



**EMPIRICAL STUDY ON THE FACTORS  
AFFECTING INVESTMENT PATTERN OF COLLEGE  
TEACHERS IN NAVI MUMBAI (INDIA)**

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**Article History: Received:** 12.06.2023

**Revised:** 14.07.2023

**Accepted:** 31.07.2023

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## Abstract

With the introduction of global era, the investment opportunities have increased manifold. Studies show the shifting trend of investors from traditional investment products like post office and bank deposits and other government investment schemes to investment in insurance, debt mutual fund, equity, real estate (home loan) and retirement planning schemes.

The present study covers the impact on investment pattern by the demographic factors of the college teachers of Navi-Mumbai (India). Research indicates that investors' choice of investment avenues is associated with their age-group, gender, employment-type, income and family-type but it is not associated with their marital-status. Further research found a very meaningful result that a joint-family member has more desire for home than the nuclear family member. Secondly, the study also revealed that, we talk about gender equality, but when it comes to involvement of women in investment decision making, women participation is still lagging behind.

**Keywords:** Demographic variables, investment decision, debt, financial instruments.

**JEL Classification Code:** J11, G11, G51, G23.

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## Introduction

Conventionally, India has been considered as a nation of savers. But when it came to investing, the major share in such savings used to get invested in traditional investment products such as Bank Fixed Deposits (FD), Kisan Vikas Patra (KVP), National Saving Certificate (NSC), Public Provident Fund (PPF) etc. and physical investments such as real estate and gold. It used to be seen that Indian investors were skewed towards physical assets such as real estate and gold. Due to lack of awareness and investment knowledge about the other investment options, a significant portion of investments used to be invested in bank FD, PPF, KVP, NSC etc.

However with the changing scenario of falling rate of interest in traditional bank deposits and increasing awareness about other investment options, there has been a paradigm shift in the minds of the investors to shift their focus of investments from physical investments to financial investment products such as mutual funds, Insurance etc. This has given rise to the research on investment pattern.

The study intends to identify the impact of the demographic variables on the pattern of

investment. Data was collected from 200 college teachers in Navi-Mumbai. The study considered a random sample from college teachers. The research intends to analyze the factors affecting the investment pattern. The study majorly relied on the primary data collected through structured questionnaires.

## Review of literature:

**Josephat Lotto(2022)**, studied the effect of demographic characteristics of households' on their saving behaviour. The region for study was East Africa. The study found that, people of almost all age group and gender practiced the life cycle model of savings behaviour. Their study found that, preference for motive of saving differs from country to county.

**Sovitha Varadarajah (2020)**, aimed to identify whether the financial management behavior of lower income people is affected by demographic factors. For the study, researcher considered five demographic variables namely, age, gender, marital status, education level and per capita income level. Personal financial management behavior is measured through three dimensions, namely cash

management, credit management and saving and investment. The study involved collection of primary data from 360 lower income people through structured questionnaire. Independent sample t-test and ANOVA were used to analyze the data. The study concluded that, there is a significant difference between demographic factor such as education level, per capita income level and marital status and lower income peoples' personal financial management behavior and no significant difference between the gender, age and the personal financial management behavior of lower income peoples in Batticaloa.

**Muhammad Nauman Sadiq, Muhammad Akhtar (2019)**, found in their study that, demographic factors have an association with financial risk tolerance. Level of income, age, academic qualification, family size, financial knowledge, occupation and personality have significant association with financial risk tolerance. The study concluded that marital status of investors has no association with their levels of financial risk tolerance. **Roszkowski, Glenn E. Snelbecker, Stephen R. Leimberg (1989)** have also concluded that comparatively more risk tolerance is seen in single investors.

**Rajeshwari Jain(2014)** studied the association of income and investment pattern of working women in Ahmadabad city. The analysis showed that majority of working women preferred to invest in bank deposits for safety and the next preference for investment was in gold. The study also revealed that married women are more serious about investments rather than

unmarried women. Majority of women mentioned their frequency of investment as yearly followed by half yearly

**Ming-Ming Lai, Wei-Khong Tan(2009)** studied the attitude of Malaysians towards personal financial planning. The results showed that demographic factors such as age, gender, education level are considered while personal financial planning. The study also found that, married individuals were more likely to engage in insurance planning as compared to unmarried individuals.

**Bajtelsmit et al (1996), Jianakoplos et al (1998) & Grable (2000)** could conclude that, women allocate their portfolios differently than men and may differ in their attitudes toward risk-taking.

