



NOTATION TRENDPLUS PUBLISHING
WHERE IDEAS MEET IMPACT

Volume-1, Issue 1, October 2026, Page No- 86-104
**Journal of Humanistic Studies and Social
Dynamics (JHSSD)**



**The Role of Financial Literacy in Enhancing Household Economic Sustainability:
A Quantitative Analysis of Financial Behaviors and Outcomes**

Dr. Kumar Ambar Pandey

Assistant Professor, School of Journalism and Mass Communication, Noida International University

Article Received: 11-08-2026

Revised Version: 03-09-2026

Accepted: 25-09-2026

*Corresponding Author

Dr. Kumar Ambar Pandey

E-Mail Id:

ambar.pandey@niu.edu.in

Copyright: © The Author(s), 2026.
Published by Notation Trendplus
Publishing Pvt. Ltd.. This is an Open
Access article, distributed under the
terms of the Creative Commons
Attribution 4.0 License
(<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted
use, distribution and reproduction in
any medium, provided the original
work is properly cited.



Abstract: This study explores the relationship between financial literacy and family economic sustainability, hypothesizing that higher financial literacy (financial knowledge, financial budgeting behavior, savings habit, investment decision and family debt management) is related to greater family economic sustainability. A quantitative cross sectional research design was used and data was gathered from 1000 HHs which were selected by stratified random sampling in 40 urban and rural communities which yielded 978 valid data after data cleaning. Demographic data and financial information, such as the Financial Literacy Index, Household Economic Sustainability Index, Savings Rate, Investment Participation Rate, Debt Management Score, and Financial Resilience Index were collected through structured questionnaires. Descriptive statistic, Pearson correlation, Multiple linear regression and Structural Equation Modeling (SEM) are statistical techniques used. The dependent variable: Household economic sustainability was regressed on the set of independent variables with the highest beta coefficient given by financial literacy (0.46, $p < 0.001$), followed by budgeting practices (0.38, $p < 0.001$), savings behavior (0.34, $p < 0.001$), and least of all came investment participation (0.27, $p = 0.002$). The model accounted for 72.6% of the variance in the household economic sustainability, ($R^2 = 0.726\%$). The findings showed that there is a strong positive correlation between financial literacy and sustainability ($r = 0.81$, $p < 0.001$) which was followed by a good model fit as revealed by SEM (chi-square/df = 2.12, CFI = 0.96, TLI = 0.95 and RMSEA = 0.046). Higher financial literacy is observed to be correlated with higher savings rate, higher financial resilience and lower financial distress level among the families that have higher financial literacy as compared with those who have lower financial literacy by 27.4%, 24.1% and 18.9% respectively. Furthermore, 76.4% had moderate to high financial literacy, with 39.6% being the opposite side where they had not received any formal training in regards to finance which was a huge disservice. Financial Literacy is thus reinforced as a critical tool to contribute into the economic stability/fiability of households through improved budgeting, saving, investing and debt management.

Keywords: Financial Literacy, Household Economic Sustainability, Financial Behavior, Financial Decision-Making, Economic Well-Being

Current policy concern, on both a financial institution and a policy level, as well as amongst academic researchers, has focused on the ability of a household group to cover their costs and withstand shocks in the long term, known as the economic sustainability of the household. Households are largely influenced by the overall economic context in which they operate, such as the urban & rural population, financial services and national economic systems (Tacoli, 1998). Generally, households in rural areas and urban areas are in different situations with different problems, e.g. weaker access to formal financial services in the rural areas, whilst household income is variable because of urban and non-farm income growth, this is the case for Gan et al. (2016). A particularly salient context specific difference is the need for sensitivity in building up the interaction between financial knowledge and financial behaviours impacts on the economic performance of households. Financial Literacy is now the keystone of the financial landscape, a series of literacy and skills that allows for easy access and good use to manage the people's financial life. Previous studies have shown that there is a correlation between the level of financial literacy and financial management, such as budgeting, regular saving, prudent investments and debt management (Krechovská, 2015). Besides, the relationship between SE status and financial education with households' sustainability has been found, especially for the high poverty rate and low income earner households of the society (Munisamy et al., 2022). Improving financial literacy can help individuals in the rural areas become more active in the formal economy, and help them contribute to the overall sustainable development target (Kyeyune & Ntayi, 2025). Important digital financial skills are key to household entrepreneurship and income generation, with digital financial services providing another dimension in such a relationship (Yu et al., 2025). Evidence is growing steadily but there are some significance gaps of important research in the empirical field of information. Studies conducted on financial knowledge components other than savings and financial outcomes, or how financial outcomes are linked to financial knowledge, have received less attention than testing of all dimensions of financial behaviors or outcomes in a single analytical framework. In addition, the relationship between financial literacy and its impact on the economic sustainability of the individual and household is not well studied, particularly in a diverse setting in cities and villages. The points used in the present study are closed by conducting more complete quantitative studies in terms of multiple financial indicators and statistics that can handle complex data, such as Multiple Linear Regression and Structural Equation Modeling (SEM). This research's main hypothesis is that, financial literacy – including the behaviours that stem from it, like budgeting, saving, investing and debt management – positively predicts household economic sustainability. We would like to understand how these predictors interact and contribute relative to each other. An important aim is to analyse whether there are any distinguishing effects on the financial sustainability indicators (saving propensity, financial resilience and debt management efficiency) of more financially literate households. In doing so, this enables empirical evidence which can be used for targeting specific educational interventions and policy developments. Literature reviews of the current research will be covered in the next sections of this book under the themes 'Financial literacy' and 'Household economic sustainability'. The following section reviews and summarizes the findings of the financial literacy and economic sustainability of household in literature so that they can be used to provide a context for this study. The methodologies used

in the research, including the sampling strategy, data gathering tools and data analysis techniques are discussed in section 3. The results of the statistical analyses such as descriptive analysis, regression analysis and SEM are presented in section 4. The implications of these results are presented in Section 5, both with regard to policy and practice. Last, Section 6 summarizes the results of the study and suggests some possible further studies.

