

THE EFFECT OF FINANCIAL LITERACY AND INVESTMENT BEHAVIOR ON FINANCIAL INCLUSION THROUGH FINANCIAL BEHAVIOR AS A MEDIATING VARIABLE IN THE SANDWICH GENERATION

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Article Info

Article history:

Received: 16 December 2025;

Accepted: 22 December 2025;

Published: 29 December 2025.

Keyword:

Financial Literacy, Investment Behavior,
Financial Behavior, Financial Inclusion

Abstract

This study looks at how investment behavior and financial literacy affect financial inclusion within Indonesia's sandwich generation. A structural equation model with SmartPLS was used to examine the quantitative data acquired from 105 respondents via online purposive sampling. The results demonstrate that financial conduct has considerable financial behavior that is significantly impacted by financial inclusion and financial knowledge. However, financial literacy has no direct bearing on financial inclusion or investment behavior, and financial conduct is not significantly influenced by investment activity.

1. INTRODUCTION

The degree of financial inclusion in society has a direct bearing on the country's economic development. The capacity of people to obtain official financial services that are secure, reasonably priced, and suitable for their requirements is known as financial inclusion. Information gathered from the National Survey Of Financial Inclusion and Literacy (SNLIK) indicates a growing level of access to banking services. Nevertheless, a disparity remains between access and effective utilization, as many individuals use bank accounts or digital wallets primarily for consumptive purposes rather than for productive activities or long-term investments that contribute to economic well-being.

This issue is particularly pressing for the sandwich generation demographic. The paradigm of the sandwich generation has now evolved, as fiscal obligations often extend beyond immediate parents and children to encompass extended family members across multiple generations. According to (Ardiyanto et al., 2024) this group faces a dual responsibility of supporting aging predecessors while simultaneously providing for their own offspring. This complex condition frequently triggers high emotional and financial distress, which, as highlighted by (Fitri Wahyuni et al., 2024), places individuals in a precarious position between the demands of the older and younger generations.

Research (Khasanah et al., 2023) further demonstrates that this double burden leads to serious financial vulnerability, as income is primarily exhausted on the routine needs of two generations. This depletion of resources significantly hinders their ability to access advanced financial products such as insurance, pension funds, or capital markets which are critical indicators of healthy financial inclusion. Furthermore, (Paendong & Rita, 2024) emphasize that such pressures often force the sandwich generation to spend their entire earnings on immediate consumption, leaving no margin for investment and jeopardizing long term wellbeing.

This situation is exacerbated in Indonesia by cultural norms and economic conditions that emphasize filial piety, compelling children to repay their parents' devotion. Phenomenological research by (Dewi & Apriyati, 2023) reveals that these pressures create a unique psychological dynamic where financial decisions are often driven by "survival mode" rather than strategic planning. Consequently, achieving financial satisfaction in this context requires an exceptional level of discipline in financial management to overcome these structural barriers. shows that this double burden causes serious financial vulnerability. Their income is spent on covering the routine needs of two

generations, thereby hindering their ability to access advanced financial products such as insurance, pension funds, or capital markets, which are indicators of healthy financial inclusion.

In addition to literacy, investment behavior also plays an important role at this time. The ease of financial technology has encouraged people to invest, but the phenomenon in the field shows that investment behavior tends to be speculative and driven by FOMO (Fear of Missing Out) trends, rather than based on in-depth analysis. (Sawitri & Candrayani, 2025) found that reckless investment decisions without risk management will actually worsen financial conditions. For the sandwich generation, mistakes in investment behavior can have fatal consequences due to their limited emergency funds.

Seeing the inconsistency between theory and real conditions in the field, this research uncovers an unresolved gap in the literature that requires scholarly attention. Theoretically, financial literacy and investment behavior should encourage financial inclusion. However, for the sandwich generation, these two factors often do not work effectively due to enormous financial pressure; knowledge is often not applied, and investment decisions are made without careful consideration. Therefore, an intermediary variable is needed to connect these factors with healthy financial conditions.

Based on this description, the author examines in more depth the “Effect of Financial Literacy and Investment Behavior on Financial Inclusion Through Financial Behavior as a Mediating Variable in the Sandwich Generation”. The study offers a novelty approach by positioning financial behavior as a crucial mediating variable to bridge the knowledge action gap often found in this demographic. The subjects of the study were individuals belonging to the sandwich generation, specifically those aged 18 to 45 years with financial dependents, as this specific age group faces the most significant structural barriers to achieving sustainable financial inclusion.