**Vickie L. Bajtelsmit, Alexandra Bernasek, Nancy A. Jianakoplos, (1999)**, found in their study that, on an average, women with DCPs (Defined Contribution Plans) allocate a smaller proportion of wealth to their pensions (retirement vehicles) (27%) as compared to men (35%). The factors influencing women's investment of wealth to DCPs are dissimilar to men's. The results of the analysis demonstrated that, there are significant gender differences in allocation of wealth into defined contribution pensions. Secondly they found that, women tend to be very risk averse with respect to the pension allocation decision. It is likely that women will retire with significantly lower pension wealth than their male counterparts.

On the basis of literature review, the current study aims to understand the relationship between following variables:

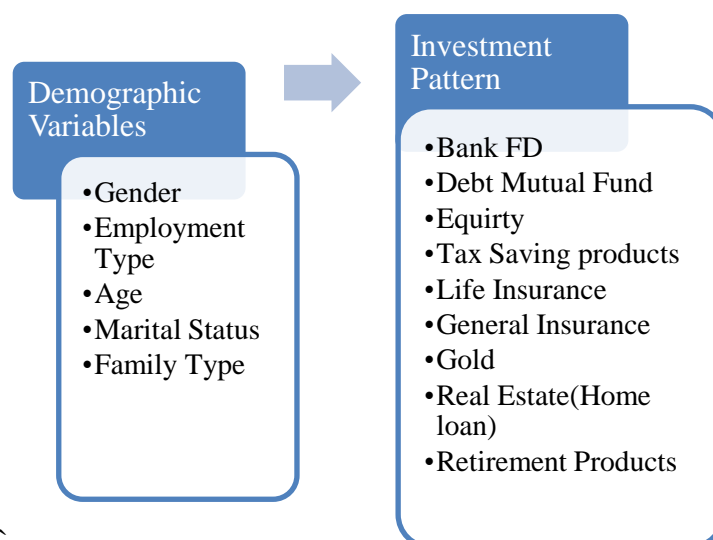


Figure 1: Association between demographic variables and investment products

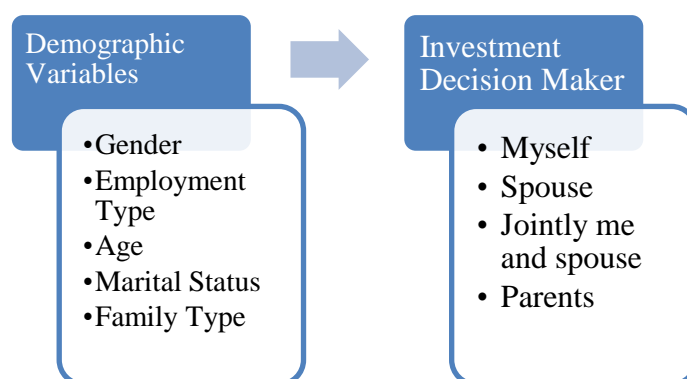


Figure 2: Association between demographic variables with investment decision maker

### Objectives of the study:

To study the influence of demographic variables on investment pattern of Navi-Mumbai college teachers, the following objectives have been formulated

1. To explore the factors affecting investment pattern among the teachers in Navi Mumbai
2. To explore the association between demographic variables (Gender, Employment type, Age-group, Marital-status) and investment pattern
3. To study the role of woman in financial decision making

On the basis of the above mentioned objectives, the following hypotheses have been formulated.

H1: There is a significant association between Gender and Investment in financial products

H2.: There is a significant association between Employment-type and Investment in financial products

H3: There is a significant association between Marital-status and Investment in financial products

H4: There is a significant association between gender and Investment decision maker

## Research Methodology:

### Research design:

The study was explorative in nature and survey method was used to complete the study. The population of the study comprised teachers of management colleges from Navi-Mumbai region. A random sample from college teachers was considered for the research.

### Sample size calculation:

The study covers teachers from management colleges in Navi Mumbai where the population size is around 200. With the help of sample size table (margin of error 5% or confidence interval 95%) sample size arrives to be 196. So the study was conducted with a sample of 200 respondents as a round figure.

### Tool for data collection:

A structured questionnaire was designed for the study. The questionnaire was divided into two sections. The first section covered the questions on demographic data. The second section contained questions related to the investment pattern.

### Tools for data analysis:

The reliability was determined through Cronbach's Alpha. To study the association between demographic variables with investment pattern, Chi square test is best to explain the association between two categorical variables. For the deeper analysis the researcher has also used layer

analysis with the addition of another categorical variable.

Further to determine the strength of association between the variables, the researcher has used Cramer- V statistics. The collected data was analysed through SPSS.

