LEX LOCALIS-JOURNAL OF LOCAL SELF-GOVERNMENT
ISSN:1581-5374 E-ISSN:1855-363X
VOL. 23, NO. S6(2025)

THE ROAD TO ECONOMIC EMPOWERMENT: ENHANCING FINANCIAL LITERACY

Ms. Gauri Singh Bhadauria[1*], Nishu Bhadoriya[2], Mr. Monik Jaiswal[3], Dr. Sanjeev Kumar Singh[4]

[1*]Research Scholar, School of Business Management, Chhatrapati Shahuji Maharaj University , UP, India
https://orcid.org/0009-0004-5212-8476
[2]Acting Dean Student welfare & Assistant professor Business administration Kanpur institute of technology, UP, India.
[3]Research Scholar, Department of Commerce, University of Lucknow, UP, India.
[4]Assistant Professor, School of Business Management, Chhatrapati Shahuji Maharaj University, Up, India.

gaurithakur.mercy@gmail.com[1]

ABSTRACT
The study investigates the complex connections between different aspects of financial literacy and how they affect financial behaviour and access to financial resources, specifically in the context of changing economic environment during the fourth industrial revolution. The study employs Structural Equation Modelling (SEM) to propose that financial confidence has a positive impact on financial inclusion (H1), financial knowledge has a direct effect on financial behaviour (H2), and financial behaviour acts as a mediator between financial knowledge and access to financial resources (H3). The results indicate strong positive correlations between financial confidence and financial inclusion ($\beta = 0.291$, $p < 0.05$), financial knowledge level and financial behaviour ($\beta = 0.093$, $p < 0.05$), and financial behaviour and access to financial resources ($\beta = 0.673$, $p < 0.001$). The study's measurement model and validity evaluations indicate a high degree of sampling adequacy (KMO = 0.871) and strong factor loadings, which ensure the correctness and reliability of the constructs. The discriminant validity study has shown that the financial components are different from each other. Additionally, the model fit indices suggest that the sample data is well represented ($\chi^2 = 218.797$, $p = 0.068$, CFI = 0.988, RMSEA = 0.025). This study provides a thorough comprehension of the dynamics of financial literacy, delivering valuable insights for policymakers, entrepreneurs, and academics who are navigating economic environment throughout the Industry 4.0 era.

Keywords: *Financial literacy, Industry 4.0, Financial confidence, Financial behavior, Access to financial resources, Financial inclusion, Micro Small Medium Enterprises (MSMEs), Financial technology*

INTRODUCTION

"Financial literacy" is a comprehensive word that may have several interpretations, depending on an individual's circumstances. It might include acquiring skills in home budgeting, investing for retirement, or receiving personalised coaching and counselling for purchasing a property or launching a company.(Potrich & Vieira, 2018) Additionally, it is a component of a comprehensive plan aimed at enhancing economic stability for families with lower incomes. Financial literacy, akin to literacy and numeracy, impacts the overall welfare of each person. It also impacts the economic and social welfare of every neighbourhood and, eventually, the general robustness of the nation's economy.

Financial literacy is a blend of financial consciousness, understanding, expertise, mindset, and conduct that is essential for making prudent financial choices and eventually attaining personal financial prosperity. (Murugiah, 2016) Financial literacy is crucial for all individuals, regardless of their gender, caste, class, or any other social variable. Financial literacy is the capacity to comprehend and use a variety of financial skills, such as personal financial management, budgeting, and investing. The phrase "financial literacy" refers to knowing a wide range of critical financial skills and ideas. People who are financially savvy are less likely to become victims of fraud. A solid foundation of financial literacy may help you achieve a variety of life objectives, including saving for college or retirement, managing debt responsibly, and starting a company. Learning how to construct a budget, prepare for retirement, manage debt, and monitor personal spending are all important parts of financial literacy. Financial literacy may be achieved by reading books, listening to podcasts, subscribing to financial material, or speaking with a financial advisor.(Garg & Singh,

2018)

Financial literacy is the ability to comprehend and implement financial principles such as budgeting, investing, credit management, and financial management. Financial literacy, in other words, is the ability to manage money. These qualities will assist one in achieving a range of life goals, such as retirement, education, and even travel. Financial literacy requires budgeting, spending management, debt repayment, and a grasp of the risk-reward trade-off in investment products. Financial literacy includes understanding fundamental financial concepts such as the time worth of money, compound interest, yearly return, and opportunity cost. Individuals who lack financial literacy struggle to make large financial choices. Furthermore, financial literacy promotes financial discipline and ability. This will result in substantial lifestyle changes, such as consistent saving and investing, excellent debt management, and achieving life goals. Furthermore, financial literacy will help people avoid financial fraud and maintain their financial well-being. Financial illiteracy stems from a lack of understanding of these skills. Being financially illiterate may result in budget misalignment, more expenses than income, debt accumulation, a bad credit score, being a victim of financial fraud, and other negative consequences.

The Financial Literacy and Education Commission launched a National Strategy for Financial Literacy in 2011 to address financial challenges affecting people, families, and communities.

The 2016 plan intends to promote "sustained financial well-being for all Americans and families in the U.S."(Andarsari & Ningtyas, 2019)

The significance of financial literacy in schools cannot be stressed; pupils desperately need this knowledge, which they are not obtaining anywhere else.

Students often lack fundamental financial knowledge when they graduate from school. Every two years, the Jump$tart Coalition conducts a statewide survey of high school students to assess their knowledge of insurance, credit and debt management, and fundamental financial management skills including banking and checking.(Asaad, 2015)

Financial literacy involves understanding, evaluating, and communicating knowledge about money and financial services. This involves selecting acceptable financial solutions, planning for the future, and responding to life events that impact personal money. Wisconsin's Model Academic Standards for Personal Financial Literacy include seven categories: Relating Income and Education, Money Management, Credit and Debt Management, Planning, Saving and Investing, Critical Consumer, Community and Financial Responsibility, and Risk Management. Each of the seven areas contributes significantly to overall financial literacy.(Bamforth et al., 2018)

Teaching financial literacy encompasses more than simply basic chequebook balances. Topics of study include verbal vs. written contracts, interest cost, loss protection, insurance, lifestyle choices, spending patterns, bankruptcy, credit sources, and investment alternatives.(Lone & Bhat, 2024)