2. LITERATURE REVIEW

2.1 Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB), introduced by Ajzen (1991), serves as the theoretical foundation of this study. The theory of planned behavior posits that behavior results from intentional considerations formed through individual attitudes, social expectations and perceptions of behavioral control. This theory extends the earlier Theory of Reasoned Action (TRA), which suggests that behavior can be predicted through intention formed by attitudes and subjective norms. In the context of financial decision-making, individuals do not always act rationally, as their choices are often influenced by psychological tendencies and habitual patterns.

2.2 Financial literacy

Financial literacy reflects an individual's ability to apply financial knowledge and exercise control over financial decisions within a digital context. This encompasses the skill to work with financial applications, digital investment services, and awareness of cybersecurity threats. A strong level of financial understanding allows the sandwich generation to leverage technology for superior financial planning and investment strategies. Financial literacy is described by (Arianti, 2021) in the publication *Financial Literacy (Theory and Implementation)* as an individual's capability to grasp and oversee different components of finance thoroughly, which includes areas such as savings, investments, debt, insurance, and other financial matters.

This comprehensive understanding is very important according to (Khasanah et al., 2023) Financial management behavior is significantly improved by cognitive, where there is an increase in individual ability to manage budgets and reduce risk. Furthermore, regarding access to services, (Safira et al., 2020) emphasize that individuals who have a good knowledge of financial products and risks that individuals who have good understanding of financial products and risks tend to be better able to access banking and capital market services optimally. However, the implementation of this literacy faces its own challenges among the sandwich generation. (Fitri Wahyuni et al., 2024) found a phenomenon of a gap between knowledge and action, where high knowledge does not always guarantee disciplined action due to extreme external pressures.

2.3 Investment Behavior

Investment behavior reflects how individuals process information from the capital market, including asset allocation decisions for the future. In investment behavior, according to research by Natapura (2009) followed by (Mahendra, 2022) individual investment behavior is based on human needs, goals, and motivations. (Githa Widyastuti & Murtanto, 2024) found that investment behavior is often biased (overconfidence). In line with Swastika and Hamid (2023), economic behavior is often affected by psychological biases, with overconfidence being a prominent example. However, rational investment behavior is very important to break the cycle of poverty. If managed properly, investment activities should encourage cash flow discipline. However, (Sawitri & Candrayani, 2025) note that the ease of fintech often triggers impulsive investment decisions that may not be in line with sound financial behavior.

2.4 Financial Behavior

Financial behavior is the tangible manifestation of an individual's responsibility in managing their financial resources to achieve prosperity. This behavior is reflected in the way a person makes conscious and planned financial decisions, from setting financial goals, budgeting, managing income, to controlling daily expenses. In practice, financial behavior also includes discipline in saving, prudence in using credit, and the ability to anticipate financial

risks that may arise in the future. The dynamics of financial behavior are not only influenced by cognitive aspects such as financial knowledge and understanding, but also by psychological factors that shape individuals' attitudes, preferences, and responses to various financial products and services.

Financial behavior can be explained through the Theory of Planned Behavior as stated by (Azizah, 2020), which states that every financial action is driven by a structured intention to achieve a specific goal. In this framework, healthy financial behavior is reflected in an individual's ability to control themselves, such as consistency in setting aside savings and timeliness in fulfilling financial obligations. This shows that financial behavior acts as a control tool that directs economic decision-making to be based on rational planning, not merely on momentary impulses.

In line with this statement, (Yundari & Artati, 2021) emphasizes that financial behavior plays an important role in determining the quality of individual investment decisions. A positive financial attitude enables a person to manage their income wisely so that they can increase the value of their assets and well-being in the future. However, poor financial management behavior can still be found in various segments of society, including individuals with high levels of education. (Safryani et al., 2020) reveal that without the implementation of disciplined budgeting, educational background and professional status do not necessarily guarantee the formation of healthy financial behavior. Therefore, in the context of financial inclusion, financial behavior functions as a mediating mechanism through which financial literacy is translated into practical financial actions, so that individuals' understanding can be realized in sustainable financial decisions that have an optimal impact on their economic conditions.

