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Factors Affecting Financial Decision Making: The Women Lecture's Perspective

Y.K. Arumsari[a], Surachman[b], Sumiati[c], Andarwati[d]
[a, b, c, d] Brawijaya University, Malang, Indonesia;
[a] Gajayana University, Malang, Indonesia

ABSTRACT

Research on women's financial decision-making involves a great deal of behavior and financial research. Due to the complexity of the phenomenon and the fact that it encompasses various aspects of life, making a deep-seated decision necessitates consideration of both financial and cognitive factors. A woman, as a wife, plays a vital role in the household, especially in terms of financial decisions. The **purpose** of the study is to assess a variety of determinant-taking decisions lecturer finance woman, Dpk LLDikti Region VII, Indonesia. It evaluates connection intelligence fluid (FI), which consists of dimensions number intelligence (FI NI), verbal comprehension (FI VU), perception speed (FI PS), inductive reasoning (FI IR), and deductive reasoning (FI DR), as well as literacy finance (FL) with making financial decisions (FDM). It employs a quantitative statistical method to examine the relationship between specified variables. Using smartPLS 4, primary data from a structured questionnaire utilizing a 5-point Likert scale were analyzed using a partial least squares-structural equation modeling approach. FI NI; FI VU; FI PS; FI IR; and FI DR exhibited a positive and statistically significant correlation with FI, as indicated by the results. This also demonstrates that FI and FL have a positive and substantial relationship. The results also demonstrate that FI and FL have a positive and statistically significant relationship with FDM. Successful FDM requires FI (FI VU; FI PS; FI IR; FI DR) and FL to optimally execute a systematic and logical decision-making process.
Keywords: fluid intelligence; financial literacy; financial decision making

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INTRODUCTION

According to a survey conducted by the Danareksa Research Institute in 2022, 39.56% of respondents admitted that the financial decision-makers in their household were the wife or the female head of the household, followed by the husband or male head of the household with a percentage of 30.97%, and the remaining 29.47% of financial decision-making is carried out jointly by the husband and wife. The results of this survey indicate that the wife is primarily responsible for making financial decisions for the family. In determining the functions and responsibilities of a woman within the family as the Chief Household Officer or the primary decision-maker in managing personal and family finances, the ability to make financial decisions is a crucial factor [1]. Women are expected to have confidence in managing their household finances; however, according to the results of a McKinsey survey conducted in 2020, women have less confidence in making financial decisions, despite having worked with financial advisors.

Women need more confidence when making financial decisions, and they tend to avoid taking financial risks. When making investment decisions, women have a lower percentage than men; this is because women's perspectives on financial positions are strongly influenced by their family background [2]. Women's status can be the greatest impediment to household financial decision-making [3]. The relationship between financial decision-making and women is collectively between husband and wife, but there are impediments as to who is entitled between husband and wife to determine good household decision-making [4]. Financial decision-making is significantly related to certain demographic characteristics of career women (age, marital status, education, occupation, and income) [5]. Through the use of structural equation modeling to examine the financial decision-making of female entrepreneurs, it was discovered that financial literacy has a significant impact on financial decision-making [6]. Financial decisions can be made with the participation of women. Nonetheless, the degree of interference from government regulations in the form of regulations also affects the quality of the resulting financial decision-making [7].

Several recent studies [8–11] indicate a close relationship between women, education, psychology, cognitive ability, level of literacy, and family income contribution to financial decision-making. The findings of a 2020 survey conducted by McKiney explain the significance of identifying social and other variables to clarify the phenomenon of women making financial decisions. Personal preference [12, 13], intrinsic and extrinsic motivation [14], financial knowledge [15, 16], confidence in the information obtained [17, 18], financial information [19, 20], and family environment [21] are correlated with other latent variables in individual financial decision-making, according to previous research.

