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Investment pattern of working women in the twin cities of Hyderabad and Secunderabad – A study

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ABSTRACT

Many individuals find investment to be fascinating because they can participate in the decision making process and see the results of their choices. Not all investments will be profitable, as investors will not always make the correct investment decisions over the period of years, however, one should earn a positive return on a diversified portfolio. Investment is one of the major issues of the middle class families as their small savings of today are to meet the expenses of tomorrow. Everyone makes investments. This study examines the investment pattern and awareness of the women investors about different investment instruments such as bank deposits, small savings, life insurance schemes, bullions, corporate security- bonds, mutual funds, and equity and preference shares, pension plan, a home or some other mode of investment like investing in Real Estate (Property) or in saving schemes of post offices. Each of these investments has common characteristics such as potential return and the risk associated with it. The key to a successful financial plan is to keep apart a larger amount of savings and invest it intelligently for a longer period of time.

Hence keeping this in mind, this paper aims to study the awareness and preferences of working women as investors for different investment options available to them and to analyze the factors influencing their perception and preferences. More specifically, an attempt has been made in this article to measure the level of awareness of investors about several pre-identified investment products and to rank the investment products on the basis of importance of parameters considered before investment is made. This research also finds the impact of age, qualification and work experience on the income level of the individual on investment. The present study also focuses on finding out the various options available for women investors and the factors which affects their decision. The study also concentrates to identify the differences in the perception of investors in the decision of investing on the basis of age, occupation, educational background and income level and to find out their attitude towards risk and return. It is observed that among all investment avenues, investments in Provident Fund followed by Post Office MIS (Monthly Investment Schemes) are considered to be the safest and most preferred by the respondents.

Key words: Investment pattern, influence, return, risk

1. Introduction

There are various types of investment avenues available in the market such as shares, debentures, mutual funds, bank deposits, life insurance, precious metal, public provident fund,

post office saving schemes and many more. Some investment avenues are risky and some are risk free. The investors prefer to invest in particular Investment Avenue according to their need, risk bearing capacity and expected return. When the investors want high return they have to choose the investment avenue that is risky. Compared to females, males prefer to invest in investment avenues that are risky. The people with less education prefer to invest in risk free investment avenues. The unmarried people prefer to invest in investment avenues where high risk is involved. Investment is one of the major issues of the middle class families as their small savings of today are to meet the expenses for the future.

Investment refers to the commitment of funds at present, in anticipation of some positive rate of return in future. Today the horizon of investment is certainly wide. An investor is confronted with an array of investment avenues as mentioned earlier. The income earned by an individual is partly spent and the rest is saved for meeting future expenses. Instead of keeping the savings idle people may like to use their savings to get returns on it in the future, which is known as 'investment'. A Portfolio is a combination of different investment assets mixed and matched for the purpose of achieving an investor's goal.

National Council of Applied Economic Research (NCEA) (1961) 'Urban Saving survey' noticed that irrespective of occupation, educational qualifications and age attained, households at every level think that saving for the future was desirable. It was found that, desire to make provision for emergencies were a very important motive for saving for old age. Securities and Exchange Board of India (SEBI) and NCEAR (2000) 'Survey of Indian Investors' reported that Safety and Liquidity were the primary considerations which determined the choice of choosing an investment portfolio.

2. Review of literature

Langer (1975) in his opinion based on the research on individual investors finds that self reported risk tolerance does the best job of explaining differences in both portfolio diversification and portfolio turnover across individual investors.

Barnewall (1987) finds that an individual investor can be found by lifestyle characteristics, risk aversion, control orientation and occupation. Warren *et al.* (1990) and Rajarajan (2000) predict individual investment choices (e.g., stocks, bonds, real estate) based on lifestyle and demographic attributes. These investors see rewards as contingent upon their own behavior.

Bajtelsmit and Van Derhei, (1996) finds that the different genders have psychological difference in making investment decisions, female are often more conservative than male and female are not keen on making risky investment decisions. Women often make safe decisions rather than run risks even when they are given reasonable advice or they think that they can get higher return if they take risks. Besides, male often trade much more than female. They discovered that women always make a more cautious decision than men do because of the risk-avoiding psychology.

Vickie L. Bajtelsmit, Alexandra Bernasek(1996), elucidates that researchers in many diverse fields have attempted to provide explanations for observed gender differences. It is difficult to definitively answer this question since researchers can only observe the outcomes of decisions rather than the decision-making processes themselves. Gender differences in investing and risk-taking can be attributed to many possible causes but, ultimately, it can be shown that all the explanations have their root in discrimination and/or differences in

individual preferences. These factors may influence risk aversion directly or through outcomes such as gender differences in wealth, income and employment. Women are more likely to take time out of the workforce for family responsibilities (child bearing, child care, elder care) which makes it difficult for them to take advantage of long term investment growth in retirement savings. Women continue to be the primary caretakers in families, responsible for care of children and the elderly.

Lori L. Embrey and Jonathan J. Fox(1997) emphasizes that Investment advisors may feel overly challenged by the need to convince risk averse investors that their long term financial interest is protected by choosing more volatile investments. In light of recent studies which find women to be more risk averse, advisors may be reluctant to place a single woman's assets in higher risk investment instruments. This study could dispel some of these concerns, as it has been shown that single men and women generally use the same decision-making process when it comes to investing.

Karthikeyan (2001) has conducted research on Small Investors Perception on Post office Saving Schemes and found that there was significant difference among the four age groups, in the level of awareness for Kisan Vikas Patra (KVP), National Savings Scheme (NSS), and deposit Scheme for Retired Employees (DSRE), and concluded that the level of awareness among investors in the old age group was higher than in those of young age group.