2.5 Empirical Review and Hypothesis Development

2.5.1 The Role of Financial Literacy in Financial Behavior

Financial literacy refers to an individual's capacity to understand, assess, and compare various financial alternatives, including the ability to identify inherent risks and develop more mature financial planning. Individuals with adequate financial literacy can usually be better prepared to face economic dynamics and are able to make more rational financial decisions in their daily activities.

The study by (Khasanah et al., 2023) shows that cognitive understanding of basic financial concepts has a significant positive impact on financial management behavior, with an increase in individuals' ability to manage budgets and mitigate risks. However, the findings of (Fitri Wahyuni et al., 2024) demonstrate the phenomenon of a knowledge-action gap among the sandwich generation, suggesting that a high level of knowledge does not always guarantee disciplined action due to extreme external pressures, creating inconsistencies that need to be further examined.

H1: Individuals' financial behavior is influenced by their level of financial literacy

2.5.2 The Role of Investment Behavior in Financial Behavior

Positive investment activities are expected to build a disciplined attitude towards money, which logically manifests itself in more structured cash flow management. However, (Sawitri & Candrayani, 2025) found that although technological advances (fintech) have succeeded in encouraging investment decisions, they are often limited in predicting healthy financial behavior. In line with (Githa Widyastuti & Murtanto, 2024), they found an empirical anomaly that investment decisions are often not based on rationality but are significantly influenced by behavioral biases such as Overconfidence Bias and Herding Bias. These findings indicate that an investor may be active in the capital market simply because they are following the Fear of Missing Out (FOMO) trend without having a foundation of healthy financial behavior. The inconsistency between investment activities and fund management discipline highlights the need for further empirical testing on whether investment actually shapes positive financial behavior in the sandwich generation. Based on these findings, the hypothesis proposed is:

H2: Investment behavior has a measurable influence on financial behavior

2.5.3 Examining the Role of Financial Behavior in Financial Inclusion

Financial inclusion is more than just physical access to financial services, but also the quality of use of these services to improve financial well-being. (Fitri Wahyuni et al., 2024) explicitly prove that behavioral management that embraces aspects of prudence, such as disciplined record-keeping and prioritizing needs, is a major determinant that transforms financial access into economic stability for the sandwich generation. (Trisna Herawati et al., 2020) emphasize that financial behavior functions as a vital control mechanism, whereby without healthy behavior, access to investment products will actually risk plunging individuals into debt traps. Therefore, financial behavior discipline is considered an absolute prerequisite (*sine qua non*) for creating quality and sustainable financial inclusion. Based on these findings, the hypothesis proposed is:

H3: The level of financial inclusion is strongly affected by individuals' financial behavior

2.5.4 Financial Literacy as a Determinant of Financial Inclusion

Research by (Safira et al., 2020) proves that financial literacy has a positive and significant effect on financial inclusion. Individuals with a good understanding of financial products and risks tend to be better able to access banking and capital market services optimally. However, this effectiveness is debatable in the context of actual behavior. (Githa Widyastuti & Murtanto, 2024) found that even though someone has high literacy, their financial decisions are often still dominated by psychological biases (overconfidence), which implies that cognitive knowledge does not necessarily guarantee the quality of decisions or healthy inclusion. This is reinforced by the findings of

(Khasanah et al., 2023), who identified the phenomenon of the Knowledge-Action Gap among the sandwich generation. The magnitude of financial pressure renders knowledge dormant, so that financial literacy is predicted to have no direct effect on inclusion without the mediation of disciplined behavior. Based on these findings, the hypothesis proposed is:

H4: Financial literacy affects financial inclusion

2.5.5 Investment Behavior on Financial Inclusion

The advancement of finance technology has democratized access to capital markets, enabling broader investment participation as a key indicator of financial inclusion. (Resyita & Khoiriyah, 2023) found that digitization significantly drives investment decisions, theoretically indicating that the more actively individuals invest, the deeper their involvement in the financial inclusion system. However, (Sawitri & Candrayani, 2025) confirm that although the scale of investment effectively predicts market participation, its ability to predict the quality of financial inclusion (security and sustainability) is very limited if not managed with good risk management. This implies the risk that without appropriate behavioral mediation, high investment activity investment behavior does not necessarily guarantee the achievement of healthy financial inclusion, but rather only pseudo-access that is vulnerable to losses. Based on these findings, the hypothesis proposed is:

