **Impact on Retail Business**

The impact of cashless transactions on retail business is multifaceted. On the one hand, cashless transactions offer numerous benefits, including:

1. Increased efficiency: Cashless transactions can speed up the payment process, reducing wait times and improving customer satisfaction.
2. Reduced costs: Cashless transactions can reduce the costs associated with handling cash, such as storage, security, and transportation costs.
3. Enhanced customer experience: Cashless transactions can provide customers with a more convenient and seamless payment experience, improving their overall satisfaction with the retail experience.

On the other hand, cashless transactions also present challenges for retailers, including:

1. Security concerns: Cashless transactions are vulnerable to cyber threats and data breaches, which can compromise customer data and damage retailer reputation.

2. Technological infrastructure: Retailers need to invest in digital payment infrastructure, including point-of-sale systems and online payment platforms, to support cashless transactions.

3. Customer adoption: Retailers need to educate customers about the benefits and use of cashless transactions, which can be a challenge, particularly for older or less tech-savvy customers.

Significance of the Study

This study is significant because it provides valuable insights into the impact of cashless transactions on retail business, which is a rapidly evolving field. The findings of this study can inform retailers, policymakers, and technology providers about the opportunities and challenges associated with cashless transactions, and help them develop strategies to harness the benefits of this shift.

Research Objective

The objective of this study is to examine the impact of cashless transactions on retail business, exploring both the benefits and challenges associated with this shift. The study aims to provide insights into the effects of cashless transactions on retail operations, customer behavior, and business performance, and to identify strategies for retailers to maximize the benefits of cashless transactions while minimizing the risks.

1.To Find out Socio economic status of the respondent

2.To know about the awareness of cashless transaction

3.To analyze challenges of cashless transaction.

4.To examine cashless transaction effect in retail business

5.To Provide Suggestions for improve cashless transaction.

Review of Literature

1.Gulirano et al., 2019 According to a study, online payments are becoming more trusted by user across all domains, including digital products and services. The nation's growth is being aided by the digitalization of payment systems. The study attempted to elucidate how economic reforms contributed to the growth of the cashless economy. This significant transitional period will result in the nation's economic integration with the rest of the world. A cashless economy will raise the efficiency of institutions and the average person while also improving the cost-benefit ratio.

2.**Joshi (2018)** "Various cashless transaction methods, associated difficulties, and corrective actions were covered in a paper. The authors of this descriptive design study used a questionnaire and schedule to gather primary data, and they used a variety of official publications and research journals to gather secondary data, which they then analyzed using the paired sample test and the percentage method. The low level of digital literacy, the lack of high-speed internet connectivity, the risk of identity theft, the habit of using cash, the lack of digital infrastructure in rural areas, the skepticism of traders, the high merchant discount rate charged by banks, and other issues were among the difficulties the authors identified with digital payments. The study also suggested some corrective actions to boost cashless transactions, like the government creating guidelines for improving online transactions, boosting financial security through risk-reduction measures.

Methodology

Results and Discussions

Gender of the Respondent

Gender	Frequency	Percent
Male	31	77.5
Female	9	22.5
Total	40	100.0

(Source: primary data 2025)

The data indicates the gender composition of the 40 respondents surveyed. A significant majority of the participants were male, accounting for 77.5% (31 out of 40 respondents). In contrast, only 22.5% (9 out of 40 respondents) were female.

Age of the Respondent

Age	Frequency	Percent
18-20	2	5.0
20-30	3	7.5
30-40	28	70.0
Above 40	7	17.5
Total	40	100.0

(Source: primary data 2025)

The age distribution of the 40 respondents reveals that the majority fall within the 30–40 years age group, comprising 70.0% (28 respondents). This indicates that middle-aged individuals formed the core demographic of the study.

Education Level of the Respondent

Education level	Frequency	Percent
Primary	11	27.5
Secondary	17	42.5
Diploma	4	10.0
Bachelor's Degree	6	15.0
Masters Degree	1	2.5
Other	1	2.5
Total	40	100.0

(Source: primary data 2025)

The data shows that the majority of respondents have attained secondary education, representing 42.5% (17 out of 40 respondents). This is followed by 27.5% (11 respondents) who have completed primary education.

Type of the Business

Type of business	Frequency	Percent
Vegetables shop	20	50.0
Provision shop	12	30.0
Bakery	2	5.0
furniture's	2	5.0
Meat	3	7.5
Others	1	2.5
Total	40	100.0

(Source: primary data 2025)

The data reveals that the most common type of business among the respondents is vegetable shops, which account for 50.0% (20 out of 40 respondents). This is followed by provision shops, operated by 30.0% (12 respondents).

Respondent used Type of QR code

Type of QR code	Frequency	Percent
Not used	2	5.0
G Pay	14	35.0
PhonePe	16	40.0
Paytm	4	10.0
BHMi	2	5.0
Other	2	5.0
Total	40	100.0

(Source: primary data 2025)

The data shows that PhonePe is the most widely used QR code-based digital payment platform among respondents, with 40.0% (16 out of 40) using it. GPay (Google Pay) follows closely, used by 35.0% (14 respondents).

Challenge Levels in Cashless Transaction

Challenges level	Frequency	Percent
High	15	37.5
Moderate	18	45.0
Low	7	17.5
Total	40	100.0

(Source: primary data 2025)

The data shows that a majority of respondents face a moderate level of challenges in their business activities, accounting for 45.0% (18 out of 40 respondents). This is followed by 37.5% (15 respondents) who reported experiencing high levels of challenges.