Meanwhile, constructs that are rarely explored are cognitive abilities and habits that can influence decision-making. Cognitive abilities and positive habits can help individuals reduce bias in their financial behavior. Cognitive abilities and positive habits such as fluid intelligence constructs [22, 23], financial literacy [24], and budgeting habits [25] with individual financial decision-making. This study aims to fill a gap in previous research and add to the originality of the relationship between financial behavior bias and individual financial decision-making. By examining the relationship between the research model, specifically fluid intelligence, and financial decision-making. Nonetheless, prior research has shown that investors who do not engage their cognitive side make a large number of irrational financial decisions [26]. In contrast to the findings of other studies, cognitive abilities (fluid intelligence) and a solid educational background are positively associated with individual financial decisions [27].

This study aims to assess fluid intelligence and financial literacy concerning financial decision-making among female lecturers in Region VII of Dpk LLDekti, Indonesia. This article investigates the connection between fluid intelligence, financial literacy, and financial decision-making. This study examines the exogenous variables of fluid intelligence, including numerical intelligence, verbal comprehension, perception speed, inductive reasoning, and deductive reasoning. It employs a quantitative method to forecast the relationship between the identified variables. In the following order, the research will be conducted: The literature review in Section 2 will focus on fluid intelligence, financial literacy, and financial decision-making. Section 3 then discusses the research methodology and data. The fourth section discusses measurement models, structural models, and testing hypotheses. The fifth section presents the research's conclusions, practical implications, limitations, and scope for future study.

LITERATURE REVIEWS

Fluid Intelligence

It has been widely acknowledged that the theory of fluid intelligence is useful for accommodating several conflicting views regarding the nature of intelligence in general, particularly regarding intelligence as a general ability and the relative roles of heredity and environment in the development of intelligence. Sobkow [28] presents the theory of fluid intelligence as a taxonomy that integrates fluid intelligence and crystallized intelligence in financial decision-making. The theory of fluid intelligence derives from an analysis of second-order factors of individual mental ability factors, which indicate the presence of multiple general factors [29]. Capabilities requiring a certain level of individual intelligence can be arranged into multiple dimensions at a more general level [30]. Number intelligence (FI NI), verbal comprehension (FI VU), perception speed (FI PS), inductive reasoning (FI IR), and deductive reasoning (FI DR) are the components of fluid intelligence.

Several prior studies have demonstrated the connection between fluid intelligence and financial literacy. The relationship between financial behavior and financial literacy has several positive associations with an age-based approach [31]. Other studies examining the relationship between financial behavior, fluid intelligence, and financial literacy reveal that as people age, their scores and comprehension of financial literacy decline [32]. Other research indicates that as women age and approach widowhood, their attitudes and perspectives on finances will change, increasing their financial literacy [33]. Consequently, this study proposes the next hypothesis:

H1: Their literacy finances are impacted by their intelligence fluid.

Financial Literacy

Better financial decision-making is associated with financial literacy. Individuals with greater financial acumen perform better in future planning, are less likely to incur debt, and participate in financial markets with more diversified portfolios more

frequently. Additionally, financial literacy is associated with greater yields on deposit accounts and a greater propensity to withdraw bank deposits [34].

Financial literacy is indispensable for assessing financial issues and implementing financial education programs [35]. A high level of financial understanding contributes significantly to a person's financial well-being because those with a strong grasp of finances are more likely to make plans. In contrast, a lack of financial literacy is one of the most influential factors in making sound financial decisions, which has a negative effect. Consequently, this study proposes the next hypothesis:

H2: Their level of financial literacy affects their financial decisions.

Financial Decision Making

The theory of behavioral finance explains the psychological relationship between the behavior of investors or financial analysts and the process of making financial decisions. The theory of behavioral finance explains why investors are not always rational, have limited self-control, and are susceptible to (subjective) bias. There is a growing body of literature that explains how families make financial decisions. Within the framework of domestic production, the two most prominent theories are based on the perspective of bargaining power and the specialization of tasks and responsibilities [36].

Empirical evidence supports the bargaining explanation, which asserts that household members with financial control associated with education, employment, and wage levels wield the greatest influence in the decision-making process [37]. In determining which spouse is responsible for household decisions, differences in income and employment status are always decisive, whereas the evidence regarding the influence of other factors is inconsistent [38]. After years of making financial decisions and observing others, however, older individuals may also benefit from the experience.

