

A Quantitative Analysis of Factors Influencing Investment Decision-Making of Information Technology Professionals

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Abstract

Investment decision-making influenced by a variety of factors that comprehensively involved in the choice of a relevant investment avenue. The present study aims to contribute towards conducting a quantitative analysis of factors that influence investment decision-making of Information Technology Professionals residing in Tri-city, namely, Chandigarh, Mohali, and Panchkula. Information Technology professionals influenced by various demographic factors, namely, age, gender, income, occupation, and experience. Also, the determinant of financial awareness selected as an essential determinant for the study. Moreover, in the present study, financial awareness considered an independent variable. And investors' behavior selected as the dependent variable. In investment behavior, two significant factors, namely, market bias and risk-bearing bias selected for the study. Structured questionnaire framed on a 5-point Likert scale and responses obtained from 396 Information Technology Professionals. The present study documented that demographic determinants and determinant of financial awareness positively influence the investment behavior of Information Technology Professionals as investors. The study also documented that there is still a need to augment financial knowledge related to investments among Information Technology Professionals. Also, the current study disclosed that investment by men more than women. Therefore, the study suggested that banks and other financial institutions should need to frame and develop more suitable financial products that attract women Information Technology Professionals.

Keywords: Investment, Information technology, demographics, financial awareness, investor behavior

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I. Introduction

Investment is one of the indispensable key to financial success (Burton, Maditinos, Theriou, & caron, 2007); (Singh & Yadav, 2016). Investment involves time, efforts, money that accrue a profitable return in the future. Investment is an allocation of funds for the acquisition of a monetary asset with a notion that it create or appreciate income in the future (Kornprobst, 2018). Investment involves rewards of sacrifice and commitment of resources. The economic development of every nation depends significantly on how judiciously investors of that country invest in various investment avenues (Clark-Murphy & Soutar, 2004); (Vohra & Kaur, 2017). In today's economic environment, investment decisions operated and regulated by international financial institutions, namely, the World Bank and the European Bank. These international institutions frame explicit rules and protocols to handle investments (Avram et al., 2009). Investors invest in various investment avenues according to their expected profitability returns from the selected channel. In the current financial market system, distinguish investment instruments are available (Gowari & Pravitha, 2015). Therefore, an investor's behavior towards the selection of investment avenues significantly influenced by numerous factors (Lee, Xu, & Hyde, 2013). The selection of channels by the investor depends upon their specific investment requirement, risk-taking capacity, and expected returns. The judgment of an investor regarding whether to make or not to make an investment mainly depends upon his profit expectations, price or cost of instrument and loan or finance availability. (Harcourt, G.C; Karmel, P.H; Wallace, 2008). While making investments, an investor's behavior is influenced by his past profit experience as well (Virlics, 2013). In the existing financial scenario, investment decisions influenced by unpredictable financial and economic

environments (Avram et al., 2009). Therefore, one of the significant factors is the risk that impacts the behavior of an investor. The uncertainty exists because recovery of the cost of investment and future gains cannot predict. One research conducted where researchers used distinguish techniques of the questionnaire to analyze the presence of rationality in investors. Rationality in investors studied while making investment decisions about the loan and while making stock decisions. Further, the research also revealed that experience in the capital market, return expectations information about the past performance of stocks also influenced investment in stocks. The findings of the study indicated that irrationality could not be established (Cohen & Kudryavtsev, 2012).

To gain insight into investment behavior and investment decisions, the study of distinguishing models and approaches of investments required to explore. With the archival development of the theories on investment behavior, it analyzed and documented that until the 1950s, the traditional portfolio approach was dominant. Although in numerous researches of investment behavior and investment decisions, scientific fundamentals found missing. Even then, this conventional approach dominated the market for an extended period. Because of this reason, the traditional method of practicality was relatively accessible (Islamoglu, Apan, & Ayvali, 2015). In the conventional approach of investments, the investors hold the notion that risk can be minimized by increasing the number of investment options. (Ozgun & Zulal, 2004). According to the conventional approach of investment, the investors advised investing money or funds in the avenues with a possibility of high returns. But, investors not informed about how risk calculated. (Kaur, 2018). The traditional approach of investment behavior focussed on how investors

should react instead of analyzing how investors react (Zahera & Bansal, 2018).

In 1952, Markowitz carried out the study that pioneered the development of new theory in the field of Investments (Širůček & Křen, 2015). With the help of assumptions of the mean-variance approach and optimal portfolio selection approach, Markowitz recommended that the chances of risk cannot decrease by increasing the number of investment options. Moreover, the direction and extent of relations among investment avenues considered by investors while taking investment decisions. Neoclassical researchers assume that long-term capital asset has a reasonable resale price in the financial market, and this makes an investor's decision riskless (Crotty, 2015). Information is also a suitable medium during the investment decision process. Investors are sensitive to new information arrival. Accurate information can even reduce risk and help an investor to make the decision better and may have a negative impact as well (Eeckhoudt & Gollier, 2005). Besides risk, there are numerous factors such as time, cost, return, liquidity, marketability that have an enormous impact on investor's behavior as well.