Online Payment method implementation reason

Reason for Implemented	Frequency	Percent
Not implemented	2	5.0
Cash change issue	4	10.0
easy method	10	25.0
customer convenience	23	57.5
Direct Bank ac	1	2.5
Total	40	100.0

(Source: primary data 2025)

The data indicates that the primary reason for implementing QR code payment systems among respondents is customer convenience, cited by 57.5% (23 out of 40). This suggests that most businesses adopted digital payments to meet customer expectations and enhance service ease.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.268[a]	.072	.033	8345.48248	.966

a. Predictors: (Constant), Business Age, Age of the respondent

b. Dependent Variable: Monthly revenue

R (Correlation Coefficient) = 0.268

This indicates a weak positive correlation between the predictors (business age and respondent age) and the monthly revenue. The relationship exists but is not strong.

Model		Sum of Squares	df	Mean Square
1	Regression	254320978.736	2	127160489.368
	Residual	3273412657.844	47	69647077.826
	Total	3527733636.580	49	

Regression Sum of Squares (SSR) = 254,320,978.736

This represents the variation in monthly revenue explained by the predictors (Business Age and Age of Respondent).

Residual Sum of Squares (SSE) = 3,273,412,657.844

This reflects the unexplained variation — the part of monthly revenue that is not accounted for by the model.

Total Sum of Squares (SST) = 3,527,733,636.580

This is the total variation in the dependent variable (monthly revenue).

Degrees of Freedom (df):

- Regression df = 2 (number of predictors),
- Residual df = 47 (n − k − 1 = 50 − 2 − 1),
- Total df = 49 (n − 1).

Mean Square:

- Mean Square Regression = 127,160,489.368
  (SSR ÷ df = 254,320,978.736 ÷ 2),

- Mean Square Residual = 69,647,077.826
  (SSE ÷ df = 3,273,412,657.844 ÷ 47)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-11464.447	7370.716		-1.555	.127
	Age of the respondent	5915.623	3161.471	.505	1.871	.068
	Business Age	-3168.253	2270.698	-.376	-1.395	.169

a. Dependent Variable: Monthly revenue

The model as a whole is not strong (R^2 = 0.072), and neither predictor is statistically significant at the 0.05 level.

However, Age of the Respondent shows a positive trend that is marginally significant (p = 0.068), which may warrant further investigation with a larger sample or additional variables. Business Age, surprisingly, shows a negative association, but this is not statistically significant.

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-3222.3362	5861.5405	1202.2200	2278.20632	50
Residual	-5859.54053	54559.34375	.00000	8173.39219	50
Std. Predicted Value	-1.942	2.045	.000	1.000	50
Std. Residual	-.702	6.538	.000	.979	50

a. Dependent Variable: Monthly revenue

The regression model has high residual variability and may not predict monthly revenue accurately.Extreme residuals suggest possible outliers or influential cases that are poorly fitted by the model.This supports earlier findings that the model has low explanatory power (R^2 = 0.072).

Correlations

Correlations		Business Age	Monthly revenue
Business Age	Pearson Correlation	1	.054
	Sig. (2-tailed)		.707
	N	50	50
Monthly revenue	Pearson Correlation	.054	1
	Sig. (2-tailed)	.707	
	N	50	50

Pearson Correlation Coefficient (r) = 0.054

This indicates a very weak positive linear relationship between business age and monthly revenue. The correlation is almost negligible and close to zero.

Significance (p-value) = 0.707

This is much higher than the commonly used threshold of 0.05, indicating that the correlation is not statistically significant.

In other words, we cannot conclude that there is a meaningful relationship between business age and monthly revenue based on this data.

Findings and Suggestions

Findings

1. Demographic Characteristics

- Gender: The majority of respondents are male (77.5%), with females making up only 22.5%.
- Age: Most respondents (70%) are in the 30–40 years age group.
- Education: A large portion of respondents have completed secondary (42.5%) and primary (27.5%) education, with relatively few holding higher degrees.

2. Business Characteristics

- Type of Business: Half of the respondents (50%) operate vegetable shops, followed by provision shops (30%). Other types such as bakery, furniture, and meat shops have minimal representation.
- Challenges: A significant portion face moderate (45%) to high (37.5%) challenges in their business operations.

3. Digital Payment Adoption

- QR Code Usage: 95% of respondents use QR code payments, with PhonePe (40%) and GPay (35%) being the most popular.
- Reason for Implementation: The leading reason for QR code adoption is customer convenience (57.5%), followed by it being an easy method (25%).

4. Statistical Analysis

- Regression Model:
  - The model shows a weak relationship ($R^2 = 0.072$) between monthly revenue and the predictors (business age, age of respondent).
  - Age of respondent has a positive but marginally significant impact on revenue ($p = 0.068$).
  - Business age has a negative and non-significant effect on revenue ($p = 0.169$).
- Residual Analysis:
  - The model shows large residuals, indicating poor prediction accuracy.
  - High standardized residuals suggest potential outliers.
- Correlation Analysis:
  - There is no significant correlation between business age and monthly revenue ($r = 0.054$, $p = 0.707$).

Suggestions

1. Encourage Female Participation
   - Promote women entrepreneurship through training, financial aid, and digital literacy to improve gender balance.
2. Skill Development
   - Offer entrepreneurial and financial literacy programs for business owners, especially those with lower education levels, to enhance operational and management skills.
3. Support for Business Challenges
   - Provide micro-financing, business consultancy, or governmental support schemes to businesses facing moderate to high levels of challenges.
4. Enhancing Digital Payment Adoption
   - Encourage continued use of digital payments by offering incentives or cashback for transactions.
   - Conduct awareness campaigns to educate about other secure and efficient digital platforms.

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