Financial decision-making effectiveness is determined empirically by financial decision-making competence [39–41] and financial literacy [35, 38]. Competence in decision-making refers to an individual's ability to make better choices. It is also related to the rational choice model's proposed decision-making principle. The psychological field of decision-making has examined how well people adhere to decision-making principles under experimental conditions that have been scientifically manipulated [42]. The scientific argument that establishes financial literacy as a mediating variable [43–46] is that it has been demonstrated that financial literacy as a mediating variable influences decisions regarding the adoption of various financial strategies.

Without the role of financial literacy as a particular mediation, financially illiterate groups of respondents are more likely to have financial problems and are more likely to reduce expenses, seek work opportunities, increase debt, and reduce/sell housing, among others, whereas the financially literate group of respondents is more likely to seek professional financial advice, purchase a life annuity, and contribute to a retirement plan. Consequently, this study proposes the next hypothesis:

H3: Fluid intelligence and financial literacy influence their financial decisions.

Fig. 1 displays variable exogenous and endogenous research. This is based on prior relevant theory and research. *Fig. 1* is a second-order conceptual model for understanding fluid variable intelligence, which is comprised of number intelligence, verbal comprehension, speed of perception, inductive reasoning, and deductive reasoning, as well as variables related to literacy and financial decision-making.

RESEARCH DATA AND METHODOLOGY

Sample and Data Collection

The research population consists of 540 individuals who are female college lecturers Dpk in the private sector of East Java, Indonesia. With the Slovin formula and a margin of error of 5%, a total sample of 230 people is obtained. This study employed multiple levels of sampling, with the first stage employing a proportional simple random sample. The application of this method is based on the assumption that it does not stratify the population. Universities, institutes, colleges, academies, and polytechnics fall under the category of higher education. This study's participants were categorized by age, institution, number of years of service, and most recent education. Using a structured questionnaire to collect primary data on the opinions of the sample population.

Measurement of the Variables

This study collects primary data via a structured questionnaire and employs a unique scale to assess