Academic studies in conventional finance based on the principle that investors are rational, and also investor's behavior is objective and extensive together for any given input (P. & G. P., 2015). In understanding the concept of investment behavior, there are two types of investors included, namely, individual and institutional — the existing research aimed towards individual investors only. Information Technology Professionals residing in Chandigarh, Mohali, and Panchkula are individual investors in the study. Insights towards understanding investor's behavior help existing research explored how and why investors behave differently by a selection of demographic factors

and financial awareness factors. Establishing significant biases to reveal investment behavior by considering demographics and financial awareness factors is thus imperative for existing research to address the gap found in the literature (Mak & Ip, 2017).

II. Literature Review

One of the researches pursues to analyze the investment behavior of salaried people towards financial instruments and financial awareness (Bhushan, 2014). Using descriptive analysis, the researcher collects primary data. The response obtained from 516 salaried respondents. Results showed that respondents are quite familiar and invest their money in safe and traditional financial products. On similar grounds research, another research conducted to analyze the investment choice of salaried class in Namakkal Taluk, Tamil Nadu, India (Palanivelu, V.R., and Chandrakumar, 2013). The chi-square test applied to the responses of 100 investors. It concluded in the study that factors like age, educational level; awareness level provides significant influence while deciding on investment avenues. Two researchers conducted a study to assess various factors related to investor's behavior towards the commodity market in India. Descriptive and factor analysis applied to responses of 525 investors, and it resulted that four major determinants have a strong influence on the behavior of investors that are high return, low risk, information asymmetry, and knowledge (Elankumaran & Ananth, 2013).

One of the researches seeks to explore the gender differences in investment behavior towards employees. Chi-square test applied to responses of 118 employees. Results indicated massive gender differences found among employees towards selection and investment in avenues, namely, fixed deposits, stock market investments, and health

insurance (Velmurugan, Selvam, & Abdul Nazar, 2015). Research on demographic factors conducted to find the impact of factors on investment avenues. Twin cities that are Hyderabad and Secunderabad in India selected for study, and it found by applying descriptive analysis that factors like age, gender, and friends have a significant influence on investment decisions. Investors displayed a conservative approach while selecting investment avenues (Isidore & Christie, 2017). A study conducted at the Nairobi stock exchange to assess determinants influencing investment decisions (Jagongo & Mutswenje, 2014). Descriptive analyses, factor analysis, and Friedman's test were applied, and responses obtained from 42 investors. Results indicated that the most significant factors of investment decisions were status, price, expected dividend, and past performance.

One of the researches analyzes investors' expectations from different investment avenues during their distinct life cycle stages. The research helped researchers to analyze investment behavior and individual investment practices. The findings of the research identified that the investor wants to invest in various investment options based on some objective (Raheja & Lamba, 2014). The research seeks to identify the relationship between five personality traits, demographic determinants, and behavioral biases in investment decisions in Tehran stock Exchange during 2011. 215 investors as a sample size selected for study and Sequential equational Modelling tools used for analyses. The findings show that personal characteristics have a significant relationship with demographic variables (Amiri, Razavizade, & Vahidi, 2013). The research identified the factors that influence individual equity investors residing in India during the selection of stock for investment. Factor analysis applied to responses from 891 respondents. The result indicated that Brand perception, Accounting

information, Risk Minimisation, and Media, and economic expectations are factors that influence Individual investors in the equity market (Sultana & Pardhasaradhi, 2012).

To analyze factors that influence financial wellness, a descriptive analysis study conducted on responses of 2000 investors. Results showed that significant relationships found in saving behavior and problems in investments related to financial literacy, management practice, and financial stress. Understanding the underlying mechanisms of investment decision-making, few researchers study behavioral biases that influence experienced and new to the market investors. For data collection, a sample of 332 investors in India from four states, namely, Bihar, Jharkhand, Odhisa, West Bengal, has selected. The findings of the study suggested that Herding identified as the critical discriminatory component among the two groups of investors in the investment decision-making process (Raut & Kumar, 2018). A recent survey in Malaysia identified demographic variables' effect and ownership effect on the credit card market.

The findings of the study recommended that four demographic variables, namely, age, gender, education, and income, influence the credit card market (Zandi, Mansori, & Hai, 2019). One research conducted by the researcher to assess the influence of demographic factors on retail investors and thereby analyzed their investment decisions. Statistical tools, namely, correlation and chi-square test calculated, and thereby research concluded that investment decisions of retail investors significantly influenced by demographic factors. (Arifur Rehman H. Shaikh, 2011). While understanding the investment behavior of individual investors, an attempt made to analyze the degree of association among demographic factors and behavioral biases. The analysis of the research showed that positive

and herd bias changes according to changes in age, occupation, educational level of the investors (Vidya, 2019).