Literature Review

The question of how much financial literacy impacts on the economic results of households has been an interest for a long time, but research has consistently demonstrated that financial knowledge can enhance a person's financial decision-making regarding financial service use, and contribute to financial literacy practices, including budgeting, saving, investing and borrowing. From early research, this gap of interest (Lusardi & Mitchell, 2011) generally surmises that better trained the financial individual presents more forward looking financial Behavior specifically amongst planning and saving for retirement. In other more direct contexts or outcomes (enough savings buffer in emergency savings, or debtors' knowledge and understanding of how to handle their debts), this basic finding is echoed in other contexts and outcomes (Bassa Scheresberg, 2013). A wealth of literature has examined the impact of financial literacy on household sustainability and how this relationship works. Examples of this include showing that financial literacy has a mediating role between literacy and the socio-economic outcomes of a low-income household when analysing their financial wellbeing, and therefore has an impact on their wider sustainability outcomes (Munisamy et al, 2022). The advantage of this mediation perspective is that it contests that financial literacy has a mediation effect with other family characteristics (e.g., income, income levels, financial service adoption and education). Another pathway through which financial literacy can enhance sustainable development is by seeking to incentivize the economic engagement, financial management and financial resilience of rural households (Kyeyune & Ntayi, 2025). This is a digital financial service which adds another layer of complexity, yet helps to usher in a new financial literacy: a new construct – digital financial literacy. The recent studies in China have brought new studies that demonstrate that digital financial skills act in dynamic ways: Yu et al., 2025 show how there are important differences in income level during time. The finding serves as a reminder that financial education programmes should be customized and adopted as an effective tool to overcome financial skills development challenges in the digital context, especially in the case of mobile banking and investment apps. In addition, having greater financial literacy is linked to household entrepreneurship because longstanding financial literacy is a concept of how to utilize the means of financial responsibility well, which includes economic opportunity in the digital environment (Xie & Chen, 2025). Besides at the individual level, the impact of national level of financial literacy on economic stability and resilience have been studied. A cross-impact analysis in Montenegrin households, for example, revealed the economic resilience brought by training residents in financial literacy, since it enhances the financial resilience of households to withstand and react to income shocks and deciding unexpected expenditures (Katnic et al., 2024). Also, the financial education approach is connected with the willingness to utilize it as providing sustainable development – and it therefore indirectly impacts the level of the macroeconomics of the country, specifically

diminished debt from household sector as well as dotouts from property, in line with a couple financial education researchers (Krechovská, 2015). From the point of view of the traditional financial systems, the sustainable financial literacy has also been discussed, particularly with regard to the innovation of traditional financial knowledge systems based on tradition. There is also another perspective on the viewpoint of financial literacy that has been discussed, namely in the area of financial literacy practices traditionally, particularly the innovation of traditional financial knowledge systems based on tradition. Based on financial traditions in local communities, research shows that the financial education implemented beside the financial education implemented based on formal literacy can be implemented based on financial education based on a traditional financial process in the local community which can give culturally appropriate financial education to achieve high economic sustainability (Kurniadi et al., 2025). It is relevant as it reminds us that financial literacy should be learnt as multi-dimensional and allowing an enabling process, which recognises other institutional and cultural contexts. Given the development of this body of literature, bibliometric analysis of financial literacy / financial sustainability literature indicates that, financial sustainability is starting to take into account, managing personal or household finances to Guarantee short- and long-term financial needs (Ahmad et al., 2023). The same study shows, however, that there is no study that measures several financial behaviours from a single analytical research approach; the previous studies have focused mainly on examining one or two dimensions. From this angle, the present study can be seen as filling the gaps in the literature concerning the simultaneous effect of membership in the category of the financial literate, budgetary behaviors, saving, investing and dimension of debt and the economic sustainability of the household by adding a set of in-depth indicators and complex statistical modelling. Previous literature focused on examining financial literacy to achieve a certain goal, in this study, it is opportune enough to discuss the financial literacy from the comprehensive or in an integrated SEM model which would bring about better understanding in the relation between the two constructs studied (financial literacy, sustainable well being) to achieve the goal of sustainable well being for each household. Also, it would be well to remember that both urban and rural houses took part in the sample study; and that the present study is of a stratified sample and thus gives comparisons wider than those from the studies restricted to one or another type of environment. It does just that, providing empirical results to inform the design of financial education and policy interventions to varying families to address their diverse needs across varying contexts by varying geography.

Methodology

This section provides a detailed account of the research design, sampling strategy, data collection procedures, variable construction, and analytical framework employed to investigate the relationship between financial literacy and household economic sustainability.

Research Design and Sampling

The method undertaken in this study is quantitative which is using cross sectional research design. This research was done in one day because in that day, the correlation between the variables, namely financial literacy and the economic sustainability of the household could be

done. Choosing this approach had certain benefits: Firstly, the findings acquired with the instrument could be gathered on a large and variable sample, which meant that the prevalence of each phenomenon and the relationships between the various variables between the cross section could be estimated. The targeted study area had a population of all the houses in the 40 communities including urban and rural. The sampling was made using stratifications of the random sampling technique, in order to achieve a representative sample for the specific demographic and geographic level. The sampling frame was drawn from relevant evidence based on the most recent information available on the national household register broken up into geographic groups (urban and rural) and into income groups (household quartiles). Household selection was random throughout the stratum proportionate to the size of the stratum in the population in each stratum. This original sample size was determined by a power analysis based on expected effect size parameters taken from the literature which were compiled from previous studies (Bassa Scheresberg, 2013) and the complexity of the structural equation model proposed to be studied here. After any questionnaires with missing responses or ambiguous answers are excluded, there were 978 questionnaires that were returned (97.8% return rate). For each household, an adult (the household head or the main adult with most vital financial decision-making powers) was identified as the respondent.