### Questionnaire Structure:

Demographic	Gender, Marital Status, Employment Type, Income, Final Decision Maker, Family Type
Investment Pattern	Bank FD Debt Mutual Fund Equity Tax saver Life insurance General insurance Gold Real Estate Retirement products

The following sample descriptive will be of value in understanding the sample characteristics. The demographic variables for this study were gender, age-group, employment-type, marital-status, family-type, monthly income and final decision maker on investment.

Table 1. Demographic Profile of the college teachers

		Frequency	Percent
Gender	Male	90	45
	Female	110	55
Age-group	54 and above years	18	9.0

	48-53 years	30	15.0
	42-47 years	45	22.5
	36 to 41 years	54	27.0
	Upto 35 years	53	26.5
Investment decision maker	Myself	100	50
	My spouse	26	13
	Jointly (Myself & spouse)	66	33
	My parents	8	4
Employment_Type	Permanent /Regular	118	59
	Ad-hoc / Contractual	82	41
Marital_Status	Unmarried	36	18
	Married	161	80.5
	Prefer not to say	3	1.5
Family_Type	Nuclear Family	113	56.5
	Joint Family	87	43.5
Monthly_Salary	Below Rs. 20,000	18	9
	Rs. 20,001 - Rs.40,000	42	21
	Rs .40,001 - 60,000	57	28.5
	Rs. 60,001 - 80,000	24	12
	Rs. 80,001 -1,00,000	19	9.5
	Above 1,00,000	40	20
	Total	200	100%

**Reliability:**

Reliability for the questionnaire was calculated through SPSS. The statistics came out as

Table 2. Reliability Statistics

Cronbach's Alpha	N of Items
0.737	22

It is considered that the reliability value more than 0.7 is good, and it can be seen that in statistics (Table 2), reliability value was (0.737) slightly higher than the standard value, so all the items in the questionnaire are reliable. Hence no

changes were done to the questionnaire and all the items were retained for further analysis.

**Chi square and Cramer-v statistics:**

The prime objective of the study is to study the factors affecting investment pattern which is depicted in the table 3. This has

been performed with the help of SPSS by using chi square, Cramer-V.

**Consolidated statistical summary for testing of Hypothesis:**

Table 3: Association between Gender and investment products, Decision

Hypothesis * (Gender different investments)	Chi Square Value	P Value	Cramer-V	Strength	Hypothesis (Accepted / Rejected)
Bank FD	9.373	.095	.216	weak	Rejected
Debt Mutual Fund	4.011	.260	.142	weak	Rejected
Equity	35.036	.000	.419	Moderate	<b>Accepted</b>
Tax saving products	7.654	.058	.196	weak	Rejected
Life insurance	4.378	.357	.148	weak	Rejected
General insurance	3.640	.303	.135	weak	Rejected
Gold	8.118	.150	.201	weak	Rejected
Real Estate	3.684	.596	.136	weak	Rejected
Retirement products	20.319	.001	.341	Moderate	<b>Accepted</b>

Gender of the investor is found to be associated with investment in equity shares (P=0.00) and investment in retirement products (p=0.001) and revealed a moderate relationship.

While investing in equity, males and females have shown difference in their investments as males are considered to be more aggressive as compared to females. On the basis of this analysis we can say that, females are more conservative investors than male. Vicki R. Fitzsimmons (2000) also found in their study that, there are differences between men and women at least in terms of financial management attitudes and behaviors.

Even though both males and females are earning, still male is considered to be the

main bread earner of the family, secondly, as females are busy in taking care of other responsibilities towards the family, so they are unable to dedicate time for long term investment decisions as their male partners.

On the contrary other demographic variables have not shown any association with investment pattern and fail to prove the alternative hypothesis.

Further, for meaningful result with the help of layer analysis, by adding one more variable i.e. age of investor with investment in equity and gender, we found that, age-group plays an important role among investments in equity with respect to investment pattern of the investor.

Table 4. Layer Analysis of Equity shares and Gender with Age\_Group

Age Group	Chi-Square Value	Cramer-V	Strength	P Value
Upto 35years	20.269	.618	Strong	0.000

36-41 years	14.286	.514	Moderate	.003
42-47 Years	15.592	.589	Moderate	.001
48-53 Years	1.212	.201	Weak	.750
54 and above	1.221	.260	Weak	.543

It showed that (Table 4), among all the age groups, the age-group below 47 has shown interest towards investment in equity (p=.001). Among all age groups, the age group up to 35 years is investing in equity shares at a higher rate than the remaining age groups as they have high risk appetite

and also showed a strong association. (p=0.000 and Cramer V statistics = 0.618).