H5: Investment behavior affects financial inclusion

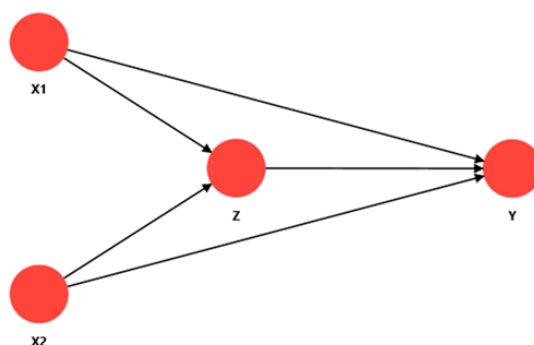


Figure 1. Conceptual Model of the Study

Source: Authors (2025)

3. RESEARCH METHODOLOGY

3.1 Research Methods and Approaches

A quantitative descriptive causal approach is employed in this study to analyze cause-and-effect relationships among variables through numerical and statistical methods. The analysis focuses on examining the influence of financial literacy and investment behavior on financial inclusion within the sandwich generation, with financial behavior positioned as a mediating variable.

3.2 Research location and Time

This study is not limited by specific geographical locations because data collection is conducted online through social media platforms. Social media channels such as Instagram, Twitter, and WhatsApp to reach respondents who meet the research subject criteria. The study period runs from October to December 2025

3.3 Population and Sample

Given that the size of the Sandwich Generation population in Indonesia is unknown, The sample size for the investigation was established using the Lemeshow formula. This method was chosen because it is considered appropriate for estimating the sample size in an infinite population with a certain confidence level. Based on calculations and data collection, this study obtained 105 respondents.

Furthermore, the sampling strategy utilized was nonprobability sampling with a purposive sampling approach. Nonprobability sampling is a method of selecting samples that does not give equal chance for every member of the population to be chosen as a respondent. In purposive sampling, respondents are selected based on certain criteria set by the researcher so that the sample used is in accordance with the objectives and needs of the study.

3.4 Data and Data Collection Techniques

Data were collected through a structured self-administered questionnaire delivered via Google Forms, to maximize coverage and efficiently reach respondents who met the study's inclusion criteria, the survey was distributed online through multiple social media platforms, including Twitter (X), Instagram, WhatsApp and Facebook. The questionnaire consisted of standardized items designed to capture and operationalize the research variables.

3.5 Measurement Scale

The evaluation tool utilized is the Likert scale featuring 23 indicators. This tool assesses the views, beliefs, and experiences of participants (sandwich generation) pertaining to key determinants, including financial literacy, investment behavior, financial practices, and financial inclusion.

Every question in the survey is paired with five response options that carry various weighted scores. These scores are intended to transform qualitative information into quantitative data, enabling analysis through SEM-PLS statistical methods. The specific details regarding the score assignments are as follows:

Table 3.1 The measurement of research variables was conducted using a Likert Scale

Pernyataan Skor
Sangat Setuju 5
Setuju 4
Netral 3
Tidak Setuju 2
Sangat Tidak Setuju 1

Sumber: Sugiyono (2017) dalam Ravella (2021)

3.6 Techniques for analyzing data

Data analysis in this study is conducted using Structural Equation Modeling (SEM) through SmartPLS software. The SEM framework includes the measurement (outer) model and the structural (inner) model. The measurement model is applied to examine the reliability and validity of the observed indicators in capturing the latent constructs, while the structural model is utilized to test the hypothesized relationships and determine the strength and direction of associations among the latent variables.

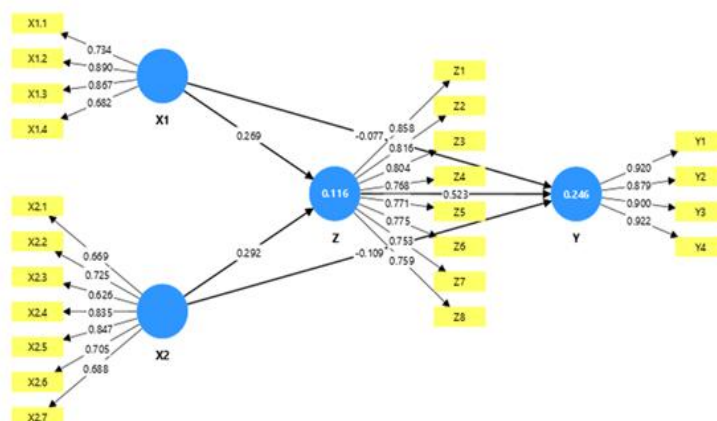


Figure 2. Research Model Framework

Source: Authors (2025)

