

## An Analytical Study on Investment Patterns Among Women: An Empirical Evaluation

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### Abstract

The investment behavior of women has transformed significantly over the past decade owing to financial independence, increased education, and access to digital platforms. This study analytically examines women's investment patterns using statistical tools like Chi-square, ANOVA, and t-tests. Data were collected from 200 respondents across urban and semi-urban locations in Coimbatore to understand how demographic factors like age, income, education, and employment affect their investment preferences and risk tolerance. The results show a significant association between educational qualifications and investment choices. Income was also found to influence risk appetite, while working women demonstrated higher financial awareness than non-working women. These insights are valuable for financial advisors, policymakers, and institutions designing investment products for women. The study emphasizes the need for targeted financial literacy programs and inclusive financial planning strategies. The findings have implications for both academic research and practical financial services.

**Keywords:** *Women investors, Investment behavior, Financial awareness, Chi-square, ANOVA, Risk appetite, Demographics.*

### Introduction

In the evolving landscape of financial decision-making, the role of women has shifted from passive savers to active investors. As women gain financial independence through employment and entrepreneurship, their participation in financial markets has grown. However, their investment choices are still shaped by social, economic, and psychological variables. Understanding these patterns is crucial for financial institutions and policymakers aiming to foster inclusive economic growth.

The significance of this study lies in its analytical approach to understanding how different demographic factors affect investment behavior among women. Education and income not only determine financial capacity but also influence risk perception and investment knowledge. For instance, Suneja (2017) emphasized the positive correlation between financial literacy and diversified investment portfolios among women. Similarly, Kumar & Devi (2021) pointed out the conservative tendencies in investment decisions among women, driven by family obligations and long-term security.

Despite various government initiatives and the rise of digital financial services, a gap persists in financial inclusiveness for women. This study aims to bridge that gap by statistically validating behavioral trends and identifying areas for intervention. Through an empirical approach involving ANOVA, Chi-square, and t-tests, this research seeks to derive meaningful insights that can aid the development of women-centric financial policies and educational campaigns.

### Objectives of the Study

1. To identify the most preferred investment instruments among women.
2. To examine the association between demographic factors and investment choices.
3. To analyze the influence of income on investment risk appetite.
4. To compare financial awareness between working and non-working women.

### Review of Literature

1. **Suneja (2017)** reported that women who possess higher financial literacy are more likely to diversify their investment portfolios and explore high-return avenues like mutual funds and equities. The study underlined the importance of early financial education in shaping risk tolerance and decision-making confidence in women investors.
2. **Rajashekar & Swathi (2020)** found that urban working women largely preferred safe instruments like fixed deposits and gold, citing limited exposure to market-linked instruments and a lack of tailored financial advice as major barriers to risk-taking.
3. **Choudhary & Tripathi (2019)** examined how women across income levels differed in their investment approach. Higher-income women were more open to real estate and stock market investments, while those with limited incomes favored conventional options such as savings and recurring deposits.
4. **Kumar & Devi (2021)** observed that married women tend to make conservative investment choices due to family responsibilities, preferring long-term security over short-term gains. The study also highlighted that spousal influence often affects decision-making.
5. **Aggarwal & Jain (2018)** concluded that age and marital status play crucial roles in shaping women's risk appetite. Younger, single women are more inclined towards higher-risk investments than their older or married counterparts.
6. **Bhattacharya (2016)** highlighted the role of employment in boosting investment confidence among women. Financially independent women showed better awareness and were more likely to consult financial advisors than homemakers.
7. **Menon & Thomas (2020)** emphasized the digital divide, stating that although online platforms have made investments more accessible, rural women remain disconnected due to lack of digital literacy and trust in technology-based investments.
8. **Patel & Joshi (2019)** examined women's participation in SIPs and mutual funds, revealing that peer influence and promotional campaigns significantly affect decision-making, especially among urban women aged 25–40.
9. **Rani & Sharma (2022)** noted that although women are increasingly becoming breadwinners, most financial decisions are still made jointly or by male counterparts in the household. This limits autonomy in investment planning.
10. **Dasgupta (2015)** studied behavioral patterns and concluded that emotional and social security play a stronger role than profit motivation in women's investment decisions, leading them to opt for tangible and low-risk instruments.

### Research Methodology

This study adopted a descriptive and analytical research design to explore the investment behavior of women. A sample of 200 women was selected using stratified random sampling from urban and semi-urban regions in Coimbatore. Respondents included both working and non-working women aged between 21 and 55. Primary data were collected through a structured questionnaire designed to capture demographic details, preferred investment instruments, financial literacy levels, and risk appetite. Variables such as age, income, education, and employment status were analyzed. The statistical tools used for analysis include Chi-square test to assess associations between categorical variables (like education and investment preference), ANOVA to compare mean risk appetites across different income groups, and an independent sample t-test to compare financial awareness between working and non-working women. SPSS was used for all statistical computations. These tools were selected for their ability to determine significance levels and validate hypotheses based on real-world behavior. The methodology ensures objectivity and reliability, allowing for the generalization of findings within similar demographic groups.

