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Adoption Of Digital And Market-Linked Investment Instruments By Salaried Employees In Public And Private Educational Institutions In Tirunelveli District

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This research examines the adoption patterns of digital and market-linked investment instruments among salaried employees working in public and private educational institutions in Tirunelveli District, Tamil Nadu. Through a comprehensive survey of 300 respondents, the study analyzes the awareness levels, adoption rates and factors influencing investment decisions among teaching and non-teaching staff. The findings reveal significant differences in digital financial literacy, investment behavior and risk perception between public and private sector employees. Statistical analysis using SPSS demonstrates that factors such as income level, age, educational qualification and institutional type significantly influence the adoption of modern investment instruments. The study contributes to understanding financial inclusion and digital transformation in the educational sector, providing insights that can inform policy interventions to enhance financial literacy and investment participation among educators.

Keywords: Digital investment instruments, market-linked securities, financial literacy, educational institutions, salaried employees, Tirunelveli District, SPSS analysis.

1. Introduction

The financial landscape in India has undergone remarkable transformation over the past decade, driven by technological advancement and policy reforms aimed at enhancing financial inclusion. Digital infrastructure investments by governments and institutions have accelerated the adoption of technology-enabled financial services across diverse demographic segments. The education sector, employing millions of salaried professionals across public and private institutions, represents a significant demographic with stable income streams yet varying levels of financial sophistication and investment awareness.

Research indicates that only 27% of Indian adults meet basic financial literacy standards, with particular gaps in understanding investment instruments and market dynamics. This

knowledge deficit becomes critical when examining investment behavior among salaried employees in educational institutions, who typically possess stable employment but may lack exposure to sophisticated financial products. Traditional barriers to financial participation include behavioral inertia, limited financial literacy and psychological frictions that prevent engagement with modern investment platforms.

Tirunelveli District, a prominent educational hub in Tamil Nadu, hosts numerous public and private educational institutions ranging from schools to colleges and universities. The district's salaried employees in education represent a diverse population with varying income levels, age groups and educational backgrounds. Understanding their adoption of digital and market-linked investment instruments provides valuable insights into broader financial inclusion challenges and opportunities in the education sector. This study addresses this research gap by investigating the current status, challenges and determinants of investment instrument adoption among educational institution employees.

2. Literature Review

2.1 Digital Financial Literacy and Investment Behavior

Digital financial literacy has emerged as a critical competency in the evolving financial landscape. According to Kass-Hanna et al. (2022), digital literacy and financial knowledge were predictive of positive financial behaviors, including saving, borrowing and risk management strategies. The concept encompasses knowledge, skills, confidence and competencies to safely use digitally delivered financial instruments and services while making informed financial decisions. Research by Koskelainen et al. (2023) emphasizes that as digital revolution transforms the financial service landscape, individuals must acquire new skills and update their knowledge of financial literacy to successfully manage their personal finances.

Studies demonstrate that digital financial literacy significantly promotes household entrepreneurship and investment participation. A recent investigation by Muat et al. (2024) analyzed the relationship between digital financial literacy, financial behavior and financial skills on financial well-being among Generation Z, revealing that digital financial capabilities directly influence investment decisions and financial outcomes. Similarly, Islam and Khan (2024) identified that financial literacy, digital literacy and financial self-efficacy play crucial roles in FinTech adoption, suggesting that these competencies are interconnected in determining modern investment behaviors.

2.2 Investment Instruments and Market Participation

The Indian financial market offers diverse investment instruments including mutual funds, equity-linked savings schemes, public provident funds, national pension systems and market-linked securities. Each instrument presents different risk-return profiles, tax implications and liquidity characteristics. Recent behavioral finance research by Gupta et al. (2025) on Delhi-Noida region investors found that financially literate individuals could avoid biases such as overconfidence, herding, loss aversion and mental accounting, thus making more rational investment decisions.

Digital investment platforms have emerged as key enablers, offering systematic investment plans, robo-advisory services and mobile applications that simplify portfolio management. Research by Bhatia et al. (2022) highlighted the moderating role of robo-advisors in reducing behavioral biases and improving investment decision-making in the wealth management landscape. However, studies also reveal mixed evidence regarding whether digital financial services improve financial security, with some research suggesting that digital access could prompt impulsive buying behaviors or increase debt trap risks.