Barber and Odean (2001), analyses that men are inclined to feel more competent than women do in financial matters. Indeed, casual observation reveals that men are disproportionately represented in the financial industry. We expect, therefore, that men will generally be more overconfident about their ability to make financial decisions than women.

Julie R. Agnew and Either (2003), opines that there is evidence that women are more risk averse than men in general and this translates to investing in less risky assets in their investment plans. Differences in financial literacy between men and women may also explain differences in their investment decisions. There is some research on individual investors for e.g. Langer (1975) finds that self-reported risk tolerance does the best job of explaining differences in both portfolio diversification and portfolio turnover across individual investors.

Meenakshi Chaturvedi and Shruti Khare (2012) analyses and suggests that there is an explosion in the growth of middle class families due to double income and increase in number of working women. Hence effort should be made to attract women investors by providing right information and knowledge about the market through advertisement. There is a dire need to initiate steps to inculcate saving habit among the growing middle class families. The savings are to be pooled and channelized into productive investments. Hence effort should be made to attract women investors by providing right information and knowledge about the market through advertisement.

Hoang Thanh Hue Ton et all (2014),their study aims to find out whether there is the discrepancy among classified groups of investors or not (the discrepancy in the risk taking investment decisions between male and female, in same age group, education, investment experience, income and marital status) , and they illustrated that male have more willingness to take risks in making investment decision than female; the elderly or retirement investors make the options of not taking risk; the investors with five-year-or-more investment experience often take higher risks than the others; the investors of different income levels

have the same ability to take risk; the single investors show a tendency to take higher risks than married investors.

Veeramani G and M.Karthikeyan(2014), opines that previous studies mainly concentrated on differences in individual investing pattern on the basis of gender and have been carried out to determine the pattern of institutional investors investment but studies dealing with Investment pattern of individual investors are very few .Earlier studies conclude that women invest more conservatively than their male counterparts. Their study concentrates on the investment pattern of the investors in Mutual fund and Life insurance. To know what factors influence investors while they choose a particular investment ,a particular company and in which particular scheme they prefer to invest and to find out whether they are satisfied with their investment decision or not.

3.1 Objectives

1. To study and analyze the factors which affects individual investment decision.
2. To study the difference in perception of Investors in the decision of investing on the basis of risk and returns.
3. To examine the impact of risk and returns associated with investments with respect to age, income and profession of individuals.

3.1 Research methodology

A research design must contain the clear statement of the research problem, procedures and techniques for gathering information, the population to be studied and the methods used in processing and analyzing data (Kothari, 1999). This is a descriptive research involving the data collection from primary as well as secondary sources. In case of primary data collection a well-structured questionnaire was prepared using different scales and the data was collected from the investors through survey method. Information was gathered from various secondary sources such as journals, web sites, books and research articles etc.

3.2 Population

The population for this study is only working women investors of the twin cities of Hyderabad and Secunderabad. The individual women investors of the twin cities were the target respondents from which the data was collected.

3.3 Sample size

Using Cochran's formula for sample size with $\alpha = 0.05$, the survey was carried among **300** working women in the twin cities as respondents. Of the 300 questionnaires, 246 filled forms were returned, representing a response rate of 82% which is considered an acceptable level of response rate in this type of research.

3.4 Sampling procedure

The sampling procedure followed in this study is non-probability convenient sampling. Simple procedures were used to select the respondents from the available database. While selecting the respondents, factors, such as age, educational qualification, and professional background of the working women were considered. These were analyzed using standard

techniques of descriptive analysis, chi-square tests, ANOVA, factor analysis (FA - Principal Component Analysis for extraction and varimax rotation for rotated components), Regression analysis and other basic techniques using SPSS and Excel.

3.5 Hypothesis

1. H₀₁: As age increases the annual income increases proportionately.
H₁₁: As age increases the annual income does not increase proportionately.
2. H₀₂: There is a positive impact of Qualification, age and experience on the annual income.
H₁₂: All three factors do not have the same impact on the annual income.
3. H₀₃: As income increases the awareness and choice of investment increases proportionately.
H₁₃: As income increases the awareness and choice of investment does not increase proportionately.
4. H₀₄: In FA, the correlation matrix is an Identity matrix and hence FA cannot be done.
H₁₄: In FA, the correlation matrix is not an Identity matrix and hence FA can be done.

3.6 Reliability test

The concept of reliability has been used to cover several aspects of score consistency. Test reliability indicates the extent to which individual differences in test scores are attributable to “true” differences in the characteristics under consideration and the extent to which they are attributable to chance errors which cannot be avoided or corrected through improved methodology.

Table 1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
0.574	0.615

Source: Primary Data, SPSS

The Cronbach alpha is the most widely used index for determining internal consistency (Kerlinger, 1986). It has been generally accepted that in the early stages of the research on hypothesized measure of construct, reliabilities of 0.50 or higher are needed, while for widely used scales, the reliabilities should not be below 0.6 (Nunnally, 1978). In the current survey, all subscale alpha coefficients exceed 0.5 with an overall alpha value 0.615 (Table 1) for the entire questionnaire. The high alpha value in all five subscales confirms the homogeneity of the items comprising them, and indicates acceptable level of reliability.

Analysis of the Data: The data is analyzed under the following two broad categories:

Phase I

Personal Factors: This phase includes the personal details of the investors. The factors considered are age, qualification, work status, etc.

Phase II

Behavioral Factors: In this particular phase the responses for the various behavioral factors of the investors that have been considered in the questionnaire have been analyzed. The

investors' financial resources, risk tolerance and various other factors have been analyzed in this phase.