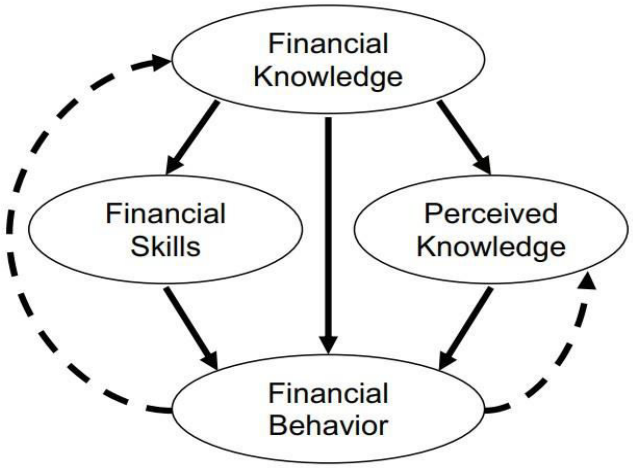

Figure 1 Conceptual Model of Financial Literacy

The concept of financial literacy and the necessary degree of understanding is continually evolving. Financial literacy is crucial due to the unpredictable nature of the global economy, including the impact of economic cycles on individuals' well-being. Financial knowledge, like other areas of skill, evolves and changes with time. However, its development rate is not consistent across all places. Current economic conditions or recent developments may make some subjects more relevant. Adhering to these guidelines benefits not just academics and professionals, but also society at large. Financial culture study often covers subjects such as economic history, reputation and trust, financial system understanding, financial literacy, educational methodologies, and the impact of digital technologies. Recent economic and societal shifts have prompted a renewed focus on corporate ethics and the problems of a zero- interest rate economy.(Brody et al., 2015) The writers of this book want to explore two new themes related to banking and Central Europe, in addition to classic issues.

Understanding the Importance of Financial Literacy

Since about 2000, financial goods and services have grown more widely available across society. Earlier generations of Americans may have bought items largely in cash, but credit and debit cards, as well as electronic transfers, are now widespread. According to a 2021 poll conducted by the Federal Reserve Bank of San Francisco, credit cards were used for 28% of all payments, with cash accounting for barely 20%. considering the significance of money in contemporary culture, a lack of financial literacy may be very detrimental to a person's long- term financial performance. Although many skills may be classified as financial literacy, common examples include household budgeting, knowing how to manage and pay off debts, and weighing the benefits and drawbacks of various credit and investment options. These abilities often need at least a basic understanding of major financial concepts such as compound interest and the time worth of money. Financial literacy may include both immediate and long- term financial plans.(Jali & Islam, 2016) The approach you employ will be determined by various criteria, including your age, investing time horizon, and risk tolerance. Financial literacy also includes understanding how today's investing selections may affect your tax payments in the future.

Mortgages, student loans, health insurance, and self-directed investment accounts are among the most popular financial products. It is critical that folks learn how to utilise them appropriately. It's also crucial to understand which investment vehicles are ideal for saving, whether for a specific financial goal like purchasing a house or for retirement. Other financial innovations, such as e-wallets, digital money, and peer-to-peer lending, may be easy and cost- effective, but they need proper consumer education to be used effectively.(Sundström et al., 2017)

Financial literacy allows for better informed decision-making:

- Effective handling of money and debt
- Gaining a better grasp of how to accomplish financial objectives
- Expense reduction via better control.
- Financial worry and stress levels are lowered.
- Increased ethical decision-making while choosing insurance, loans, investments, and using credit cards.
- Effective construction of a structured budget.

The importance of possessing financial knowledge, skills, and literacy has been repeatedly acknowledged during a series of economic disasters.(Bayeh, 2016) It is inevitable that any deficiency in this aspect will be acknowledged, as economic crises are accompanied by declines in stock and bond prices, depreciation of individual currency exchange rates, reductions in company workforce, corporate bankruptcies, reductions in employee perks, declining consumption and trade, and so forth. Even ordinary people might experience these factors, such as declining salaries

and job insecurity, which can make it difficult for them to afford housing and jeopardise their whole life.(Pratley, 2016) Due to their widespread and significant consequences, severe economic crises prompt urgent responses from both economic and political authorities as well as intellectual specialists.

Among aspects of financial literacy suffering a deficit, and thus subject to examination, it is customary to list the following elements as those presenting increasing challenges:

- knowledge of simple financial concepts;
- financial knowledge and understanding of financial processes;
- ability to apply financial knowledge and acquired experiences;
- ability to reach well-founded and conscious decisions.

Components of financial literacy:

Financial literacy includes a variety of financial components and abilities that teach people how to manage money and debt successfully.(Garg & Singh, 2018)

- ***Budgeting:–*** Budgeting is an essential life skill that supports in the development of financial knowledge for money planning and management. It is one of the most important components of financial knowledge. Keeping track of one's spending habits is critical. Effective money management can help you develop a viable financial plan. The practical approach will help you keep track of expenses, separate the unnecessary ones, and ensure that money is spent wisely. It is crucial for financial stability and freedom.(Goyal & Kumar, 2021)
- ***Debt:–***Debt is often considered as a bad aspect. As a consequence, it is vital to grasp debt. It is also critical to grasp the distinction between good and bad debts. Borrowing money for things needed to create a living is termed positive debt. Borrowing money to cover needless costs is termed bad debt. As a consequence, being able to discriminate bet ween necessary and unnecessary expenditure will help a person avoid sliding into debt. (Allgood & Walstad, 2016)
- ***Savings:—*** Savings ensures financial stability, a steady present, and a promising future. Prudent financial planning may help create long-term wealth. Keeping track of one's spending habits may benefit in money management and financial discipline.(Lusardi & Tufano, 2015)
- ***Investments:-*** Rather of keeping money in a bank account, it might be invested in financial items. Investing is all about generating and growing money so that you may live a safe and happy lifestyle. Investments will help to generate extra monthly income and significant profits. It is also feasible to meet financial objectives while contributing to retirement savings. Equity, debt securities, mutual funds, real estate, and gold are among the most popular investment options.(Gaudecker, 2015)

LITERATURE REVIEW

(Zaman et al., 2018) The purpose of this research is to look at the special needs for financial literacy among entrepreneurs, particularly in the context of the Industry 4.0 age, with an emphasis on Indonesia. With the growing influence of Industry 4.0 on numerous sectors, entrepreneurs must effectively manage their enterprises, particularly their financial aspects. While financing for Micro, Small, and Medium Enterprises (MSMEs) in Indonesia has improved due to government cooperation, issues in successfully managing incoming money remain, compounded by the advent of financial technology. As a result, the purpose of this study is to create a conceptual framework of financial literacy specific to entrepreneurs, which will serve as a foundation for future research and financial literacy surveys aimed at Indonesian entrepreneurs. To summarise, increasing financial literacy among entrepreneurs is critical for navigating the intricacies of the Industry 4.0 ecosystem and guaranteeing the long-term success of MSMEs in Indonesia.

(Hlavacek, 2013) Researchers and organisations often prioritise evaluating and improving their work.During the earliest stages of research, it's important to properly describe and explain the subject under analysis. To accomplish the purpose, textual material was analysed using AQUAD 6.0 and Hamlet II. We utilised AQUAD's content analysis and Hamlet's joint frequency analysis to

construct hierarchical clustering on the material. Diverse investigation of financial literacy provide a framework for expanding knowledge. The authors will utilise the data to establish a framework for measuring financial literacy in Latvia.