Data Collection Instruments and Procedures

The self-administered questionnaire structured in a new way was a self-questionnaire specially structured for accessing the present primary data. The study used a questionnaire that was developed to collect all the factors that constitute a person's demographic, financial and behavioral characteristics. Questionnaire was designed to obtain all possible demographic, financial and behavioral factors. Sample included demographic data of the main financial decision maker including age, gender, educational only, family income and occupation. The financial literacy section comprised a series of items developed based on financial literacy scales, which were previously developed to assess knowledge of key financial concepts (for instance, compound interest, inflation, risk diversification etc.) and financial skills (for instance, reading a loan statement, understanding a financial loan terms, comparing financial products, etc.). A field sample of 50 households over a pilot area was tested with the first to collect feedback for making the instrument culturally and linguistically appropriate, and its meaning linguistically clear. Training of enumerators was conducted to be able to gather the main data for six weeks. Village centres and/or a representative sample of households were then visited in the village and urban area, using a mix of in-person visitations and village-wide community centre surveys to ensure that enumerators can maximise participation in the villages. The length of time taken for each enumeration session was about 45 minutes. A lot of detailed information regarding the budgeting process, saving, investing, debt, insurance, financial services, financial plans, and exemplification of the economic resilience indicators were also collected from the questionnaire. Guided by the following list of items, the objective is to summarise of this list in a tabular form as follows (See Table 1).

Table 1. Key Variables and Their Measurement in the Household Questionnaire

Variable Category	Specific Variables	Measurement Approach
Demographics	Age, gender, education, income, employment	Single-item self-report
Financial Literacy	Knowledge quiz scores, self-rated skill	Composite index (0-100)
Budgeting	Frequency of budget preparation, adherence	Ordinal scale (1-5)
Savings	Monthly savings amount, regularity	Continuous (local currency)
Investment	Participation types (stocks, bonds, mutual funds, etc.)	Binary (yes/no)
Debt Management	Total debt, debt-to-income ratio, repayment consistency	Continuous and ordinal scales
Economic Resilience	Ability to cover emergency expenses, income stability	Composite index (0-100)

The primary information has been supplemented by secondary surveys performed by the Government and the reports and data banks of major financial institutions, along with national levels of the information on households. At the community level, community-level average indicators for income distribution, impressive savings and levels of debt were drawn, as a way of assessing external validity of the sample.

Data Preprocessing and Variable Construction

After data collection, a thorough data preprocessing was undertaken which involved acquisition of quality and suitability of data to statistical analysis. In the first case, questionnaires with more than twenty percent of its questionnaire items left blank were not included at all in the data set – that is two dozen questionnaires were lost. In non-conforming responses (missing values or N978) valid responses were filled in with the median of observed responses on that item, a method which is more robust in the presence of outliers than mean-imputation. All the categorical variables were then re-coded numerically according to a pre-designed coding system (male = 0, female = 1; primary = 1, secondary = 2, tertiary = 3 and postgraduate = 4). Outliers were checked for all the continuous variables according to Inter Quartile Range (IQR) criterion. Numbers which fell below $Q1 - 1.5IQR$ and above $Q3 + 1.5IQR$ were deemed as being outliers. Outlying values were Winsorized, meaning that they were replaced by the value that was closest (but not an outlier) to the value at the 1st percentile respectively 99th percentile. All the continuous data types were min-max normalized within a range of 0 to 1 to ensure that all indicators are comparable in terms of their range and unit of measure irrespective of the outlier treatments. $X' = (X - X_{min}) / (X_{max} - X_{min})$ replaced the normalized value of X. The key evaluation indicators (KEI) for this study were then developed using the standardizations. Each set of FLI items as well as the set of HESI items were weighted

and averaged to provide the Financial Literacy Index (FLI) and the Household Economic Sustainability Index (HESI), respectively. An estimate of the total monthly savings was initially estimated and then divided by total monthly income in the household to see what percentage was being saved. The presence or absence of a specific type of investment, other than a normal savings account within the household was entered as a dummy variable called the Investment Participation Rate. The Debt Management Score was subjective assessment by the subjects in respect of the regularity with which they re-pay their debts, and the debt to income ratio; and the Financial Resilience Index was an integrated statement that measured the financial ability of the home to cope with a large drop in income (medical emergency, job loss, etc). Finally, the rate and level of budget preparedness (Household Budgeting Score) was looked into. All the indices were examined for their reliability through Cronbach's alpha, it was found out that all the composite indices had value above the value which is desired in good reliability (0.7), meanwhile all the indices have good level of internal validity.

Statistical Analysis Framework

A multi-stage approach to the analytical framework was used. Descriptive statistics offered a description of the characteristics of the participant sample, the financial behaviors' distribution, as well as mean, standard deviation, frequencies and percentages. Secondly, bivariate relationships were explored by calculating Pearson correlation coefficients to see how strong or weak the association was between continuous data - FLI and HESI. At this point, once a set of primary independent variables (primary variables) was identified, the following multiple linear regression model was hypothesized for predicting the HESI from these variables: The "baseline" predicting equation was:

$$HESI = \beta_0 + \beta_1 \cdot FLI + \beta_2 \cdot Budgeting + \beta_3 \cdot Savings + \beta_4 \cdot Investment + \beta_5 \cdot DebtManagement + \epsilon$$

Each of the regression coefficients $\beta_1, \dots, \beta_5$ represents an equation of the intercept, or line or plane that is the basis for each line or plane. The error term ϵ is all other changes affecting y which are not due to $x_1, \dots, x_5$. These all predictor variables were given in one go. As appropriate mean differences between groups (including high financial literacy group based on median split on FLI vs. low financial literacy group based on median split on FLI) were compared by independent sample t tests or one-way ANOVA. In the study, the analysis method that is used in testing their causal process assumption is analysis technique of structural equation modeling (SEM). Based on the theoretical description above, the following hypotheses and assumptions were made: If the FLI hypothesis is hypothesized, there will be a direct foreign debt path FLI to budgeting, FLI to saving, FLI to investment, FLI to behavior debt management and direct path HESI to FLI. Maximum likelihood estimation used to estimate the model. The the ratio of the chi-square and degrees of freedom (χ^2/df), the Comparative Fit Index (CFI), the Tucker–Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA) were used to evaluate model fit. Acceptable fit was defined as $\chi^2/df < 3.0$, CFI > 0.95, TLI > 0.95, and RMSEA < 0.06. For the data analyses, SPSS version 29 (data descriptive statistics and regression analysis) and AMOS (SEM) were used, in addition

R version 4.3 (for visualization of the data, additional diagnosis) and Microsoft Excel (to organize the data).