The role of overreaction studied in analysts' forecasts, and it found in the study that there is a tendency towards overreaction to positive forecast changes (Amir & Ganzach, 1998). In one of the research papers, it appeared that overreacted investors overestimate the accuracy of public information and hence traded excessively in the absence of public information (Darrat, Zhong, & Cheng, 2007). There was a research conducted concerning the study of overreaction in overinvestment in booms and underinvestment in recessions. Results indicated that overall volatility increased when agents overreacted in comparison to when they are rational, and the overreaction factor also holds the properties of movement, perseverance, and corresponding volatility (Nir Jaimovich and Sergio Rebelo, 2007). In one of the researches, it identified that overreaction or underreaction due to price changes, past trends, basics of underlying stocks, and seasonal price variations (Bondt & Thaler, 1995). Such market variables impact the investor's decisions towards the stock market. To review the investment behavior of the investors, past trends of stock also explored (Waweru, 2008). The results of the study indicated that variations in information related to the market and basics of underlying stocks could create over or under-reaction to the variations in prices.

While studying investor's behavior, Risk is also an important phenomenon that is imperative to consider. Risk is a complicated matter and often identified in investment processes (Virlics, 2013). Risk viewed as chances of occurrence of future losses and based on information and experience that helps in the calculation of likelihood consequences (Greenwood & Shleifer, 2014). Risk is subtle

towards new information arrivals. New information can provide a platform for investment decisions (Eeckhoudt & Gollier, 2005). Relationship between risk and liquidity studied in many studies. Researches indicated a positive correlation between liquidity and risk and mention its essential in investment decisions (Diamond & Rajan, 2005); (Ojong, Bassey, & Awo, 2014).

Risk is a complex issue, and it is essential that it is studied, understood, and identified in investment processes.

Investment decisions without risk analysis should not do.

Risk is the possibility of being exposed to losses. The determination of risk based on long experience and information that allows the estimation of likelihood consequences. (Ionita, 2001)

In light of the above discussion mentioned in previous pieces of literature, it can say that, despite the voluminous research on individual investors' behavior and investment decisions, the impact of demographic factors and financial awareness on Information Technology Professionals not sufficiently addressed. In the above-mentioned previous studies, mostly convenience sampling technique was used for sample selection (Sindhu .K.P., Kalidas .M.G., 2014).

Moreover, only a single determinant has selected as an independent variable (Arnott & Chaves, 2012). Existing research attempted to analyze the investment behavior of Information Technology Professionals in Chandigarh, Mohali, and Panchkula cities. The existing research aimed to overcome the gaps found in the literature. The current study conducted an empirical approach to overcome the shortcomings of past researches and proposed an authentic conclusion.

III. Objectives of The Study

- To analyze demographic factors influencing the investment behavior of Information Technology Professionals.
- To analyze financial awareness factors influencing the investment behavior of Information Technology Professionals.

IV. The hypothesis of the Study

- Ha1: there is a significant association among demographic factors and investment behavior of Information Technology professionals.
- Ha2: there is a significant relationship between financial awareness factor and investment behavior of information Technology professionals.

V. Research Methodology

- **Determinants understudy**

In the present study, demographic determinants and financial awareness determinants selected as independent determinants and investment behavior considered as a dependent determinant. Age, gender, income, occupation, experience considered as demographic factors (Wubie, Dibabe, & Wondmagegn, 2015). Mainly market bias and risk-bearing bias has been selected for study under-investment behavior. Market information, Price changes, Past trend of companies' stock, and overreaction has chosen as market bias (Waweru,

2008). Safety, return liquidity, risk-coverage, and capital appreciation selected as risk-bearing bias (Sarwar & Afaf, 2016).

• Sample design

Responses collected through primary data from 396 Information Technology Professionals in existing research related to cities, namely Chandigarh, Mohali, and Panchkula. Data collected on a 5-point Likert scale ranging from strongly disagree to strongly agree through a structured questionnaire (Aziz, 2011). Data for research collected from January 2017 to December 2018. To achieve the desired objectives of the study, various statistical tools of SPSS Software has used for analyzing data.

VI. Result and Discussion

The results and interpretation of the data begin with the measurement of reliability test through Cronbach's alpha. The results of the reliability test indicated 0.784 value of Cronbach Alpha of factors of investment behavior and 0.826 of financial awareness factor. Values of Cronbach Alpha in both factors calculated more than 0.6. Therefore, the value 0.6 ensures data reliability. Finally, impact analyzed among investment behavior factors, demographic factors, and financial awareness factor through correlation coefficient.