(Arsyianti & Kassim, 2018) This study proposes a framework to enhance financial prudence and inclusion for low-income families in Indonesia. Knowledge impacts attitudes, which then determine behaviour. To avoid insolvency or bankruptcy, a household's social production function relies on financial stability. Households with superior financial education and understanding are more likely to adopt suggested financial practices. The government, Islamic social finance practitioners, and academics may promote financial prudence among low- income people by focusing on financial inclusion.

(Knoll & Houts, 2012) The paper aims to construct a metric that explicitly assesses an individual's level of financial understanding. Apply item response theory (IRT) to examine items from three national surveys, leading to the development of a reliable 20-item financial knowledge scale with strong psychometric properties. Through the use of Item Response Theory (IRT), the present research incorporates people' responses to determine which questions should be included in the scale initially, rather than only validating the associations between these responses and other financially significant outcomes after the fact. The extensive use of this index, together with the ongoing application of contemporary psychometric methods, will provide the comparison of financial knowledge in a consistent and reliable manner across various research, demographics, and programmes.

(Atkinson, 2013) Financial inclusion is a global policy issue, and efforts that focus on educating consumers about finance have a crucial role in enabling them to access and use suitable, official financial products. In 2010, with the backing of the Russian Trust Fund for Financial Literacy and Education, the OECD/INFE initiated a study examining the impact of financial education on financial inclusion. The findings of this study indicate that there is a correlation between limited levels of financial inclusion and reduced levels of financial literacy. A recent study, which included a comprehensive analysis of INFE members, has allowed for the identification of several approaches that policy makers are using to create financial education policies for promoting financial inclusion.

(Lusardi & Mitchelli, 2007) Research indicates that many consumers lack fundamental economic knowledge required to make informed savings and investment choices. Financial illiteracy is prevalent among both young and elderly individuals in the United States and other nations. This lack of knowledge may have major consequences for saving, retirement planning, mortgages, and other choices. Governments and charitable organisations have launched projects to improve financial literacy. Other nations' experiences, such as Japan's saving campaign and Sweden's pension privatisation programme, provide insights into the potential role of financial literacy and savings programmes.

(SUYANTO et al., 2021) This study examines the impact of financial socialisation, experience, and literacy on financial behaviour among college students. The findings show that financial socialisation improves financial literacy and behaviour. Research suggests that social agents can help students improve their financial literacy and behaviour. However, experience may also impact their financial decisions. College students' lack of experience leads to insufficient financial understanding and increases the chance of making poor financial choices. Students with strong financial understanding and excellent behaviour may make informed choices for financial planning and management, perhaps avoiding future financial troubles.

(Nguyen & Nguyen, 2020) This study investigates the effects of financial literacy and peer effect indicators on Vietnamese investors' financial market engagement. This study divides financial literacy into two levels: basic and advanced. An empirical research surveyed 387 persons working in finance-related businesses, including banking, insurance, and real estate. Peer influence and perceived financial literacy positively impact financial market involvement, according to the study's results. After addressing the endogenous issue using instrument variable (IV) methods, such as

Ivprobit regression, the results remain robust. These results suggest that policymakers should create sophisticated financial literacy programmes to keep up with the emergence of financial innovations. This should be done on both individual and national levels to increase financial market participation.

RESEARCH GAP

In the pursuit of economic empowerment via improved financial literacy, there is a significant study vacuum on the specialised knowledge and skills needed by entrepreneurs, especially in the context of fast changing technology landscapes such as Industry 4.0. While the literature recognises the importance of financial literacy in entrepreneurial success, there is a paucity of comprehensive studies that address the varied demands of entrepreneurs in the face of growing financial technology, particularly in places such as Indonesia. Existing research either focuses on broad financial literacy frameworks or ignores the specific obstacles and possibilities that entrepreneurs confront while navigating the intricacies of contemporary financial systems. Thus, there is an obvious need in the literature for targeted financial literacy efforts that meet the unique needs of entrepreneurs, especially in developing nations experiencing large technology developments. Closing this gap is critical for creating successful policies that empower entrepreneurs and promote long-term economic development.

RESEARCH METHODOLOGY OBJECTIVES OF THE STUDY

- To assess if higher levels of financial confidence correlate with increased access to financial services.
- To investigate whether individuals with greater financial knowledge exhibit more responsible financial behaviors.
- To explore if financial behaviors mediate the relationship between financial knowledge and access to financial resources.

HYPOTHESIS

H1: Financial confidence will have a direct positive effect on financial inclusion. H2: Financial knowledge will have a direct positive effect on financial behaviour.
H3: Financial behaviour will mediate the relationship between financial knowledge and access to financial resources.

Research Design:

This study utilises a cross-sectional research design to investigate the correlation between activities aimed at improving financial literacy and the achievement of economic empowerment. It entails the gathering of data from a sample of individuals at a certain moment in time.

Sampling Technique:

The research employs a stratified random sample technique to guarantee representation across various demographics and economic sectors. The population of interest comprises people from diverse economic categories, educational levels, and work positions.

Random Sampling Technique:

Random sampling is a method used to choose samples from a population, whereby each potential participant is assigned an equal likelihood of being picked. The act of randomly sampling from a pool of individuals often yields a reliable representation of the whole population. Random sampling is often regarded as a basic approach for data collection from a whole population. In the context of random sampling, it is generally advised that a sample should be selected just once,

$$P \square 1 \square (N \square 1 \mid N)(N \square 2 \mid N).....(N \square n \mid N \square (n \square 1))$$

Here, P stands for probability, n for sample size, and N for population.

Now, P = n/N will be the outcome if 1-(N-n/n) is cancelled. Furthermore, it is crucial to provide for a variety of sample options: P = 1-(1-(1/N)) n

Data Collection Instruments:
The main tool used to gather data is a well-organized questionnaire that has been specifically created to evaluate the financial literacy levels, economic position, and markers of empowerment among participants. The questionnaire has a combination of closed-ended questions and Likert-scale items, which enables the use of quantitative analytic methods.

Sample Size:
A total of 250 participants will be chosen using stratified random selection to provide a fair representation of all demographics and economic sectors. Stratification encompasses variables such as income, educational attainment, and job situation to include a wide array of viewpoints.

Data Collection:
- Face-to-Face Interviews: Proficient researchers will carry out organised face-to-face interviews with participants use the questionnaire specifically created for the study. Interviews will be arranged at appropriate venues for the participants, guaranteeing confidentiality and convenience.
- Online Surveys: A segment of the sample may be accessed via online surveys disseminated via email or social media channels. Participants will get a hyperlink to the survey, allowing them to conveniently complete the inquiry at their own time.
- Data Collection period: The data collection time will extend over multiple weeks to allow for the arrangement of interviews and the fulfilment of online questionnaires. Participants will get reminders to motivate their involvement and optimise the pace of responses.

