

Examining Behavioural Aspects of Financial Decision Making: The Working Women Perspective

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ABSTRACT

In the challenging and volatile financial markets, an investor needs to change his financial objectives frequently, leading to a diversified portfolio of investments. The financial future of the individual investor depends on his rational decision-making. This research **aims** to evaluate various determinants of financial decision-making concerning working women in the National Capital Region, India. It examines the association of financial literacy, personal finance planning, and risk behaviour with the financial decision-making of working females. The research also studies the different exogenous variables of financial literacy, including financial attitude (FA), financial behaviour (FB) and financial knowledge (FK). It utilises a quantitative approach for predicting relationships between the identified variables. The study is based on primary data collected through a structured questionnaire designed on a 5-point Likert scale and was analysed through a partial least square-structural equation modelling (PLS-SEM) approach. The **study results** suggest a positive and significant association of financial literacy and personal finance planning with financial decision-making by working women. On the other hand, risk behaviour negatively affects financial decision-making. The findings also reveal that all three exogenous variables, financial attitude, financial behaviour and financial knowledge, have a strong relationship with financial literacy. The research is relevant for individual women investing in various financial avenues to take better decisions. This study also benefits financial managers and institutions to target as women are potential investors in a developing country like India.

Keywords: financial decision-making; financial literacy; personal financial planning; risk behavior; working women

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INTRODUCTION

In the competitive market forces, the intricacy of the variety of financial products expands the scope of the entire financial market. Individual investors must have a thorough knowledge and awareness of the world of finance to make better choices [1]. The study of financial decision-making is a diverse field, not just limited to individuals or organisations but covers various market anomalies [2]. It is evident that financial decision-making is not an easy process — multiple factors like risk, return, market volatilities, financial knowledge, regulatory framework, and many other constructs affect an individual's decision-making process. However, there is a widespread opinion about an innate difference in men's and women's financial decision-making.

A broad perspective regarding financial decision-making is that women are more risk-averse than men, which creates stereotypical statistical discrimination

against women and belittles their successes [3]. Other than the genetic variations, various researchers have found a conservative approach of women towards taking any financial decisions compared to men [4]. As there is an anticipation that women investors are generally over-cautious about their investments than men, they are typically offered low-risk financial opportunities and consequently low returns [5]. As we hear, change is the only constant, but in this unprecedented and dynamic global economy, change is the rule. The world is also witnessing a noticeable shift from men leading the world to women leading the economy. Women have come out of the four walls of their houses and started contributing equally to family income. According to research by IMF, women's engagement in financial services will benefit in reducing gender inequality and will stabilise the banking system. This active participation of women in financial markets will also boost economic growth [6].

This research has specifically chosen working women as their primary discussion point for the following reasons. First, there are evident changes in the decision-making behaviour of women due to their increased and active involvement in family financial decisions. Secondly, there is a substantial disparity in the financial decision-making of men and women. Thirdly, working women are a significant market segment for financial institutions in India. Thus, this study analyses the financial decision-making of working women regarding their spending, borrowing and investment pattern. It identifies the financial literacy of working women in India by analysing its exogenous variables: financial attitude, financial behaviour, and financial knowledge. It also tries to understand the personal financial planning of working women and their risk behaviour. Thus, it studies different behavioural aspects affecting the financial decision-making of working women in India.

The research will be structured in the following sequence: Section 2 will deliver a literature review regarding financial decision-making, financial literacy, financial information, and personal financial planning. Next, Section 3 covers research data and methodology, whereas Section 4 discusses the measurement model, structural model, and hypothesis testing. Section 5 gives the conclusion to the study, including the theoretical observations, practical implications, limitations, and future scope of the study.