### Gender and Decision maker on investments:

Table 5: Association between Gender and decision maker on investments

Hypothesis	Chi Square Value	P Value	Cramer-V	Strength	Hypothesis (Accepted / Rejected)
H4:There is a significant association between gender and Investment decision maker	9.025	.029	.212	Weak	<b>Accepted</b>

The Chi square analysis showed P= 0.029 which is less than 0.05 (Table 5), there is an association between gender and investment decision maker. This implies that the

decision maker in financial investment decision is different in case of male and female investors.

Table 6. Gender \* decision maker on investments

			Decision maker on investments				Total
			Myself	My spouse	Jointly & spouse	Myself & My parents	
Gender	Male	Count	54	9	22	5	90
		% within Gender	60.0%	10.0%	24.4%	5.6%	100%
	Female	Count	46	17	44	3	110
		% within Gender	41.8%	15.5%	40.0%	2.7%	100%
Total		Count	100	26	66	8	200
		% within Gender	50.0%	13.0%	33.0%	4.0%	100%



Majority of Male (60%) investors are taking the investment decisions by themselves as compared to their female counterparts. On the contrary, female investors are taking decisions jointly (40%) by consulting with their spouses (Table 6). Also, it's seen that male and female are different in being a final decision maker on investments. Most male investors are seen to take their investment decisions independently whereas female investors consult their spouse for investment decisions. Alexandra Bernasek and Vickie

L. Bajtelsmit(2002) also found in their study that women involvement in financial decision making is lower as its linked to her share in the income.

Generally, in every aspect of life, we always talk about women empowerment and gender equality but when it comes to in real terms like investment decision, male are more dominant in taking investment decisions independently and females are still hesitant to take such decisions on their own.

Table 7. Layer Analysis of Retirement products and Gender with Age\_Group

Age Group	Chi-Square Value	Cramer-V	Strength	P Value
Upto 35years	2.261	.207	Weak	.323
36-41 years	5.538	.320	Weak	.236
42-47 Years	11.471	<b>.505</b>	Strong	.043
48-53 Years	6.616	.470	Moderate	.158
54 and above	5.914	.573	Moderate	.116

Further, if we see the relationship between retirement plan with gender and age -group, we found that (Table 7), only the age-group 42 to 47 years (p=0.043) have shown interest in investing in retirement products. This age-group investors are generally considered to be moderate investors. **M.Krishna Moorthy, Chiau shu Sien** et. al,(2012) also concluded in their study that, different age groups of the working individuals have different perspective towards the retirement planning.

#### Association of Employment Type with different investment products:

The chi- square analysis showed that, the investment pattern relates to the employment-type. Both the ad-hoc and the permanent teachers are investing in Debt MF, Tax Saver, Life insurance, General insurance, Gold, Real estate and Retirement products (Table 8).

Table 8. Association of Employment Type with different investment products

Hypothesis	Chi Square Value	P Value	Cramer V	Strength	Hypothesis Accepted/ Rejected
Bank FD	7.705	.173	.196	Weak	Rejected
Debt Mutual Fund	13.208	.004	.257	Weak	Accepted
Equity	3.660	.301	.135	Weak	Rejected
Tax saver	20.557	.000	.365	Moderate	Accepted

Life insurance	28.214	.000	.376	Moderate	<b>Accepted</b>
General insurance	16.072	.001	.283	Weak	<b>Accepted</b>
Gold	13.337	.002	.258	Weak	<b>Accepted</b>
Real Estate	28.652	.000	.378	Moderate	<b>Accepted</b>
Retirement products	36.289	.000	.426	Moderate	<b>Accepted</b>

In table:8, employment type has shown a significant association with all the variables of investment pattern and also showed a moderate association except for bank deposit ( $p=0.173$ ) and equity ( $p=0.301$ ). Reason for less investment in bank deposits can be attributed to the reduction in interest rates on bank deposits and availability of other investment avenues with better return prospects. Due to high rate of inflation, the real rate of return on bank deposits have come down year on year, so the investors have moved to the other avenues of investments like tax saving products ( $p=.000$ ), life insurance ( $p=.000$ ), general insurance ( $p=.001$ ), gold ( $p=.002$ ), real estate (home loan) ( $p=.000$ ), retirement products ( $p=.000$ ).

Chaubey and Dimri (2008) have also found the similar result in their study and proved that there is a shifting trend of investors from post office and other government

investment schemes to insurance and mutual funds.