Data analysis:
- Descriptive Analysis: Descriptive statistics will be computed to provide a summary of the demographic characteristics of the sample, financial literacy scores, and economic empowerment indicators. The data will be described using statistical measures such as mean, median, standard deviation, and frequency distributions.
- Inferential analysis will be used to investigate the correlation between programmes aimed at improving financial literacy and measures of economic empowerment. Regression analysis is one of the statistical approaches that will be applied for this purpose. In order to evaluate the distinct impact of financial literacy, it is possible to account for covariates such as age, gender, education, and income throughout the study.
- Statistical tools, such as SPSS (Statistical Package for the Social Sciences) or R, will be used for data analysis. We will estimate regression models to test the hypotheses and uncover important determinants of economic empowerment.
- Analysis of Results: The results will be analysed in relation to the study hypotheses, examining the consequences for policy, practice, and future research. The research will recognise its limitations and provide suggestions for improving financial literacy programmes based on the findings.

RESULTS
CONCEPTUAL FRAMEWORK

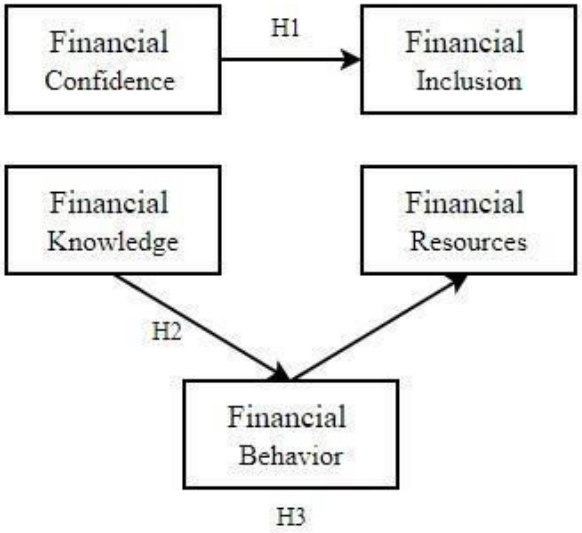

Figure 2 conceptual frame work Table 1 Demographic variables

		Frequency	Percent
AGE	18-25	55	22.0
	26-45	56	22.4
	46-65	80	32.0
	above 65	59	23.6
	Total	250	100.0
GENDER	Male	104	41.6
	Female	146	58.4
	Total	250	100.0
EDUCATION LEVEL	10th	116	46.4
	12th	115	46.0
	Graduate	14	5.6
	Master Degree/Professional qualification	5	2.0
	Total	250	100.0
INCOME LEVEL	1K - 25K	54	21.6
	26K - 50K	67	26.8
	51K - 75K	74	29.6
	76K - 1 LAKH	55	22.0
	Total	250	100.0

The demographic profile of the sample consists of 250 respondents, with varying distributions across different categories. In terms of age, the majority fall between 46 and 65 years old (32.0%), followed by those aged 18 to 25 (22.0%), 26 to 45 (22.4%), and above 65 (23.6%). Regarding gender, there is a slight majority of females (58.4%) compared to males (41.6%). Education levels are predominantly split between 10th grade (46.4%) and 12th grade (46.0%), with smaller proportions holding graduate (5.6%) or master's degree/professional qualifications (2.0%). Finally, looking at income levels, the largest group earns between 51,000 and 75,000 (29.6%), followed closely by those earning between 26,000 and 50,000 (26.8%), 76,000 and 1
lakh (22.0%), and 1,000 and 25,000 (21.6%). This diverse demographic composition provides a comprehensive representation of different age groups, genders, educational backgrounds, and income brackets within the sample, enabling a more nuanced analysis of the impact of HR 4.0 on organizational performance across various demographic segments.

SEM (structural equational modelling)

Structural Equation Modelling (SEM), a flexible statistical approach, to describe complex interactions between variables, whether latent or observable. Its ability to analyses intricate causal pathways, integrate latent components, test several hypotheses at once, account for measurement error, evaluate model fit, and combine aspects of factor analysis and regression are just a few of its special features. SEM is an essential tool for research in disciplines like psychology, sociology, economics, and beyond because it can be used to validate theoretical models, examine the effects of interventions or policies, and simplify complex datasets. This allows for more thorough and accurate data analysis and hypothesis testing.

Measurement model and validity

Measurement models and validity are indispensable in research as they establish a structured framework for ensuring the accuracy and meaningfulness of data. Measurement models clarify the relationships between observed variables and their underlying constructs, enabling researchers to assess complex concepts. Validity, on the other hand, ensures that the measurement instruments precisely capture the intended constructs, safeguarding against misleading or incorrect conclusions. Both measurement models and validity are essential components in research, serving as the foundation for reliable and credible findings, which is paramount for informed decision-making and advancing knowledge across diverse field.

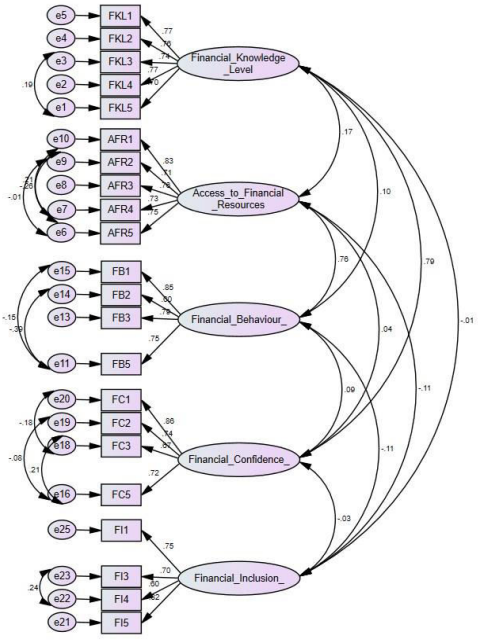

Table 2 Regression Weights: (Group number 1 - Default model)

PATH			Un std. Estimate	*S.E.*	Std. Estimate	*C.R.*	*P*
FKL5	<---	Financial_Knowledge Level	1.000		.701		
FKL4	<---	Financial_Knowledge Level	1.089	.101	.766	10.821	***