Phase I

Personal Factors

Table 2: Age of Investors

AGE (In years)	No Of Respondents	Percentage
21-30	66	26.83
31-40	96	39.02
41-50	64	26.02
51-60	19	7.72
Greater than 60	1	0.41
TOTAL	246	100%

Source: Primary Data

Table 2 shows that out of the 246 respondents, nearly 26.83% of the investors are in the age-group of 21-30 years whereas 39.02% are in 31-40 years, 26.02% are in the age-group of 41-50 years. 7.72% are in the age-group of 51-60.

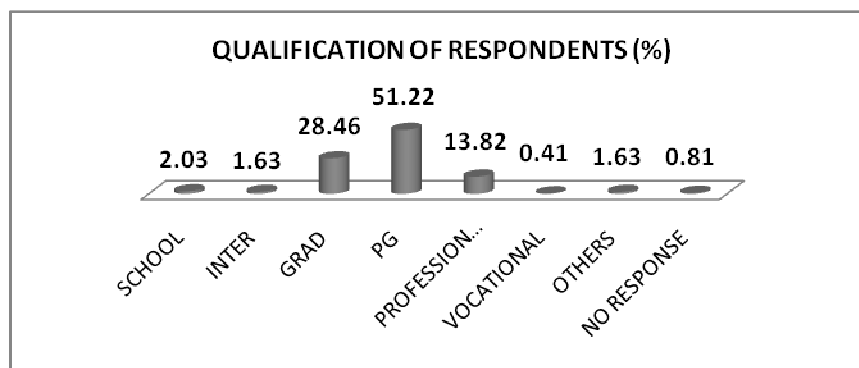


Figure 1: Educational Qualification of Investors

Source: Primary Data

Figure 1 shows that out of the 246 respondents, only 2.03% of the investors have school level education whereas 28.46% are graduates, 51.22% are postgraduates, 13.82% have professional qualification and 1.63% of them have completed other level of education like diploma, etc.

Table 3: Work Status of the Investors

Work-Area	No Of Respondents	Percentage
School	36	14.63
College	72	29.27
Professional	16	6.50
Corporate	46	18.70
Self-Employed	13	5.28
Government	45	18.29
Others	14	5.69
No Response	4	1.63
Total	246	100

Source: Primary Data

Out of the 246 respondents, 14.63% of the investors are working in schools whereas 29.27% are working in colleges, 6.50% are professionals, 18.70% are in corporate sector, 18.29% are in government services and 5.69% are in other jobs like banks, etc. as shown in Table 3.

Table 4 : Marital Status of the Investors

MARITAL STATUS	No Of Respondents	Percentage
Single	39	15.85
Married	199	80.89
Divorced	4	1.63
Widowed	4	1.63
TOTAL	246	100

Source: Primary data

It is observed from table 4, that majority of the women respondents are married (80.89%) and 15.84% are single (spinsters). An equal percent of 1.63% were divorced and widowed.

Family Type: 69.11% of the respondents were from nuclear families, where as 30.49% were in joint families (Figure 2).

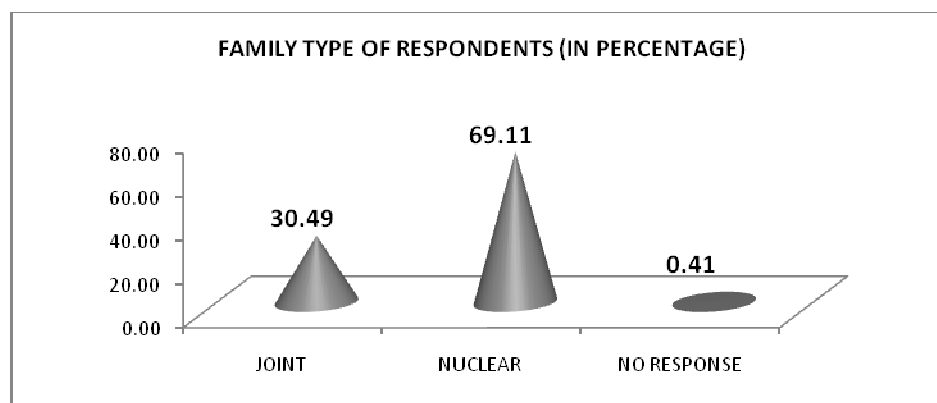


Figure 2: Family Types of respondents (In Percentage)

Source: Primary data

Phase II

Behavioral Factors

Table 5: Annual Income of respondents

Annual Income	No of Respondents	Percentage
< Rs.1,00,000	27	10.98
Rs.1,00,000 - Rs.2,00,000	54	21.95
Rs.2,00,000 - Rs.5,00,000	88	35.77
Rs.5,00,000 - Rs.10,00,000	53	21.54
> Rs.10,00,000	20	8.13
No Answer	4	1.63
Total	246	100

Source: Primary data

It is shown in Table 5 that majority of the respondents (88/246) were in the income bracket of Rs.2, 00,000– Rs.5, 00,000/- p.a., i.e., representing 35.77%.21.95% and 21.54 % are in the income bracket of Rs.1, 00,000 - Rs.2, 00,000/- and Rs.5, 00,000 - Rs.10, 00,000/- respectively.