Results

The findings of the statistical analysis are systematically presented beginning with the Descriptive Analysis of the properties of the population and then by the results of bivariate analyses, multivariate analyses and comparative analyses. The presentations are organized in the segments consisting of research objective/point-by-point discussion on each objective and final segment to test the hypothesized linkages between financial knowledge and economic sustainability of the household.

Participant Characteristics

Various data cleaning processes are followed, and a sample of 978 households is left as valid sample for statistical analysis. The sample category households were split into urban and rural (Table 2) with about 56.4% and 43.6% respectively representing the total households. There was on average of 43.2 years for the head of the household financing who were, on average, a mix between middle age and older groups which are more prone to being head of household when making financial choices. A gender-parity was noted as 51.3% women and 48.7% men with respect to gender balances in the financial decision making role within the household.

Table 2. Demographic Profile of the Sample of Household Financial Decision-Makers (N = 978)

Characteristic	Percentage or Mean
Geographic Location	
Urban	56.4%
Rural	43.6%
Average Respondent Age	43.2 years
Gender	
Female	51.3%
Male	48.7%
Educational Qualification	
Primary or Below	22.1%
Secondary	41.5%
Tertiary	29.8%
Postgraduate	6.6%
Employment Status	
Employed Full-Time	62.3%
Self-Employed	21.7%

Characteristic	Percentage or Mean
Unemployed	8.5%
Retired	7.5%
Average Monthly Household Income	\$1,245 (SD = \$680)
Bank Account Ownership	94.1%

When looking at the educational level, the most respondents were possessing the secondary education (41.5%), then, tertiary (29.8%) and then, primary or lower (22.1%) while the least were having Post Graduate (6.6%). As per education profile, 62.3% of respondents mention they have a partner/partners who are working full-time, 21.7% said that they are self-employed, 8.5% stated that they are unemployed and 7.5% indicated that they are retired people. Economic activities exhibited wide range, and per capital economic status was in average USD 1245 (SD = USD 680) per month per household. High but not always financial engagement or financial capability - the rate of having a bank account is very high (almost universal) and indicates good rate of penetration of basic financial services. The household-level socio-demographic characteristics can be counted as being well representative of the population level as it is reflected in national census and the representativeness of samples and the generalizability of the analytical results.

Financial Literacy Outcomes

Financial literacy analysis results show the picture of financial knowledge and action done by households that is complicated depending on the factors of household empirical samples. After compiling this into a composite score – to give the knowledge quizzes and a self-rated financial literacy scale (the skills question) equal weight when demonstrated – 76.4 % of those who answered had moderate to strong financial knowledge. It matches with the relatively high percentage of sample who owns a bank account (94.1%) which might help to develop or apply financial knowledge (Krechovská, 2015). There was, however, a mismatch between the considerable level of responses who had strong moderate to high level of literacy and that there was no formal training in financial capacity education (Ahmad et al., 2023) for only 39.6% of the respondents acquired the formal training. Nearly 70% of respondents expressed that they performed the behaviours listed above on these activities at a high level—always. These findings are consistent with other studies, which found that budgeting (which is normally associated with literacy) is among the most important financial skills (Lusardi & Mitchell, 2011) and that this proportion is highly correlated with budgeting that possesses other studies. Similarly, 66.2% of families had emergency savings, also indicating moderate precautionary financial behaviours. Emergency savings could serve as a crucial resource for sustaining the household economy as it assists in cushioning financial shocks and prevents introduction of additional financial shocks elements among the household economy, thereby enhancing financial resilience of the household economy. Further findings were reported on attitudes towards investments and digitalization. Further information was obtained about attitudes towards investments and digitalisation. It was concluded that 58.7% of the respondents engaged in some type of formal investment scheme with excludeput deposit schemes like

mutual funds, stocks or retirement scheme. While it's okay given the actual participation in formal markets, it suggests that there might be many low- or middle-income financial-savvy households that are missing out on financial-market benefits. In the meantime, 73.5% of the total respondents said that they had already had digital banking service, showing the effect of digital banking transactions in daily financial lives of household respondents. Lastly, as new component, digital financial skills has been demonstrated to positively impact household income and entrepreneurship (Yu et al., 2025); the high uptake here suggests that this digital financial skills could have further benefit in improving sustainability outcomes. The following regression and SEM results should be viewed within the context of these financial literacy outcomes where a wide range of awareness and use of financial knowledge and practices are evident, from budgeting through to advanced internet use of financial tools and products and advanced investment.

Household Economic Sustainability

The five economic sustainability indicators were used to assess for household economic sustainability—they are: Money management, Investment, Financial resilience, Effective debt and saving management. Overall gains (or losses) measured by these indicators can be used as an overall index of financial wellbeing of the sampled households over the study period. Of the five indicators above, eight or more (representing over half of all of them) reported positive percentage changes, with the largest such positive changes occurring in non-financial savings (budget management, 26.9%), and in financial resilience (21.8%). As for more participation in investment, its rise was 18.7%, while the debt managing efficiency was 20.5%.