PATH			**Un std. Estimate**	**S.E.**	**Std. Estimate**	**C.R.**	**P**
FKL3	<---	Financial_Knowledge Level	1.136	.096	.742	11.847	***
FKL2	<---	Financial_Knowledge Level	1.171	.108	.765	10.813	***
FKL1	<---	Financial_Knowledge Level	1.144	.105	.774	10.921	***
AFR 4	<---	Access_to_Financial Resources	1.000		.728		
AFR 3	<---	Access_to_Financial Resources	1.119	.098	.758	11.452	***
AFR 2	<---	Access_to_Financial Resources	1.036	.088	.708	11.820	***
AFR 1	<---	Access_to_Financial Resources	1.168	.098	.830	11.978	***
FB5	<---	Financial_Behaviour_	1.000		.751		
FB3	<---	Financial_Behaviour_	1.065	.101	.790	10.587	***
FB2	<---	Financial_Behaviour_	.884	.117	.600	7.532	***
FB1	<---	Financial_Behaviour_	1.435	.120	.851	11.966	***
FC3	<---	Financial_Confidence_	.925	.094	.667	9.888	***
FC2	<---	Financial_Confidence_	.992	.097	.739	10.274	***
FC1	<---	Financial_Confidence_	1.306	.117	.862	11.175	***

PATH			**Un std. Estimate**	**S.E.**	**Std. Estimat**	**C.R.**	**P**
FI5	<---	Financial_Inclusion_	1.000		.820		
FI4	<---	Financial_Inclusion_	.666	.080	.602	8.374	***
FI3	<---	Financial_Inclusion_	.850	.087	.700	9.760	***

FI1	<--	Financial_Inclusion_	.993	.095	.746	10.404	***
AFR5	<--	Access_to_Financial_Resources	1.023	.096	.747	10.602	***
FC5	<--	Financial_Confidence_	1.000		.717		

The measuring model shows the complex links between financial behavior, knowledge, resources, confidence, and inclusion. It defines constructs with numerous indicators, standardized estimates, standard errors, critical ratios, and significance levels. Financial Knowledge Level (FKL) has five levels (FKL1–FKL5) with standardized estimates from 1.000 to 1.171. Standardized estimates of Access to Financial Resources (AFR) range from 1.000 to
1.168. Financial Behavior (FB) emerges via FB1–FB5, with 0.884–1.435 standardized estimates. FC1 to FC5 explain financial confidence (FC), with standardized values from 0.925 to 1.306. Similar to Financial Inclusion (FI), FI1 to FI5 have standardized estimates from 0.666 to 1.000. These numbers show the relative relevance of each concept in financial decision- making and management. This complete model shows how these dimensions interact and rely on each other, providing vital insights into financial behaviour and decision-making.

Table 3 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.871
Bartlett's Test of Sphericity	Approx. Chi-Square	2666.405
	df	231
	Sig.	.000

Using KMO and Bartlett's tests to evaluate the appropriateness for factor analysis. The KMO value obtained was 0.871, indicating a high level of sampling adequacy. Additionally, the Bartlett's test yielded a highly significant result (P = 0.00), providing further support for the factor analysis.

Table 4 Post CFA, Cronbach alpha, factor loadings

Factors and items	Cronbach alpha values	***Post CFA factor loadings***	AVE	CR
Financial Knowledge Level	869		0.7496	0.47720616
FKL 5		***701***		
FKL 4		***766***		
FKL 3		***742***		
FKL 2		***765***		
FKL 1		***774***		
Access to Financial Resources	870		0.7542	0.48025955
AFR5		***747***		
AFR4		***728***		
AFR3		***758***		
AFR2		708		
AFR1		830		
Financial Behaviour	806		0.748	0.37383109

FB5		751		
FB3		790		
FB2		600		
FB1		851		
Financial Confidence	832		0.74625	0.37273516
FC5		667		
FC3		739		
FC2		862		
FC1		717		
Financial Inclusion	820		0.717	0.35423609
FI5		820		
FI4		.602		
FI3		.700		
FI1		.746		

The table provides a thorough assessment of many financial concepts, including Financial Knowledge Level, Access to Financial Resources, Financial Behavior, Financial Confidence, and Financial Inclusion. Every construct undergoes a thorough evaluation using Cronbach's alpha values, post-Confirmatory Factor Analysis (CFA) factor loadings, Average Variance Extracted (AVE), and Composite Reliability (CR). Significantly, there is a high level of internal consistency seen in all aspects, as shown by Cronbach's alpha values ranging from 0.806 to 0.870. In addition, factor loadings after doing confirmatory factor analysis (CFA) show strong connections between items and constructs. AVE values indicate the extent to which the variance is accounted for, while CR values indicate the reliability. These results provide important insights into the accuracy and consistency of the concepts, establishing a strong foundation for further study and interpretation in the field of financial decision-making and management.

Discriminant validity:

Discriminant validity is not a specific test performed in SPSS or any other statistical software but a concept within the context of validating measurement instruments and assessing the relationships between variables. Discriminant validity is crucial to ensure that different constructs or variables in a study are truly distinct and not measuring the same underlying concept. Researchers use various techniques such as confirmatory factor analysis (CFA) or correlation analysis to demonstrate that the measures intended to assess different constructs are, indeed, different and not highly correlated. Discriminant validity helps ensure that the measurement instruments accurately represent the unique concepts they are meant to measure, preventing construct overlap or redundancy and allowing for more robust and accurate data analysis and interpretation.

Table 5 Discriminant test

	Financial_Kno	Access_to_Fina	Financial_	Financial_	Financial
Financial_Kno					
Access_to_Fina					
Financial_Beha	0.077	.679**	0.86487		
Financial_Confi	.685**	0.065	0.102	0.863858	
Financial_Inclu	0.013	0.090	0.089	0.000	0.846759

This table shows how important financial concepts are connected. It's worth mentioning that Financial Knowledge Level is highly linked to Financial Confidence (about 0.686) and only slightly to Access to Financial Resources (about 0.140). There is a strong link between Access to Financial Resources and Financial Behaviour (about 0.868), but only a weak link between Financial Behaviour and both Access to Financial Resources and Financial Knowledge Level (about 0.077 and 0.679, respectively). Financial Confidence is somewhat related to Financial Knowledge Level (about 0.686) and only slightly to Access to Financial Resources (about 0.065). Financial Inclusion doesn't have many relationships, but it is very consistent with itself (about 0.847). These insights show how complicated the links are between financial factors that affect choices and results.

Table 6 Model Fit Summary

Variable	***Value***
Chi-square value(χ2)	***218.797***
Degrees of freedom (df)	***189***
CMIN/DF	***1.158***
P value	0.068
GFI	0.925
RFI	0.903
NFI	0.921
IFI	0.988
CFI	0.988
RMR	0.048

RMSEA	0.025

The quality of fit was acceptable representation of the sample data ($\chi 2$ = 218.797), NFI (Normed Fit Index) =0.921; IFI (Incremental fit index) = 0.988, GFI (Goodness of Fit) = 0.925, RFI (Relative Fit Index) = 0.903 and CFI (Comparative Fit Index) =0.988 which is much larger than the 0.90. Similarly, RMR (Root Mean Square Residuals) =0.048 and RMSEA (Root mean square error of approximation) = 0.025 values is lower the 0.080 critical value. Results indicated a good fit for the model presented including RMSEA of 0.025, RMR of 0.048, GFI of 0.903, and CFI of 0.988.

