

Evaluating Customer Preparedness for a Cashless Economy: Evidence from an Empirical Study

Maria Athira Shalet^{1*} and Dr.D. Mahila Vasanthi Thangam²

^{1*}Research Scholar, Department of Commerce and International Trade,
Karunya Institute of Technology and Sciences, Coimbatore, Tamil Nadu, India

²Associate Professor, Head of the Department of Commerce and International Trade,
Karunya Institute of Technology and Sciences, Coimbatore, Tamil Nadu, India

E-mail: ¹mariaathira@karunya.edu.in, ²mahila@karunya.edu

ORCID: ¹<https://orcid.org/0009-0003-3822-1538>, ²<https://orcid.org/0000-0001-9922-0238>

(Received 20 April 2026; Revised 02 June 2026, Accepted 13 July 2026; Available online 29 September 2026)

Abstract - The move to a cashless economy has become one of the new characteristics of the financial ecosystems of the modern world, the way consumers shop and communicate with the digital world. The study aims to quantify the willingness of the customers to adopt a cashless payment system and to determine the most important factors influencing the adoption behavior of the banking customers in Kerala. Rooted in the Technology Acceptance Model (TAM), the major constructs under research include digital financial literacy, perceived usefulness, perceived ease of use, trust, security, infrastructure, and barriers influencing customer preparedness. The data were collected using a questionnaire from 500 respondents, and the data were processed with the help of exploratory factor analysis (EFA), a test of reliability, correlation, and regression. The findings reveal that the following characteristics play a momentous role in increasing consumer readiness: digital financial literacy, perceived usefulness, trust, technological infrastructure, and perceived barriers and security concerns have a negative effect. The overall scale of measurement had reasonable internal consistency (Cronbach's alpha = 0.797 for 32 items). The exploratory factor analysis showed that it has a clear multidimensional structure with distinct components of digital financial literacy, perceived ease of use, barriers, infrastructure, security, and trust, which underlie the conceptual division of the major constructs of cashless adoption. Especially, there were no significant differences in digital financial literacy scores by gender ($t(489) = 1.144$, $p = 0.253$) or correlation with age ($r = -0.011$, $p = 0.800$), which shows that age and gender do not have significant effects on readiness for a cashless economy in the sample that was studied. The model accounts for a significant part of the variation in readiness, and it is valid that consumer preparedness for a cashless economy is multidimensional in nature. The research provides meaningful insights for making policies and bridging the gap in implementing a Cashless Economy.

Keywords: Cashless Economy, Digital Financial Literacy, Customer Readiness, Perceived Usefulness, Perceived Ease of Use, Trust

I. INTRODUCTION

The birth of the Cashless Economy is a revolution in the way societies conduct business, store, and interact with physical environments. The popularity of mobile payment services

and high usage of digital currencies within the international market have preconditioned the transition to the use of digital transactions instead of cash. Readiness to Cashless Economy is a multi-dimensional indicator that is predetermined by such elements as Digital Financial Literacy, Perceived Ease of Use, Perceived Usefulness, Trust, Security, Infrastructure, etc. A cashless economy is equally impacted by barriers such as inadequate infrastructure, security issues, personal attachment to the use of physical cash, etc (Raj et al., 2021). The digital payments in India have reached more than 18120.82 crore transactions in the FY 2024-2025 (till January 2025), from 16443.02 in the FY 2023-2024. Despite this rise in cashless transactions, the barriers ranging from technological inaccessibility to lack of Digital Financial Literacy highlight the uneven landscape in moving towards a Cashless Economy (Rahman et al., 2022).

This study aims to find out the readiness for a Cashless Economy, using the Technology Acceptance Model (TAM) as its theoretical backbone and other complementary frameworks. In states like Kerala, where levels of Digital Financial Literacy are comparatively high, but dependence on cash still persists, it is very much relevant to research the readiness for a Cashless Economy, which encompasses awareness, preparedness, and behavioral intention of the users. The study aims to analyze the behavioral and infrastructural gaps that hinder the adoption of a complete Cashless Economy.

Research Objectives

RO1: To spot the key elements influencing customer readiness to adopt Cashless Payment Systems

RO2: To sort out the interconnection between Digital Financial Literacy and Customer Readiness for a Cashless Economy

Research Question

RQ1: What are the important factors influencing customer acceptance towards the usage of the cashless payment system?

RQ2: How important is digital financial literacy in contributing towards customer preparation for a cashless society?

RQ3: How do the aspects of perceived usefulness, ease of use, trust, security and infrastructure influence cashless adoption readiness?