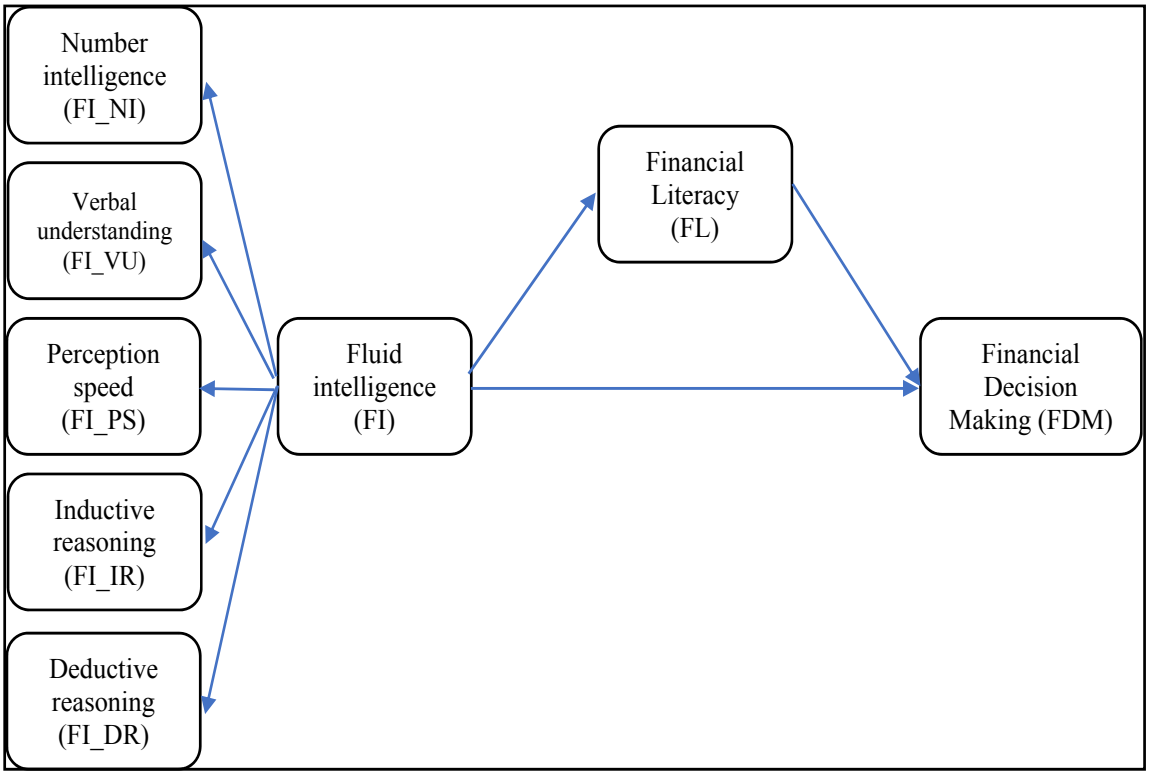

Fig. 1. **Conceptual Framework**

Source: Compiled by the authors.

the identified variables' impact on female lecturers' financial decision-making. The survey consists of two parts, the first of which is designed to collect respondent profile information. The second section is a research instrument with items to be studied on a five-point Likert scale, with "strongly disagree" receiving the least weight and "strongly agree" receiving the most. Exogenous and endogenous variables were adapted from previous research and modified to account for the lecturing profession of women. Using a scale inspired by Li et al. [47] and Sobkow et al. [28], fluid intelligence is an independent variable comprised of numerical intelligence; verbal comprehension; the speed of perception; inductive reasoning; and deductive reasoning. The financial literacy variable statement was adapted from Balasubramanian and Sargent [35] and Liu and colleagues [48]. Adapted from Mertzanis [36] and Fong et al. [38]: financial decision-making, endogenous variable statement.

RESULTS

Respondent Profile

The population and sample for this study were DPK lecturers from Region VII of LLDikti. There were a total of 230 female lecturers who provided information for this study. Percentage of respondents based on age, the majority of respondents observed were aged between 51–60 years, as many as 140 individuals (60.9%); aged 61 years, as many as 52 individuals (22.6%); and as many as 38 individuals (16.5%) aged between 41–50 years. This distribution indicates that the majority of female professors are still in their productive years. The percentage of respondents by institution, with the majority of respondents observed at the university level, was 143 (62.2 percent), followed by 48 (20.9), 32 (13.9), and 7 (3.0 percent) for Institutes, Polytechnics, and High Schools, respectively. The percentage of respondents based on years of service revealed that the majority of respondents (92 individuals) had 21–30 years of service (40.0 percent). 136 individuals comprised the majority of respondents with a master's degree, based on the percentage of respondents with recent master's degrees (59.1 percent). *Table 1* provides a summary of the characteristics of the study's respondents.

Data Analysis Using PLS-SEM

Verification of the analysis in the study is achieved using the statistical test tool with the equation test

Table 1

Respondent Profi

Characteristics	Frequency	Percentages
Age (years)		
41–50	38	16.5
51–60	140	60.9
⩾ 61	52	22.6
agency		
University	143	62.2
Institute	48	20.9
Polytechnic	32	13.9
High School	7	3.0
Working Period (year)		
1–10 Years	19	8.3
11–20 Years	40	17.4
21–30 Years	92	40.0
⩾ 31 Years	79	34.3
Last Education		
Masters	136	59.1
Doctor	94	40.9

Source: Compiled by the authors.

structure based on variance or Partial Least Square (PLS) software SmartPLS 4. PLS is utilized to forecast the relationship between constructed variable pairs. Another benefit of PLS is that it enables researchers to obtain the dominant latent variable values for evaluating their prediction results. The indicators of the latent variables are linear aggregates, and the latent variable score components (weight estimate) are derived by examining the inner model (a structural model that links latent variables) and the outer model (the measurement model, i.e., the relationship between indicators and their constructs).

Measurement Model

In measuring convergent validity, the outer loading value obtained by each measurement indicator is compared to the variable it represents. Indicators with outer loading values less than 0.6 indicate that these indicators are ineffective at describing the variables in the developed model. The AVE values for all variables satisfy the requirements, which are above 0.5, as shown in *Table 2*. The lowest AVE value is found in the FL variable, with a value of 0.627; it can be concluded that the data from this study satisfied the requirements of the convergent validity test.

