Digital Financial Literacy among Working Women in Kerala:a Study with Special Reference to Malappuram District

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Abstract

In today's digital era, financial literacy plays a crucial role in empowering individuals to make informed decisions regarding their finances. With an increasing number of women joining the workforce and the growing importance of digital financial services, it is essential to understand the level of digital financial literacy among working women in Kerala. This study focuses on digital financial literacy among working women in Kerala, with a special reference to the Malappuram district. The study used descriptive research design and the primary data collected from 130 working women in Kerala. The researcher identified that the four factors such as Financial Inclusion, Awareness, Access to Technology, Peer Influence are the factors affecting the digital financial literacy. The result also identified that the digital financial literacy explains approximately 65.6% of the variation in the investment behaviour among working women in Kerala.

Keywords: Awareness, Financial literacyDigital Literacy, Impact, Investment Behaviour

Introduction

In today's digitally connected world, financial literacy has expanded beyond traditional concepts of managing money to include digital financial literacy. Digital financial literacy refers to the knowledge, skills, and capabilities required effectively navigating and utilizing digital financial tools and services. It encompasses understanding digital payment systems, online banking, mobile banking applications, budgeting apps, and other technology-driven financial solutions. The rapid advancement of technology has revolutionized the way people access, manage, and engage with financial services. Digital financial tools offer convenience, accessibility, and efficiency, empowering individuals to conduct financial transactions anytime and anywhere. However, the benefits of these tools can only be fully realized when individuals possess the necessary digital financial literacy.

Digital financial literacy is critical for individuals of all backgrounds, regardless of age, gender, or socio-economic status. It equips individuals with the skills needed to make informed financial decisions, protect their financial information, and manage their resources effectively in the digital realm. Moreover, digital financial literacy plays a vital role in promoting financial inclusion, as it enables individuals to participate fully in the digital economy, access financial services, and build financial resilience. As technology continues to evolve and reshape the financial landscape, it is essential to understand the level of digital financial literacy within different populations.

Digital financial investment behaviour among working women has witnessed a significant surge in recent years. Empowered by the convenience and accessibility offered by digital platforms, working women are actively participating in various investment avenues such as stocks, mutual funds, cryptocurrencies. These platforms allow them to research, make informed decisions, and manage their investments at their own pace, fitting seamlessly into their busy schedules. Moreover, digital investments provide an opportunity for working women to diversify their portfolios beyond traditional assets, allowing them to explore different investment options based on their risk tolerance and long-term financial goals. This research aims to explore digital financial literacy among working women in Kerala, India, with a special focus on the Malappuram district.

Reviewof Literature

*Binod A. (2019)*examined financial literacy among women in Kerala. The study analysed the level of financial literacy among women in Kerala and the influence of socio-demographic variables on financial literacy of women. The researcher collected data from 150 respondents with structured questionnaire. The study considered the factors such as residential location, age, marital status, family size, monthly income, educational qualification, and occupation. Pearson's chi-square test was applied to check for any association between financial literacy and socio - demographic characteristics of the respondents. The researcher found that Women who are highly educated, well employed with a high monthly income and are living in the urban areas have higher levels of financial literacy than other area.

*Gopeekrishna, S., & Geetha, K. T. (2018)*accessed the status of financial literacy on economic empowerment of working women of Kerala. The study examined the determinants of Monthly savings of working women and correlation between Economic empowerment and financial literacy among women. Statistical tools like Multiple Regression Analysis, Economic Empowerment Index, Correlation and simple graphs were applied to satisfy the objectives considered. The study revealed that regression coefficients of the predictor variables namely financial decision making and Monthly expenditure have significant effect on the monthly savings of the respondents of Kerala at high level of significance. The rest of the variables like Age, caste, financial literacy, Family pattern, and Occupational status have no significant effect on the monthly savings of the respondents and there is a negative correlation between financial literacy and economic empowerment.

S. Amutha Rani (2017) measured the level of financial literacy among rural women in virudhunagar district. The researcher analysed the socio-economic background of the respondents and financial literacy Gap among the rural women. The researcher identified 360 sample respondents and collected data by using convenient sampling technique. Percentage and Gap Analysis statistic tools were used for the research. Literacy gap of the variables Awareness on credit facilities of banks and Knowledge about online banking are need high improvement. Literacy gap of the variables Knowledge about different types of bank accounts, Familiarity on deposit and withdraw of money in bank account, Understand the time requirement for increase the value of different investment, Familiarity on ATM Card operations, Bank account opening procedure (KYC) are need little improvement.