Proposed Hypothesis

H1: Financial confidence will have a direct positive effect on financial inclusion.

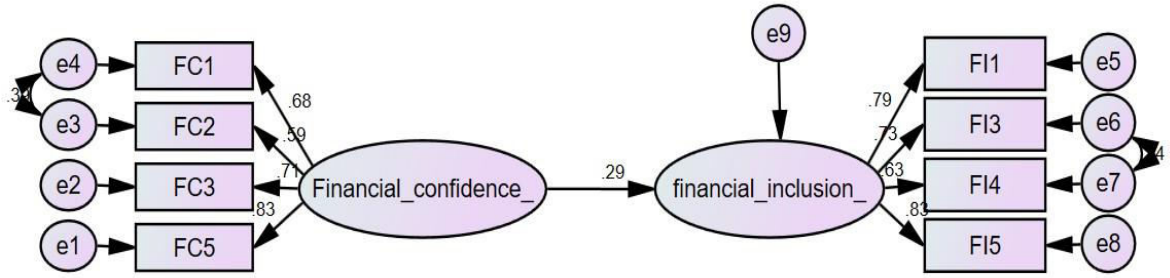

Table 7 Regression Weights: (Group number 1 - Default model)

PATH			Un std. Estimate	S.E.	Std. Estimate	C.R.	P
financial inclusion	<---	Financial confidence	.380		.291		
FC5	<---	Financial confidence	1.177	.125	.833	9.426	***
FC3	<---	Financial confidence	1.000	.108	.711	9.251	***
FC2	<---	Financial confidence	.795	.078	.592	10.159	***
FC1	<---	Financial confidence	1.000		.676		
FI1	<---	financial inclusion_	1.000		.793		
FI3	<---	financial inclusion	.807	.074	.727	10.968	***
FI4	<---	financial inclusion	.629	.068	.627	9.292	***
FI5	<---	financial inclusion	.931	.077	.826	12.100	***

Table depicts a hypothetical structural equation model that show cases the interdependence between Two variables, namely the financial inclusion and financial confidence. In the present model, the independent variable is the financial confidence, whereas the dependent variable is financial inclusion. The findings of the investigation indicate a positive and statistically significant relationship between financial inclusion and financial confidence (β=.291, P<.05).

The standardized coefficient of 0.291, a positive association between financial inclusion and financial confidence, as shown in the route connecting these two variables. The correlation coefficient values (C.R. values) show large magnitudes, suggesting that the observed associations are statistically significant. The fit indices indicate that the model has a good fit,m since the factors exhibit statistical significance with p-values over 0.05. The total model fit was evaluated by using seven distinct fit indices, which together demonstrated a statistically significant positive association

between financial inclusion and financial confidence.

Table 8 Model Fit Summary

Variable	Value
Chi-square value(χ^2)	42.303
Degrees of freedom (df)	18
CMIN/DF	2.350
P value	0.054
GFI	0.959
RFI	0.912
NFI	0.944
IFI	0.967
CFI	0.966
RMR	0.049
RMSEA	0.074

The quality of fit was acceptable representation of the sample data (χ^2 = 42.303), NFI (Normed Fit Index) =0.944; IFI (Incremental fit index) = 0.967, GFI (Goodness of Fit) = 0.959, RFI (Relative Fit Index) = 0.912 and CFI (Comparative Fit Index) =0.966 which is much larger than the 0.90. Similarly, RMR (Root Mean Square Residuals) =0.049 and RMSEA (Root mean square error of approximation) = 0.074 values is lower the 0.080 critical value**.** Results indicated a good fit for the model presented including RMSEA of 0.74, RMR of 0.049, GFI of 0.959, and CFI of 0.966.

H2: Financial knowledge level will have a direct positive effect on financial behaviour

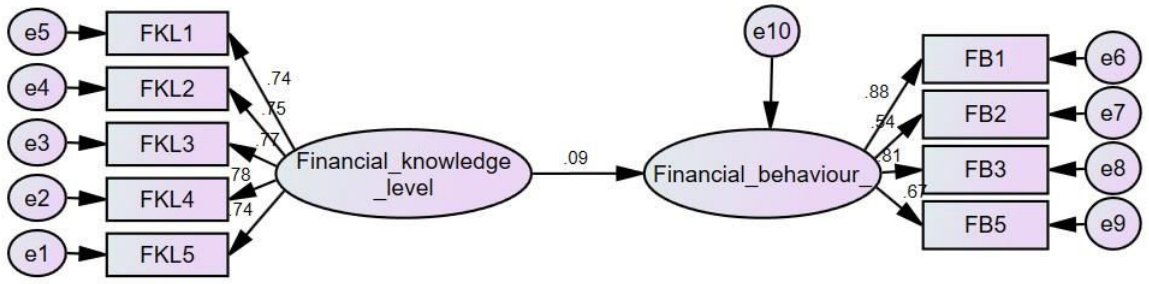

Table 9 Regression Weights: (Group number 1 - Default model)

PATH			**Un std. Estimate**	**S.E.**	**Std. Estimat**	***C.R.***	***P***
Financial behaviour	<---	Financial_knowledge_level	.136	.106	.093	1.279	***
FKL4	<---	Financial_knowledge_level	1.015	.08	.780	11.61	**
FKL3	<---	Financial_knowledge_level	1.081	.09	.771	11.49	**
FKL2	<---	Financial_knowledge_level	1.055	.09	.753	11.23	**
FKL1	<---	Financial_knowledge_level	1.000		.739		
FB1	<---	Financial_behaviour_	1.000		.875		
FB2	<---	Financial_behaviour_	.540	.06	.541	8.476	**
FB3	<---	Financial_behaviour_	.741	.05	.812	12.98	**
FB5	<---	Financial_behaviour_	.606	.05	.671	10.85	**
PATH			**Un std. Estimate**	**S.E.**	**Std. Estimat**	**C.R.**	**P**
FKL5	<---	Financial_knowledge_level	.962	.08	.737	10.99	**

Table depicts a hypothetical structural equation model that show cases the interdependence between Two variables, namely the financial knowledge level and financial behaviour. In the present model, the independent variable is the financial knowledge level, whereas the dependent variable is financial behaviour. The findings of the investigation indicate a positive and statistically significant relationship between financial behaviour, Access to Financial Resources (β=.093, P<.05).
The standardized coefficient of 0.093, a positive association between financial knowledge level and financial behaviour, as shown in the route connecting these two variables. The correlation coefficient values (C.R. values) show large magnitudes, suggesting that the observed associations are statistically significant. The fit indices indicate that the model has a good fit, since the factors exhibit statistical significance with p-values over 0.05. The total model fit was evaluated by using seven distinct fit indices, which together demonstrated a statistically significant positive association between financial knowledge level and financial behaviour.