LITERATURE REVIEW

Financial Decision-Making

The art of financial decision-making requires a broad understanding of financial markets. It entails gathering information, comprehending financial affairs, and conducting asset research and analysis [7]. In different financial decision environments, males and females apply different strategies, not influencing their performance; these differences should be treated as general traits [8]. Most of the investment decisions of women are influenced by family needs and professional associations [9]. Gender disparity in the decision-making roles in early-stage funding further contributes to the gender gap in funding for women entrepreneurs [10]. Women who earn more in a family solely take major financial decisions than those who earn less [11]. Various variables like socio-demographics, financial literacy, economic and circumstantial forces, and

psychological constructs significantly impact women's financial planning [12]. Due to the gender identity norms, women's role in intrahousehold financial decision-making is limited, which leads to a smaller impact of her information contribution to the family finances [4].

Financial Literacy

Financial literacy is considered an essential element for stable economic and financial growth. It has become increasingly important in developed and emerging nations in the recent decade. While the need for financial planning is well recognised, financial literacy is generally underappreciated, particularly among women [13]. Women are ignorant of the financial markets' recent financial innovations and upgrades [14]. Working women invest their benefits in multiple savings options and avoid taking unnecessary risks [15, 16]. They also appear to struggle with fundamental financial concepts and have lower financial knowledge, making it harder to make sound financial decisions [17]. This study analyses the gap in the financial literacy of working women and its effect on their financial decision-making. Thus, this study proposes the following hypothesis:

H1: Financial literacy of working women impacts their financial decision-making.

OECD defines financial literacy as "A combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being." [18]. Thus, the research identifies three critical determinants of financial literacy, i.e., financial attitude, financial behaviour and financial knowledge, as recommended in previous studies.

Financial Attitude

Financial attitude is the personal orientation of an individual towards his financial matters [19]. Men may have better financial behaviour or knowledge scores, but women hold better financial attitudes [20]. Women are more likely to be stressed about their finances and other financial issues [21]. Financial decisions are innately risky, and the preconceived notions about female investors' risk attitude may be more prejudiced than the fact [22]. Women's financial attitudes are concerned with capital investment safety, regular and

consistent income, and little investment risk [23]. Thus, it can be said that financial attitude is an essential determinant of financial literacy. Therefore, the research formulates and tests the following hypothesis:

H1a: Financial attitudes of working women significantly affect their financial literacy level.

Financial Behaviour

Individuals who engage in positive financial behaviour, such as proper budgeting and financial stability, improve their financial literacy. In contrast, those who engage in poor financial behaviour, such as relying heavily on credit and loans, deteriorate their economic well-being [18]. Women are more conscientious about budgeting and keeping track of their funds, but they lack financial expertise, impacting several aspects of their financial behaviour [17]. Women who are self-assured about their financial management capacities are most likely to opt for savings and investment products and less likely to opt for debt products [24]. Thus, with this changing global economy and the inclusion of working women in the world financial markets, it has become essential to understand how working women's different aspects of financial behaviour like spending, borrowing and investing affect their financial decision-making. Thus, this study proposes the following hypothesis:

H1b: Working women's financial behaviour significantly affects their financial literacy level.

Financial Knowledge

Another behavioural aspect of being financially literate is applying financial knowledge while making a saving or investing decision [25]. Increased financial knowledge will change individuals' risk perception towards various investment avenues [26]. Women have a dearth of financial knowledge and skills and are risk-averse in nature [27]. It has been found that two-thirds of the gender gap found in financial literacy is due to lower financial knowledge and one-third is due to reduced confidence [28]. Women's financial knowledge regarding various financial instruments like debit cards, credit cards, shares, mutual funds, and debts is deficient [14].

Therefore, the aforementioned literature supports that financial knowledge is essential for financial literacy. Thus, the following hypothesis is proposed:

H1c: Financial knowledge of working women significantly impact their financial literacy level.

Personal Financial Planning

Personal financial planning is a strategy for efficiently planning for future household financial needs [29]. It is a continuous process that requires regular monitoring and reevaluation. Managing and preparing for economic security is a task for working women. A change in attitude is found in women who understand comprehensive long-term financial planning, which helps in effective money management [30]. Women with high financial self-efficacy are found to plan their finances by being more likely to hold savings and investment products and less likely to have debt products [24].