The next test is the construct reliability test, which is measured by two criteria, Composite Reliability (CR) and Cronbach's Alpha (CA) from the indicator block, which measures the CR construct utilized to demonstrate good reliability. A construct is deemed reliable if the composite reliability or Cronbach's Alpha value is greater than 0.70. The composite reliability test and Cronbach alpha values in *Table 2* are greater than 0.6, indicating that each instrument's value is reliable. Measure formative construction with a collinearity indicator whose VIF score is 10.

Table 3 is a discriminant of measurement validity based on: Which correctly assigns a variable to every indicator whose measurements were input into the model? Currently, every instrument measurement must satisfy a discriminant condition of validity, followed by measurements of cross-loading. Cross-loading measurements are conducted by evaluating every model instrument for every model variable.

Hypothesis Test

The last stage of statistical analysis and inference is hypothesis testing. Testing The hypothesis was formed by comparing the t-statistic and t-table values derived from the connection between variables in the previous model. The confidence level of the processed data is 95%, with a critical r value or alpha of only 5%. Based on such a rate, the t-table values used for comparison with the t-statistic value of each relationship is 1.964; if the connection between variables possesses a t-statistic value greater than 1.964, the hypothesis can be accepted (*Table 4*).

Initially (H1), intelligence fluid affects their literacy finances. This acknowledged. *Table 5* shows that the result is supported by greater t-statistic values than t-table values (6.119 > 1.964). The accepted second (H2) hypothesis is that financial literacy affects their financial decisions. This result is observed for a greater number of t-statistic values than t-table values (5.817 > 1.964).

Table 2

Factor Loadings of the Constructs

Constructs and Items	ID	Outer Loadings	AVE	Composite reliability	Cronbach's Alpha	VIF
FI_(NI)	FI_(NI)1	0.900	0.822	0.786	0.783	2.124
	FI_(NI)2	0913				2.654
FI_(VU)	FI_(VU)1	0.916	0.834	0.801	0.801	1.804
	FI_(VU)2	0911				1.804
FI_(PS)	FI_(PS)1	0910	0.835	0.803	0.802	2.200
	FI_(PS)2	0917				2.347
FI_(IR)	FI_(IR)1	0.906	0.819	0.779	0.779	1688
	FI_(IR)2	0.904				2.363
FI_(DR)	FI_(DR)1	0.894	0.793	0.739	0.739	2.186
	FI_(DR)2	0887				1988
FL	FL1	0.772	0.627	0.804	0.802	1.443
	FL2	0.790				1.742
	FL3	0.799				1.739
	FL4	0.806				1.719
FDM	FDM1	0.901	0.700	0891	0.806	1.734
	FDM2	0.733				1.721
	FDM3	0867				1.774

Source: Compiled by the authors.

Table 3

Discriminant Validity

	FL	FI	FI_(NI)	FI_(VU)	FI_(PS)	FI_(IR)	FI_(DR)
FI	0.124						
FI_(NI)	0.155	1.026					
FI_(VU)	0.160	1.023	0.956				
FI_(PS)	0.113	0967	0.807	0.802			
FI_(IR)	0.061	1.049	0.901	0.940	0.919		
FI_(DR)	0.101	1040	0.940	0914	0814	0.946	
FDM	0.243	0.064	0.069	0.038	0.102	0.042	0.053

Source: Compiled by the authors.

Table 4

T-statistics

	Path Coefficients	T Statistics	P Values	decision
FI → FI_(NI)	0.708	13.359	0.000	Sig.
FI → FI_(VU)	0.667	11.114	0.000	Sig.
FI → FI_(PS)	0.770	22.272	0.000	Sig.
FI → FI_(IR)	0.673	13.046	0.000	Sig.
FI → FI_(DR)	0.630	11.603	0.000	Sig.

Source: Compiled by the authors.

Table 5

T-statistics

	Path Coefficients	T Statistics	P Values	decision
FL → FDM	0.324	5.817	0.000	Supported
FI → FL	0.351	6.119	0.000	Supported
FI → FDM	0.351	11.603	0.000	Supported
FI → FL → FDM	0.114	4.094	0.000	Supported

Source: Compiled by the authors.