Mahalaxmi Kumar & Rajesh Mankani (2017) examined the level of awareness regarding investment avenues among educated working women in Mumbai City. The researcher identified the various investment avenues available in India and the awareness level of educated working women regarding various investment avenues. The study collected data from 500 respondents by using convenient and judgmental sampling technique. The study used the tests such as Chi-square test. The study found that educated working women have a high level of awareness regarding various investment avenues.

*Lokhande M. (2015)*examined the investment awareness and patterns of savings and investments by rural investors. The researcher examined the awareness level and their preferences of investment and compared the investment behaviour of rural male and female investor. The data were collected from 300 respondents based on convenient sampling. The study used the tools such as simple percentage, ANOVA and Garrett Ranking method. The study revealed that the awareness level of rural male and female investors, having different

educational qualifications, is similar. As per the result of Garrett score Bank is deposit is at top most priority followed by Gold jewellery, Real estate, and Postal Scheme.

Objectives

- To study the socio- demographic profile of working women in Kerala
- To identify the factors affecting digital financial literacy among working women in Kerala.
- To determine the impact digital financial literacy on investment behaviour among working women in Kerala.

Research Methodology

Research Design: The researcher used descriptive research design to measure the level of digital financial literacy among working women in Kerala. The researcher collected primary data from working women in Kerala with a special reference to Malappuram district through a structured questionnaire.

Sampling: The target population will consist of working women in Malappuram district. Malappuram has seven taluks namely Eranad, Nilambur, Perinthalmana, Tirur, Tiruragadi, Ponnani and Kondotty. Based on the convenience of the researcher the researcher selected two taluks namely Nilambur and Perintalmana. The researcher used convenience-sampling method for selecting the sample respondents. The sample size of the study is 130 working women in Nilambur and Perintalmana taluks.

Data Collection: The researcher developed a well-structured questionnaire for collecting the primary data about digital financial literacy among the working women in Kerala. The questionnaire designed to capture various dimensions of digital financial literacy.The questionnaire also include demographic questions to gather information about participants' educational background, income level, occupation, and prior experience with digital financial services.

Data Analysis: The collected data will be analyzed using appropriate statistical techniques. Descriptive statistics used to summarize the demographic characteristics and digital financial literacy levels of the working women.Inferential statistics, such as factor analysis, regression analysis, used to examine the relationships between various factors on digital financial literacy.

Analysis and Discussion

Table 1 Demographic Profile of the Respondent

Variable	Description	Frequency	Percentage
Age	Less than 20	11	8.5
	20-35	62	47.7
	36-50	28	21.5
	Above 50	29	22.3
Total		*130*	*100*
Marital Status	Single	46	35.4
	Married	84	64.6
Total		*130*	*100*
	SSLC	47	36.2

Educational qualification	+2	11	8.5
	Graduation	44	33.8
	Post-graduation	28	21.5
Total		*130*	*100*
Occupation	Govt. Sector	21	16.2
	Private Sector	62	47.7
	Business	29	22.3
	Others	18	13.8
Total		*130*	*100*
Income	Below 20,000	29	22.3
	20,001-30,000	44	33.8
	30,001-40,000	36	27.7
	Above40000	21	16.2
Total		*130*	*100*
Area of Residence	Rural	55	42.3
	Urban	75	57.7
Total		*130*	*100*

 (Source: primary data)

The table presents the demographic characteristics of the respondents in a study, with a total sample size of 130 working women in Kerala. The variables examined include age, marital status, educational qualification, occupation, income, and area of residence. Regarding age, the respondents 8.5% were less than 20 years old, 47.7% fell within the age range of 20-35, 21.5% were between 36 and 50, and 22.3% were above 50 years old. 35.4% of the participants were single, while the majority, 64.6%, were married. Based on the educational qualifications, 36.2% had completed SSLC (Secondary School Leaving Certificate), 8.5% had finished +2 level, 33.8% held graduation degrees, and 21.5% had post-graduation qualifications.16.2% of the working women were employed in the government sector, 47.7% worked in the private sector, 22.3% were involved in business, and 13.8% had occupations classified under "Others".Regarding income levels, 22.3% of the respondents had incomes below 20,000, 33.8% earned between 20,001 and 30,000, 27.7% fell within the income range of 30,001 to 40,000, and 16.2% had incomes above 40,000. Lastly, the analysis of the area of residence indicated that 42.3% of the working women lived in rural areas, while the majority, 57.7%, resided in urban areas.