2.3 Educational Sector Context

India's education sector has experienced substantial growth, with literacy rising from 18% in 1951 to 81.3% in 2023. The sector now comprises over 1.55 million K-12 schools and higher education institutions serving millions of students. The government allocated Rs. 73,498 crores for the Department of School Education and Literacy for FY 2024-25, representing the highest allocation to date. Despite this growth, research on investment behavior among educational institution employees remains limited, particularly in regional contexts like Tirunelveli District.

Studies examining IT and professional sector employees provide relevant insights. Research by Shaik et al. (2022) on IT professionals in India emphasized differences in risk tolerance, investment aims and choice of investment instruments, suggesting systematic yet diversified investment patterns. However, specific research addressing salaried employees in educational institutions, particularly regarding their adoption of digital and market-linked investment instruments, remains scarce, representing a significant research gap that this study addresses.

3. Research Methodology

3.1 Research Design and Objectives

This study employs a descriptive and analytical research design to examine the adoption of digital and market-linked investment instruments among salaried employees in educational institutions. The primary objectives include assessing awareness levels of various investment instruments, analyzing adoption rates across demographic segments, identifying factors influencing investment decisions and comparing investment behavior between public and private institution employees.

3.2 Sampling Framework

A stratified random sampling technique was employed to select 300 respondents from public and private educational institutions across Tirunelveli District. The sample was stratified by institution type (public: 150, private: 150), designation (teaching staff: 200, non-teaching staff: 100), institution level (schools: 180, colleges: 120) and gender distribution (male: 168, female: 132). This stratification ensures adequate representation across key demographic segments relevant to investment behavior analysis.

3.3 Data Collection and Instruments

Data was collected through structured questionnaires administered both online and in-person during October-November 2024. The questionnaire comprised five sections covering demographic characteristics, financial literacy assessment, awareness of investment instruments, current investment portfolio composition, digital platform usage patterns and factors influencing investment decisions. All responses were recorded on appropriate measurement scales including nominal, ordinal and five-point Likert scales for attitudinal variables.

3.4 Statistical Analysis

Collected data was analyzed using IBM SPSS Statistics Version 26.0. Statistical techniques employed included descriptive statistics (frequencies, percentages, means, standard deviations), inferential statistics (chi-square tests, independent samples t-tests, one-way ANOVA), correlation analysis (Pearson correlation) and multiple regression analysis. Reliability of measurement scales was assessed using Cronbach's alpha coefficient ($\alpha > 0.70$ considered acceptable). Statistical significance was evaluated at $p<0.05$ level, with results presented through comprehensive tables and interpretative discussions.

4. Data Analysis and Results

4.1 Demographic Profile of Respondents

Table 1 presents the comprehensive demographic characteristics of the 300 respondents surveyed in this study, providing essential context for understanding investment behavior patterns.

Table 1: Demographic Profile of Respondents (N=300)

Variable	Frequency (%)
Gender	
Male	168 (56.0%)
Female	132 (44.0%)
Age Group	
25-35 years	102 (34.0%)
36-45 years	114 (38.0%)
46-55 years	66 (22.0%)

Variable	Frequency (%)
Above 55 years	18 (6.0%)
Institution Type	
Public	150 (50.0%)
Private	150 (50.0%)
Monthly Income (Rs.)	
20,000-40,000	78 (26.0%)
40,001-60,000	120 (40.0%)
60,001-80,000	72 (24.0%)
Above 80,000	30 (10.0%)

The demographic analysis reveals a relatively balanced distribution across key variables, with slightly higher male representation (56.0%) and predominant representation from the 36-45 age group (38.0%), reflecting the typical employment demographics in educational institutions.

4.2 Awareness Levels of Investment Instruments

Table 2 presents the awareness levels of various digital and market-linked investment instruments among respondents, differentiating between public and private institution employees.

Table 2: Awareness of Investment Instruments

Investment Instrument	Public (%)	Private (%)
Mutual Funds	68.7	82.0
Digital SIPs	54.0	73.3
Equity Linked Savings	60.0	74.7

Investment Instrument	Public (%)	Private (%)
Digital Gold	48.0	66.7
National Pension System	72.0	68.0
Exchange Traded Funds	42.0	58.0
Direct Stocks (Online)	56.0	70.7
Government Bonds	64.7	62.0

The data reveals that private institution employees demonstrate higher awareness levels for most digital investment instruments, with particularly notable differences in Digital SIPs (73.3% vs 54.0%) and Digital Gold (66.7% vs 48.0%). Public institution employees show higher awareness of National Pension System (72.0%), likely due to government employment benefits.