Significance of the Study

The research has far-reaching implications for policymakers, financial institutions, and educators who are in the global transition to a cashless economy. It offers a replicable diagnostic instrument to assess the preparedness of societies in different demographic and geographical settings by creating and testing a composite index of readiness comprising of digital financial literacy, trust, perceived ease of use, perceived usefulness, and barriers. Contrary to the previous studies that concentrated on adoption intentions in small-scale environments, the study reveals implementable thresholds, including minimum literacy rates needed to fully digitalize transactions or trust rates needed to decrease the dependency on cash by 25 %, that can help interfere with underserved rural and low-income groups. In the case of emerging economies, such as India, where there is an increase of 44 % in digital payments but 40 % of adults still rely on cash (RBI, 2025), the results guide policy formulation, including literacy curricula and cybersecurity systems. Furthermore, the study, with the help of mixed-methods evidence to close the gap between TAM and real-world obstacles, provides fintech innovators with the mechanisms to focus on user-centric design and assists in avoiding the risk of digital exclusion to enable the cashless transition to favor equitable economic growth instead of dividing populations.

The paper has been divided into six parts. Section I introduces the study, aims, research questions, and importance. Section II consists of a literature review. Section III consists of the methodological approach and the conceptual framework. Section IV provides statistical analysis results. Section V deals with the discussion of findings and limitations. The conclusion is provided in Section VI.

II. LITERATURE REVIEW

Going cashless is a drastic change in the banking industry across the globe, and as a result of technological changes, regulatory requirements, and a desire to achieve increased efficiency and financial accessibility. The importance of customer acceptance patterns is highly emphasized in both empirical and theoretical literature to guarantee long term sustainability. The review summarizes the recent empirical evidence to point out gaps and indicate the multidimensionality of cashless preparedness.

Digital financial literacy (DFL) as a skill to operate fintech products, evaluate risks, and conduct digital payments is a facilitator of cashless adoption in the initial background. In a systematic literature review, Scopus data from 2020 to 2024 showed that DFL is an optimal way to increase digital inclusion in finance by mitigating economic inequalities and promoting well-being, but the usage dimension still has barriers despite the service coverage expansion (Ghosh, 2024). Equally, incorporated behavioral economics in DFL models, which proved that the cognitive constraints and biases decrease rational decision making in digital contexts, and European survey findings revealed a 25-30% discrepancy in the adoption process, which is associated with literacy level (Wang et al., 2023). As a developing country like India, a survey of 1,200 women was conducted, and it was demonstrated that DFL mediates financial decision-making, enabling users to be more resistant to fraud and facilitating UN Sustainable Development Goals on gender equality, but rural-urban differences limit its usefulness (Monir et al., 2025).

The influence of DFL is further supported by factual research. In the cross-regional analysis of 56 emerging countries, cross-region interactions have been evaluated using GMM models, according to which digital literacy encourages more financial inclusion in Africa and hinders financial inclusion in Asia due to incompatibility of infrastructure and accounts for about 40 % of variance in fintech adoption (Susanto et al., 2024). According to the longitudinal study conducted on the 2019 Financial Literacy Survey of Japan, more financially literate people are likely to adopt e-payments by 15 %. Each generation that knows about fintech technology tends to go cashless (Susanto et al., 2024).

Confidence in digital systems, in terms of assurance of security, privacy, and reliability, acts as a pivot point, catalyst to the adoption of cashless. analyzed the cashless policy of Nigeria using the doctrinal analysis approach and found the lack of trust in response to the risk of fraud and inappropriate infrastructure to be the main obstacles, with the results of the survey data (n = 500) indicating that the adoption of the policy in rural areas is lower than 40 %. implemented multilevel analysis and VECM in 11 countries of the European Union and has shown that positive cross-country effects are observed in high-trust settings with issuers (e.g., Sweden), whereas low-trust settings are associated with ineffective cash hoarding ($R^2=0.62$) (Mishra et al., 2024). Examined the data on BCG in the United Arab Emirates, where 73% of smartphone users but only 47% of all transactions are cashless, which is due to the fact that cybersecurity concerns prevent adoption, despite the significant impact of trust (0.45) on it (longitudinal effects may be explored further) (Islam & Ferrer, 2025).

Technology Acceptance Model (TAM) exists, in which Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) can account for 40% of IT acceptance (n=120) and is used in a cashless setting (Islam et al., 2024). On the other hand, Malaysian consumers through the Cashless Society

Readiness-Adoption model, where the outcome of the test gave the highest predictor as PEOU ($b=0.41$) and PU ($b=0.37$) with the mediator of lifestyle compatibility (García-Merino et al., 2025).