Exploratory Factor Analysis (EFA)

KMO and Bartlett's Test employed to assess the appropriateness of the data for factor analysis. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) used to gauge the proportion of variance in the data that attributed to underlying factors. KMO values range between 0 and 1, with higher values approaching 1 denoting a stronger fit for factor analysis.

Table 2 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.792

Bartlett's Test of Sphericity	Approx. Chi-Square	816.811
	df	66
	Sig.	.000

(Source: Computed data)

KMO value of 0.792 suggests that the data is suitable for factor analysis, as the value is above the recommended threshold of 0.60. In this case, the approximate chi-square value is 816.811 with 66 degrees of freedom, and a p-value of .000, indicating that the null hypothesis is rejected and the data is suitable for factor analysis.

Table 3 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.309	44.241	44.241	5.309	44.241	44.241	2.434	20.286	20.286
2	1.561	13.007	57.248	1.561	13.007	57.248	2.214	18.451	38.737
3	1.157	9.642	66.890	1.157	9.642	66.890	2.198	18.315	57.052
4	.891	7.421	74.311	.891	7.421	74.311	2.071	17.259	74.311
5	.661	5.508	79.819						
6	.590	4.913	84.731						
7	.482	4.016	88.747						
8	.461	3.839	92.587						
9	.343	2.862	95.448						
10	.249	2.073	97.522						
11	.158	1.316	98.837						
12	.140	1.163	100.000						
Extraction Method: Principal Component Analysis.									

(Source: Computed from Primary Data)

The above table shows the total variance explained in the factor analysis. The above table reveals that out of the 12 Statements about digital financial literacy among working women in Kerala, four factors have been extracted and these four factors explain the total variance of digital financial literacy to the extent of 74.311%.