Most women are responsible for daily budget management, which exacerbates concerns about financial stability in the short term and has a detrimental influence on savings goals. It is found true even when women, rather than males, control the household's long-term investments [31]. As women are becoming more affluent in their financial decision-making, the need for personal finance planning increases. Thus, the following hypothesis is formulated:

H2: Personal Financial Planning of working women significantly impact their financial decision-making.

Risk Behaviour

Individual investors plan their finances, considering the risk involved in the various investment opportunities. In the risk homeostasis theory, it is found that individuals have a target level of risk, and they involve themselves in activities that give a high benefit-to-losses ratio to reach that level [32]. Thus, individuals' risk perceptions reflect their behaviour [33]. There is a vast literature stating men are the risk-takers with their money, whereas women are risk-averse [34–36]. Working women are loss averse but are positive in their expectations regarding their investments [37]. Despite being well-off in their income, women do not feel confident with their investments and have a moderate risk appetite [38]. In a study including wealthy individual investors, it was found that rich women consider themselves conservative and allocate a large number of their investments into cash compared to men [39]. Therefore, the aforementioned literature suggests that risk behaviour is an essential element of the financial decision-making process. Thus, the following hypothesis is proposed:

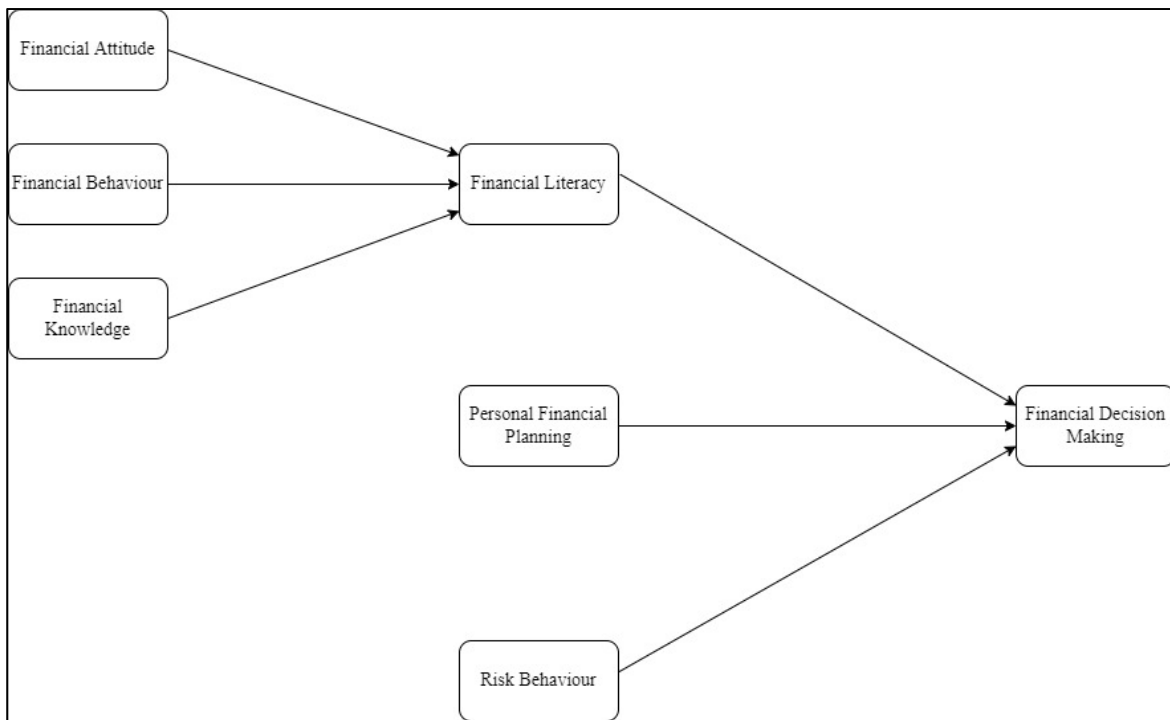


Fig. 1. Conceptual framework

Source: compiled by the authors.

H3: Risk Behaviour of working women significantly affects their financial decision-making.