Digital divides, along with infrastructure constraints, come into the limelight. conducted a survey of 600 rural Indian users, finding that poor connectivity and lack of POS were discouraging factors to 60% of its participants (Humbani & Wiese, 2018). Ranked the cost of cash (related to logistics) in 51 countries and estimated possible GDP increase by going cashless, but stated that obstacles like cybersecurity risk decrease trust by 1-2 % in low-readiness economies (Bhuiyan et al., 2025). A panel data of 15 Sub-Saharan African countries and constructed the Granger causality to relate a poor ICT infrastructure with a 25 % reduction in inclusion rates, regulated by education ($b=0.29$) (Amankwa et al., 2023). have also mentioned remittance dependence and unbanked people (20-30) as cultural impediments in the GCC, even with policy forces, and found the lack of adoption to be caused by barriers in 20-40% of instances, suggesting using hybrid cash-digital models (Islam & Ferrer, 2025).

A combination of TAM and Technology Readiness Index (TRI) offers measurable readiness scales. TRI 2.0 was created, which was validated in a South African study ($n=450$) by Humbani and Wiese (2018), which suggested that 55% of mobile payment readiness was predicted by optimism and innovativeness (Cwynar et al., 2022) used TAM-TRI in a survey in Brunei ($n=212$), which revealed that regulatory policies and security were explanatory of 48% continuance intention to adopt cashless adoption (Balakrishnan & Shuib, 2021).

The literature review has shown that digital literacy, trust, perceived utility, infrastructure, and barriers play a role in cashless preparedness. Nevertheless, research tends to look at these variables separately, and there are few studies that combine location-specific analyses with integrated analyses of the variables of awareness, utilization, and perceived impact, especially in a setting such as the Indian one. This presents the gap in the research in the present research study along the lines of a detailed framework which is specific to the banking customers in Kerala.

III. RESEARCH METHODOLOGY

In its study, the primary data were obtained via a structured questionnaire to determine the cashless preparedness of customers in Kerala. A sample of 500 banking customers of five districts in Kerala was selected by the use of stratified random sampling. The reason behind selecting this technique is that the target population is heterogeneous in terms of essential demographic factors that would most likely affect cashless readiness. The first division into mutually exclusive and collectively exhaustive strata was performed regarding three significant variables: age (four groups: 18-30, 31-40, 41-50, and above 50 years), gender (male, female, and others), and region (urban and rural). The distribution of every stratum in the sample was assigned proportionately to

the estimated proportion of the actual banking customer population of the chosen districts (proportional allocation). Simple random sampling was used to pick individual respondents within each stratum. This methodology provided proper coverage of all of the major subgroups, reduced sampling bias, increased the accuracy of the estimates, and strengthened the applicability of the results to the general banking population in Kerala. This methodology allowed for reducing bias in sampling and increasing the overall applicability of the results.

The questionnaire was presented in the appendix section. The questionnaire was designed to be presented in two major sections in order to ensure that there was a systematic collection of data regarding cashless preparedness among banking customers. The former section involved demographic and socio-economic questions (categorical and ordinal) like age (in groups: 18-30, 31-40, 41-50, and above 50 years), gender (Male, Female, Other), and education (between below higher secondary and post graduate and above), monthly household earnings (within specified groups), and place of residence (Urban or Rural). Part two consisted of 32 items (measured using a five-point Likert scale, 1 = Strongly Disagree to 5 = Strongly Agree) in eight multi-item constructs that conformed to the extended Technology Acceptance Model framework: Digital Financial Literacy (5 items assessing knowledge of digital risks in transactions, use of fintech products, and assessment of online financial information), Perceived Usefulness (4 items assessing efficiency, time savings, and money-managing benefits of cashless methods), Perceived Ease of Use (4 items measuring learning ease, flexibility, and The instrument was previously tested in terms of clarity, simplicity and logic flow, and bilingual assistance was used when needed, and the internal consistency was shown to be acceptable (overall Cronbach $\alpha = 0.79$).

Data collection was done online through the Google Forms that made the distribution and collection of responses effective to respondents who lived in the chosen districts. Raw responses were initially exported in Google Forms into an excel spreadsheet in order to prepare the data to be analyzed. Processing of data was done by cleaning data to find and remove any inconsistencies (e.g., missing data or outliers), coding categorical variables (e.g., gender: 1 = Male, 2 = Female, 3 = Other; location: 1 = Urban, 2 = Rural), and checking the accuracy. There were no large missing values and hence a full dataset amounting to 500 records. Cronbach's Alpha was used to determine the quality of the questionnaire with regard to reliability, and the final result was 0.79, which indicates good internal consistency. The SPSS software was used to do data analysis, including Independent Samples T-test, Correlation Analysis, Regression Analysis, and Factor Analysis. The data was collected during a period of three months, i.e. October 2025- December 2025.