4. RESULT AND DISCUSSION

4.1 Result

Statistics Descriptive

Table 1. Table Statistic Descriptive

Variable	N	Minimum	Maksimum	Mean	Std.Deviation
Financial Literacy	105	1.0	5.0	4,483	0,5134
Investment Behavior	105	1.0	5.0	4,293	0,4898
Financial Behavior	105	1.0	5.0	4,389	0,5438
Financial Inclusion	105	1.0	5.0	4,521	0,5656

Source: Authors (2025)

The variables have a minimum of 1 and a maximum value of 5, according to the descriptive analysis. The mean and standard deviation of the Financial Literacy variable are 4.483 and 0.5134, respectively. The Investment Behavior variable has a data dispersion level of 0.4898 and a mean value of 4.293. Financial behavior is a mediating variable

with a mean value of 4.389 and a data dispersion level of 0.5438. Financial Inclusion is the dependent variable, with a mean value of 4.521 and a data dispersion level of 0.5656. Every variable has a mean value greater than 4, suggesting that the study's Sandwich Generation participants generally have favorable opinions. This shows that respondents are still doing well even with a double burden.

Convergent Validity

Convergent validity measures the degree to which a measurement tool corresponds favorably with the alternative measurement tools on the same construct. An indicator is regarded as valid when its outer loading exceeds 0.7, indicating that the indicator is consistent with the construct of the variable being measured (Hair Jr et al. 2017).

Table 2. Convergent Validity

Variable	Financial Literacy	Investment Behavior	Financial Behavior	Financial Inclusion
X1.1	0.734			
X1.2	0.890			
X1.3	0.867			
X1.4	0.682			
X2.1		0.669		
X2.2		0.725		
X2.3		0.626		
X2.4		0.835		
X2.5		0.847		
X2.6		0.705		
X2.7		0.688		
Y1			0.920	
Y2			0.879	
Y3			0.900	
Y4			0.922	
Z1				0.858
Z2				0.816
Z3				0.804
Z4				0.768
Z5				0.771
Z6				0.775
Z7				0.753
Z8				0.759

Source: Authors (2025)

Test findings suggest that the indicators for the Financial Inclusion and Financial Behavior variables have excellent measurement performance. All indicators for these two variables have a loading factor value above 0.70. This indicates that the items in the mediation and dependent variables are able to reflect the construct accurately and consistently. In the Financial Literacy and Investment Behavior variables, there are several indicators with loading values in the range of 0.60.

Average Variance Extracted (AVE)

Table 3. Result AVE

Variable	Average Variance Extracted (AVE)	Syarat	Keterangan
Financial Literacy	0,637	> Ø 0,50	Valid
Investment Behavior	0,536	> Ø 0,50	Valid
Financial Behavior	0,622	> Ø 0,50	Valid
Financial Inclusion	0,820	> Ø 0,50	Valid

Source: Authors (2025)

The table demonstrates that all research variables have AVE values above 0.50. The Financial Inclusion variable has the highest AVE value of 0.820, which means that 82% of the information contained in the indicators can be explained by this variable. Meanwhile, the Investment Behavior variable, despite possessing the lowest value of 0.536, is still above the required threshold. Thus, it can be concluded that all variables have adequately met the convergent validity criteria.

Discriminant Validity

To make sure that every latent variable is unique from the others, discriminant validity testing is employed. The Fornell-Larcker Criterion technique is used in this test. Each latent variable's square root of the Average Variance

Extracted (AVE) (diagonal value) must be higher than the correlation coefficient between that latent variable and other latent variables (values below the diagonal).

Table 4. Table Fornell Larcker Criterion Test

Variable	Financial Literacy	Investment Behavior	Financial Behavior	Financial Inclusion
Financial Literacy	0.789			
Investment Behavior	0.289	0.732		
Financial Behavior	0.122	0.097	0.906	
Financial Inclusion	0.209	0.221	0.502	0.789

Source: Authors (2025)

The AVE square root value for each variable, as shown in the table (bold numbers on the diagonal) shows a greater value than the correlation values between the variables below it.