Fig. 1
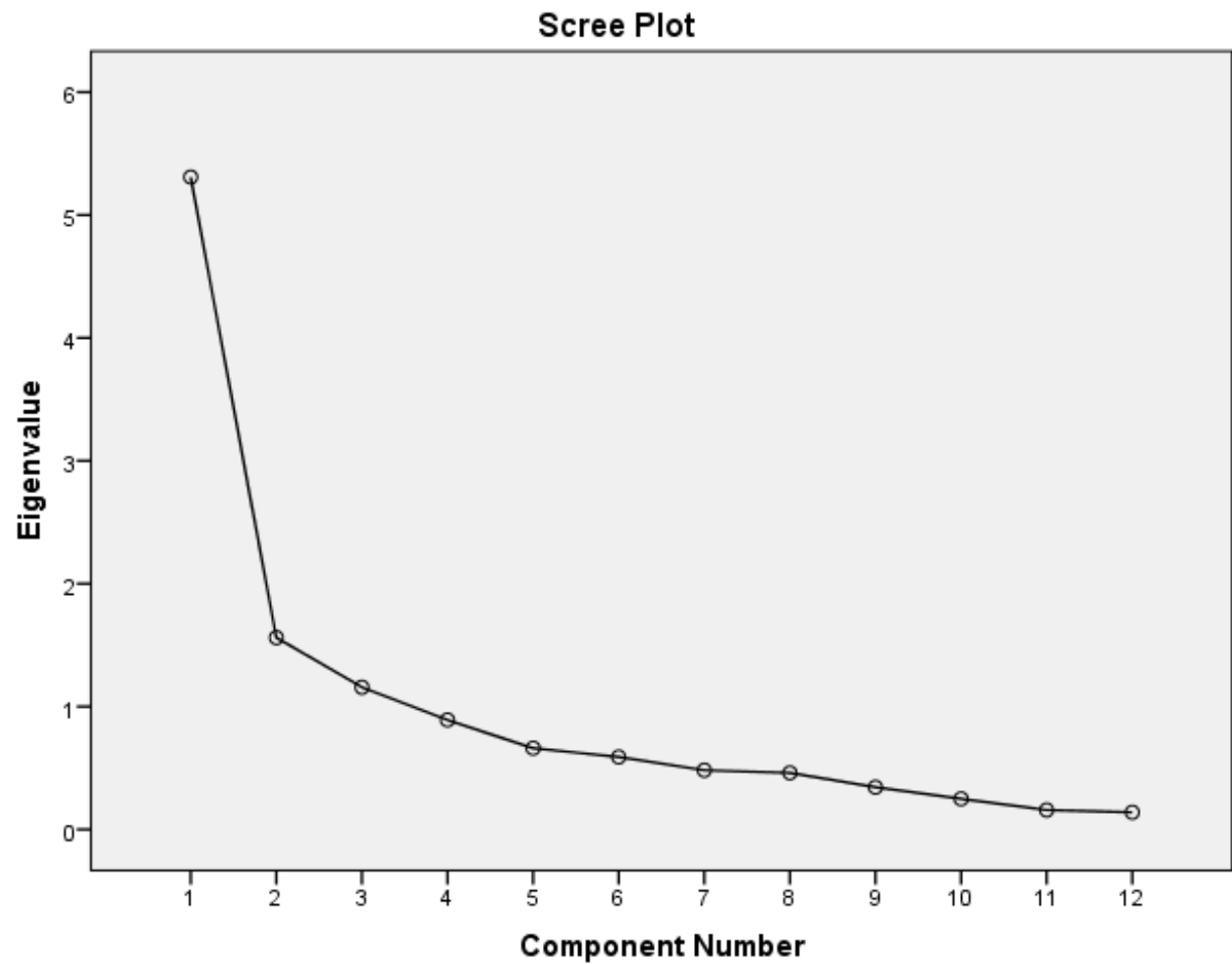
Scree Plot

The scree plot demonstrates that the primary four factors capture the majority of the total variability present in the data, as indicated by their respective eigenvalues, all of which surpass 1. In contrast, the subsequent factors account for only a minimal proportion of the variability and are likely to be inconsequential for the analysis.

Table 4 Factors influencing the adoption of digital finance

Factor Name	Items	Factor Loading	Total Variance Explained
Financial Inclusion	Digital financial services have made it easier for me to participate in the formal financial system.	.831	20.29%
	Access to digital financial services has helped me gain a better understanding of managing my finances effectively.	.791	
	Financial inclusion through digital services has empowered me to make informed financial decisions.	.768	

Awareness	I am aware of the various digital financial tools and platforms available for managing personal finances.	.904	18.45%
	I feel confident in my understanding of basic financial concepts of digital financial services.	.878	
	I actively seek out information and resources to improve my knowledge about digital financial services.	.567	
Access to Technology	I have easy access to digital devices (e.g., smartphones, computers) for managing my financial activities effectively.	.851	18.45%
	Reliable and fast internet connectivity is readily available in my area, allowing me to access digital financial services conveniently.	.846	
	The availability of user-friendly digital platforms has contributed to improving my understanding and usage of digital financial services	.669	
Peer Influence	I have adopted digital financial practices due to positive recommendations from friends or family.	.793	17.25%
	My peers' engagement with digital financial services has motivated me to improve my own digital financial literacy.	.730	
	I discuss digital financial tools and platforms with my friends or colleagues, which enhances my understanding of their benefits and risks.	.636	

(Source: Computed Data)

Exploratory Factor Analysis (EFA) was employed to delve into the underlying factors that impact digital financial literacy among working women in Kerala. The analysis identified 12 statements that loaded onto four distinct factors, collectively explaining approximately 74.31% of the variance in the data. The researcher named these factors based on existing literature.

The first factor named as Financial Inclusion: This factor, accounting for 20.28% of the variance, represents the extent to which working women are included in the formal financial system and have access to digital financial services.

The second factor named as Awareness: The second factor, explaining 18.45% of the variance, pertains to the level of awareness and knowledge among working women regarding various digital financial tools and services.

The third factor named as Access to Technology: This factor, explaining 18.32% of the variance, reflects the availability and accessibility of technology, such as smartphones and internet connectivity, that facilitates the use of digital financial services.

The fourth factor named as Peer Influence: The fourth factor, explaining 17.26% of the variance, signifies the influence of peers and social networks on the digital financial behaviour and decisions of working women.