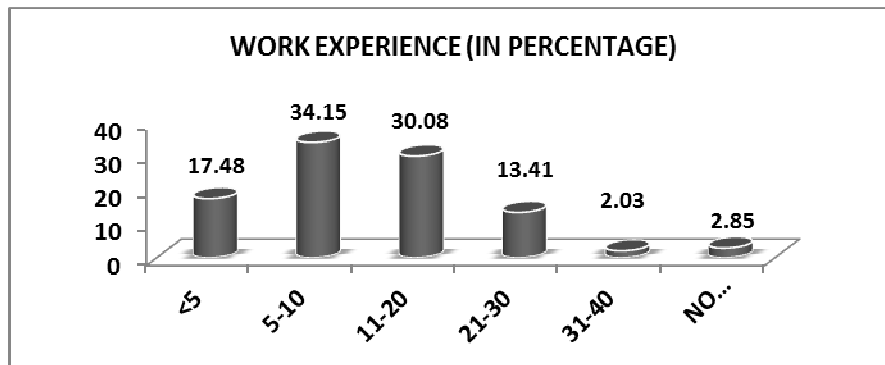


Figure 3: Work experience
 Source: Primary data

From Figure 3 it is observed that majority of the respondents have a minimum of 5 – 10 years of work experience (34.15%). 30.08% of the women respondents have 11 – 20 years of work experience, whereas 17.48 % have less than 5 years' experience and 13.41% have 21 – 30 years of work experience.

3.7 Saving pattern of the investors

It may be noted from the information given in Table 6 that most of the respondents are able to save between 5 – 50% of the annual income. Only a few of the respondents, i.e., around 6% of the total respondent were not able to save beyond 5% from their income. It can be noted that 38.21 % of the total respondents are able to save to the extent of 10-25% of their annual income. While 24.8% are saving between 5 - 10%. 27.64% are saving 25-50% of their annual income. It is therefore, concluded that most of the sample investors are able to save substantially out of their annual income and is in a position to make investments.

Table 6: Saving pattern of the investors

Saving	No of Respondents	Percentage
Less than 5%	14	5.69
5 – 10%	61	24.80
10 – 25%	94	38.21
25 – 50%	68	27.64
No Ans	9	3.66
Total	246	100%

Source: Primary data

3.8 Decision for expenditure, savings and investments

The income earned by a person is normally distributed in three areas - investment, expenditure and savings. In all the three cases, i.e., investment, expenditure and savings,

55.69%, 60.16% and 52.44% of the decisions are made with the help of spouse respectively. Slowly women are indeed becoming independent in taking decisions as observed from table 7 below. 28.05%, 27.64% and 35.77% of the respondents make their decision independently and exclusively by them for investment, expenditure and savings respectively. The decision taken only by the spouse in all the three cases is a very low percentage of 1.63%, 2.85% and 4.47% respectively.

Table 7: Decision for expenditure, savings and investments

DECISION FOR						
Decision by	Investment	%	Expenditure	%	Savings	%
Self	69	28.05	68	27.64	88	35.77
With spouse	137	55.69	148	60.16	129	52.44
Only spouse	4	1.63	7	2.85	11	4.47
In-laws play a role	2	0.81	6	2.44	4	1.63
Others	15	6.10	11	4.47	9	3.66

Source: Primary data

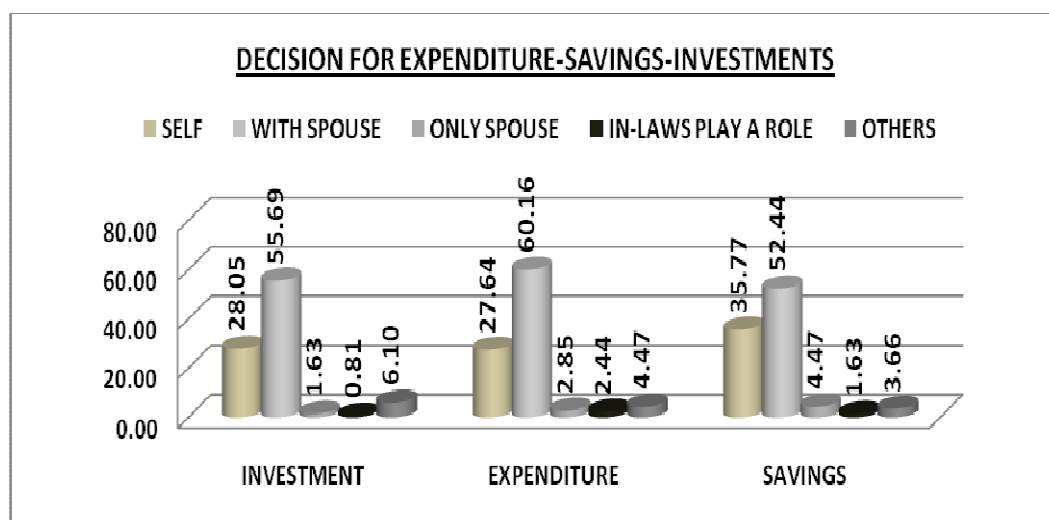


Figure 4: Decision for expenditure, savings and investments

Source: Primary data

Table 8 provides the information about the preference of investors towards various investment avenues and the following observation were made.

1. 17 investment avenues were placed before the respondents. Majority of the investors preferred 'Provident Fund' as their most preferred choice of investment apart from investing in other portfolios. A total number of 129 respondents (18.7%) preferred the same.
2. Next to Provident Fund, Post office MIS constitutes the second choice of investment (115/246, 16.67%) among the various investment avenues preferred by the investors. 81/246 (11.74%) respondents invested in Real Estate which is the third investment opportunity they prefer.