Further table 8 revealed that, employment type with retirement scheme, have shown the highest strength (cramer-v = 0.426) among all the other variables.

It shows that, retirement schemes play an important role in decision making regarding investment pattern.

Not only with the variable employment-type but with gender (in Table 3 Cramer-v=0.341) also it showed highest strength. If we want to see a more meaningful result by adding one more variable i.e. family-type with these two variables (employment-type and Real estate investment), family type showed strong association with Real estate investment. Very interesting point came out during this research. It's seen that joint family member has more desire for home than the nuclear ones.

Table 9. Layer Analysis of Employment-Type and investment in real estate (Home Loan) with Family\_Type

<b>Family_Type</b>	<b>Chi-Square Value</b>	<b>Cramer-V</b>	<b>Strength</b>	<b>P Value</b>
Nuclear	9.533	.290	Weak	.049
Joint	25.152	.538	Strong	.000

It can be seen from the above table 9 that, either a person from a nuclear family or a joint family have shown a desire for having a house (real estate). With the help of Cramer-V statistics, its seen that, joint-

family (Cramer V=0.538) member has shown strong association than the nuclear family member (Cramer V=0.290) towards investing in a house.

Table 10. Association of Marital status with investment products

Hypothesis (Association of Marital status with investment products)	Chi Square Value	P Value	Cramer V	Strength	Hypothesis Accepted/ Rejected
Bank FD	11.231	.340	.168	Weak	Rejected
Debt MF	6.063	.416	.123	Weak	Rejected
Equity	2.881	.824	.085	Weak	Rejected
Tax Saver products	8.998	.174	.150	Weak	Rejected
Life insurance	11.265	.187	.168	Weak	Rejected
General Insurance	8.142	.228	.143	Weak	Rejected
Gold	11.005	.357	.166	Weak	Rejected
Home loan(real estate)	35.655	.000	.299	Weak	<b>Accepted</b>
Retirement Products	19.285	.082	.220	Weak	Rejected with min. margin

Table 10 depicted that, marital-status has shown no association between different investment avenues except home loan (real estate  $p=0.000$ ) has shown association with marital-status. So it can be concluded that, after marriage, every person would like to own a house rather than investing in other investment avenues. Secondly, retirement products ( $p=0.082$ ) have shown some kind of association with the marital-status with weak strength.

### Discussion and Conclusion:

The three general objectives of this research were, to find out first, factors affecting investment pattern, second, the association between demographic variables like gender, employment type and marital status with investment pattern and third to examine the role of women in financial decision making. A conceptual framework was developed on the basis of the above mentioned objectives.

It was observed that, males are more dominant in taking investment decisions towards retirement planning and females are still hesitant to take such decisions on their own. If women also start taking their investment decisions independently, then

only we can say that we achieved women empowerment and gender equality in true sense.

Research also indicates that, investor's choice of their investment pattern is associated with age, gender, employment type but it's not associated with their marital status. Some factors have significant relationship with individual's preparedness and capability for retirement savings.

The Result of Chi- square shows that, employment type and saving in insurance are directly associated with retirement planning behavior. Investment attitude in gold is also found to partially mediate this relationship.

### Limitation of the study:

The study has its limitations. First, this research was under taken as a cross sectional study. Thus it cannot measure the change in the variables over time and findings capture only a snapshot of the investment pattern of Navi-Mumbai college teachers at a particular point in time. Nevertheless, this shortcoming can be mitigated by studying five different age groups and marital status.

Second, this study is based on a non-probability sampling method, because of the limitation in cost and accessibility to the list of college teachers. Third, the study was restricted to the Navi-Mumbai working college teachers, so it may not be representative of the overall teachers of Mumbai. Last, since this research is a type of behavioral study, the selected behavioral factors were based on literature review and researchers financial knowledge, so that the proposed framework could be more accurate and comprehensive by adding more variables (Psychological factors). Since this study applied to small sample (n=200), it is recommended for future studies to examine the effect of demographic variables on investment pattern. Moreover, in future a mixed method may be applied to investigate the psychological factors and investment choices of the investors for their retirement planning. Finally this study could be the first empirical research to analyze the proposed relationship in Navi-Mumbai college teachers. Also the replication of this research in future using samples from other places could be a fruitful attempt to reach the final conclusion of the findings.

This study has a number of key inferences for the researchers. The findings of the present paper will help to wrap the literature gaps.

#### Future scope of the study:

The current study has focused on the occupation of teachers. The scope of the study can further be expanded to cover other occupations. Also the study covered the geographic location of Navi Mumbai. Such study can be expanded to include other geographic locations.

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