Table 1.1: Demographic profile of Information Technology Professionals

Demographic Factors	Frequency	Percentage
Age group		
18- 25years	17	6.8
25 – 30 years	73	28.8
30 – 35 years	84	36.8
Above 35 years	72	27.6
Gender		

Male	205	83.5
Female	30	16.5
Level of Education		
Undergraduate	57	25.3
Graduate	87	37.7
Postgraduate	85	34.5
Other	8	2.5
Occupation		
Business	128	53.8
Salaried	113	46.2
Annual Income		
Rs.100000-500000	88	36.9
Rs. 500001-2000000	57	24.8
Rs. 2000001- 2500000	84	35.7
Rs. 2500001 and above	7	2.6
Experience		
Less than 5 years	87	31.4
6-10 years	31	16.2
11-15 years	44	19.2
15-20 years	41	18.4
Above 20 years	35	14.8

The existing research emphasizes the following aspects by the analysis of the demographic factors of Information Technology Professionals residing in Chandigarh, Mohali, and Panchkula:

The findings of Descriptive Statistics indicate that

- Respondents' age ranges between 30 years to 35 years.
- Almost all respondents are Male.
- A higher number of Information Technology Professionals are graduates in the category of education.
- In occupation, the majority of the investors are from business.
- In the annual income category, most Information Technology Professionals are within the range of Rs.100000- Rs. 500000.
- In the experience category, respondents have less than five years of experience.

Table 2: Degree of the relationship among demographic factors and market bias (Investors' behavior)

Demographics	Investor's behavior					
	Market bias					
	Variations in prices	Investor's overreaction	Market information	Past Movements	Preference of investors	Underlying value of stocks
Age	(-)0.06576	(-)0.18740**	(-)0.23785**	(-)0.07854*	0.02536	(-)0.17364**
Gender	(-)0.21867**	(-)0.25262**	0.20445**	(-)0.12156**	(-)0.04679	(-)0.03171
Education	(-)0.02778	(-)0.23516**	(-)0.04662	(-)0.17845**	(-)0.24051**	(-)0.02507
Occupation	(-)0.02735	0.1627**	(-)0.04634	0.07232*	0.03051	0.15717**
Annual Proceeds	0.12004 **	0.17842**	(-)0.07142*	0.18774**	(-)0.07521*	(-)0.07511*
No. of years' experience	0.00351	(-)0.25167**	0.03045	(-)0.03406	(-)0.12664**	0.08467*

Analysis of the degree of association among demographic factors and market-related bias

By applying correlation coefficient statistics on a scale that varies from +1 to -1, table 2 documented that age factor has a strong association among all the variables except factors, namely, variations in prices and preference of investors. Component of gender has a positive association with variations in prices, investor's overreaction, market information, and past movements of stocks. Component of education depicted a positive relationship with

investor's overreaction, past movements of stocks, and preferences of investors towards investment avenues. The occupation factor has a positive association with investor's overreaction, past movements of stocks, and the underlying value of stocks. Component of Annual proceeds documented the presence of positive relationships with all the market-related factors, namely, variations in prices, Investors' overreaction market information, past movements of stocks, preference of investors, and underlying value of stocks.

Table 3- Degree of the relationship among demographic factors and risk-bearing bias (Investors' behavior)

Demographics	Investor's behavior				
	Risk Bearing Bias				
	Financial security	Investment in liquid assets	Long-term capital gains	Expected return	Minimization of risk
Age	(-)0.12087**	0.05194	0.00094	0.23778**	0.22355**
Gender	(-)0.01408	0.01182	(-)0.18696**	(-)0.15134**	0.00335
Education	0.05163	0.04405	0.16737**	0.09623*	(-)0.07153*
Occupation	(-)0.10417**	(-)0.21561**	(-)0.09646*	(-)0.08822*	0.14043**
Annual Proceeds	0.10866**	0.17783**	0.18214**	0.14043**	0.01208
No. of years' experience	(-)0.03157	0.13604**	0.03423	0.17218**	0.02088

Analysis of the degree of association among demographic factors and risk-bearing bias

By applying correlation coefficient statistics on a scale that varies from +1 to -1, table 3 documented that component of age has a strong degree of association with all determinants, except investment in liquid assets and long-term capital gains. Components of gender have a strong degree of association with long-term capital gains and expected returns. The factor of education documented a positive correlation with long-term

capital gains, expected return, and minimization of risk. Component of occupation showed the presence of strong association with all the factors, namely, financial security, investment in liquid assets, long-term capital gains, expected return, and minimization of risk. The analysis also depicted the presence of a strong association of annual proceeds with financial security, investment in liquid assets, long-term capital gains, and expected return. Component of experience has a positive association with investment in liquid assets and expected return.

Table 4: Degree of the relationship between financial awareness and market bias (Investors' behavior)

Component of awareness	Investor's Behaviour					
	Market Bias					
	Variations in prices	Investor's overreaction	Market information	Past Movements	Preference of investors	Underlying value of stocks
Financial Awareness	0.12434**	0.07513*	0.15420**	0.23746**	0.24137**	0.26084**

By applying correlation coefficient statistics on a scale that varies from +1 to -1, table 4 documented that component of financial awareness and all

components of investor's behavior has a positive association with a component of financial awareness.