Table 8: Investor preferences of investment avenues

S. NO.	Investment Avenues	No of Respondents	Percentage
1	Provident Fund	129	18.7
2	Post office MIS	115	16.67
3	Real Estate	81	11.74
4	Antiques	51	7.39
5	LIC	47	6.81
6	PPF	43	6.23
7	Commodities	42	6.09
8	Costly metals/stones	38	5.51
9	Mutual Funds	36	5.22
10	Chit Funds	25	3.62
11	Fixed Deposits in Companies	23	3.33
12	Shares	21	3.04
13	Bank Fixed Deposits	12	1.74
14	Tax Free Bonds	11	1.59
15	NSC	8	1.16
16	Private Insurance	6	0.87
17	Debt Market	2	0.29
	TOTAL	690	100

Source: Primary data

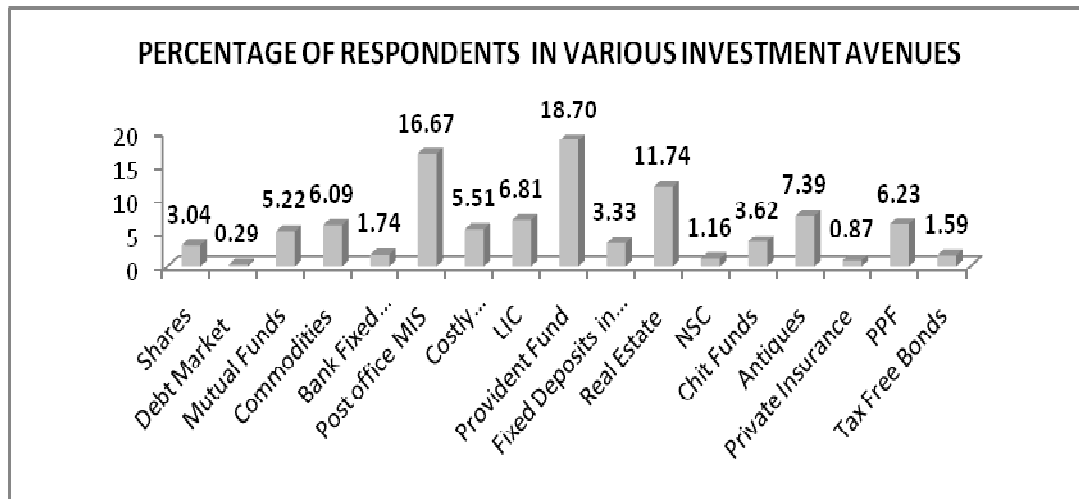


Figure 5: Investor preferences of investment avenues

Source: Primary data

35.77% of the respondents were in the income bracket of Rs.2,00,000 - Rs.5,00,000/- p.a. 21.95% and 21.54 % are in the income bracket of Rs.1,00,000 - Rs.2,00,000/- and Rs.5,00,000 - Rs.10,00,000/- respectively as revealed in Table 5. Income is also identified as one of the variable that has a significant relation with the option of investment avenues. To assess the level of relation an analysis of Income-distribution with investment avenues is attempted. The relevant data for this purpose is furnished in table 9. It is observed that the increase in the level of income has increased the awareness of investing in various avenues and has shown a positive impact on different investment portfolios.

Table 9: Income-wise distribution of investment avenues

ANNUAL IN	INVESTMENT AVENUES																
	PPF	ANTIQUES	TAX FREE BONDS	PF	COSTLY METALS	NSC	BANK FD	LIC	FD IN COMPANIES	CHIT FUNDS	PRIVATE INSURANCE	PO MIS	DEBT MKT	COMMODITIES	SHARES	MUTUAL FUNDS	REAL ESTATE
LESS THAN 1 L	2	0	0	3	3	1	12	8	0	7	1	2	0	5	0	2	1
1-2 L	1	0	0	9	8	0	16	30	2	10	7	6	1	1	0	0	4
2-5 L	19	1	5	35	17	9	41	49	3	22	8	12	1	3	5	11	13
5-10 L	15	3	3	26	11	9	34	34	2	10	4	12	0	3	10	13	15
MORE THAN 10 L	7	2	3	8	8	6	11	8	1	1	3	6	0	0	6	10	9
Total	44	6	11	81	47	25	114	129	8	50	23	38	2	12	21	36	42

Source: Primary data

3.9 Investment objective

To ascertain the investment objective influencing the investor preferences and their behavior, investors were asked to indicate their choices for various investment objectives. For this purpose, twelve. Objectives were placed before them. The obtained information is presented and analyzed in table 10. Information presented in table 10 shows that most of the investors, i.e., 113 out of 246, which works out to 45.93% of them, have indicated that ‘Savings for future of children’ as their first objective in choosing the investment alternative. The second objective influencing the investor behavior and preferences in the selection of investment alternative is ‘Retirement planning’ to earn from the investment made. This is stated by 88 out of 246 which works out to 35.77% of the total. The above two objectives are followed by ‘Future Emergencies’, ‘Security’ and ‘Education funding’ and so on.

Table 10: Investment objective

Investment objective	No	%
Short term profit seeking	22	8.94
Steady income	43	17.48
Long term profit seeking	57	23.17
Future Emergencies	84	34.15
Purchase of property	58	23.58
Education funding	69	28.05
Retirement planning	88	35.77
Savings for future of children	113	45.93
Security	81	32.93
Status	21	8.54
Long term wealth accumulation	49	19.92
Others	17	6.91

Source: Primary data

Table 11: Frequency of monitoring their investment

Monitor	No of Respondents	Percentage
Daily	2	0.81
Monthly	86	34.96
Quarterly	49	19.92
Bi-Annually	28	11.38
Annually	53	21.54
No Response	28	11.38
Total	246	100%

Source: Primary data

Women in general being more cautious and conscious of their investment/savings, tend to monitor more frequently than men. Table 11 shows that 86/246 (34.96%) investors monitor their investments on a monthly basis. 49/246 (19.92%) investors monitor on a quarterly basis whereas 53/246 (21.54%) investors monitor annually.