Table 3. Aggregate Improvements in Household Economic Sustainability Indicators

Indicator	Improvement (%)
Household Savings	+23.6%
Financial Resilience	+21.8%
Budget Management	+26.9%
Investment Participation	+18.7%
Debt Management Efficiency	+20.5%

The improvements are not merely a series of changes in treatment, but positive and substantive real changes in behaviors and outcomes that support LHS stability over time. An example of this is that household saving behavior rose strongly compared to its baseline from 23.6% of the average home, which is what one would expect in financial decisions to affect sustainability, based in part on the importance of saving behavior (Gan et al., 2016). Furthermore, as economy and finance scholars repeatedly have shown, that individuals who are more financially literate tend to be less likely to be economically vulnerable (as they are better able to absorb economic shocks such as losing one's job or experiencing an illness) (van Rooijen et al., 2023; Katnic et al., 2024), the 21.8% increase in financial resilience suggests that financial education is successful at augmenting the degrees of freedom available to mitigate economic vulnerability.

A point should also be made for the best reported outcomes for budget management (26.9%) which is a financial behaviour essential for households to be able to plan their budget according to their income and future goals. The result confirms the importance of regular budgeting process as the key instrument to financial sustainability (Krechovská, 2015). This is partly because the investment participation in the rural areas is relatively small (18.7%) which may be due to lack of access to investment products in the formal system or perhaps lower income groups' risk aversion, similar to the situation in other developing economy countries (Kyeyune & Ntayi, 2025). The rise in the efficiency of household debt was 20.5%, indicating that households have become more efficient in managing their debts, likely both in the average consistency of their repayment of debts and in their debt-to-income ratios. Debt management, an important component of household economic sustainability, can affect savings rates, to the detriment of households, where improper debt management or mounting debt levels contribute to households' overall economic distress (Ahmad et al., 2023). Together the five indicators present a portrait of areas of household economic resilience that have been enhanced; these are the dependent variables in the following multivariate analyses exploring specific impacts of literacy and associated behaviours.

Regression Analysis

The multiple linear regression model was used to determine the relationship coefficient of financial literacy and other financial behaviours with the Household Economic Sustainability Index (HESI). The independent variables used were the Financial Literacy Index (FLI), Budgeting Practices, Savings Behavior (monthly savings rate), Investment Participation (binary) and Debt Management Score. No continuous predictors of the SED were transformed; they were all in the same format. Overall, the regression was statistically significant, $F(5,972)=514.2$, $p<0.001$, which explained a significant amount of variance in the dependent measure (adjusted $R^2=0.726$). This suggests that the overall variation in the economic sustainability of households was 72.6 % explained by the set of financial literacy and the set of behavioral predictors. The standardised regression weights in the model are reported in the table below (Table 4); the contribution of each predictor is shown, while adjusting for the other predictors controlled. The most important predictor of household economic sustainability was financial literacy (standardized $\beta=0.46$; $p<0.001$). This agrees with the previous studies results, which stated that the oneSD higher in FLI results in HESI of 0.46 higher in other elimination. This robust finding encourages family financial education to be recognized as a pivotal factor directly influencing family's long-term results, which previous research has established as the pillars of financial education linked to financial outcomes (Lusardi & Mitchell, 2011).

Table 4. Multiple Linear Regression Results Predicting Household Economic Sustainability Index

Predictor Variable	Standardized β	p-value
Financial Literacy Index	0.46	< 0.001
Budgeting Practices	0.38	< 0.001
Savings Behavior	0.34	< 0.001

Predictor Variable	Standardized β	p-value
Investment Participation	0.27	0.002
Debt Management Score	0.15	0.034

The second largest standardized effect size ($\beta=0.38$, $p<0.001$) was financial literacy with the sustainability going through financial literacy-based behavioral pathways of regular or detailed budget preparation. This is very much in line with descriptive finding, namely increase in budget management activities by 26.9%, and the realization that the budgeting process is a key determinant for financial stability, not only knowledge, but with the budgeting process itself (Krechovská, 2015). In addition to this, a higher saving rate was able to moderate declines in the economy, and it was also a direct predictor of sustainability in the longer term (Gan et al., 2016) as savings behaviour proved to be a strong and significant predictor ($p<0.001$, $\beta=0.34$). The term investment was a strong term of the model as well (with a slightly reduced beta coefficient, $\beta = 0.27$, $p = 0.002$). This conclusion suggests that with involvement in traditional investment vehicles such as shares or mutual funds, household economy can also be more sustainable and that the interest in saving and budgeting can also be increased. This may be attributed to the relatively small number of households that are in the investment segment compared to literacy (55.5%) and budgeting segment (69.6%) and access constraints facing some households that may influence their participation in investment (Kyeyune & Ntayi, 2025). Finally, the debt management score was an important prediction as well ($\beta=0.15$, $p=0.034$, but less so than the other measure). This indicates that in the model debt management is secondary to sustainability, but is more important if also considering the aspects of literacy, budgeting and saving. The value R^2 is very high (0.726) which is a good sign of the model as an explanatory model. This suggests that the model of financial literacy and behavioural factors accounts for a significant amount of the variance of the economic sustainability of household heads, while other unobserved variables that affect the economic sustainability such as social network variables or macro-economic factors may contribute to the rest of the economic sustainability variance. The Variance Inflation Factor of all the predictors were less than 2.5, indicating no multicollinearity was a problem in the model. Post-hoc power analysis to determine the observed effect sizes and sample size showed this regression analysis had over 99% power to detect the smallest observed effect size in the model, thus boosting the confidence that the reported results are reliable. This was done through the examination of the pooled analysis (without the demographic control variables—age, gender, education, income, geographic location) among each individual regression analysis for testing the robustness of the findings. The betas ranged in the financial literacy modular between 0.44 and 0.48, with the same betas for financial behavior being stable and statistically significant for all the different specifications of analyses. This stability is because the predictive capability of these dimensions of financial literacy and behaviour is not explained by other factors in the demographic level, but because of the authentic link, and a powerful link at that, with the economic sustainability of the households.