- The AVE square root value for Financial Literacy (0.798) is greater than its correlation with Investment Behavior (0.289), Financial Inclusion (0.122), and Financial Behavior (0.209).
- The square root AVE value of Investment Behavior (0.732) is greater than its correlation with other variables.
- The square root AVE value of Financial Behavior (0.789) is also greater than its correlation with Financial Inclusion (0.502).

Reliability

Table 5. Result Reliability

Variable	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Financial Literacy	0.805	0.810	0.874	0.637
Investment Behavior	0.872	0.933	0.889	0.536
Financial Behavior	0.927	0.932	0.948	0.819
Financial Inclusion	0.914	0.919	0.929	0.622

Source: Authors (2025)

According to Table 6, the test results demonstrate that all variables have Cronbach's Alpha and Composite Reliability values that surpass 0.7. As a result, all variables have been deemed dependable. In addition, the AVE values for all variables also exceed 0.5, which means that the data meets the validity and reliability requirements. Hair et al. (2017) declare that the recommended AVE value is above 0.50.

R-Square

The R-squared value is utilized to determine the extent of the independent variable's contribution to the dependent variable. According to Hair et al. (2011), there is a standard for grouping model quality, where a value of 0.75 suggests a strong effect, 0.5 indicates a moderate influence, and 0.25 indicates a weak influence.

Table 6. Determination Coefficient Test (R-Square)

Variable	R-Square-	R-square adjusted
Financial Inclusion	0.246	0.224
Financial Behavior	0.116	0.099

Source: Authors (2025)

In Table 7, the findings indicate that the R-Square figures for the variables Financial Inclusion and Financial Behavior are under 0.25. These figures suggest that the impact of Financial Inclusion and Financial Behavior is rather minimal, signifying that their role in this model remains restricted, which means the effects of additional elements beyond this research model are necessary.

Hypothesis

The proposed structural relationships were evaluated using a hypothesis testing approach. The assessment relied on bootstrapping results, with statistical significance determined based on the T-statistic and P-value criteria. A relationship was considered statistically supported when the T-statistic exceeded 1.96 and the P-value was below 0.05.

Table 7. Hypothesis Testing

Variable	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))
Financial Literacy -> Financial Inclusion	-0.077	-0.071	0.108	0.712

Financial Literacy -> Financial Behavior	0.269	0.265	0.128	2.102
Investment Behavior -> Financial Inclusion	-0.109	-0.103	0.158	0.687
Investment Behavior -> Financial Behavior	0.292	0.283	0.161	1.813
Financial Behavior -> Financial Inclusion	0.523	0.527	0.108	4.822

Source: Authors (2025)

The analysis reveals that financial literacy does not have a significant direct effect on financial inclusion. This result implies that financial knowledge alone is insufficient to increase access to and utilization of formal financial services. In the context of the sandwich generation, high financial obligations and limited disposable income may prevent individuals from translating financial knowledge into broader financial participation. As a result, individuals may possess adequate financial understanding but remain unable to engage more deeply with financial products beyond basic transactional use.

In contrast, financial literacy demonstrates a positive and statistically significant influence on financial behavior, with a path coefficient of 0.269 and a P-value of 0.036. This result suggests that higher levels of financial literacy are associated with improved financial management practices, including more prudent budgeting, saving behavior, and control over financial decisions. Financial literacy thus appears to function as a foundational element that shapes how individuals manage their day-to-day financial activities.

Furthermore, the relationship between investment behavior and financial inclusion is found to be negative and statistically insignificant, indicated by a path coefficient of -0.109 and a P-value of 0.492. This finding implies that participation in investment activities does not necessarily lead to greater financial inclusion. Investment behavior may be selective or speculative in nature and does not automatically reflect broader access to or utilization of formal financial services, particularly among individuals experiencing financial pressure.

Investment behavior shows a positive path coefficient of 0.292 in relation to financial behavior. However, the P-value of 0.070 exceeds the significance level, indicating that investment behavior does not have a statistically significant effect on financial behavior.

Conversely, financial behavior exhibits a strong and positive effect on financial inclusion, as evidenced by a path coefficient of 0.523 and a P-value of 0.000. This result highlights that disciplined financial practices such as effective income management, prioritization of essential expenditures, and timely fulfillment of financial obligations significantly enhance individuals' ability to access and utilize formal financial services. The strength of this relationship underscores the critical role of financial behavior in transforming financial access into meaningful financial inclusion for the sandwich generation.