Table 12: Sources of Income

Sources of income	No of Respondents	Percentage
Inherited Wealth	16	6.50
Marginal Financing	4	1.63
Income from business	14	5.69
Personal Borrowing	4	1.63
Salary	205	83.33
Total	246	100%

Source: Primary data

Majority of the respondents 205/246 (83.33%) claim that salary is their source of income whereas wealth from inheritance accounts for only 6.5%, i.e., 16/246.

Table 13: Age versus annual income

Age In Years	Annual Income(In Lakh-L)					Total
	<11	1 – 2 L	2 – 5 L	5 – 10 L	More Than 10 L	
20-30	11	19	22	10	2	64
31-40	11	25	32	14	13	95
41-50	5	8	24	23	3	63
51-60	0	2	10	5	2	19
More Than 60	0	0	0	1	0	1
Total	27	54	88	53	20	242

Source: Primary data

An age old saying is that as age increases the annual income also increases. However, from Table 13, conducting the χ^2 test for association, the χ^2 value = 33.659 and the significant value for a two-tailed test at 5% level = 0.006. Since p-value < 0.05, we reject the null hypothesis and conclude that as age increases the annual income does not increase.

Table 14: Important Parameters for Choosing an Investment

	Rank(Figure in number)									
Parameters	1	2	3	4	5	6	7	8	9	10
The opportunity for steady growth	5	9	4	10	14	10	19	14	27	30
Monthly income the investment will generate	13	6	10	10	20	13	21	14	3	15
The safety of my investment	9	2	5	2	7	10	7	14	27	62
Preserve my net worth	6	9	6	9	18	16	13	17	10	16
Stay ahead of future inflation	7	5	9	14	20	14	12	18	10	11
Increase my current investment income	7	8	13	14	14	8	15	11	16	19
Fund college education	19	12	11	6	11	11	8	19	10	19
Reduce my current tax burden	14	20	10	4	19	8	10	18	16	10
Accumulate future income/wealth	7	4	9	17	4	13	15	16	20	21
Invest for retirement	18	10	5	3	12	8	9	18	17	37

Table 15: Important Parameters for Choosing an Investment (Figures in percentage)

	Rank (Figures in percentage)									
Important parameters	1	2	3	4	5	6	7	8	9	10
The opportunity for steady growth	3.52	6.34	2.82	7.04	9.86	7.04	13.38	9.86	19.01	21.13
Monthly income the investment will generate	10.40	4.80	8.00	8.00	16.00	10.40	16.80	11.20	2.40	12.00
The safety of my investment	6.21	1.38	3.45	1.38	4.83	6.90	4.83	9.66	18.62	42.76
Preserve my net worth	5.00	7.50	5.00	7.50	15.00	13.33	10.83	14.17	8.33	13.33
Stay ahead of future inflation	5.83	4.17	7.50	11.67	16.67	11.67	10.00	15.00	8.33	9.17
Increase my current investment income	5.60	6.40	10.40	11.20	11.20	6.40	12.00	8.80	12.80	15.20
Fund college education	15.08	9.52	8.73	4.76	8.73	8.73	6.35	15.08	7.94	15.08
Reduce my current tax burden	10.85	15.50	7.75	3.10	14.73	6.20	7.75	13.95	12.40	7.75
Accumulate future income/wealth	5.56	3.17	7.14	13.49	3.17	10.32	11.90	12.70	15.87	16.67
Invest for retirement	13.14	7.30	3.65	2.19	8.76	5.84	6.57	13.14	12.41	27.01

(Source: Primary data)

Table 14 may be interpreted as, 42.76% of the respondents felt that **safety of the investment** is the most important parameter where as 1.38% felt that safety is not so important parameter. 27.01% of the respondents felt that investment for retirement is the most important but 2.19% felt that it was not so important; whereas 21.13% of the respondents are of the opinion that investment is meant for steady growth. Investment Behaviour for Various Investment Portfolios In Terms Of Risk and Returns

Table 16 gives the different level of risk and returns, as expressed by the women respondents, for each investment portfolio (in percentage). For example, for LIC, 50.4% of the respondents feel there is no risk and only 1.7% feels there is a very high risk. As far as returns are concerned for LIC, 56.7% feel there is an average return and 2.4% feels there is no return. For shares as the portfolio, 48.1% consider it as a very high risk to invest followed by 38.3% who feel it's a high risk to invest in shares; but 55.2% feel there is high return by investing in shares.

Table 16: Important Parameters for Choosing an Investment (Figures in percentage)