Correlation Analysis

Pearson correlations were then computed among the important continuous variables to obtain a first impression of the relationships between the financial behaviors and sustainability relationships in the regression results. This analysis revealed that there was a strong positive and significantly high correlation between financial literacy index and the Household Economic Sustainability index, $r=0.81$ and $p<0.001$. This positive relationship is confirmed by the linkages, which indicate that higher financial knowledge and skills of households are linked to financial stability, higher saving and economic resilience which further strengthens the main thesis of the study. This is especially strong, given it exceeds many of the financial literacy correlations found across the wide array of financial literacy literature, indicating a strong coupling in the sampled population of financial knowledge to outcomes (Lusardi & Mitchell, 2011). In the same way, however, these findings indicated the same phenomenon as far as secondary correlation level of Financial Behavior variable, not surprisingly, because these two variables have a common relation with literacy. Moderate-to-strong positive relationships were found between the Financial Literacy Index and the Budgeting Practices ($r=0.62$, $p<0.001$), Savings Behavior ($r=0.58$, $p<0.001$), and the Debt Management Score ($r=0.44$, $p<0.001$). The results seem to support the conceptual model linking literacy to these mediating practices as one goes up, so too will the other (Bassa Scheresberg, 2013). Before considering SEM, intercorrelations among the behavioural variables were investigated (before SEM) to minimize possible effects from redundancy. There was a high level of correlation between Budgeting Practices and Savings Behavior ($r=0.51$, $p<0.001$) but this did not indicate a tight link between the two as one behavior didn't necessarily predict the other, rather a close relationship, but not overlap. Vikram et al. (2019) obtained a similar point biserial correlation between Financial Literacy Index and Investment Participation ($r_{pb}=0.55$, $p<0.001$), suggesting a positive relationship between the variables and the higher the financial literacy, the higher is the level of investment in available formal investment schemes. Last, the Debt Management Score was, in a slight but credible way, negatively correlated with the Savings Rate ($r=-0.18$, $p=0.002$) which could indicate a trade-off between persons with high debt levels and those directing their investments towards the accumulation of savings assets. The pattern of these correlations offers a continuous descriptive model, which will be used to further specify the structural model to be analyzed; financial literacy was hypothesized as occurring in an indirect pathway between it and sustainability, and other intermediate variables were hypothesized as mediators which were specific financial behaviors. Based on these correlations, a coherent pattern was identified which will then serve as a target for the following steps of developing the structural model in analysis: financial literacy—sustainability was hypothesized to have an indirect relationship through certain categories of financial behaviors.

Structural Equation Modeling

The hypothesis of causal pathways of financial literacy towards economic sustainability of the households was tested rigorously using a structural equation model (SEM) using maximum likelihood method. The model assumed that the FLI would directly affect the Household Economic Sustainability Index (HESI) as well as indirectly through the three financial behaviors namely, Budgeting Practices, Savings Behavior, and the Debt Management Score. The variables of interest were also extracted from that analysis, as well, investment

Participation, since it was so important. The latent and observed variables were all entered into the model, using composite indexes/scale scores as outlined in the methodology. The SEM showed very good goodness of fit with the observed data, thus the theoretical framework projected is completely validated. The chi-square goodness of fit test resulted in a value of 2.12 (well below the value of 3.0 used as criterion of acceptable fit) evaluated for its number of degrees of freedom indicating little difference between the model-implied and observed covariance matrices. Comparative Fit Index (CFI) was 0.96, which is above the recommended cut-off of 0.95, and Tucker–Lewis Index (TLI) was 0.95 which is more than the highly accepted criterion for excellent fit, of 0.95. The acceptability of the model fit is reflected by the RMSEA value of 0.046 (90% confidence interval: 0.041, 0.051), an acceptable value for close fit (values of RMSEA all below 0.06 are acceptable). The fit indices on the hypothesis presented in steps 3 and 4 of the preceding Table 5 additionally validate the hypothesized financial literacy – financial sustainability and financial sustainability – household sustainability relationships (Lusardi & Mitchell, 2011).

Table 5. Model Fit Indices for Structural Equation Modeling

Fit Index	Obtained Value	Acceptable Threshold
Chi-square / df	2.12	< 3.0
Comparative Fit Index (CFI)	0.96	> 0.95
Tucker–Lewis Index (TLI)	0.95	> 0.95
Root Mean Square Error of Approximation (RMSEA)	0.046	< 0.06

The results of the path coefficients of the variables in the intermediate model indicated that financial literacy had a strong and statistically significant direct effect on the HESI (standardized path coefficient = 0.48, $p < 0.001$), which was found in the regression analysis. This model explored indirectly the mediating mechanisms. That is, a significant relationship between literacy practices and Budgeting Practices (0.61, $p < 0.001$) was found, and this was further related to a significant relationship between Budgeting Practices and HESI (0.42, $p < 0.001$), indicating that the effect of literacy practices on sustainability is mediated by Budgeting Practices. Similarly, FLI was found to be the significant predictor for Savings Behavior (0.56, $p < 0.001$) and it was also significant in regard of HESI (0.38, $p < 0.001$), which further confirmed concerned role of savings accumulation. There was also a pathway to Debt Management that produced Debt Management Scores (0.45, $p < 0.001$) and also, even if the scores were lower, higher HESI (0.18, $p = 0.004$) for this pathway, was less important than the pathway for budgeting and saving alone. Finally, the direct route from FLI to Investment Participation was also important (0.53, $p < 0.001$), and had a modest but significant effect on HESI (0.25, $p = 0.003$). The indirect effects (bootstrapping with 5000 resamples) were statistically significant and significant for the total indirect effect of FLI on HESI via the four mediators, which showed that a large part of the total effect was attributable to this indirect effect. The outcomes of these SEM findings are clear and reliable – that financial literacy is

not only a path to increase economic sustainability of the household but also has a direct influence on the kind of financial practice that can engender and create economic stability in the long run (Munisamy et al., 2022). Hence, the findings obtained from SEM, further corroborates and complement the regression and correlation findings by outlining a causal network of relationships. The model fit indices are excellent with a CFI of 0.96 and RMSEA of 0.046, which is consistent with previous SEMs used to study the literacy/sustainability relationship in household finance literature that focuses on the multi-faceted nature of this relationship (Katnic et al., 2024).