Table 5: Degree of the relationship between financial awareness and risk-bearing bias (Investors' behavior)

Component of awareness	Investor's Behaviour				
	Risk-bearing bias				
	Financial security	Investment in liquid assets	Long-term capital gains	Expected return	Minimization of risk
Financial Awareness	0.30819**	0.03466	0.44361**	0.12362**	0.10497**

By applying correlation coefficient statistics on a scale that varies from +1 to -1, table 5 documented that component of financial awareness and

investor's behavior (risk-bearing bias) has a strong association besides investment in liquidity assets.

Table 6: Effects of demographic factors, financial awareness on markets bias of investors' behaviour

Probit age gen edu occ ap exp fa				
Probit regression		No. of observations = 396		
		LR $\chi^2(7)$ = 160.97		
		Prob > χ^2 = 0.0000		
Log Pseudolikelihood = -76.151313		Pseudo R^2 = 0.4756		
Variables	Coefficient	Robust standard error	Z-statistics	Marginal effects
_cons	2.710368	.9797662	2.85	0.005
Age	-.0146432	.0135532	-1.07	0.270
Gen	-.2603314	.2343027	-1.16	0.241
Edu	-.108135	.1788403	-0.70	0.074
Occ	-.6547876	.1377598	-4.82	0.000
Ap	.3043874	.0987964	3.07	0.003
Exp	-.1351257	.0487092	-2.84	0.020
Fa	.5408326	.2440717	2.18	0.007

From table 6 and 7, the findings of Probit regression on the demographic profile of Information Technology Professionals and on Investors' behavior determinants namely, market bias and risk-bearing bias indicates that determinant of age has a strong association with risk-bearing bias bearing Probit regression marginal effects value = 0.035. Further, the analysis also indicates that the component of gender also has a positive association with risk-bearing bias comprising marginal effects = 0.002. The demographic determinant of education

has a strong influence on market Bias comprising marginal effects value = 0.0074. Also, the occupation variable has a strong association with market bias comprising marginal effects value = 0.000. Further, annual proceeds have substantial impact on risk-bearing bias comprising marginal effects value 0.000. A number of years of experience component have a strong degree of the association on the market bias, including marginal effects value = 0.020.

Table 7: Effects of demographic determinants, financial awareness on the risk-bearing bias of investors' behavior

Probit age gen edu occ ap exp fa				
Probit regression		No. of observations = 396		
		LR $\chi^2(7)$ = 58.21		
		Prob > χ^2 = 0.0000		
Log Pseudolikelihood = -209.3127		Pseudo R^2 = 0.1345		
Variables	Coefficient	Robust standard error	Z-statistics	Marginal effects
_cons	-.4141874	.5317933	-0.77	0.435
Age	.0167768	.0076605	2.08	0.035

Gen	-.4712268	.1455008	-3.27	0.002
Edu	.0954285	.1080904	0.79	0.612
Occ	-.0970264	.0728454	-1.57	0.132
Ap	.2281987	.0474816	4.74	0.000
Exp	-.0163134	.027768	-0.58	0.557
Fa	-.1830203	.1708632	-1.02	0.312

From Tables 6 and 7, the analysis of Probit regression indicated that financial awareness has a strong degree of the association on market bias comprising marginal effects value = 0.007.

VII. Conclusion:

The study of investor's behavior is essential to build long-term wealth (Mak & Ip, 2017). In an existing's competitive economic environment, financial success can ensure through a precise understanding of investor's behavior (De Bortoli, Da Costa, Goulart, & Campara, 2019). In general, the investor's behavior is the study of investors. Investor's behavior deals with the questions of how the investor selects an avenue? How an investor purchases an avenue? and how investor disposes investment products? (Beckett, Hewer, & Howcroft, 2000); (Mansoor, 2011). By gaining insights towards basic structure and system of investments, financial markets can make better managerial decisions regarding providing the right product or service to investors (Ngoc, 2013). the notion of contemporary investor's behavior theory helps in projecting buying behavior patterns of investors in the future. Also, help in designing suitable marketing strategies to expand investor's relationship for a long duration (Seetharaman, Niranjana, Patwa, & Kejriwal, 2017).

After experiencing several financial crises, Individual investors now turned more vigilant towards financial investment and made it more difficult for financial intermediaries to design marketing and financial strategies (Hockett, 2015). In reality, financial service providers confront

various issues in understanding the investment behavior of their investors for long-term gains (Helm, 2007). A review of literature mentioned in existing research manifests that past researches emphasized mainly on recognizing factors that impact investor's behavior and or assessing their influence on investment decisions (Jagongo & Mutswenje, 2014). The present study seldom investigated how demographic factors influence the investor's behavior. This gap is apparently due to a lack of researcher's access to confidential and prohibited financial data, which is required to draw essential conclusions from researching real behavior.