Investment portfolio	Returns					Risk				
	Very high	High	Medium	Low	Nil	Very high	High	Medium	Low	Nil
Shares	14.9%	55.2%	25.4%	4.5%	0	48.1%	38.3%	11.1%	0	2.5%
Debt Market	0	21.2%	63.5%	7.7%	7.7%	21.4%	30.4%	33.9%	10.7%	3.6%
Mutual Funds	3.7%	33.3%	49.4%	11.1%	2.5%	17.1%	17.1%	44.7%	19.7%	1.3%
PPF	8.6%	18.5%	49.4%	19.8%	3.7%	0	14.9%	21.6%	16.2%	47.3%
LIC	3.1%	16.5%	56.7%	21.3%	2.4%	1.7%	4.3%	12.2%	31.3%	50.4%
PF	3.4%	20.7%	52.9%	21.8%	1.1%	0	7.7%	15.4%	19.2%	57.7%
Tax Free Bonds	0	12.7%	54.5%	25.5%	7.3%	1.8%	10.7%	28.6%	33.9%	25.0%
Commodities	4.8%	23.8%	42.9%	19.0%	9.5%	15.2%	17.4%	54.3%	10.9%	2.2%
Bank FD	3.4%	21.4%	45.3%	24.8%	5.1%	0	2.7%	9.7%	41.6%	46.0%
Post Office MIS	9.6%	17.8%	39.7%	30.1%	2.7%	1.5%	2.9%	5.9%	33.8%	55.9%
Costly Metal & Stones	8.2%	27.4%	47.9%	11.0%	5.5%	8.5%	18.3%	31.0%	28.2%	14.1%
FD In Companies	0	19.6%	64.7%	11.8%	3.9%	9.4%	18.9%	43.4%	18.9%	9.4%
Real Estate	22.2%	47.2%	23.6%	2.8%	4.2%	36.0%	30.7%	20.0%	10.7%	2.7%
NSC	3.4%	10.3%	43.1%	39.7%	3.4%	1.8%	10.5%	29.8%	19.3%	38.6%
Chit Funds	4.0%	36.0%	46.7%	6.7%	6.7%	38.4%	20.5%	26.0%	11.0%	4.1%
Antiques	16.7%	28.6%	31.0%	14.3%	9.5%	15.0%	20.0%	22.5%	12.5%	30.0%
Private Insurance	1.8%	7.1%	71.4%	16.1%	3.6%	9.8%	26.2%	42.6%	18.0%	3.3%

(Source: Primary data)

3.10 Regression analysis

Regression is the determination of a statistical relationship between two or more variables. In simple regression, there are only two variables; one variable defined as independent and another one defined as dependent variable. From the responses we wish to test if there is any impact of qualification, age and experience on the annual income. In other words we wish to test H_{02} . The steps used in conducting the regression analysis on the responses are as follows: Let $Y = A + B_1X_1 + B_2 X_2 + B_3 X_3 + \dots$ (1) be the regression line of Y on X, where, Y = dependent variable representing the annual income. B_1 , B_2 , and B_3 are the coefficients of the regression equation; X_1 = qualification, X_2 = age, X_3 = experience, A = Constant term.

Table 17: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	39.899	3	13.300	12.46	.000(a)
Residual	247.491	232	1.067		
Total	287.390	235			

a Predictors: (Constant), experience, qualification, age

b dependent variable: annual income

From table 17, we observe that the p-value is 0.000, which is less than $\alpha = 0.05$. Calculated value of F is 12.467. Hence we reject H_{02} and conclude that all three variables, i.e. qualification, age and experience do not have the same impact on annual income.

Table 18: Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.34	0.34		3.92	0.000
Qualification	0.2	0.07	0.16	2.63	0.009
Age	-0.08	0.11	-0.07	-0.70	0.483
Experience	0.42	0.10	0.38	4.01	0.000

Dependent variable: Annual income

Annual income (Y) = 1.34 + 0.2 * Qualification - 0.08 * Age + 0.42 * Experience.....(2)

From table 18 above, we conclude that the independent factors - qualification and experience do have a significant impact on the annual income. Keeping all other factors constant, the increase in the educational qualification has a positive impact on the annual income. Similarly, keeping all other variables constant, considering only the experience, it is observed that as the experience increases the income level also shows an increase.

As normally and very typically expected/perceived, age and income levels are not having a direct relationship. As age increases, the level of income does not show an increase. It may probably be due to two reasons. Firstly, women are taking up highly paid jobs at a very young age. Secondly, after a certain age they may go for a break from their service because of domestic commitments or otherwise and later on they may take up a job with lower level of annual income.

3.11 Important factors before choosing an investment - factor analysis (data reduction)

Factor analysis is a method of data reduction. It does this by seeking underlying unobservable (latent) variables that are reflected in the observed variables (manifest variables). Factor analysis groups variables with similar characteristics together. There are many different methods that can be used to conduct a factor analysis.

Principal Component Analysis method for extraction and varimax rotation for rotated component are used for our study. Eigen values more than 0.9 is used for the study against the conventional value of 1. Also executed are correlation matrix, the scree plot and the plot of the rotated factors.

The first output from the analysis is a table of descriptive statistics for all the variables under investigation. Typically, the mean and standard deviation are given. Looking at the mean, one can conclude that 'The safety of my investment' is the most important factor that influences customers to invest. It has the highest mean of 7.54, followed by 'The opportunity for steady growth' with a mean of 6.53.

Table 19: Descriptive Statistics

Factors before choosing an investment	Mean	S.D
The opportunity for steady growth	6.53	2.754
The amount of monthly income the investment will generate	5.43	2.587
The safety of my investment	7.54	2.840
Preserve my net worth	5.94	2.603
Stay ahead of future inflation	5.79	2.484
Increase my current investment income	5.77	2.801
Fund college education	5.26	3.140
Reduce my current tax burden	5.11	2.923
Accumulate future income /wealth	6.35	2.726
Invest for retirement	6.08	3.328

Source: Primary data)

Table 20: MO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.552
Bartlett's Test of Sphericity	Approx. Chi-Square	127.833
	df	45
	Sig.	.000

Kaiser-Meyer-Olkin (KMO) and Bartlett's Test measures the strength of the relationship among variables. The KMO measures the sampling adequacy which should be greater than 0.5 for a satisfactory factor analysis to be done. Looking at the table above, the KMO measure is 0.552.

Bartlett's test is another indication of the strength of the relationship among variables. This tests the null hypothesis that the correlation matrix is an identity matrix. An identity matrix is a matrix in which all of the leading diagonal elements are 1 and all off diagonal elements are 0. This hypothesis must be rejected to conduct the Factor analysis. From the same table, it is observed that the Bartlett's test of sphericity is significant. That is, its associated probability is less than 0.05. In fact, it is actually 0.000, i.e., the significance level is small enough to reject the null hypothesis. This means that correlation matrix is not an identity matrix. Hence we reject H_{04} .

