

**Digital Divide in Finance: Online Financial Literacy and Financial Independence Among
Elderly People in Kerala**

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Abstract

The progressive digitalisation of financial services has fundamentally altered how citizens engage with banking, payment systems, and investment platforms. Yet the gains of this transformation are distributed unevenly across age cohorts, with elderly individuals frequently facing structural, cognitive, and affective obstacles. This study investigates online financial literacy and its consequences for financial independence among elderly residents of Kerala — a state distinguished by high overall literacy yet confronted with one of India’s fastest-ageing demographic profiles. Employing a descriptive survey design, data were gathered from 100 respondents aged 60 and above, drawn from the districts of Kottayam, Ernakulam, and Idukki using stratified sampling. Findings reveal a pronounced gap between awareness of digital financial services and their active, independent use. Critical obstacles include inadequate digital competence, fear of cyber fraud, interface usability failures, physical limitations, and linguistic barriers. The paper advocates for community-based digital literacy interventions, inclusive platform design standards, and collaborative policy action to bridge the digital financial divide among Kerala’s senior citizens.

Keywords: digital divide, online financial literacy, elderly people, financial independence, financial inclusion, cybersecurity awareness.

Introduction

The past decade has witnessed an accelerating shift in financial services — from branch-dependent, paper-based transactions to platform-mediated, real-time digital interactions. In India, this transition has been propelled by the Pradhan Mantri Jan Dhan Yojana, the Aadhaar biometric framework, and the Unified Payments Interface (UPI), which democratised instant fund transfers. The Reserve Bank of India (2023) reports UPI transactions alone exceeded nine billion per month by late 2023. Kerala, with its high literacy rate and active remittance economy, has been an early adopter of digital financial services. Yet within Kerala, the benefits of digital finance remain concentrated among younger, educated, and urban segments. The India Ageing Report (UNFPA, 2023) notes that Kerala has one of the highest proportions of elderly residents in India, lending particular urgency to questions about elderly financial inclusion. This study examines online financial literacy — defined as the knowledge, skills, and confidence required to engage with digital financial services effectively and securely — among elderly residents of Kerala, and explores how deficits in this literacy affect their capacity for financial independence.

Need and Significance of the Study

Digital financial services are progressively displacing physical banking channels as the primary conduit for pension disbursement, government benefit transfers, bill settlement, and retail transactions. For elderly individuals — whose financial interactions frequently cover pension management, medical payments, and inter-generational transfers — the stakes of digital exclusion are particularly high. Empirical research focusing specifically on the intersection of old age, digital literacy, and financial independence in the Kerala context remains limited. By centring analysis on the elderly in a high-literacy, high-connectivity state, this study isolates the skills and trust

dimensions of the digital divide from the infrastructure dimension, generating insights applicable to rapidly ageing, digitally transitioning societies worldwide.

Review of Related Literature

A substantial body of international and national research converges on the finding that older adults are systematically disadvantaged in digital financial environments relative to younger cohorts. The OECD (2022) found that older individuals frequently possess adequate offline financial knowledge but struggle to translate it into effective action within digital interfaces—attributed to platforms that prioritise transaction speed over usability. The OECD (2023) international survey identified a statistically significant negative correlation between age and digital financial capability scores, sharpest in the 65-and-above cohort. The World Bank’s Global Findex Database (2021) documented that while digital payment adoption surged globally between 2017 and 2021, older adults in low- and middle-income economies remained significantly less likely to have used a digital payment method, attributing this gap to lower comfort with app-based interfaces and higher risk aversion. Nationally, NCAER (2021) identified educational attainment and prior technological exposure as the strongest predictors of financial literacy scores. Within Kerala, Rajan and Mathew (2022) and Joseph and Thomas (2021) documented that fear of fraud and interface complexity are the two most frequently cited barriers to digital banking adoption among elderly non-users.

Conceptual Framework

- **The Digital Divide:** Contemporary scholarship distinguishes among first-level divides (physical access to devices and connectivity), second-level divides (skills and usage patterns), and third-level divides (tangible outcomes derived from digital engagement). For elderly populations, skill deficits and motivational resistance remain significant impediments to meaningful adoption even after access is secured. In the financial domain, the divide manifests as unequal capacity to access, navigate, and derive benefit from digital financial services—with consequences that are materially significant.

- **Online Financial Literacy:** Financial literacy, as defined by the OECD (2023), encompasses the knowledge, skills, attitudes, and behaviours required to make sound financial decisions. Online financial literacy extends this construct to encompass digital competencies—navigating banking applications, executing secure transactions, recognising phishing attempts, and understanding two-factor authentication—without which financial literacy cannot be operationalised in contemporary environments.
- **Financial Independence Among the Elderly:** Financial independence, in the context of elderly populations, refers to the capacity to manage one's own financial affairs without systematic dependence on others. Digital financial literacy is increasingly a precondition for such independence. The loss of financial independence is associated in the gerontological literature with diminished psychological wellbeing, heightened vulnerability to financial abuse, and reduced quality of life.

Objectives of the Study

1. To assess the level of awareness and utilisation of online financial services among elderly residents of Kerala.
2. To identify the primary barriers that constrain elderly people from participating effectively in digital financial activities.
3. To analyse how deficits in digital financial literacy affect the financial independence of older adults.
4. To propose evidence-informed measures for advancing digital financial inclusion among elderly citizens in Kerala.

Methodology

Research Design

A descriptive survey design was adopted for this investigation. This approach is well suited to studies that aim to systematically document the characteristics, attitudes, and behaviours of a defined population at a given point in time, without experimentally

manipulating variables.