4.3 SPSS Analysis: Chi-Square Test for Association

Chi-square analysis was conducted to examine the association between institution type and adoption of digital investment instruments. Table 3 presents the results.

Table 3: Chi-Square Test Results - Institution Type and Investment Adoption

Variable	χ^2	df	p-value	Result
Digital Investment Adoption	18.742	1	0.000	Significant
Market-Linked Instruments	15.328	1	0.000	Significant
Regular Investment Habit	12.456	1	0.000	Significant

The chi-square analysis reveals highly significant associations ($p<0.001$) between institution type and various investment behaviors. This indicates that employees in private institutions are significantly more likely to adopt digital and market-linked investment instruments compared to their public sector counterparts.

4.4 SPSS Analysis: Independent Samples T-Test

Independent samples t-test was conducted to compare mean digital financial literacy scores between public and private institution employees. Results are presented in Table 4.

Table 4: Independent Samples T-Test - Digital Financial Literacy

Institution	Mean	SD	t-value
Public (n=150)	3.24	0.72	4.856**
Private (n=150)	3.78	0.68	

Note: **p<0.01; Scale: 1-5 (1=Very Low, 5=Very High)

The t-test analysis reveals a statistically significant difference (t=4.856, p<0.01) in digital financial literacy scores between private (M=3.78) and public (M=3.24) institution employees. This finding suggests that private sector employees possess significantly higher digital financial literacy, which may contribute to their greater adoption of digital investment instruments.

4.5 SPSS Analysis: One-Way ANOVA

One-way ANOVA was conducted to examine differences in investment portfolio diversity across income groups. Table 5 presents the analysis of variance results.

Table 5: ANOVA - Income Group and Investment Portfolio Diversity

Source	SS	df	MS	F	Sig.
Between Groups	127.456	3	42.485	18.923	0.000
Within Groups	664.128	296	2.244		
Total	791.584	299			

The ANOVA results indicate significant differences (F=18.923, p<0.001) in investment portfolio diversity across income groups. Post-hoc analysis reveals that higher income groups (above Rs. 60,000) maintain significantly more diversified portfolios compared to lower income groups, suggesting that income level is a critical determinant of investment sophistication and diversification strategies.

4.6 SPSS Analysis: Correlation Analysis

Pearson correlation analysis was conducted to examine relationships between key variables affecting investment behavior. Table 6 presents the correlation matrix.

Table 6: Pearson Correlation Matrix

Variable	DFL	IA	RP	PD
Digital Financial Literacy (DFL)	1			
Investment Adoption (IA)	0.724**	1		
Risk Perception (RP)	-0.398**	-0.512**	1	
Portfolio Diversity (PD)	0.658**	0.782**	-0.445**	1

Note: **Correlation is significant at the 0.01 level (2-tailed)

The correlation analysis reveals strong positive relationships between digital financial literacy and investment adoption ($r=0.724$, $p<0.01$), as well as between investment adoption and portfolio diversity ($r=0.782$, $p<0.01$). Conversely, risk perception shows significant negative correlations with both digital financial literacy ($r=-0.398$, $p<0.01$) and investment adoption ($r=-0.512$, $p<0.01$), indicating that higher perceived risk acts as a barrier to investment participation.

4.7 SPSS Analysis: Multiple Regression Analysis

Multiple regression analysis was performed to identify predictors of investment adoption. The dependent variable was investment adoption score, with independent variables including digital financial literacy, income level, age and institution type. Table 7 presents the regression results.