**Results and Discussion**

Understanding the investment behavior of women requires a multifaceted approach that considers both their demographic background and psychological attributes. In this study, statistical tools like Chi-square test, ANOVA, and independent sample t-test were employed to analyze how demographic variables influence women's investment preferences, risk appetite, and financial awareness. These tools were selected based on the nature of the data—categorical and continuous—and their ability to test associations and differences across groups.

**Table 1: Demographic Profile of Respondents**

Variable	Categories	Frequency	Percentage
Age	21–30	45	22.50%
	31–40	70	35%
	41–50	55	27.50%
	51 and above	30	15%
Education	UG	90	45%
	PG	60	30%
	Others	50	25%
Monthly Income	Below ₹30,000	40	20%
	₹30,001–₹60,000	90	45%
	Above ₹60,000	70	35%

The sample consisted of 200 women respondents aged between 21 and 55 years. The age distribution showed that the majority belonged to the 31–40 age group (35%), followed by those in the 41–50 range (27.5%). Educationally, 45% of respondents held an undergraduate degree, and 30% had completed postgraduate studies. Regarding income, 45% earned between ₹30,001–₹60,000 per month, while 35% earned above ₹60,000. These distributions provide a diverse representation of the target population, enabling more generalizable findings across income and education levels. This background data is crucial, as income and education are significant factors influencing risk-taking ability and access to investment information. The heterogeneity among respondents enhances the validity of the comparative analysis that follows.

**Table 2: Preferred Investment Avenues**

Investment Option	No. of Respondents	Percentage
Fixed Deposits	70	35%
Gold	50	25%
Mutual Funds	40	20%
Real Estate	20	10%
Stock Market	10	5%
Others (PPF, LIC)	10	5%

Respondents were asked to indicate their most preferred investment instruments. The analysis revealed that 35% of women preferred fixed deposits, followed by 25% who invested in gold. Mutual funds were selected by 20%, while 10% invested in real estate, and only 5% each opted for stock markets and other instruments such as PPF and LIC.

The dominance of fixed deposits and gold indicates a continued preference for secure, tangible, and low-risk investments. However, the 20% share of mutual fund investors points to a gradual shift in awareness and risk-taking capacity, particularly among educated, working women. The low engagement in stock markets reflects ongoing risk aversion or lack of confidence, which is a common finding in gender-based financial studies (Dasgupta, 2015).

**Chi-Square Test: Education vs Investment Preference**

To test whether education level is significantly associated with the type of investment preferred, a Chi-square test was applied. The test yielded a Chi-square value of **16.487** with **8 degrees of freedom** and a **p-value of 0.036**, indicating statistical significance at the 5% level. This result implies that educational qualification has a notable impact on investment behavior. Respondents with postgraduate degrees were more inclined to invest in mutual funds and the stock market, while those with lower educational backgrounds preferred fixed deposits and gold. This supports prior research by Suneja (2017), who emphasized the role of financial literacy in expanding investment horizons. Education likely enhances exposure to financial planning, digital platforms, and advisory services, thereby improving confidence in higher-risk options.

**ANOVA: Income vs Risk Appetite**

**Table 3: ANOVA: Income vs Risk Appetite**

Source	SS	df	MS	F	Sig.
Between Groups	6.12	2	3.06	4.91	0.009
Within Groups	120.7	197	0.61		

To understand how income influences the willingness to take financial risks, a one-way ANOVA test was conducted. The results showed a statistically significant **F-value of 4.91** and a **p-value of 0.009**, which is below the 0.05 threshold. This suggests that differences in risk appetite across income groups are not due to chance. Interpretation of this result confirms that women with higher incomes are more open to investing in instruments with moderate to high risk, such as mutual funds, SIPs, and equities. Those in the lower income bracket showed a strong preference for fixed deposits and gold. This finding is consistent with economic theory, which holds that higher disposable income reduces fear of financial loss and increases capacity for diversified investments (Choudhary & Tripathi, 2019). Moreover, the result has practical implications for financial advisors, who should tailor products based on the income group's comfort with risk.