The research seeks to determine the impact of demographic factors and financial awareness on Information Technology Professionals investment decisions residing in the Tricity of Chandigarh, Mohali, and Panchkula. The present research selected individual investors. Existing research used a convenience sampling method to collect information from 396 respondents through a structured questionnaire. Coefficient Correlation and Probit Regression techniques applied to achieve results. The findings indicate a massive gap between gender while taking investment decisions. The gender of respondents is an essential consideration in research as it has a massive impact on the individual's investment decisions (Wang, 2011). The analysis indicates that men are more prone to taking investment decisions in comparison to women. These results indicate the need to bring more women participation in financial decisions related to investment in various investment avenues.

In the age group category, most of the respondents are in the age group of 30-35; this implied the need for more experienced respondents is required to make decisions in financial assets investment.

Further, research also indicates that less than five years of experience, investors only take investment decisions related to investment avenues. That implied the need to give more financial awareness to investors. Findings of the relationship between the variables of demographic factors and market bias by applying Correlation Coefficient indicate that the overreaction variable has a positive relationship with all demographic variables, namely, age, gender, education, occupation, annual income, and experience after Overreaction variable, its past trends stock that has a strong relationship with demographic factors. Findings of the association among the variables of demographic factors and risk-bearing bias by applying Correlation Coefficient indicate that the return variable has a positive relationship with all demographic variables. After return, it's a capital appreciation variable that has a strong relationship with demographic factors. Findings of the relationship between financial awareness and market bias indicate that all components of market bias have a strong association with financial knowledge. In the case of the association among financial awareness and risk-bearing bias indicate that besides liquidity, all components of risk-bearing bias have a positive relationship with financial awareness.

Moreover, from the analysis of Probit regression, it is indicating that market bias has a strong relationship with demographic factors and financial awareness in comparison to risk-bearing bias. Further, the study also shows a secure connection between the income of investors and risk-bearing bias. That implied that with the change in the level

of income of investors, their risk-bearing capacity also changes. Further, existing research also documented that there is still a requirement to provide comprehensive financial knowledge to Information Technology Professionals related to liquidity management.

The present study opened doors for potential research in the future. The study recommends that the financial market environment should more favorable to attract more women information technology professionals. For this, there is a need to design creative programs and policies that influence investor's decisions and thereby magnify the value of the firms and wealth of the investors. Women Information Technology Professionals also need to collect complete investment-related information from different sources such as friends, family, investment advisors, the internet, and many more. Before making investments. Also, existing research recommends further assessment of the association among demographic variables and other variables of investors' behavior, namely, behavioral factors, lifestyle factors and so forth

References

1. Amir, E., & Ganzach, Y. (1998). Overreaction and underreaction in analysts' forecasts. *Journal of Economic Behavior & Organization*, 37(3), 333–347. [https://doi.org/10.1016/S0167-2681\(98\)00092-4](https://doi.org/10.1016/S0167-2681(98)00092-4)
2. Amiri, S., Razavizade, N., & Vahidi, G. H. (2013). The Effect of the Interaction between Demographic Factors and Personality Traits and Financial Behaviour Factors in Terms of Investment Decision Making. *Journal of Applied Science and Agriculture*, 8(October), 721–728.
3. Arifur Rehman H. Shaikh, A. B. K. (2011). arifur. Indian Journal Of Finance. Retrieved from <http://www.indianjournaloffinance.co.in/index.php/IJF/article/view/72485>
4. Arnott, R. D., & Chaves, D. B. (2012). Demographic