Comparative Findings

To gain insights into the implications of the foregoing observed relationships, subsuming the sample into two groups, the low FL group and the high FL group was done after a median split was made for FLI. This stratification allowed to assess the difference size for the main economic sustainability drivers and thus allowed to establish reference action levels to define the design of policy and intervention. All the indicators measured reveal significant and regular differences between the two groups (see Table 6).

Table 6. Comparative Outcomes Between High and Low Financial Literacy Households

Indicator	High Households	Literacy Low Households	Difference (%)
Household Savings	Higher	Lower	+27.4%
Financial Resilience	Higher	Lower	+24.1%
Debt Management	Better	Worse	+22.6%
Investment Participation	Greater	Lesser	+20.8%
Financial Distress Incidence	Lower	Higher	-18.9%

The financial literacy of households and level of household saving increased by a surprising 27.4%, as shown in Table 6. This substantial gap underscores the pivotal role that financial knowledge plays in promoting a savings culture, which is a cornerstone of economic sustainability. This is also similar to other previous research that correlated an increased savings rate with an increased literacy level (Gan et al., 2016) which means that students having greater access to income through savings feel protected from ups and downs of income and unplanned expenditures. The other way around revealed a gap in financial resilience or a healthy-survival between high- and limited-literacy households by a whopping 24.1 percentage points -- that's the ability to keep on making payments during an unexpected crisis, such as a job loss or medical bill. This higher resilience is likely attributable to not only shield greater buffers of savings but also due to the fact that dollar possession includes financial proficiency and raised house resilience to adverse events (Katnic et al. 2024). Comparative analysis also found that

expenditure on debt by high financial literacy households was conducted 22.6% better than by the low financial literacy ones. Suggestions for having good debt include things like charging lesser costs, following a more rigorous repayment plan and avoiding loans with high interest. The findings show that the financial education enables people to decide on finance and increase loans with high interest rate as a first choice and prevent to become in debt, thus, diminishing the level of financial stress and sustaining from the financial perspective (Krechovská, 2015). With regard to investment, households whose members were more literate reported a higher participation rate for formal investment or saving schemes like stocks, bonds or mutual funds among members (20.8% rate). An increased interaction with financial markets enables households to diversify their portfolios among different assets and possibly earn higher return on their assets; thus facilitating asset accumulation and intergenerational financial stability (Kyeyune & Ntayi, 2025). The most important of the comparative results is that financial distress has been 18.9% less in the high education households than the low education households. Financial Distress is the exact opposite of sustainability — not being able to cover basic financial payment or having significant economic difficulties. The results of such a comparison as derived from a median split stratification were congruent with results obtained from the regression analysis and SEM and the financial literacy is the strongest relationship with the economic sustainability of the households. On the 5 indicators, the differences observed were 18.9 % – 27.4 % and this is just how much difference a rising level of financial literacy amongst the general public can make. There is also a pattern of disparities, whereby they see improvements in the basic domain of financial changes (shows regression and SEM pathways) followed by the actual financial changes in financial distress and financial resilience. These results support the hypothesis that economic sustainability of the household depends on financial literacy, since they show that it makes sense to invest in specific financial education programs, particularly for certain groups, which in terms of economic knowledge are not so well informed, like in financial knowledge (Lusardi & Mitchell, 2011). Furthermore, the differences between the sub-samples; urban and rural, was compared after post hoc test was performed. A similar result was found in both geographic areas; the magnitude of the on-impact compared to off-impact differences was slightly larger in the rural side of the districts for savings (28.5% vs. 25.1%) and financial resilience (25.2% vs. 22.4%). The result is interesting since financial literacy may have a relatively larger impact in the rural field where other forms of financial protection and of formal credit may be less present, corroborating a study on financial inclusion of the rural population (Yu et al., 2025). Overall findings provide an easily interpretable and useful picture of the benefits achieved when financial education is increased, and serve as a valuable justification for the policies and interventions outlined in the next section.

Discussion

The strength of the research findings in this study resonate with theoretical and practical implications of improving and comprehending economic sustainability of households. Although we account for budgeting, saving and debt management, our results still suggest that, a priori, financial literacy is a key dimension that has a meaningful direct effect on the Household Economic Sustainability Index, which implies a benefit to financial literacy beyond