Table 10 Model Fit Summary

Variable	**Value**
Chi-square value(χ^2)	32.124
Degrees of freedom (df)	26
CMIN/DF	1.236
P value	0.79
GFI	0.973
RFI	0.953
NFI	0.966
IFI	0.993
CFI	0.993
RMR	0.036
RMSEA	0.031

The quality of fit was acceptable representation of the sample data (χ^2 = 32.124), NFI (Normed Fit Index) =0.966; IFI (Incremental fit index) = 0.993, GFI (Goodness of Fit) = 0.973, RFI (Relative Fit Index) = 0.953 and CFI (Comparative Fit Index) =0.993 which is much larger than the 0.90. Similarly, RMR (Root Mean Square Residuals) =0.036 and RMSEA (Root mean square error of approximation) = 0.031 values is lower the 0.080 critical value**.** Results indicated a good fit for the model presented including RMSEA of 0.031, RMR of 0.036, GFI of 0.973, and CFI of 0.993.

H3: Financial behaviour will mediate the relationship between financial knowledge and access to financial resources.

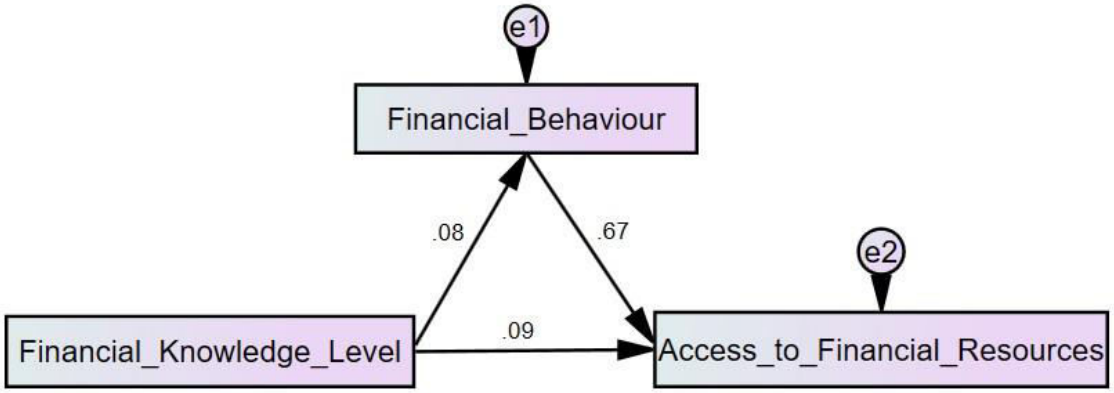

Table 11 Regression Weights: (Group number 1 - Default model)

			Unstandardi		Standardized		
Financial_Behavi	<---	Financial_Knowled	077	063	077	1.217	***
Access_to_Finan	<---	Financial_Knowled	088	046	088	1.908	***
Access_to_Finan	<---	Financial_Behaviou r	669	046	673	14.531	***

The table provide a thorough knowledge of the mediating model including Financial Behaviour, Financial Knowledge Level, and Access to Financial Resources. The use of Financial Knowledge Level has a considerable direct influence on Access to Financial Resources, with an unstandardized estimate of 0.088 ($p < 0.001$). This direct association shows that firms that use Financial Knowledge Level are more likely to acquire high-quality applicants, independent of other circumstances. The relationship between Financial Knowledge Level and Financial Behaviour shows a significant unstandardized estimate of 0.077 ($p < 0.001$), suggesting that as organizations integrate more Financial Knowledge Level and Financial Behaviour increase. Financial Knowledge Level has a strong indirect influence on Access to Financial Resources via Financial Behaviour, Finally, a significant unstandardized estimate of 0.669 ($p < 0.001$) indicates that Financial Behaviour has a direct impact on recruiting high-quality applicants. As a result, the mediating model illustrates that, although the use of Financial Knowledge Level directly improves Access to Financial Resources, it also indirectly contributes to this outcome by positively influencing Financial Behaviour.

Table 12 Standardized Indirect Effects (Group number 1 - Default model)

	Financial Knowledge Level	Financial Behaviour
Financial Behaviour	.000	.000
	Financial Knowledge Level	Financial Behaviour
Access to Financial Resources	.052	.000

The standardized indirect effects table provides to the understanding of the mediating model that includes Financial Knowledge Level, Financial Behaviour, and Access to Financial Resources. First, Financial Knowledge Level has an indirect influence on Access to Financial Resources via Financial Behaviour, with a standardized indirect effect of 0.052 ($p < 0.001$). This number demonstrates how the influence of Financial Knowledge Level on Access to Financial Resources is mediated by changes in Financial Behaviour. Notably, the standardized indirect impact of Financial Behaviour on Access to Financial Resources is also apparent, implying that Financial Behaviour has a direct influence on recruiting Access to Financial Resources applicants. However, the standardized indirect effect of Financial Knowledge Level directly on Financial Behaviour is negligible, implying that, while Financial Knowledge Level may indirectly influence Access to Financial Resources through Financial Behaviour, their direct impact on Financial Behaviour levels may be minimal. As a result, our results highlight the critical role of Financial Behaviour as a mediator in the link

between Financial Knowledge Level and Access to Financial Resources.

Discussion:

The study investigates the complex interconnections among many aspects of financial literacy, such as financial confidence, financial knowledge, financial behaviour, access to financial resources, and financial inclusion. Structural Equation Modelling (SEM) is used to analyse these connections, providing understanding into their interactions and mutual influences. The hypothesis H1 suggests that there is a direct and positive relationship between financial confidence and financial inclusion. The findings provide evidence in favour of this hypothesis, demonstrating a statistically significant and positive correlation between financial confidence and financial inclusion ($\beta = 0.291$, $p < 0.05$). This suggests that persons who have a greater sense of assurance in their financial abilities are more like to have improved access to financial services, highlighting the significance of confidence in making financial choices and engaging in financial activities. The data confirm Hypothesis H2, which proposes that there is a direct positive relationship between financial knowledge level and financial behaviour. There is a substantial correlation between the amount of financial knowledge and financial behaviour, with a positive coefficient of 0.093 and a p-value less than 0.05. This indicates that those who possess a higher level of financial knowledge are more likely to engage in positive financial behaviours, emphasising the significance of education in influencing financial choices. Hypothesis H3 posits that financial behaviour will act as a mediator in the link between financial knowledge and access to financial resources. The findings corroborate this concept, suggesting that financial behaviour serves as an intermediary between financial knowledge and the ability to get financial resources. The research reveals that financial knowledge has a notable indirect impact on access to financial resources via financial behaviour ($\beta = 0.052$, $p < 0.001$). This implies that financial behaviour plays a partly mediating role in the connection between financial knowledge and access to financial resources. The fit indices of the structural equation models suggest that the suggested models have a satisfactory fit. The Chi-square value, Normed Fit Index (NFI), Incremental Fit Index (IFI), Goodness of Fit Index (GFI), and Comparative Fit Index (CFI) all exhibit good values, indicating that the models accurately describe the sample data. The findings enhance our understanding of the intricate relationship between different aspects of financial literacy and how they affect the ability to make financial decisions and get resources. Their emphasis is on the significance of advancing financial literacy measures to bolster financial confidence, knowledge, behaviour, and eventually, financial inclusion. Furthermore, the involvement of financial behaviour as a mediator emphasises the need of interventions that focus on improving both knowledge and behaviour in order to promote improved access to financial resources.