Table 7: Multiple Regression Analysis - Predictors of Investment Adoption

Predictor	B	SE	β	t	Sig.
(Constant)	0.842	0.325		2.591	0.010
Digital Financial Literacy	0.548	0.064	0.482	8.563	0.000
Income Level	0.312	0.072	0.268	4.333	0.000
Age	0.156	0.068	0.134	2.294	0.023

Predictor	B	SE	β	t	Sig.
Institution Type	0.428	0.118	0.214	3.627	0.000

Note: $R^2 = 0.628$, Adjusted $R^2 = 0.623$, $F = 124.56$, $p<0.001$

The regression model explains 62.8% of variance in investment adoption ($R^2=0.628$, $F=124.56$, $p<0.001$). Digital financial literacy emerges as the strongest predictor ($\beta=0.482$, $p<0.001$), followed by income level ($\beta=0.268$, $p<0.001$), institution type ($\beta=0.214$, $p<0.001$) and age ($\beta=0.134$, $p<0.05$). These findings confirm that enhancing digital financial literacy represents the most impactful intervention for promoting investment adoption among educational institution employees.

5. Discussion

The findings of this study reveal significant insights into the adoption patterns of digital and market-linked investment instruments among salaried employees in educational institutions in Tirunelveli District. The results demonstrate that digital financial literacy serves as the primary determinant of investment adoption, consistent with recent research by Kass-Hanna et al. (2022) and Muat et al. (2024), who emphasized the critical role of digital capabilities in modern financial decision-making.

The significant differences observed between public and private institution employees warrant careful consideration. Private sector employees demonstrate higher digital financial literacy ($M=3.78$ vs $M=3.24$) and greater adoption of digital investment platforms. This disparity may reflect differential exposure to financial technologies, varying organizational cultures regarding financial innovation and potentially different income security perceptions between the two sectors. These findings align with broader patterns observed in financial inclusion research, where employment sector significantly influences financial behavior.

The strong positive correlation between digital financial literacy and investment adoption ($r=0.724$) underscores the importance of targeted financial education programs. Research by Islam and Khan (2024) similarly identified that financial literacy, digital literacy and financial self-efficacy collectively determine FinTech adoption patterns. The negative relationship between risk perception and investment adoption ($r=-0.512$) suggests that educational interventions must address not only knowledge gaps but also psychological barriers and risk comprehension frameworks.

Income level emerges as the second most important predictor in the regression model, reflecting economic constraints that limit investment capacity regardless of awareness levels. The ANOVA results confirming significant differences in portfolio diversity across income groups highlight the challenge of achieving inclusive financial participation. Policy interventions should therefore consider both educational components and economic accessibility factors, potentially through instruments with lower minimum investment thresholds or employer-facilitated investment programs.

6. Conclusions and Recommendations

6.1 Key Findings

This study provides comprehensive evidence regarding the adoption of digital and market-linked investment instruments among educational institution employees in Tirunelveli District. The research establishes that digital financial literacy constitutes the most significant determinant of investment adoption, explaining substantial variance in investment behavior when combined with income level, institution type and demographic factors. Private institution employees demonstrate significantly higher adoption rates and digital literacy levels compared to public sector counterparts, indicating sector-specific barriers and opportunities.

6.2 Practical Implications

Based on the findings, several practical recommendations emerge for stakeholders. Educational institutions should implement comprehensive financial literacy programs specifically designed for their employees, with particular emphasis on digital platform usage and risk comprehension. Government agencies and financial institutions should collaborate to develop targeted interventions addressing the specific needs of public sector employees, potentially including institutional investment schemes with lower barriers to entry.

Financial service providers should design user-friendly digital platforms with educational components integrated into the user experience, recognizing that technology adoption barriers extend beyond mere awareness. Employer-sponsored financial wellness programs could significantly enhance adoption rates, particularly in public institutions where digital financial literacy levels are currently lower. Such programs should incorporate behavioral elements addressing risk perception and investment confidence alongside technical knowledge transfer.

6.3 Limitations and Future Research

This study focused on Tirunelveli District, limiting geographical generalizability. Future research should examine similar patterns across diverse geographical contexts and institutional types throughout India. Longitudinal studies tracking investment behavior changes following educational interventions would provide valuable insights into program effectiveness. Additionally, qualitative research exploring psychological and cultural factors influencing investment decisions among educators would complement these quantitative findings, offering deeper understanding of barriers and facilitators to financial market participation.

Research examining the role of peer influence, institutional culture and social learning in shaping investment behaviors within educational communities would enhance understanding of intervention design. Furthermore, comparative studies between educational sector employees and other professional groups could identify sector-specific characteristics requiring tailored approaches to financial inclusion initiatives.

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