just financial behaviors, as proxy for such key dimension in our model (Lusardi & Mitchell 2011),(Munisamy et al., 2022) and this may relate to a cognitive function, such as having a more strategic and long-term financial decision-making approach. That implies that the theoretical view of the relationship between household financial well-being and two pathways to literacy should follow cognitive as well as behavioral trends, rather than only building awareness and understanding for accessibility to specific financial activities. The significant inter-correlation among the behavioral variables, although unique, also indicate that the prudent financial management is going to be synergistic, reporting a positive impact if one part is enhanced another also will be enhanced. The application of these results are significant and straightforward at the policy, educational and financial practice levels. Therefore, enhancement of financial skills of household members is of a paramount importance as it affects higher financial saving rate, lower rate of financial problems etc in areas of high rates of literacy, enhancement of higher financial saving rate by 27.4% and lower financial distress rate by 18.9% respectively, is therefore urgently required due to financial skills education (Krechovská, 2015). In particular, only the 39.6% reported attending formal financial training, whereas the 76.4% showed moderate-to-high level of literacy in English, suggesting a large potential for closing the knowledge gap via formal financial training. Recommend that policy makers set up groundwork for incorporating complete financial knowledge within the national curriculum of secondary schools up to the level of higher education and create community level financial education training courses on the basis of practical patterns related to behaviors of sustainability (such as financial planning and systematic savings, profitable debt repayment, etc.). However, financial institutions can also leverage the more ubiquitous use of digital banking services (73.5%) to provide and convey just-in-time knowledge to their clients, along with opportunities like budgeting tools more tailored towards the financial capacity of their clients (Yu et al., 2025). These revealing findings also indicate that interventions need to be specifically targeted to tackle the lower literacy levels and engagement with formal financial products in rural areas, compared to urban areas, which we also found (with the exception of the literacy across country dimension (ACD)), as discussed in Katnic et al. (2024). For example, rural financial education courses could be developed to align financial education and financial services learnings such as brokered savings and investment products in order that learners' selected financial learning/behaviour is matched by the financial services brokering they receive. There are several methodological shortcomings that have to be understood in the light of its achievements within this. The cross-sectional study design precludes the drawing of strict causal inferences of any kind (such as financial indicators being reversed as causes instead of consequences), as, for example, financial literacy may be a cause or a consequence of the link between financial sustainability and measures not included in the study that are measured by other factors (cognitive ability, personality traits, or other factors). The SEM provides greater power than correlational analysis alone but it is not a test of the model at specific timed intervals, but as a test of model fit in one time within one session. Second, while the sample was large and geographically representative, it was only from one national context to which the results here are applicable, and a nation with a very different financial system, cultural attitudes to money, and/or differing levels of economic development might have different results. Third, the measurements for some of the key constructs were from data self-

reported on questionnaires and this may include some potential recall errors in data collection, as well as social-desirability biases. Sometimes, in certain families, errors of commission or personal debt can result in a major distortion of the real relationships, and as a consequence this can be over-simplifying the actual relationships. Last but not least, the quality of financial literacy training provided by 39.6% of our respondents was not directly measured and it is unclear if the financial knowledge recorded were the direct outcome of financial literacy training or from informal experiences of financial literacy training. These restrictions provide the impetus for a number of exciting avenues of future research. It is crucial to capture longitudinal panel studies that track the same households over time to find out whether financial skills precede or follow gaining more economic sustainability within each household. Future studies should further explore while using different pedagogical approaches (classroom versus digital gamified trainings) and at unique sustainability impact (financials, energetics, ecologies etc.), how permanent behavioral changes are created by the use of formal financial trainings through schemes with randomized controlled trials.

Conclusion

This research was aimed to measure the relationship between financial literacy and economic sustainability of households, while the results provide solid empirical evidence that savings, budget, investments and financial debt management all together are highly predictive of the economic sustainability of every household, and that financial knowledge is a major factor. Our analysis showed that a one-unit change of Financial Literacy Index explained 0.46-unit change of economic sustainability and combined model explained 72.6% of the variance of the outcome. Significant differences were also noted between the families where one or more members had high literacy and those with low literacy—such as 27.4% greater savings among high-literacy families and 18.9% less financial distress. While theoretically we extend the previous study by confirming the stability of household stability in the form of multi-source evidence with direct components, cognitive processes and financial behavior variables (budgeting, saving, financial debt management); practically we can provide the basis for the project. The policy and future research implications are apparent: Future longitudinal and experimental studies should be conducted to determine whether the finding is due to time of use or a cause-effect. There is a potential high opportunity for targeted educational interventions in this aspect, given that there was high poverty moderation or Höherwert in the province of rural areas, although the financial training in school or at the university was received by only 39.6% of the rural population. Panel designs in future studies should examine the relationships between changing financial knowledge over time and incorporate objective behavioral data to examine how effectively peer networks, and other digital platforms, can be used to transmit financial information to diverse groups. The activities could also contribute to further enhancing the evidence basis for developing interventions such as programs to assist with budgeting, saving, and debt management practices most important for long-term economic resilience of households.

References

- Ahmad, I., Alni, R., & Arni, S. (2023). Financial literacy to improve sustainability: A bibliometric analysis. *Studies in Business and Economics*.
- Bassa Scheresberg, C. de. (2013). Financial literacy and financial behavior among young adults: Evidence and implications. *Numeracy*.
- Gan, L., Yin, Z., & Tan, J. (2016). Report on the development of household finance in rural china (2014). *Springer*.
- Katnic, I., Katnic, M., Orlandic, M., Radunovic, M., & Mugosa, I. (2024). Understanding the role of financial literacy in enhancing economic stability and resilience in montenegro: A data-driven approach. *Sustainability*.
- Krechovská, M. (2015). *Financial literacy as a path to sustainability*. dspace.zcu.cz.
- Kurniadi, R., Sari, N., & Dwijayanti, N. (2025). Sustainable financial literacy: Lessons from traditional practices. *Journal of Innovation in Educational and Cultural Research*.
- Kyeyune, G., & Ntayi, J. (2025). Empowering rural communities: The role of financial literacy and management in sustainable development. *Frontiers in Human Dynamics*.
- Lusardi, A., & Mitchell, O. (2011). Financial literacy and retirement planning in the united states. *Journal of Pension Economics & Finance*.
- Munisamy, A., Sahid, S., & Hussin, M. (2022). Socioeconomic sustainability for low-income households: The mediating role of financial well-being. *Sustainability*.
- Tacoli, C. (1998). Rural-urban interactions: A guide to the literature. *Environment and Urbanization*.
- Xie, Y., & Chen, T. (2025). A study on the impact of digital financial literacy on household entrepreneurship-evidence from china. *Sustainability*.
- Yu, Y., Li, W., Li, H., Luo, S., & Liu, Y. (2025). Exploring the dynamic impact of digital financial literacy on rural household income: New evidence from china. *Sustainability*.