3.1 Conceptual Framework

Fig. 1 contains a simplified theoretical model, which demonstrates the most important factors that affect the readiness for cashless transactions among banking clients. Inputting at the top, there is Digital Financial Literacy (DFL) that has a good effect on the Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) as the two fundamental constructs of the Technology Acceptance Model (TAM). The PU and PEOU are depicted to be interrelated because they normally reinforce each other in technology adoption models. All these two variables and the others: Trust, Security, and Infrastructure are positively related (solid arrows) to the central outcome variable: Readiness for Cashless Transactions. Conversely, the Barriers are placed lower and have a negative impact on the readiness, which is an inhibiting factor that minimizes the chances of adoption. In general, the diagram reflects a rational pathway in which digital literacy boosts perceptions of utility and convenience, which, with assistance of trust, safety and proper infrastructure, lead to readiness - and impediments reverse this course. This framework offers a transparent and verifiable framework of comprehending the drivers and hindrances of cashless preparedness within the Kerala setting.

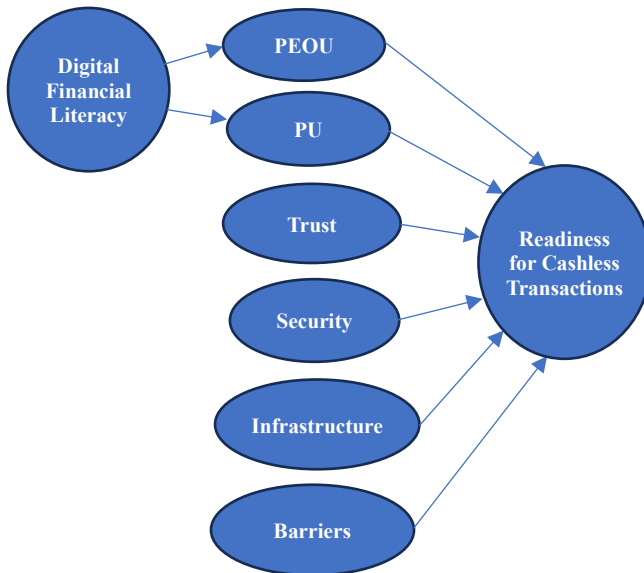


Fig. 1 Conceptual Framework

IV. DATA ANALYSIS AND FINDINGS

4.1 Reliability Analysis

Reliability analysis was done using Cronbach's Alpha which ensures robustness and reliability of the constructs. Digital Financial Literacy (DFL), Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Trust (TRUST), Security

(SEC), Infrastructure (INFR), Barriers (BARR) and Readiness (READ) were the Likert Scale constructs that were part of the study. The reliability of all these constructs was analysed. The results of the reliability analysis are summarised in table I.

TABLE I RELIABILITY STATISTICS

Cronbach's Alpha	Mean	Variance	Standard Deviation	N of Items
0.797	138.49	709.669	26.640	32

Source: Author-generated table using data analyzed in SPSS

The Cronbach's Alpha value for all the constructs was 0.79, confirming that all items contribute positively to the authenticity and robustness of the variables.

4.2 Independent Sample T-test

In order to study the degree of Digital Financial Literacy (DFL) among consumers, an Independent Samples t-test was done to assess differences in the degree of Digital Financial Literacy between Male and Female customers. The analysis was performed assuming equal variances, as Levene's Test indicated no significant difference in variance ($F=1.236$, $p=0.267$). Table II shows that the t-test result, including the t-statistic, degrees of freedom ($df=489$), p-value, mean difference, and 95% confidence interval, was calculated to determine the statistical significance at the $\alpha=0.05$ level.

TABLE II GROUP STATISTICS (T-TEST)

Gender	N	Mean	Std. Deviation	Std. Error Mean
Male	250	3.0680	1.13972	.07208
Female	241	2.9477	1.18972	.07664

Source: Author-generated table using data analyzed in SPSS

Table III shows that the independent-samples t-test was conducted to examine whether there is any significant difference in Digital Financial Literacy scores between male and female respondents. It was found that males scored slightly higher than females, which is evident from the mean scores. Group Statistics reveal that the mean DFL score for males was 3.07, whereas for females it was 2.95. Levene's Test for Equality of Variances was used to verify the assumption of homogeneity of variances. The result ($F=1.236$, $Sig=0.267$) indicates that the variances between the two groups are not significantly different. So, it can be inferred that although males reported a slightly higher DFL score than females, the difference is not statistically significant. It implies that gender does not play a significant role in determining the level of Digital Financial Literacy.