Figure 1 represents different variables which are studied in this research. It is a conceptual model to understand antecedent variables of financial literacy, personal financial planning and risk behaviour, influencing the financial decision-making process.

RESEARCH DATA AND METHODOLOGY

Sample and Data Collection

This study is based on the target population of women who are 20 years or above and are engaged in a public or private organisation, i.e., working women. Using a cross-sectional research approach, the participants of this research are distributed demographically into various categories like age, education, level of income, and marital status. A well-structured questionnaire was designed to study the opinions of a dispersed population [40]. The questionnaires were distributed to individual women who belonged to National Capital Region, India, via messages and e-mails. Women participants voluntarily filled out the questionnaire and were well-informed about it. Though more than 500 women employees were approached with the questionnaire, only 420 responses were received, out

of which 392 responses were complete and valuable for the research.

Measurement of the Variables

As the data collection is done through a well-structured questionnaire, this research uses different distinctive scales to measure the impact of the identified variables on financial decision-making. The research survey consists of three sections, first explaining the aim of the study and the steps to fill out the questionnaire. The second section was designed to collect the demographic data of participants. The third section included a research tool having items to be studied on a five-point Likert scale, with one being "Strongly Disagree" and five being "Strongly Agree". The exogenous and endogenous variables were adapted from previous studies and modified in the Indian context.

Financial literacy, an independent variable and its exogenous variables, financial attitude, financial behavior, and financial knowledge, are studied in the research through scales inspired by OECD [18] and S.S. Shockey [41]. The other two identified independent variables, personal financial planning, and risk behaviour are studied by Ellen Loix et al. [42] and C. Mayfield et al.

[43]. Financial decision-making is a dependent variable in the study for which statements were adapted from A. Bernasek & V.L. Bajtelsmit [44].

RESULTS

Demographic Profile

Table 1 shows the demographic characteristics of the individual participants. Out of the total 392 respondents, 44.6% of women were between the age group of 20–30 years, 16.2% were 30–40 years, 22.7% were 40–50 years, and 16.5% were 50–60 years of age. Most working women were post-graduated, including 67.2% of the total sample. About 50.76% of the sample data were single, 38.26% were married, 8.41% were divorced, and 2.55% were widowed. Most of the women in the sample, i.e., 32.14%, earned a monthly income between Rs. 51,000 – Rs. 75,000.

Data Analysis Using PLS-SEM

For analysis of the research, Partial Least Square – Structural Equation Modelling (PLS-SEM) using SmartPLS software is used. PLS-SEM is a non-parametric approach used in management and information systems. PLS-SEM is a second-generation exploratory method that examines the impact of exogenous variables on a single endogenous variable [45]. This analytical approach has been shown to produce notable analyses in banking and finance and is an excellent chance for behavioural finance research [46]. Thus, PLS-SEM is suitable for assessing and analysing this research model.

Measurement Model

To test the reliability and validity of the constructs, the measurement model was analysed. The item's outer loadings, i.e., the correlation of measure with their constructs, were analysed to assess the item reliability. *Table 2* shows the factor loading of 30-items of the measurement model. All the items were having a factor loading of more than 0.7, making the statement reliable to use for further analysis [47]. It also portrays a detailed reliability check, including Cronbach's Alpha test and composite reliability (CR), to analyse internal consistency and convergent reliability. The values of Cronbach's Alpha were within acceptable limits, above 0.7, thus, satisfying the internal consistency [48]. For ascertaining convergent reliability, the composite reliability of all the latent variables was found in

between the range of 0.8 to 0.95, exceeding the threshold value of 0.7 [49]. Thus, CR is accepted.

Additionally, the average variance extract (AVE) was calculated to estimate the convergent validity, found above the permissible limit of 0.5. Thus, convergent validity is assured [49, 50]. The degree to which the constructs vary is measured using discriminant validity [47]. In a measuring model, the AVE square root of an identified construct should be larger than the inter-construct correlation [49]. *Table 3* shows the latent constructs' correlation matrix, and the off-diagonal value explains the AVE square root (*in italics*). As an outcome, the discriminant validity analysis results are accepted.