Specific Indirect Effects

Hypothesis testing of indirect effect It was checked to find out if the mediating variable, namely Financial Behavior, was able to mediate how independent and dependent variables are related. The assessing completed by looking at the specific indirect impact values in the bootstrapping results.

Table 8. Table Specific Indirect Effects

Variable	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ([O/STDEV])	P values
Financial Literacy -> Financial Behavior -> Financial Inclusion	0.141	0.143	0.078	1.797	0.072
Investment Behavior -> Financial Behavior -> Financial Inclusion	0.153	0.150	0.093	1.646	0.100

Source: Authors (2025)

The mediating role of financial behavior was evaluated using the bootstrapping approach, the indirect relationship between financial literacy and financial inclusion shows a positive coefficient of 0.141, however, the associated P-value of 0.072 exceeds the 0.05 significance level, indicating that the mediation effect is not statistically supported.

Similarly, the indirect path linking investment behavior to financial inclusion through financial behavior produces a coefficient of 0.153, despite its positive direction, the 0.100 P-value suggests that this indirect influence does not reach statistical significance, therefore, financial behavior cannot be confirmed in either connection as a mediating factor.

4.2 Discussion

How Financial Literacy Shapes Individual Financial Behavior

The empirical discoveries of this study provide evidence regarding the relationships among the examined variables within the sandwich generation context. The estimated path coefficient of 0.265, accompanied by a P-value of 0.036, confirms that financial literacy exerts a positive and statistically significant effect on financial behavior at the 5% significance level. A positive coefficient value suggests that a person's financial behavior improves with increasing financial literacy. These findings support the idea that daily money management practices are significantly influenced by financial literacy. People who are well-read typically prioritize their needs, organize their finances, be disciplined in keeping track of their spending, and abstain from impulsive and consumptive financial judgments. These results also support the research by (Safryani et al., 2020), which concluded that a good understanding of finance is used as the main consideration in managing financial resources, so that individuals can avoid potential financial losses. In the context of the Sandwich Generation, financial literacy not only plays a role as a decision-making tool, but also as a protective mechanism to maintain a balance between personal needs and family obligations.

The Effect of Investment Behavior on Financial Behavior

Research findings show that the path coefficient for investment behaviour is 0.283, but the P-Value is 0.070 (> 0.05). Although the path coefficient is positive, these results indicate that the relationship between investment behaviour and financial behaviour is not statistically strong enough to be considered significant. This shows that investment behavior has no substantial influence on financial behavior. An individual's interest or tendency towards investment activities does not necessarily lead to good financial behaviour. Individuals may have a high interest in investment, mainly due to expected returns, but this is not necessarily reflected in their daily financial management discipline, such as controlling expenses, keeping financial records, or consistent saving.

This phenomenon can be explained by the research of (Khalisa et al., 2020), which found that investor behaviour factors are often biased, such as overconfidence, herd behaviour, and emotional factors in decision making. A person may have a high interest in investing, but their daily financial behaviour still tends to be undisciplined because financial decisions are driven more by emotion than rational considerations.

Examining the Role of Financial Behavior in Financial Inclusion

The findings confirm that financial behavior plays a decisive role in shaping financial inclusion, with the observed effect being highly significant at a P-value of 0.000. This is a key finding that proves financial discipline is an absolute requirement for access to financial services. These findings are highly relevant to the latest journal by (Rahmahtika et al., n.d.), which highlights that behavioural adaptation, especially in the digital era, greatly influences financial inclusion. Adaptive and disciplined behaviour enables individuals to access formal financial services. These findings also fill a gap in the research by (Safryani et al., 2020), previous studies reported that financial behavior did not exert a significant influence on investment decisions among professors; however, within the sandwich generation, financial behavior emerges as a key determining factor.