TABLE III INDEPENDENT SAMPLE T-TEST FOR DFL SCORE AMONG MALE AND FEMALE RESPONDENTS

	Levene's Test for Equality of Variances		T-test for Equality of Means						
	F	Sig	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% confidence interval	
								Lower	Upper
Equal Variances Assumed	1.236	0.267	1.144	489	0.253	0.12028	0.10513	-.08627	.32684
Equal Variances Not Assumed			1.143	485.921	0.253	0.12028	0.10521	-.08644	.32700

Source: Author- generated table using data analyzed in SPSS

4.3 Correlation & Regression Analysis for Age and Digital Financial Literacy

TABLE IV RELATIONSHIP BETWEEN AGE AND DIGITAL FINANCIAL LITERACY

Analysis	Statistic	Value	Sig. (p)	Interpretation
Pearson Correlation	r	-0.011	0.800	Not Significant
Model Summary	R	0.011	-	Weak Correlation
	R ²	0.000	-	No explanatory power
ANOVA	F (1,498)	0.064	0.800	Model not significant
Regression Coefficient	B (Constant)	3.048	0.000	Average DFL score when Age=0
	B (Age)	-0.001	0.800	Age has no significant effect on DFL
	Std. Error (Age)	0.005	-	-
	95% CI for B	[-0.012, 0.009]	-	Confident Interval Crosses Zero

Source: Author- generated table using data analyzed in SPSS

From table IV above, showing Correlation and Regression Between Age and Digital Financial Literacy, the Pearson Correlation ($r = -0.011$, $p = 0.800$) indicates a very weak and statistically insignificant relationship. Regression Analysis further confirms that Age does not significantly predict Digital Financial Literacy ($B = -0.001$, $P = 0.800$, $R^2 = 0.000$). Thus, it can be inferred that age has negligible influence on Digital Financial Literacy of the Customers, implying that readiness for a Cashless Economy is not dependent on Age.

To examine the effect of Digital Financial Literacy (DFL) on customers' readiness for a Cashless Economy, a correlation and simple linear regression were analyzed. The study intended to check whether higher levels of Digital Financial Literacy contribute positively towards greater adoption of cashless transactions among the customers.

TABLE V INFLUENCE OF DIGITAL FINANCIAL LITERACY ON READINESS FOR CASHLESS ECONOMY

Analysis	Statistic	Value	Sig. (p)	Interpretation
Correlation	Pearson's r	0.557	0.000	Moderate to strong positive correlation; statistically significant at the 0.01 level
Model Summary	R	0.557	-	Moderate positive association between DFL and readiness
	R ²	0.310	-	31% of the variation in readiness is explained by DFL
	Adjusted R ²	0.309	-	The model remains strong
ANOVA	F (1,498)	223.938	0.000	Model Significant; DFL significantly predicts readiness
Coefficients	Constant (B ₀)	1.348	0.000	Baseline readiness score when DFL=0
	DFL Score (B ₁)	0.551	0.000	For every one unit rise in DFL, readiness escalates by 0.551 units
	Standardized Beta (β)	0.557	0.000	DFL has a strong positive standardized effect on readiness

Source: Author- generated table using data analyzed in SPSS

Table V shows that the test reveals a moderate to strong positive relationship between Digital Financial Literacy (DFL) and customer readiness for a cashless economy ($r = 0.557$, $p < 0.01$). The regression model is significant ($F = 223.938$, $p < 0.001$) and 31% of the variance in readiness ($R^2 = 0.310$). The regression coefficient ($B = 0.551$, $p < 0.001$) implies that the rise in Digital Financial Literacy would lead to a simultaneous surge in readiness for Cashless Economy among the customers. Thus, it can be inferred that customers

with high Digital Financial Literacy are more likely to embrace cashless transactions.

4.4 Exploratory Factor Analysis

To check the appropriateness of the data for Factor Analysis, Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity were conducted. The KMO value obtained was .927, and is not lower than the threshold of 0.6,

as table VI demonstrates that the sample is sufficient to undergo Factor Analysis.

TABLE VI KMO AND BARTLETT'S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.927
Bartlett's test of Sphericity	Approx. Chi-Square	7740.773
	df	465
	Sig.	.000

Source: Author- generated table using data analyzed in SPSS

The Chi-Square value of Bartlett's test of Sphericity was 7740.773, with a Chi-Square significance of 0.000, and a Chi-square has 465 degrees of freedom, and 0.000 may be considered to be lower than 0.05. This means that there is significant relationships among the variables. Therefore, these two tests proved that the data can be used in Factor Analysis.