The third (H3) hypothesis is that fluid intelligence and financial literacy influence financial decisions. This acknowledged. This conclusion is supported by greater t-statistic values than t-table values (11.603 > 1.964 and 5.817 > 1.964).

The outcomes of employing bootstrapping to overcome the problem of abnormal data. *Fig. 2* depicts the outcome of the PLS-SEM full model, including the path coefficient and p values. *Fig. 3* depicts the outcomes of the PLS-SEM full model with t values.

PLS-SEM 4 bootstrapping in *Fig. 2* and *Fig. 3* tests the hypothesis and examines the relationship between variables. The outcome demonstrates a positive and statistically significant relationship between the FIs from FI NI; FI VU; FI PS; FI IR; FI DR; and FDM-related FL variables. Consequently, H1 (t = 6.119, p = 0.05), H2 (t = 5.817, p = 0.05), and H3 (t = 11.603, p = 0.05) were accepted.

DISCUSSION AND IMPLICATIONS

The research objectives are to examine the relationship between the elements of the decision finance lecturer, Dpk at LLDikti Region VII, Indonesia. Identified as crucial determinants of financial decision-making, fluid intelligence, and literacy are the two most essential components. The results of this study are supported by additional research [31, 32]. As supported by previous research [47], all dimensions of the exogenous variables — number intelligence, verbal comprehension, perception speed, inductive reasoning, and deductive reasoning were determinants of fluid intelligence. This finding suggests that female

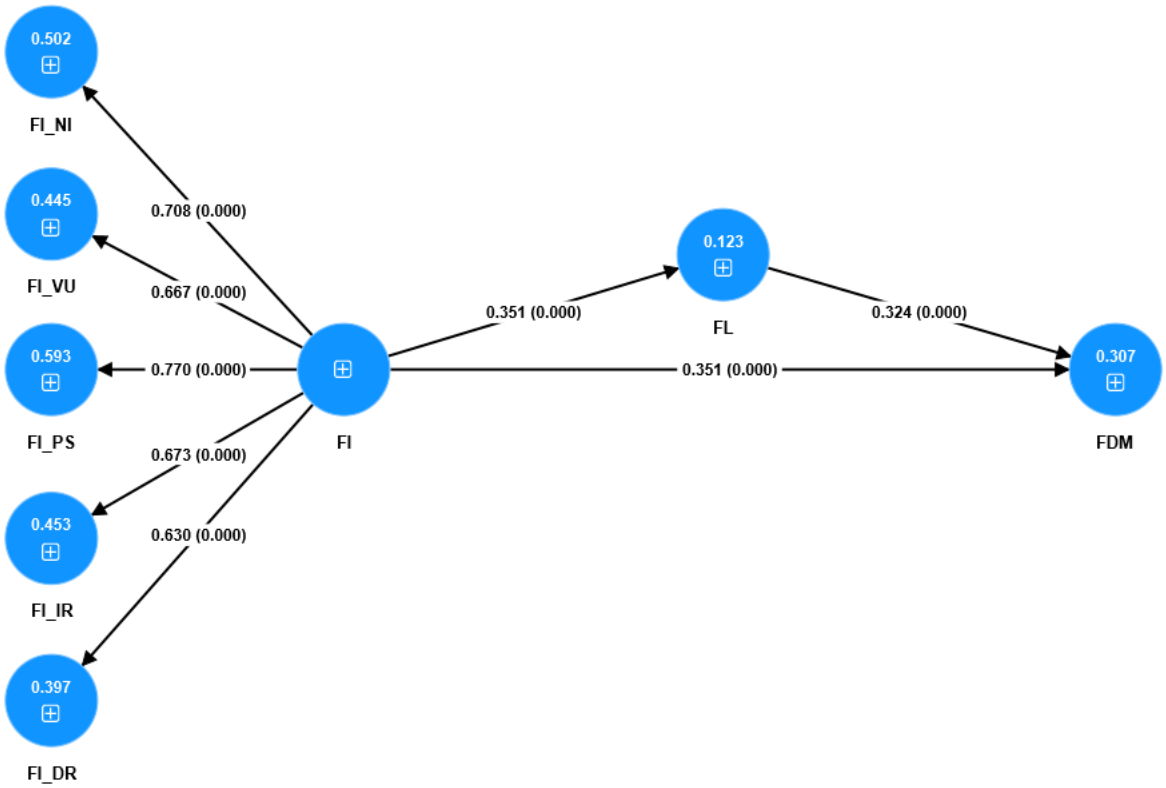

Fig. 2. **PLS-SEM full model with path coefficient**

Source: Compiled by the authors.