Structural Model

The structural model is analysed by examining the collinearity, significant structural model, and measuring coefficient of determination (R^2) [51]. Variation Inflation Factor (VIF) is determined for all exogenous variables to test multicollinearity among the constructs [47]. The value attained for VIF for the latent variables was below five, as shown in *Table 2*. As a result, it is ensured that multicollinearity does not exist [47]. We can infer that the relationship between the constructs was substantial since the values of collinearity were justified.

The PLS-SEM bootstrapping approach was used to examine the significance of constructs in the model. A random sample of 5000 cases was produced from the original cases to explore the relevance of the construct's relationships [47, 52]. *Figure 2* shows the path coefficients model and hypothesis testing. *Table 4* and *Table 5* show the hypothesis testing, path coefficients, and t-statistics values using bootstrapping techniques in PLS-SEM. After hypothesis testing, the coefficient of determination was found significant shown in *Table 6*.

DISCUSSION AND IMPLICATIONS

The PLS-SEM bootstrapping algorithm shown in *Fig. 3* tests the hypothesis and examines the relationships between the constructs. The results show a positive and significant association between working women's financial attitudes, financial behaviour, financial knowledge, financial literacy, and financial decision-making. Therefore, H1a ($t = 9.299, p < 0.05$), H1b ($t = 7.509, p < 0.05$) and H1c ($t = 7.725, p < 0.05$) is accepted. The findings suggest that working women's financial

Table 1

Demographic Profile

Characteristics	Frequency	Percentage
Age		
20–30 years	175	44.6%
30–40 years	63	16.2%
40–50 years	89	22.7%
50–60 years	65	16.5%
Educational Qualification		
Diploma	45	11.4%
Graduate	84	21.4%
Post-graduate	263	67.2%
Marital Status		
Single	199	50.76%
Married	193	49.23%
Monthly Income		
Below Rs. 25,000	98	25.0%
Rs. 26,000 – Rs. 50,000	108	27.55%
Rs. 51,000 – Rs. 75,000	126	32.14%
More than Rs. 76,000	60	15.3%

Source: compiled by the authors.

attitudes, behaviour, and knowledge influence their financial literacy. The hypotheses are supported and portray a strong association of the three exogenous variables with the latent variable. The results also signify that financial literacy, personal financial planning and risk behaviour are three important determinants of financial decision-making. Therefore, H2 ($t = 8.886, p < 0.05$), H3 ($t = 9.326, p < 0.05$) and H4 ($t = 3.103, p < 0.05$) is also accepted.

The primary goal of this study was to discover the elements that influence working women's financial decision-making in India. The three primary aspects of financial decision-making — financial literacy, personal financial planning, and risk behavior — were identified as critical. The results of this study are supported by various research [53–55]. It was also found that various exogenous variables, financial attitude, financial behaviour and financial knowledge are the determinants of financial literacy, as supported by previous work [19, 56]. The research concluded that not just mere financial understanding is essential while making a financial decision, but financial literacy and planning the finances significantly and positively impact the whole process. The findings reveal that working women have high financial literacy; as a result, they have control over their finances and feel that to make a return on their investments, they need to perform financial planning. The study finds a significant but negative impact of risk behaviour on working women's financial decision-making process, asserting the previous work of Faff et al. [57]. This indicates that women are less confident with decisions while managing their finances and do not want to take a high risk with their investments.

The investment motivation of working women is based on their income earned and their financial literacy on how to employ their funds for investment. For a long time, women have been considered to do their house chores and not interfere in other family financial matters. Women's income has been regarded as secondary income in the family and is generally considered consumers, not producers [58]. But in present times, working women's spending habits and household decision-making should be considered while planning for gross domestic consumption and production [59]. In particular, given the prevalence of financial illiteracy among women, a one-time financial education session is unlikely to influence long-term planning and saving decisions.