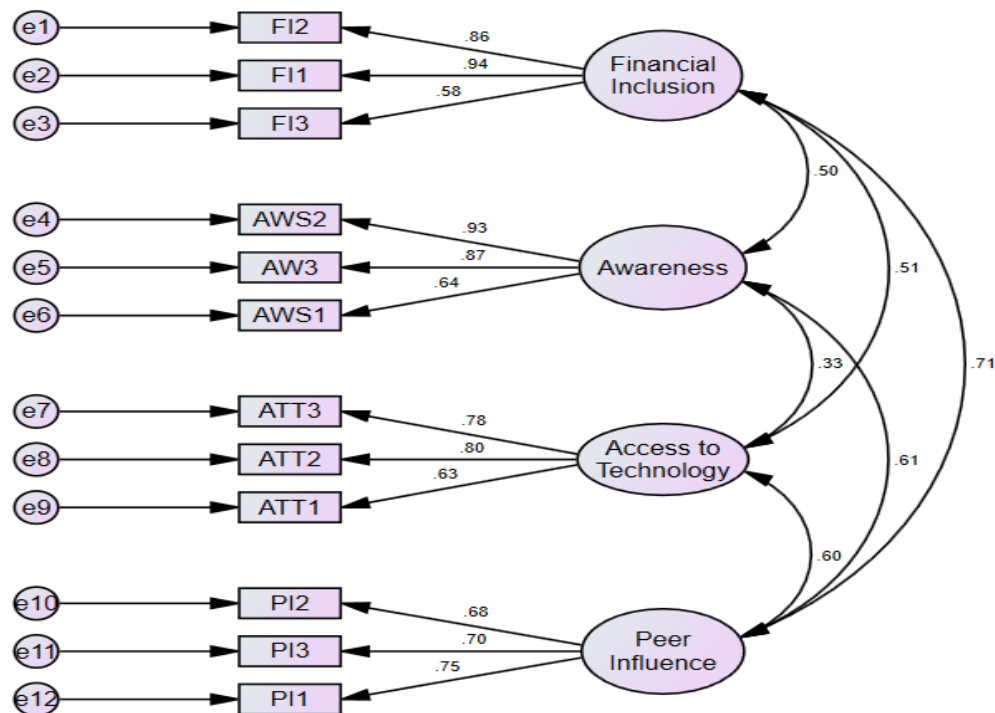**Fig. 2 Confirmatory Factor Analysis for proposed model**

Table5 Results of Goodness of Fit test for Proposed Model

Fit Indices	CMIN/DF	GFI	AGFI	NFI	CFI	RMR	RMSEA	TLI
Model Value	1.966	0.95	0.94	0.99	0.98	0.02	0.03	0.94
Acceptable Value	≤ 3	> 0.9	> 0.9	> 0.9	>0.95	≤0.10	< 0.06	>0.95

(Source: Computed from Primary Data)

From the above table, it is found that the Goodness of Fit Index (GFI) value (0.95) and Adjusted Goodness of Fit Index (AGFI) value (0.94) is greater than 0.9 which represents it is a good fit. The calculated Normed Fit Index (NFI) value (0.99) and Comparative Fit Index (CFI) value (0.98) indicates that it is a perfect fit and it is found that Root Mean square Residuals (RMR) and Root Mean Square Error of Approximation (RMSEA) value is 0.03 which is less than 0.06 which indicated it is perfectly fit.
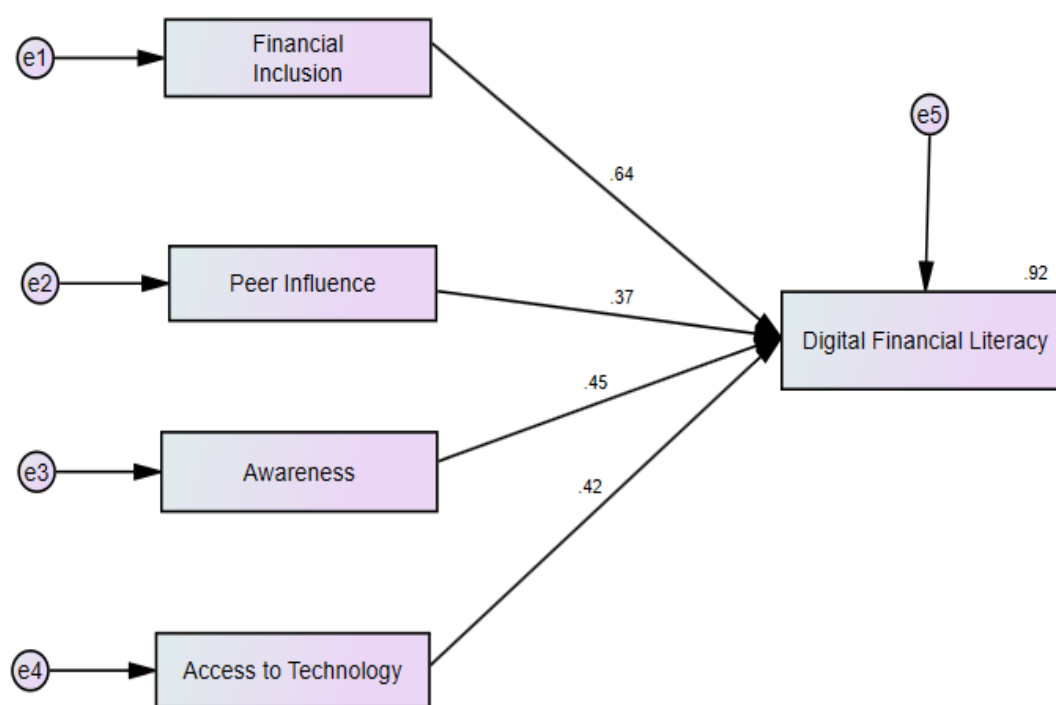
Fig.3 Digital Financial Literacy Model