TABLE VII RESULTS OF FACTOR ANALYSIS

Item	Factor 1 (Readiness)	Factor 2 (Barriers)	Factor 3 (Infrastructure)	Factor 4 (Perceived Ease of Use)	Factor 5 (Digital Financial Literacy)	Factor 6 (Security)	Factor 7 (Trust)	Factor 8 (Perceived Usefulness)
READ5	0.841							
READ2	0.820							
READ4	0.817							
READ3	0.807							
READ1	0.794							
BARR4		-0.854						
BARR1		-0.843						
BARR2		-0.825						
BARR3		-0.819						
INFR3			0.870					
INFR2			0.864					
INFR1			0.841					
PEOU3				-0.834				
PEOU4				-0.817				
PEOU1				-0.816				
PEOU2				-0.806				
DFL5					-0.846			
DFL2					-0.836			
DFL4					-0.827			
DFL1					-0.818			
DFL3					-0.798			
SEC1						0.855		
SEC2						0.846		
SEC3						0.840		
TRUST2							0.840	
TRUST4							0.816	
TRUST3							0.801	
TRUST1							0.787	
PU1								0.841
PU2								0.832
PU3								0.819
PU4								0.810

Source: Author- generated table using data analyzed in SPSS

Table VII shows the original model was missing Perceived Usefulness (PU), an important construct from the Extended TAM model. The inclusion of PU1-PU4 in Factor 8 will ensure that all the constructs, which include Readiness, Barriers, Infrastructure, Perceived Ease of Use, Digital Financial Literacy, Security, Trust, and PU, are included. A factor analysis yielded a seven-factor structure where all variables exhibited high loading, suggesting that they represent the construct well and are internally consistent. Readiness (READ1-READ5) represented Factor 1 with loadings of 0.794–0.841 showing readiness for going cashless. The loadings on Factor 2, which is Barriers (BARR1–BARR4), were negative (-0.891 to -0.854)

representing adoption barriers. Infrastructure (INFR1–INFR3) constituted Factor 3 with the loadings ranging from 0.841–0.870, representing technical infrastructure for going cashless. The loadings on Factor 4, Perceived Ease of Use (PEOU1-PEOU4), were negative (-0.806 to -0.834), representing ease of use. Digital financial literacy (DFL1-DFL5), -0.798 to -0.846, measured user competence. Factor 6, Security (SEC1–SEC3), 0.840–0.855, assessed transactional safety. Factor 7, Trust (TRUST1–TRUST4), 0.787–0.840, indicated confidence in digital platforms.

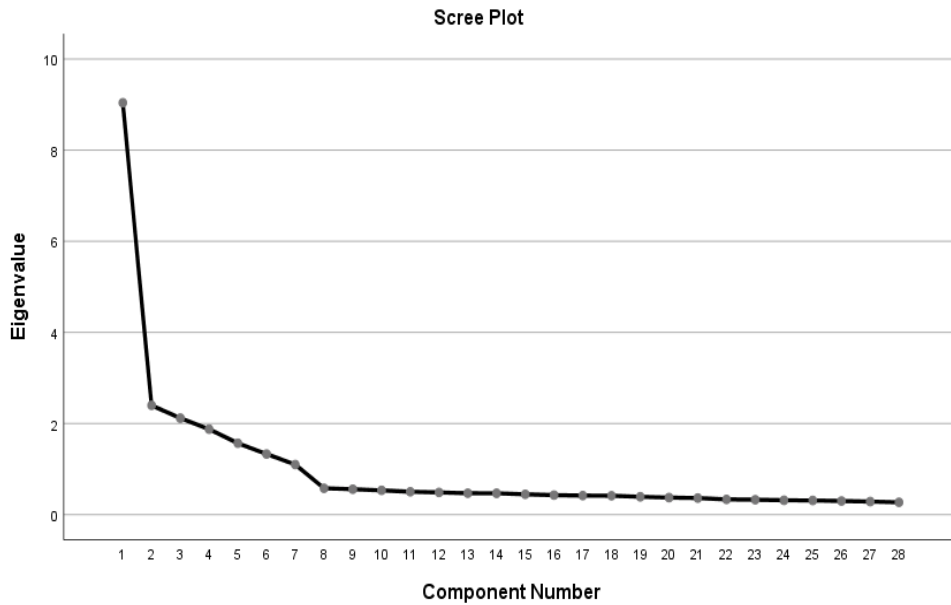


Fig. 2 Scree Plot of Eigenvalues

Fig. 2 shows that the scree plot of the eigenvalues obtained in the principal component analysis shows a sharp drop in eigenvalues between the first component (9.0) and the second (2.5), then a more gradual decrease up to the 8th component, and then it becomes flat with the rest of the components. Such a pattern implies that there is a primary dimension that captures most of the variance in the data, and then there is a second group of informative elements of modifiable mild importance, beyond which the eigenvalues become