On the other hand, women-specific initiatives should be more adapted to address fundamental disparities in their tastes, saving requirements, and financial expertise. Creating awareness and cultivating an investment culture is essential because investment promotes and fosters economic development and growth. Before making a financial decision, women should be aware of the facts that affect their investment decisions and carefully analyse investment considerations using fair business experience. They should evaluate all environmental conditions rather than relying on only one of them. Women investors must diversify their portfolios through multiple industries and avenues available to reduce uncertainties and other fluctuations while optimising returns by building a portfolio of assets that corresponds to their financial interests.

Table 2

Factor Loadings of the constructs

Constructs and Items		Outer Loadings	AVE	Composite Reliability	Cronbach's Alpha	VIF
Financial Attitude	FA1	0.849	0.662	0.907	0.872	1.771
	FA2	0.794				
	FA3	0.823				
	FA4	0.829				
	FA5	0.77				
Financial Behaviour	FB1	0.892	0.747	0.937	0.916	1.862
	FB2	0.822				
	FB3	0.901				
	FB4	0.876				
	FB5	0.828				
Financial Knowledge	FK1	0.705	0.57	0.868	0.808	2.738
	FK2	0.712				
	FK3	0.794				
	FK4	0.815				
	FK5	0.827				
Financial Literacy	FL1	0.735	0.563	0.837	0.741	1.573
	FL2	0.732				
	FL3	0.784				
	FL4	0.747				
Personal Financial Planning	PFP1	0.731	0.568	0.795	0.727	1.771
	PFP2	0.724				
	PFP3	0.884				
Risk Behaviour	RB1	0.766	0.502	0.834	0.752	1.497
	RB2	0.759				
	RB3	0.708				
	RB4	0.733				
Financial Decision-Making	FDM1	0.886	0.746	0.921	0.886	-
	FDM2	0.835				
	FDM3	0.839				
	FDM4	0.893				

Source: compiled by the authors.

Table 3

Discriminant Validity

	Financial Attitude	Financial Behaviour	Financial Knowledge	Financial Literacy	Personal Financial Planning	Risk Behaviour	Financial Decision Making
Financial Attitude	0.813						
Financial Behaviour	0.407	0.864					
Financial Knowledge	0.658	0.678	0.755				
Financial Literacy	0.712	0.688	0.701	0.75			
Personal Financial Planning	0.467	0.434	0.698	0.578	0.754		
Risk Behaviour	0.355	0.325	0.375	0.462	0.549	0.708	
Financial Decision Making	0.552	0.561	0.635	0.668	0.672	0.346	0.864

Source: compiled by the authors.

Table 4

T-statistics

	Path Coefficients	T Statistics	P Values	Decision
Financial Attitude -> Financial Literacy	0.358	9.299	0.00	Supported
Financial Behaviour -> Financial Literacy	0.307	7.509	0.00	Supported
Financial Knowledge -> Financial Literacy	0.347	7.725	0.00	Supported

Source: compiled by the authors.

Table 5

T-statistics

	Path Coefficients	T Statistics	P Values	Decision
Financial Literacy -> Financial Decision Making	0.446	8.886	0	Supported
Personal Financial Planning -> Financial Decision Making	0.482	9.326	0	Supported
Risk Behaviour -> Financial Decision Making	-0.124	3.103	0.002	Supported

Source: compiled by the authors.

CONCLUSION

Financial market activities are revamped after the advent of the internet and globalisation; thus, they are technologically and geopolitically developed [60]. Financial decision-making and awareness of

one's financial abilities are vital for avoiding financial mistakes [61]. Various researchers have studied gender differences in financial decision-making. Many women are working, and their attitudes toward investment opportunities are also changing. Instead of sitting

Table 6

Coefficient of Determination (R^2 Value)

Variables	Coefficient of Determination (R^2 Value)	
	R^2	R^2 Adjusted
Financial Literacy	0.741	0.739
Financial Decision Making	0.579	0.576

Source: compiled by the authors.