3.12 Rotated Component (Factor) Matrix

The idea of rotation is to reduce the number of factors on which the factors under investigation have high loadings. Rotation does not actually change anything but makes the

interpretation of the analysis easier. From the rotated component matrix, we observe that 'The safety of my investment' and 'Preserve my net worth' are substantially loaded on Component 1 while 'Stay ahead of future inflation' and 'Accumulate future income/wealth' are substantially loaded on Component 2. 'Monthly income the investment will generate' and 'Increase my current investment income' are loaded on Component 4 and 'Fund college education' is loaded on Component 5. All the remaining variables are substantially loaded on Component 3. These Components can be labeled as below and used for further analysis.

Table 21: Safety and Networth

Safety and Networth	Future inflation and income	Steady growth	Income generation	Education fund
The safety of my investment	Stay ahead of future inflation	The opportunity for steady growth	Monthly income the investment will generate	Fund college education
Preserve my net worth	Accumulate future income/wealth	Reduce my current tax burden	Increase my current investment income	
		Invest for retirement		

4. Findings

Previously many studies have been carried out to find out the pattern of investments made by Institutional investors but studies dealing with Investment pattern of individual investors are very few. Earlier Studies mainly concentrated on Differences in individual investing pattern on the basis of Gender. Differences on the basis of Age, educational background, occupation in Investment pattern of individual investors is new area. According to the data that have been collected, women are making investment in some portfolio or the other but investment in the area of debt/ financial instruments are less. A good number of investors possess higher education like graduation and above. 51.22% are postgraduates and 28.46% are graduates. Most of the investors were dependent on two or more sources of information to make investment decisions.

The study revealed that 80.99% are married women. 69.11% are from nuclear families and 30.49% are from joint families. It is observed that 35.77% of the respondents were in the income bracket of Rs.2,00,000 - Rs.5,00,000/- p.a. 21.95% and 21.54 % are in the income bracket of Rs.1,00,000 - Rs.2,00,000/- p.a. and Rs.5,00,000 - Rs.10,00,000/- p.a. respectively. Majority of the respondents 205/246 (83.33%) claim that salary is their major source of income.

Greater part of the respondents answered that they discuss with their family members and friends before making an investment decisions. It is evident that in all the three cases of distribution of income, i.e., investment, expenditure and savings, 55.69%, 60.16% and 52.44% of the decisions are made with the help of spouse respectively. The next highest percentage in all the three cases is the decision made independently by the women themselves, i.e., 28.05%, 27.64% and 35.77% respectively.

It is found that majority of the respondents belong to the teaching profession and are in the age group of 35-50. Research analysis revealed that women give more preference to savings and safety but at the same time they want higher interest at low risk in shorter span. 42.77% of the respondents felt that safety of the investment is the most important parameter. 27.01% of the respondents felt that investment for retirement is the most important but 2.19% felt that it was not so important; 21.13% of the respondents are with the opinion that investment is meant for steady growth. 86/246 (34.96%) investors monitor their investments on a monthly basis. 49/246 (19.92%) investors monitor on a quarterly basis whereas 53/246 (21.54%) investors monitor annually.

113 out of 246, which works out to be 45.93% of them, has indicated that 'Savings for future of children' as their first objective in choosing the investment alternative. The second objective influencing the investor behavior and preferences in the selection of investment alternative is 'Retirement planning'. This is stated by 88 out of 246 which work out to 35.77% of the total. A total number of 129 respondents (18.7%) preferred 'Provident Fund'. Next to Provident Fund, Post office MIS constitutes the second choice of investment (115, 16.67%) among the various investment avenues preferred by the investors. 50.4% of the respondents feel there is no risk in investing in LIC. As far as returns are concerned for LIC, 56.7% feel there is a medium return and 2.4% feels there is no return. For shares as the portfolio, 48.1% consider it as a very high risk to invest followed by 38.3% who feel it's a high risk to invest in shares; but 55.2% feel there is high return by investing in shares.

Using the χ^2 test it is inferred that as age increases the annual income does not increase. Using Regression analysis, it is found that, keeping all other factors constant, the increase in the educational qualification has a positive impact on the Annual income. Similarly, keeping all other variables constant, considering only the experience, it is observed that as the experience increases the income level also shows an increase.

Ten factors that were presented to the women investors were reduced to five factors using Factor Analysis under the following headings - Safety and Net worth, Future Inflation and Income, Steady Growth, Income Generation and Education Fund. In general women experience greater weakness than men since they earn on an average less than men, are more likely to care for children and elderly, are less likely to have health insurance and pension coverage in their jobs. They do have greater tendency towards risk aversion and is one of the reason that they look for more safe and steady return investment patterns. Percentage of income that they invest depends on their annual income. The study resulted that higher the income more percentage of their income that they invest.

5. Suggestions

Through the conclusions drawn earlier, the following suggestions may help to improve the investment pattern and investor preferences among the women investors.

1. There is a rapid growth in the increase in the number of working women of middle class families, which leads to their financial independence. Hence, effort should be made to attract women investors by providing right information and knowledge about various investment avenues through advertisement / counseling.
2. At national level there is a need to initiate steps to inculcate the right saving habit among the growing middle class working women. People will be interested if government takes any initiative in encouraging more savings by giving lucrative benefits on savings.

3. It is observed that a negligible number of women invest in Debt and Equity instruments. The savings are to be pooled and channelized into productive investments, thereby enhancing the return to the investor which may result in further investments through corporate securities. Some “Financial Literacy Campaign” must be undertaken as many people are still unaware of the investment opportunities in the stock market.

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