Table 6 Fitness of Structural Equation Model

Variables	Estimate	S.E	C.R.	Sig.
Digital Financial Literacy <--- Financial Inclusion	.638	.006	25.830	***
Digital Financial Literacy <--- Peer Influence	.365	.013	14.776	***
Digital Financial Literacy <--- Awareness	.455	.013	18.405	***
Digital Financial Literacy <--- Access to Technology	.417	.015	16.879	***

(Source: Computed from Primary Data)

The result shows that Financial Inclusion has a significant impact on Digital Financial Literacy of women in Kerala ($\beta 1$=0.638, S.E. = 0.006, P = 0.000 < 0.05). So the null hypothesis is rejected at 5% level of significance. It depicts that for every one percent increase in Financial Inclusion, Digital Financial Literacy increased by 0.64 percent. Peer Influence has a significant impact on Digital Financial Literacy of women in Kerala ($\beta 1$=0.365, S.E. = 0.013, P = 0.000 < 0.05). So the null hypothesis is rejected at 5% level of significance. It depicts that for every one percent increase in Peer Influence, Digital Financial Literacy increased by 0.37 percent. Awareness has a significant impact on Digital Financial Literacy of women in Kerala ($\beta 1$=0.455, S.E. = 0.013, P = 0.000 < 0.05). So the null hypothesis is rejected at 5% level of significance. It depicts that for every one percent increase in Awareness, Digital Financial Literacy increased by 0.45 percent. Access to Technology has a significant impact on Digital Financial Literacy of women in Kerala ($\beta 1$=0.417, S.E. = 0.015, P = 0.000 < 0.05). So the null hypothesis is rejected at 5% level of significance. It depicts that for every one percent increase in Access to Technology, Digital Financial Literacy increased by 0.42 percent.

H_1. Digital Financial Literacy positively associated with investment behaviour among working women in Kerala.

Table 7 Regression analysis

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Sig. F Change
1	.810[a]	.656	.653	.000
a. Predictors: (Constant), Digital Financial Literacy				
b. Dependent Variable: Investment Behaviour				

(Source: Computed from Primary Data)

The table presents the results of a regression model that investigates the relationship between several predictors and a dependent variable. The dependent variable in this case is Investment Behaviour, and the predictor is Digital Financial Literacy. The R-value is 0.810. This value indicates a strong positive relationship between the predictor and the dependent variable. Moreover, the R-square value is 0.656, which means that approximately 65.6% of the variation in the dependent variable is explained by the predictor.

Conclusion

Digital financial literacy plays a critical role in today's technologically advanced world. This study has highlighted the importance of understanding and effectively using digital financial tools and platforms to manage personal finances, make investment decisions. The study identified that the four factors such as Financial Inclusion, Awareness, Access to Technology, Peer Influence are the factors affecting the digital financial literacy.Financial Inclusion plays a vital role in ensuring that individuals have access to formal financial services and opportunities to participate in the digital economy. Greater financial inclusion leads to improved digital financial literacy as more people engage with digital financial tools and services. Awareness emerged as a crucial factor, highlighting the importance of knowledge and understanding of digital financial services. Educating individuals about the benefits, risks, and functionalities of various digital financial tools is instrumental in promoting their adoption and effective usage. The availability and affordability of digital devices and internet connectivity directly influence an individual's ability to access and utilize digital financial services. Social networks and interactions with peers can shape attitudes and behaviours towards digital financial services. Positive peer influence can encourage individuals to embrace and enhance their digital financial literacy.

Scope for further study

This study's scope is limited to the specific context of Malappuram District, and further research in other regions of Kerala would contribute to a more comprehensive understanding of digital financial literacy among working women in the Kerala state.

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