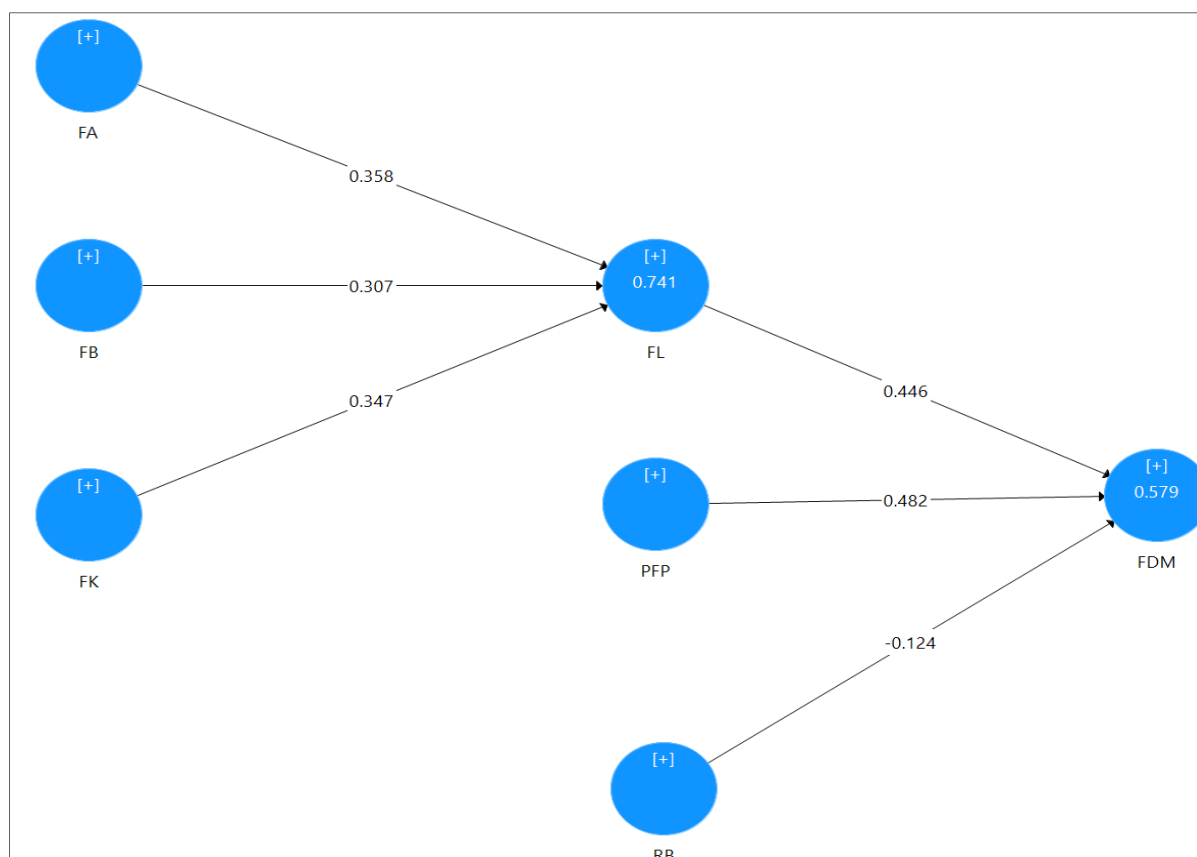


Fig. 2. PLS-SEM full model with path coefficient

Source: compiled by the authors.

on their savings, women show a strong interest in investing their money in various investment avenues to earn returns and meet certain current and future expenses.

Women play a crucial role in uplifting the global economy but are still treated as underutilised assets. This research examines the impact of various determinants on the financial decision-making of working women in the national capital region. The current study has collected data from 392 working women 20 years and above. This study contributes in numerous ways to the literature and has different implications. It identifies

different variables, including financial literacy, personal financial planning, and risk behaviour, which significantly impact the financial decision-making process. It also helps understand the changing attitudes, behaviour, and financial knowledge on literacy levels in the NCR region.

The various goals of this research investigation were laid out, including identifying determinants and the impact on working women investors' financial decision making, all of which were thoroughly examined and tested. The results suggest that women should invest a lesser portion of their money in riskier assets, thereby exacerbating the wealth gap between men and women.