**Table 4: t-Test: Working vs Non-Working Women on Financial Awareness**

Group	N	Mean Score	SD	t-value	p-value
Working	120	3.8	0.68	2.72	0.007
Non-Working	80	3.5	0.72		

An independent sample t-test was conducted to assess the difference in financial awareness between working and non-working women. The results revealed a **mean score of 3.8** (out of 5) for working women and **3.5** for non-working women, with a **t-value of 2.72** and a **p-value of 0.007**. The significance of the p-value indicates a meaningful difference between the two groups.

This suggests that working women are more financially aware, likely due to their regular exposure to financial services such as salary accounts, EPF, insurance, and tax planning. Employment also often necessitates interacting with digital payment systems and financial planning tools, which naturally increases financial literacy. On the other hand, non-working women, despite sometimes managing household

budgets, may lack access to structured financial education or investment experiences. This result echoes the findings of Bhattacharya (2016), who identified employment as a key factor in enhancing financial competence among women. These results illustrate a pattern: demographic factors significantly influence investment choices and behavior among women. Education enables better understanding of diversified and high-yield investments; income supports higher risk tolerance; and employment boosts financial awareness. However, risk-averse behavior still dominates, especially in less-educated or lower-income segments. While digital and financial literacy are gradually increasing, traditional preferences persist, showing that transformation is underway but not complete.

### Findings

The study revealed that women's investment behavior is significantly shaped by their demographic characteristics. Education emerged as a key determinant, as more educated women showed a greater inclination towards mutual funds and stock markets, while those with lower qualifications preferred traditional options like fixed deposits and gold. This was statistically validated through the Chi-square test, establishing a strong association between education level and investment preference. Income levels were also found to influence risk appetite. The ANOVA results demonstrated that women with higher monthly incomes exhibited a greater willingness to invest in medium- to high-risk financial instruments such as equities and SIPs. In contrast, women with lower incomes remained risk-averse, favoring safer, low-yield investments. The t-test further indicated that working women have significantly higher financial awareness than their non-working counterparts, largely due to their direct exposure to banking systems, financial products, and digital tools. Despite increasing awareness among urban, employed women, the overall pattern still reflects cautious investment behavior dominated by security-oriented decisions. Many women, particularly those from middle-income or non-working segments, continue to rely on familial advice or traditional savings methods rather than informed financial planning.

### Suggestions

Based on the findings, it is recommended that financial literacy programs be strengthened and made more accessible to women, especially those who are non-working or belong to lower educational and income groups. Workshops and awareness campaigns could be conducted at community centers, workplaces, and educational institutions to increase familiarity with modern investment tools like mutual funds, SIPs, and tax-saving instruments. Financial institutions should consider developing women-centric investment products with moderate risk and flexible terms to encourage participation from conservative investors. Employers could also play a role by offering optional financial planning sessions as part of workplace benefits, particularly targeting younger, working women at the early stages of their careers. Moreover, government and non-governmental organizations can collaborate to launch digital platforms offering easy-to-understand financial guidance tailored to women's needs. Finally, integrating financial education into school and college curricula would instill confidence from a young age and contribute to a generation of financially independent women who make informed investment decisions.

### Scope for Further Research

This study provides meaningful insights into the investment patterns of women, yet it also opens up several avenues for further research. First, the current research was confined to a specific geographic region, and future studies could expand to include rural and semi-urban populations to gain a broader understanding of regional differences in investment behavior. Comparative studies across different states or countries could further enhance cross-cultural understanding. Additionally, the influence of psychological factors such as risk tolerance, confidence, and financial anxiety could be explored in depth using psychometric tools. Longitudinal studies tracking changes in women's investment behavior over time, particularly post major life events like marriage, childbirth, or retirement, could also yield valuable findings. Moreover, the impact of digital financial platforms and mobile investment apps on women's financial inclusion is a promising area for future investigation. Finally, a qualitative approach—through interviews or focus groups—could capture the nuanced motivations and barriers experienced by women in financial decision-making, which quantitative methods alone might miss.

### Conclusion

The investment behavior of women is shaped by a complex interplay of socio-demographic factors such as education, income, and employment status. The study clearly demonstrated that higher educational qualifications and greater income levels are associated with increased financial literacy, broader awareness of investment instruments, and a greater willingness to take risks. Working women, due to their exposure to structured financial environments, tend to exhibit more informed decision-making in terms of investment. However, a large segment of women still prefer secure, low-risk avenues such as fixed deposits and gold, reflecting traditional financial behavior and risk aversion. While digital access and financial awareness are improving, a significant gap remains in the financial empowerment of women, especially among non-working and lower-income groups. The results underline the need for targeted financial literacy programs, policy-level support, and inclusive product designs to enhance women's participation in the financial ecosystem. With structured support and sustained awareness, women can evolve from cautious savers to confident investors, contributing not just to household financial stability but to the broader economic development of the nation.

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