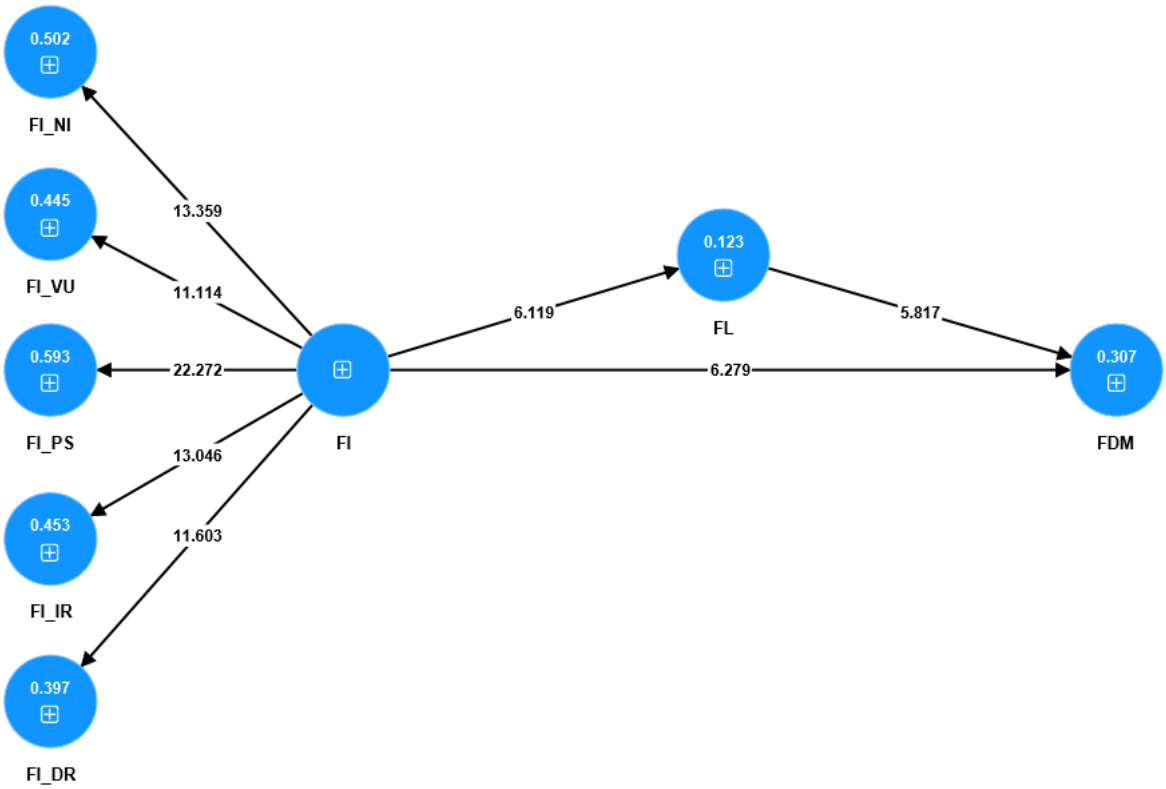

Fig. 3. **PLS-SEM Full Model With T-Value**

Source: Compiled by the authors.

professors have a high level of financial literacy; they have control over and benefit from their financial decisions, so financial planning is essential.

Several previous studies have examined the direct relationship between financial behavioral bias (fluid intelligence) and financial literacy; for instance, [31] explains that financial behavior and age are positively related to financial literacy, and [32] supports these findings by revealing a relationship between age and fluid intelligence on decreasing financial literacy scores. According to [33], older and approaching-elderly women demonstrate increased financial literacy. Numerous relationships with financial behavior and a significant relationship with financial decision-making have been discovered through research on financial literacy as a predictive variable [49–52]. The relationship between financial behavior (overconfidence) and investment decisions is moderated by financial literacy [45].