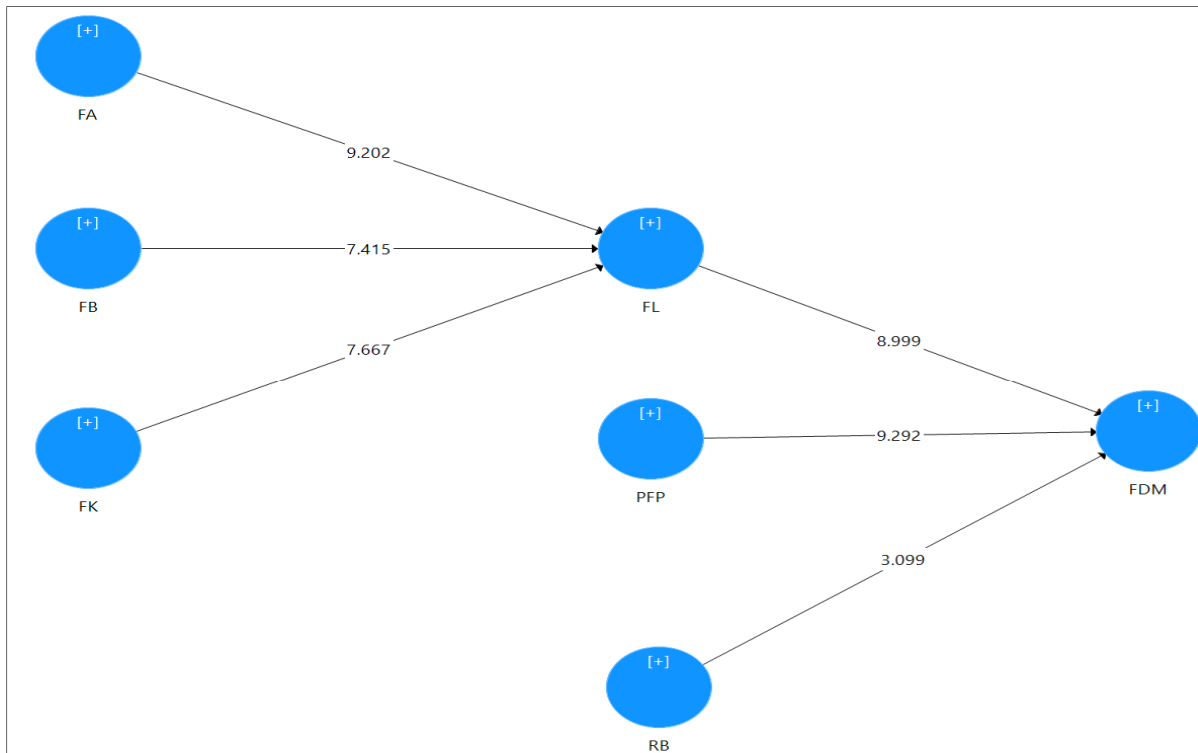


Fig. 3. PLS analysis of the structural model with t-value

Source: compiled by the authors.

However, income disparities between men and women are likely to remain a significant concern. Women generally have different learning preferences regarding various investment avenues and distinctive mindsets regarding money matters [62]. The findings have ramifications for programmes that increasingly put individuals in charge of their retirement funds. Personal finance budgeting will assist working women in better understanding their financial condition, and they are a crucial variable in identifying financial components while saving time.

LIMITATIONS AND FUTURE SCOPE OF STUDY

The current research follows some limitations. First, the survey participants are part of one region of India, i.e. National Capital Region. The results found may

not be applicable in other places and thus, cannot be generalised. Secondly, this study is only based on working women's perspective; thus, the financial attitude, financial behaviour, and financial literacy of non-working women may be different. Third, the sample size taken for the study is minimal. Lastly, only three determinants have been studied to understand financial decision-making.

Further samples can better measure these determinants, like gender differences, working or non-working women, students, individual and retail investors, etc. Other variables like social-economic characteristics, cultural differences, family issues, or environment can also influence decision-making. Researchers can eliminate these constraints in future studies by including a large sample size.

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