Conclusion:

The study's thorough research reveals that financial literacy has a crucial role in influencing several areas of financial decision-making and management. The results confirm the proposed hypotheses, demonstrating that having confidence in one's financial abilities has a direct and beneficial impact on being included in financial systems, and that having knowledge about finances influences one's financial conduct. Moreover, the research emphasizes the intermediary function of financial conduct in the correlation between financial knowledge and the ability to get financial resources. The strength of the results is emphasized by the positive fit indices of the model, high values of Cronbach's alpha, and excellent discriminant validity. In summary, the research highlights the need of promoting financial literacy to encourage inclusive financial practices and empower people to make well-informed financial choices. This, in turn, contributes to enhancing financial resilience and well-being within society.

REFERENCES

1. Allgood, S., & Walstad, W. B. (2016). The effects of perceived and actual financial literacy on financial behaviors. *Economic Inquiry*, *54*(1), 675–697.
2. Andarsari, P. R., & Ningtyas, M. N. (2019). The role of financial literacy on financial behavior. *Journal of Accounting and Business Education*, *4*(1), 24–33.
3. Arsyianti, L. D., & Kassim, S. (2018). Financial prudence through financial education: A conceptual framework for financial inclusion. *Journal of King Abdulaziz University, Islamic Economics*, *31*(1), 151–166. https://doi.org/10.4197/Islec.31-1.10
4. Asaad, C. T. (2015). Financial literacy and financial behavior: Assessing knowledge and confidence. *Financial Services Review*, *24*(2), 101–117.
5. Atkinson, A. (2013). *Promoting Financial Inclusion through Financial Education: OECD/INFE Evidence, Policies and Practice Flore-Anne Messy*. *34*.
6. Bamforth, J., Jebarajakirthy, C., & Geursen, G. (2018). Understanding undergraduates' money management behaviour: a study beyond financial literacy. *International Journal of Bank Marketing*, *36*(7), 1285–1310.
7. Bayeh, E. (2016). The role of empowering women and achieving gender equality to the sustainable development of Ethiopia. *Pacific Science Review B: Humanities and Social Sciences*, *2*(1), 37–42.
8. Brody, C., De Hoop, T., Vojtkova, M., Warnock, R., Dunbar, M., Murthy, P., & Dworkin, S.
9. L. (2015). Economic self-help group programs for improving women's empowerment: A systematic review. *Campbell Systematic Reviews*, *11*(1), 1–182.
10. Garg, N., & Singh, S. (2018). Financial literacy among youth. *International JournaL of SociaL Economics*, *45*(1), 173–186.
11. Gaudecker, H. Von. (2015). How does household portfolio diversification vary with financial literacy and financial advice? *The Journal of Finance*, *70*(2), 489–507.
12. Goyal, K., & Kumar, S. (2021). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies*, *45*(1), 80–105.
13. Hlavacek, P. (2013). Economic and Innovation Adaptability of Regions in the Czech Republic. *Proceedings of the 11th International Conference on Liberec Economic Forum 2013*, *February*, 194–203.
14. Jali, M. R. M., & Islam, G. M. N. (2016). Measuring the socio-economic empowerment of rural households in Pakistan. *Journal of Governance and Development (JGD)*, *12*(1), 107–122.
15. Knoll, M. A. Z., & Houts, C. R. (2012). The Financial Knowledge Scale: An Application of Item Response Theory to the Assessment of Financial Literacy. *Journal of Consumer Affairs*, *46*(3), 381–410. https://doi.org/10.1111/j.1745-6606.2012.01241.x
16. Lone, U. M., & Bhat, S. A. (2024). Impact of financial literacy on financial well-being: a mediational role of financial self-efficacy. *Journal of Financial Services Marketing*, *29*(1), 122–137.
17. Lusardi, A., & Mitchelli, O. (2007). Financial literacy and retirement preparedness: Evidence and implications for financial education. *Business Economics*, *42*(1), 35–44. https://doi.org/10.2145/20070104
18. Lusardi, A., & Tufano, P. (2015). Debt literacy, financial experiences, and overindebtedness.*Journal of Pension Economics & Finance*, *14*(4), 332–368.
19. Murugiah, L. (2016). The level of understanding and strategies to enhance financial literacy among Malaysian. *International Journal of Economics and Financial Issues*, *6*(3), 130– 139.
20. Nguyen, T. A. N., & Nguyen, K. M. (2020). Role of financial literacy and peer effect in promotion of financial market participation: Empirical evidence in Vietnam. *Journal of Asian Finance, Economics and Business*, *7*(6), 1–8. https://doi.org/10.13106/JAFEB.2020.VOL7.NO6.001
21. Potrich, A. C. G., & Vieira, K. M. (2018). Demystifying financial literacy: a behavioral perspective analysis. *Management Research Review*, *41*(9), 1047–1068.

22. Pratley, P. (2016). Associations between quantitative measures of women's empowerment and access to care and health status for mothers and their children: a systematic review of evidence from the developing world. *Social Science & Medicine*, *169*, 119–131.
23. Sundström, A., Paxton, P., Wang, Y.-T., & Lindberg, S. I. (2017). Women's political empowerment: A new global index, 1900–2012. *World Development*, *94*, 321–335.
24. SUYANTO, S., SETIAWAN, D., & ... (2021). The Impact of Financial Socialization and Financial Literacy on Financial Behaviors: An Empirical Study in Indonesia. *The Journal of Asian ...*, *8*(7), 169–180. https://doi.org/10.13106/jafeb.2021.vol8.no7.0169
25. Zaman, M., Yuan, S., Junping, L., Minggao, T., Jien, X., & Xiao, T. (2018). Quantifying the irrigation performance of newly developed solar sprinkler irrigation system. In *ACM International Conference Proceeding Series* (Issue October). https://doi.org/10.1145/3285957.3285995