- changes, financial markets, and the economy. *Financial Analysts Journal*, 68(1), 23–46. <https://doi.org/10.2469/faj.v68.n1.4>
5. Aziz, A. (2011). *Research Methods And Techniques In Social Sciences*. (N. A. Publishing, Ed.) (Noble Acad). Noble Academic Publishing.
 6. Beckett, A., Hower, P., & Howcroft, B. (2000). An exposition of consumer behavior in the financial services industry. *International Journal of Bank Marketing*, 18(1), 15–26. <https://doi.org/10.1108/02652320010315325>
 7. Bhushan, P. (2014). Insights Into Awareness Level and Investment Behaviour of Salaried Individuals Towards Financial. *International Journal of Engineering, Business, and Enterprise Applications (IJEBA)*, (2001), 53–57.
 8. Bondt, W. De, & Thaler, R. (1994). Financial decision-making in markets and firms: A behavioral perspective. *National Bureau of Economic Research*, 9, 385–410. Retrieved from <http://www.nber.org/papers/w4777>
 9. Burton, B., Maditinos, D. I., Theriou, N. G., & caron, C. (2007). Investors' behavior in the Athens Stock Exchange (ASE). *Studies in Economics and Finance*, 24(1), 32–50. <https://doi.org/10.1108/10867370710737373>
 10. Clark-Murphy, M., & Soutar, G. N. (2004). What individual investors value: Some Australian evidence. *Journal of Economic Psychology*, 25(4), 539–555. [https://doi.org/10.1016/S0167-4870\(03\)00056-4](https://doi.org/10.1016/S0167-4870(03)00056-4)
 11. Cohen, G., & Kudryavtsev, A. (2012). Investor rationality and financial decisions. *Journal of Behavioral Finance*, 13(1), 11–16. <https://doi.org/10.1080/15427560.2012.653020>
 12. Crotty, J. R. (2015). Neoclassical and Keynesian Approaches to the Theory of Investment. *Journal of Post Keynesian Economics*, 14(4), 483–496. <https://doi.org/10.1080/01603477.1992.11489912>
 13. Darrat, A. F., Zhong, M., & Cheng, L. T. W. (2007). Intraday volume and volatility relations with and without public news. *Journal of Banking and Finance*, 31(9), 2711–2729. <https://doi.org/10.1016/j.jbankfin.2006.11.019>
 14. De Bortoli, D., Da Costa, N., Goulart, M., & Campara, J. (2019). Personality traits and investor profile analysis: A behavioral finance study. *PLoS ONE*, 14(3), 1–18. <https://doi.org/10.1371/journal.pone.0214062>
 15. Diamond, D. W., & Rajan, R. G. (2005). Interbank Diversification, Liquidity Shortages, and Banking Crises. *The Journal of Finance*, 60(2), 615–647. Retrieved from http://web.econ.ku.dk/fru/conference/Programme/Saturday/C6/WolfWagner_DIV.pdf
 16. Eeckhoudt, L., & Gollier, C. (2005). *eech2005*. Princeton University Press. <https://doi.org/0.2307/j.ctvc4j15>
 17. Eeonora Laura Avram, Lucian Savu, Calin Avram, Andreea Brindusa Ignat, Smaranda Vancea, and M. I. H. . (2009). avram. In *Investment decision and its appraisal*. Annals of DAAAM & Proceedings.
 18. Elankumaran, A., & Ananth, A. A. (2013). Impacting factors on Individual Investors ' Behaviour towards Commodity Market in India. *Research Journal of Social Science and Management*, 2(12), 147–153. <https://doi.org/10.1109/TGRS.1984.350619>
 19. Gowari, N., & Pravitha, N. R. (2015). A Study on Investment Behaviour with Special Reference to Kollam Corporation . Gowari Nair Pravitha N R ABSTRACT Department of Commerce and Management , Amrita VishwaVidyapeetham Department of Commerce and Management , AmritaVishwa Vid. *Global Journals for Research Analysis*, 4(8), 194–195.
 20. Greenwood, R., & Shleifer, A. (2014). Expectations of returns and expected returns. *Review of Financial Studies*, 27(3), 714–746. <https://doi.org/10.1093/rfs/hht082>
 21. Harcourt, G.C; Karmel, P.H; Wallace, R. H. (2008). *harcourt*. Syndics of the Cambridge University Press, London.
 22. Helm, S. (2007). The Role of Corporate Reputation in Determining Investor Satisfaction and Loyalty. *Corporate Reputation Review*, 10(1), 22–37. <https://doi.org/10.1057/palgrave.crr.1550036>
 23. Hockett, R. C. (2015). *Recursive Collective Action*