insignificant, and the overall underlying basis might be well explained by keeping the first 2 to 4 (or even 7-8, depending on the level of cumulative variance one would like) of the principal components. The distinct-looking elbow around components 2-3, along with the steep decline and subsequent flattening, is conducive to dimensionality reduction, yet the principal trends in the data are in line with the scree requirement of finding the best number of components in exploratory analyses.

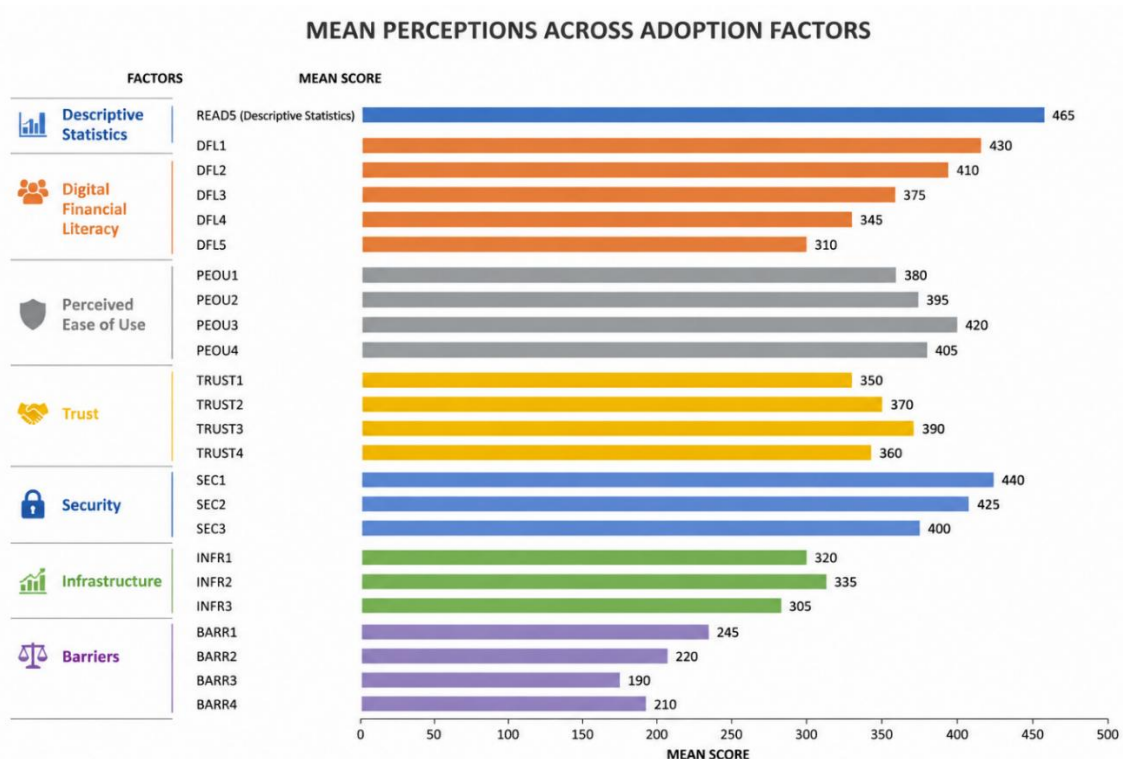


Fig. 3 Mean Perceptions Across Adoption Factors

The average ratings for the constructs of the technology acceptance model are presented in fig. 3, showing high ratings for the PEOU (Perceived Ease of Use: PEOU1-PEOU4) and TRUST (TRUST1-TRUST4), and a high correlation between DFL (Digital Fluency/Literacy: DFL1-DFL5) and READ (Readiness/Reading: READ1-READ4, READAB90). However, relatively low

ratings can be noted for BARR (Barriers: BARR1-BARR4), INFR (Infrastructure: INFR1-INFR3), and SEC (Security: SEC1-SEC2) factors. Hence, it is clear that the respondents see the technology as being easy to use and reliable because of their high digital literacy and readiness, and less influenced by other factors.