This study's findings will address the gaps and weaknesses of previous research. The study of financial decision-making has been explained using behavioral finance theory, which emerged and developed in the 1990s as a combination of psychology, decision-making, and classical economics. The behavioral finance theory is an investor preference to support investment decisions [53]. Psychological calculations, certainty effects, value functions, probabilities, and framing are examples of behavioral finance theory's guiding principles [54]. The results of this study can be explained using behavioral finance theory, as supported by previous researchers who have used behavioral finance theory in the context of women's decision-making, such as [55], which examines the role of behavioral and psychological factors in financial decisions. Women are capable of making prudent financial choices [56].

CONCLUSION

This study's findings contribute to the literature on financial decision-making in various ways and have diverse implications. This study identifies the variables of fluid intelligence and financial literacy that significantly influence female lecturers' financial decision-making. The role of women in the household economy is one of the primary concerns of this study. Partnership, as a relationship between husband and wife in the home, is a pattern of partnership that aligns men and women in the family, including decision-making. The role of women in the family economy will lead to an equitable distribution of development outcomes and the growth of human resources.

Currently, women are not only mothers who give birth, care for, and guide their children, nor are they merely companions for their husbands; they are a fundamental component of society's economic system. When a woman is financially independent, she can earn and manage her finances, granting her the ability to make decisions. One of the most critical roles of women in the family is as the primary household decision-maker, including financial management decisions. Decision-making is a response to social or personal situations that considers the situation faced, the resources owned, the capacity to solve problems or achieve specific objectives, and the consequences or risks of the choices made. Women can regulate and make decisions regarding the management of household income. In general, decision-making is a multifaceted phenomenon encompassing all aspects of life, involving multiple dimensions and the selection of numerous alternatives. Gender roles influence financial and decision-making skills among individuals. In this study, it was found that women have an important role in making financial decisions in the family, and when they are financially independent, they can make money and manage their finances, which ultimately gives them strength in making decisions.

This research makes an important contribution in showing that the role of gender in financial decision-making is very significant and should not be ignored. This research also shows that the role of women in the family economy will provide equitable results in the development of human resources.

LIMITATIONS AND FUTURE SCOPE OF STUDY

This study has several limitations. First, the respondent is a woman Dpk lecturer at LLDikti in Region VII, Indonesia. The findings cannot be generalized because they are not widely accepted in other jurisdictions. This study is based solely on the perspectives of female lecturers at private postsecondary institutions. Thus, there may be differences between fluid intelligence and financial literacy. Third, the sample size for this investigation

was relatively small. Additionally, only two constructs have been investigated to determine their impact on financial decision-making. Other constructs, such as financial behavior, risky behavior, and financial planning, are anticipated to be able to be measured in future research.

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ABOUT THE AUTHORS

Yuni Kusuma Arumsari — Doctoral student, Brawijaya University, Malang, Indonesia; Lecturer, Gajayana University, Malang, Indonesia
https://orcid.org/0000-0002-6625-9096
Corresponding author:
yka.finance2606@gmail.com

Surachman — PhD, Prof., Faculty of Economics and Business, Brawijaya University, Malang, Indonesia
https://orcid.org/0000-0002-9592-4630
surachman@ub.ac.id

Sumiati — PhD, Prof., Faculty of Economics and Business, Brawijaya University, Malang, Indonesia
https://orcid.org/0000-0001-8471-1261
sumiati_atiek@yahoo.com

Andarwati — PhD, Assoc. Prof., Faculty of Economics and Business, Brawijaya University, Malang, Indonesia
https://orcid.org/0009-0002-5961-7032
andarwati@ub.ac.id

Authors' declared contribution:
Y.K. Arumsari — formulation of the research problem, justification of hypothesis, and evaluation of theory.
Surachman — practical framework's consistency.
Sumiati — critical analysis of the literature and validation of methodology.
Andarwati — substantiation of the methodology, hypotheses, and results.

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