Population and Sample

The study population comprised elderly individuals aged 60 years and above residing in the districts of Kottayam, Ernakulam, and Idukki in Kerala—selected to represent contrasting urban–rural compositions: Ernakulam (predominantly urban), Kottayam (semi-urban), and Idukki (predominantly rural). A stratified random sampling procedure yielded a total sample of 100 respondents.

Tool for Data Collection

Data were gathered using a structured questionnaire covering four thematic domains: (i) socio-demographic particulars, (ii) awareness and utilisation of online financial services, (iii) perceived challenges in digital financial engagement, and (iv) perceptions regarding the relationship between digital literacy and financial independence. The questionnaire was administered in Malayalam to ensure accessibility.

Analysis and Interpretation

Quantitative data were analysed through frequency counts, percentage distributions, and descriptive interpretation. Findings are presented in tabular form with analytical commentary.

Table 1

Demographic Profile of Respondents (N = 100)

Variable	Category	Frequency n (%)
Gender	Male	48
	Female	52
Age Group	60–69 years	58
	70–79 years	29
	80 years and above	13
Residence	Urban	47
	Rural	53

The sample is nearly evenly distributed by gender (52% female). The majority of respondents (58%) fall within the 60–69 age bracket, with rural respondents (53%) slightly outnumbering urban counterparts.

Table 2

Awareness and Utilisation of Online Financial Services Among Elderly Respondents (N = 100)

Online Financial Service	Aware (%)	User (%)	Gap (%)
Internet Banking	72	38	34
Mobile Banking Applications	65	31	34
UPI Payments (GPay, PhonePe, etc.)	60	27	33
ATM / Debit Card Services	88	74	14
Online Bill Payments	55	33	22
Online Investment Services	25	10	15

A consistent gap between awareness and active usage is observable across all service

categories. ATM and debit card services record the highest awareness (88%) and usage (74%), reflecting long-term normalisation. UPI-based payments are used independently by only 27%, reflecting the recency of the technology and steeper skill demands. Online investment services record the lowest penetration (10%).

Table 3

Major Challenges Faced by Elderly Respondents in Using Online Financial Services (N = 100)

Challenge	Frequency (n)	Percentage (%)
Insufficient digital skills and technical competence	78	78
Apprehension regarding online fraud and cyber threats	74	74
Complicated or non-intuitive banking interfaces	68	68
Declining vision and reduced motor coordination	56	56
Language and technical terminology barriers	52	52
Limited assistance from family or community	38	38

Insufficient digital skills constitute the most frequently reported barrier (78%), followed by apprehension about online fraud (74%) and discomfort with complicated banking interfaces (68%). These three leading barriers are structurally interrelated.

Discussion

The survey findings present a coherent account of digital financial exclusion among elderly Keralites. The evidence reveals that older adults are not uniformly unaware of digital financial tools — awareness rates for internet banking (72%) and mobile banking (65%) are reasonably high— but that awareness does not reliably convert into confident, independent use. Campaigns focused primarily on information dissemination are likely to yield minimal gains if not accompanied by structured skills development and sustained opportunities for supervised

practice. The primacy of fear of fraud as a barrier (74%) merits particular attention. Elderly individuals are disproportionately targeted by digital fraud schemes, and their lower baseline familiarity with platform interfaces makes them less equipped to distinguish legitimate from fraudulent communications. Addressing this barrier requires not only reassurance but genuine enhancement of digital security literacy. OECD (2022) similarly identifies cybersecurity education as a priority component of financial literacy programmes for older adults.

Physical limitations affecting more than half the sample (56%) highlight a dimension of digital financial exclusion often underweighted in policy discussions. Banking applications designed with small icons, low-contrast text, and rapid timeout features impose disproportionate burdens on users with declining visual acuity or fine motor difficulties. The language barrier finding (52%) is particularly striking in Kerala—the barrier is not literacy per se but the English-medium nature of most banking platforms, misaligned with users' Malayalam linguistic capabilities. Malayalam-language interfaces, voice-guided navigation, and regional-language customer support could substantially reduce this barrier without requiring any change in users' underlying capabilities.

Conclusion

This study has documented a significant digital financial divide among elderly residents of Kerala, persisting despite the state's comparatively strong literacy and digital infrastructure foundations. The divide is characterised not by a lack of awareness but by a persistent failure to convert awareness into confident, independent, and regular use of digital financial services—rooted in skill gaps, fear of fraud, design exclusivity, physical constraints, and linguistic barriers. As physical banking infrastructure continues to contract and as government benefits and pension payments shift progressively to digital channels, elderly individuals who lack digital financial literacy face a genuine risk of exclusion from the financial systems that underpin their material

welfare. Strengthening digital financial literacy among older adults is therefore an essential component of financial inclusion policy.

Recommendations

➤ Programme and Policy Interventions

State and district authorities should launch structured digital financial literacy programmes for senior citizens delivered through panchayat offices, community centres, and senior citizen associations, with content adapted to Malayalam and grounded in practical skill-building. Banks should maintain dedicated Malayalam-speaking customer support desks capable of providing patient, step-by-step guidance to elderly users.

➤ Design and Technology Standards

The Reserve Bank of India and NPCI should issue design guidelines for banking applications specifying minimum accessibility standards for elderly users, including minimum font sizes, high-contrast display options, simplified transaction flows, and Malayalam-language interfaces. UPI platform providers should develop a ‘senior mode’ feature offering voice-guided transaction confirmation and extended session timeouts.

➤ Community and Family Support Mechanisms

Intergenerational digital literacy support programs—pairing college students with elderly community members for supervised digital finance practice—should be formalised through panchayat or NGO coordination. Community organisations, religious institutions, and senior citizen associations should be engaged as trusted dissemination channels for cybersecurity awareness and digital finance education.

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