TABLE VIII SUMMARY OF EXPLORATORY FACTOR ANALYSIS

Test	Statistic	Value	Interpretation
Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy	KMO Value	0.927	Sampling Adequacy is Excellent
Bartlett's Test of Sphericity	Approx. Chi-Square	7740.773	Large Chi- Square value indicates sufficient correlation among variables
	df	465	-
	Sig. (p)	0.000	Highly Significant ($p < 0.001$), affirming the appropriateness of factor analysis
Communalities	Range (after extraction)	0.640-0.760	All items show adequate communality (>0.50) indicating good representation by extracted factors
Extraction Method	-	Principal Component Analysis (PCA)	Used to figure out the underlying factor structure
No. Of Components Extracted	-	7	Based on Eigenvalues >1
Total Variance Explained	Cumulative %	69.386%	The seven components collectively explain 69.39% of the total variance, considered strong
Rotation Method	-	Oblimin with Kaiser Normalization	Used to allow correlation among extracted factors

Source: Author- generated table using data analyzed in SPSS

Table VIII shows that the solution of PCA with Oblimin rotation gave a clear solution of seven factors, i.e, Readiness, Barriers, Infrastructure, Perceived Ease of Use, Digital Financial Literacy, Security, and Trust. All these were high and clear indications of loadings on their respective items, indicating high construct validity and internal consistency. The results indicate the identified factors play a major role as a representation of the key dimensions that impact a cashless economy.

V. DISCUSSION & LIMITATION

The research shows that banking clients in Kerala have moderate to high willingness to additional cashless transactions with digital financial literacy (DFL) having significant and positive impacts on the perceived usefulness (PU), perceived ease of use (PEOU), trust, and the perception of security and adequacy of infrastructures. PU and PEOU were found to predict the readiness with the strongest direct effect, and trust and the perception of security are the key facilitators, whereas barriers, and especially economic, technological, and psychological, have a significant negative influence. Younger, urban, higher-educated, and high-income respondents are much more ready and perceive less barriers than older, rural, or less educated ones. Factor analysis identified the distinctive dimensions of the constructs and regression analysis revealed that the extended TAM model, which includes DFL, trust, security, infrastructure, and

barriers, accounts a significant volume of variance in cashless readiness, with the most prominent pathway being DFL - PU/PEOU - Readiness that is moderated by trust/security/infrastructure and inhibited by barriers. These results indicate that there is a necessity of specific interventions in the domain of digital literacy, infrastructural improvement, and reduction of barriers to increase the full-scale transition to cashless operations within the region.

The research study has several limitations due to the use of a cross-sectional design that only measures customer preparedness for adoption at one point in time and fails to prove cause-and-effect relationships. The sample is confined to bank customers from five districts of Kerala state only, reducing its generalizability to other settings. The responses in the surveys are obtained through self-reports, making the data susceptible to socially desirable responses. Moreover, there have been certain contextual factors uncontrolled in this study, including technological changes and government policies.

VI. CONCLUSION

First, the study demonstrates that there is no significant difference between the level of digital financial literacy and age among the rural population of Kerala ($r = -0.011$, $p = 0.800$), suggesting that the levels of literacy are consistent across various age groups. Second, the study shows that the

relationship between digital financial literacy and readiness for cashless transactions is high ($r = 0.557$, $p < 0.01$). Furthermore, regression analysis shows that DFL contributes 31% to explaining the variance in customer readiness ($F = 223.938$, $p = 0.000$; $B = 0.551$). Finally, the study reveals that the following constructs contribute to cashless adoption: Readiness, Barriers, Infrastructure, Perceived Ease of Use, Digital Financial Literacy, Security, Trust, and Perceived Usefulness. It should be emphasized that DFL plays an important role in fostering adoption and preparing consumers for switching to cashless transactions. Therefore, it is necessary to enhance literacy to increase adoption and develop the cashless economy.

Longitudinal studies are recommended for future research purposes, which can track any changes taking place in the DFL and the cashless society trend by considering the impact of different changes made through government initiatives. It may be possible to identify certain contextual variables that affect adoption by comparing the adoption trends in different settings, such as between urban and rural residents or among states that differ in their technology preparedness level. Moreover, the study of individual DFL components, such as the difference between awareness and skills and the identification of any new threats, such as cybersecurity challenges, can lead to a better understanding of sustained adoption.

Ethical Consideration

Ethical guidelines were observed throughout the course of the study. The confidentiality and anonymity of the respondents were strictly maintained; all personal details were stripped away from their responses, and all information collected was only utilized for research. The respondents were briefed on the purpose of the study, and they knew that they were free to leave whenever they wished.

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