The Effect of Financial Literacy on Financial Inclusion

Financial literacy does not exhibit a significant effect on financial inclusion. This t-statistic value of 0.712, which is less than the critical value of 1.96, and the P-value of 0.477 that exceeds the 0.05 significance level. These results suggest that financial literacy alone is insufficient to directly enhance financial inclusion among the sandwich generation. It can also be concluded that even if the sandwich generation has good knowledge, it does not necessarily mean that they are able to access or use financial products and services optimally. This is due to financial constraints resulting from the burden of double dependents, so that theoretical understanding cannot necessarily be converted into ownership of financial products. These results differ from the findings of (Githa Widyastuti & Murtanto, 2024) and (Dewi & Apriyati, 2023) who discovered a good influence on Generation Z. However, this insignificance is in line with the logic developed in (Barajas et al., 2020), which states that barriers to financial inclusion are often not only a matter of knowledge but also a matter of not having enough money. This is reinforced by (Safryani et al., 2020), they demonstrate the substantial significance of the income variable. This implies that for the Sandwich Generation, financial literacy alone is not sufficient to drive inclusion if it is not supported by adequate financial capacity to purchase these financial products.

The Role of Investment Behavior in Financial Inclusion

Research findings indicate implying that engagement in investment activities fails to exert a meaningful impact on financial inclusion, $P\text{-Values } 0.492 > 0.05$. Respondent interest in investing has not been realised in concrete actions to access formal financial products. This is consistent with the study conducted by (Githa Widyastuti & Murtanto, 2024) which discovered that psychological elements such as risk perception and behavioural bias greatly determine investment decisions. For the vulnerable Sandwich Generation, high risk perception makes them refrain from entering the financial system (inclusion) despite their interest in investment behaviour. (Khalisa et al., 2020) also add that individual investor decisions are often irrational or delayed due to cognitive bias, so that investment intentions do not always lead to the realisation of financial inclusion.

5. CONCLUSION

The results suggest that higher levels of financial literacy are associated with more favorable financial behavior based on data analysis and discussion. This demonstrates how a solid grasp of risk management, digitalization, and fundamental financial principles may motivate the sandwich generation to handle their daily budgets with greater discipline. Additionally, it has been demonstrated that financial conduct is a key determinant that significantly and favorably affects financial inclusion. It has been demonstrated that members of the sandwich generation who are disciplined in keeping track of their spending, paying their bills on time, and saving aside money for emergencies have access to and utilize safer and better formal financial service.

The findings indicate that neither financial literacy nor investment behavior exerts a statistically significant direct effect on financial inclusion. This suggests that possessing financial knowledge or demonstrating interest in investment activities does not automatically enhance access to appropriate financial services. Such a condition can be attributed to the financial pressures faced by the sandwich generation, particularly the responsibility of supporting dependents from two generations, which constrains the practical application of financial knowledge and limits engagement with financial products. Furthermore, the mediation analysis reveals that financial behavior does not significantly mediate the relationship between financial literacy and investment behavior in influencing financial inclusion. Instead, the direct effect of disciplined financial behavior on financial inclusion is substantially stronger than its mediating role. These findings imply that, for the sandwich generation, meaningful financial inclusion is driven less by increased financial knowledge or investment participation and more by consistent behavioral discipline in managing everyday financial activities.

Research Limitations

The researchers acknowledge that this study is not without limitations that may affect the generalization of the results. A significant consideration regarding the model's explanatory power is the R-Square value for the financial inclusion variable, which stands at 0.246. This indicates that the model accounts for 24.6% of the variance in the phenomena, suggesting that while the predictors are relevant, a substantial portion of financial inclusion is influenced by factors outside this study. This indicates that there are still 75.4% of other factors outside this research model that have a more dominant influence on the financial inclusion of the sandwich generation. In addition, this study used an online survey method via social media with a sample size of 105 respondents. This method has the potential to limit the range of respondents to only those with good digital literacy, so it does not fully represent the sandwich generation from the lower economic strata or those who do not have adequate internet access. Another limitation is the self-assessment-based research instrument, which allows for perception bias where respondents tend to give answers that are considered ideal compared to their actual financial behavior.

Suggestions

Considering the conclusions and restrictions mentioned above, the author proposes several recommendations that can be used as a reference for further research and input for related parties. It is advised that future researchers expand the research model by adding new independent variables that are more relevant to economic pressure conditions, given the low R-Square value in this study. Future researchers can include financial pressure or income level as moderating variables. This is based on the findings that because of actual financial limitations, financial literacy has no discernible impact faced by the sandwich generation. In addition, future researchers can explore psychological factors to see how emotional pressure affects financial inclusion decisions. Using mixed techniques with in-depth interviews is also highly recommended to explore the reasons behind the gap between knowledge and action found in this study.

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