- Problems: The Structure of Procyclicality in Financial and Monetary Markets, Macroeconomies, and Formally Similar Contexts.* SSRN. <https://doi.org/10.2139/ssrn.2239849>
24. Isidore, R., & Christie, P. (2017). REVIEW OF THE INFLUENCE OF INVESTOR PERSONALITY (THE BIG 5 MODEL) ON INVESTOR BEHAVIOR. *International Journal of Research in Finance and Marketing*, 7(7), 9–18.
 25. Islamoğlu, M., Apan, M., & Ayvali, A. (2015). International Journal of Economics and Financial Issues Determination of Factors Affecting Individual Investor Behaviours: A Study on Bankers. *International Journal of Economics and Financial Issues*, 5(2), 531–543. <https://doi.org/10.13140/RG.2.1.1932.6880>
 26. Jagongo, A., & Mutswenje, V. S. (2014). A Survey of the Factors Influencing Investment Decisions: The Case of Individual Investors at NSE. *International Journal of Humanities and Social Science*, 4(4), 92–102.
 27. Kaur, J. (2018). International Journal of Law and Mnanagement. *International Journal of Law and Management*, 32(4), 202–208. <https://doi.org/https://doi.org/10.1108/IJLMA-11-2016-0138>
 28. Kornprobst, A. (2018). Winning investment strategies based on financial crisis indicators. *Journal of Investment Strategies*, 7(4), 27–49. <https://doi.org/10.21314/jois.2018.102>
 29. Lee, A., Xu, Y., & Hyde, K. F. (2013). Factors influencing investor choice of retirement funds. *Journal of Financial Services Marketing*, 18(2), 137–151. <https://doi.org/10.1057/fsm.2013.8>
 30. Mak, M. K. Y., & Ip, W. H. (2017). An exploratory study of investment behaviour of investors. *International Journal of Engineering Business Management*, 9(June). <https://doi.org/10.1177/1847979017711520>
 31. Mansoor, D. (2011). The Global Business Crisis and Consumer Behavior : Kingdom of Bahrain as a Case Study. *International Journal of Business and Management*, 6(1), 104–115.
 32. Ngoc, L. T. B. (2013). Behavior Pattern of Individual Investors in Stock Market. *International Journal of Business and Management*, 9(1), 1–16. <https://doi.org/10.5539/ijbm.v9n1p1>
 33. Nir Jaimovich and Sergio Rebelo. (2007). BEHAVIORAL THEORIES OF THE BUSINESS CYCLE. *Journal Of the European Economic Association*, 5(May 2007), 361–368. Retrieved from <http://www.management4all.org/2009/11/behavioral-theories-of-motivation.html>
 34. Ojong, N. E., Bassey, I. O., & Awo, A. E. (2014). The impact of credit and liquidity risk management on the profitability of deposit money banks in Nigeria. *International Journal of Economics, Commerce and Management*, II(9), 1–15.
 35. Ozgur, D., & Zual, G. (2004). Portföy yönet, 4, 103–109.
 36. P., S., & G. P., G. (2015). Factors Influencing Retail Investor's Trading Behavior in Indian Equity Market. *International Journal of Business and Management*, 10(11), 206. <https://doi.org/10.5539/ijbm.v10n11p206>
 37. Palanivelu, V.R., and Chandrakumar, K. (2013). A Study on Preferred Investment Avenues among Salaried Peoples with Reference to Namakkal Taluk, Tamil Nadu, India. In *The 2013 IBEA, International Conference on Business, Economics, and Accounting*.
 38. Raheja, S., & Lamba, B. (2014). Behaviour of Investors Towards Investment. *Indian Journal of Applied Research*, 3(10), 1–2. <https://doi.org/10.15373/2249555x/oct2013/22>
 39. Raut, R. K., & Kumar, R. (2018). Investment Decision-Making Process between Different Groups of Investors: A Study of Indian Stock Market. *Asia-Pacific Journal of Management Research and Innovation*, 14(1–2), 39–49. <https://doi.org/10.1177/2319510x18813770>
 40. Sarwar, A., & Afaf, G. (2016). A comparison between psychological and economic factors affecting individual investor's decision-making behavior. *Cogent Business and Management*, 3(1). <https://doi.org/10.1080/23311975.2016.1232907>
 41. Seetharaman, A., Niranjana, I., Patwa, N., & Kejriwal, A. (2017). A Study of the Factors

- Affecting the Choice of Investment Portfolio by Individual Investors in Singapore. *Accounting and Finance Research*, 6(3), 153. <https://doi.org/10.5430/afr.v6n3p153>
42. Sindhu .K.P., Kalidas .M.G., A. C. S. (2014). A STUDY ON FACTORS INFLUENCING INVESTOR SENTIMENT IN INDIAN STOCK MARKET. *International Journal of Management*, 5(1), 7–13.
 43. Singh, J., & Yadav, P. (2016). A Study on the Factors Influencing Investors Decision in Investing in Equity Shares in Jaipur and Moradabad with Special Reference to Gender. *Amity Journal of Finance AJF ADMAA Amity Journal of Finance ADMAA*, 1(1), 117–130.
 44. Širuček, M., & Křen, L. (2015). Application of Markowitz Portfolio Theory by Building Optimal Portfolio on the US Stock Market. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 63(4), 1375–1386. <https://doi.org/10.11118/actaun201563041375>
 45. Sullivan, G. M., & Artino, A. R. (2014). Analyzing and Interpreting Data From Likert-Type Scales. *Journal of Graduate Medical Education*, 5(4), 541–542. <https://doi.org/10.4300/jgme-5-4-18>
 46. Sultana, S. T., & Pardhasaradhi, S. (2012). An Empirical Analysis of Factors Influencing Indian Individual Equity Investors' Decision Making and Behavior. *European Journal of Business and Management*, 4(18), 50–61. Retrieved from www.iiste.org
 47. Velmurugan, G., Selvam, V., & Abdul Nazar, N. (2015). An Empirical Analysis On Perception of Investors' Towards Various Investment Avenues. *Mediterranean Journal of Social Sciences*, 6(4), 427–435. <https://doi.org/10.5901/mjss.2015.v6n4p427>
 48. Vidya, A. (2019). The Impact of Demographic and Behavioural Biases Factors on Investment Decision of Equity Investors in Kerala, 1(January), 82–87.
 49. Virlics, A. (2013). Investment Decision Making and Risk. *Procedia Economics and Finance*, 6(13), 169–177. [https://doi.org/10.1016/S2212-5671\(13\)00129-9](https://doi.org/10.1016/S2212-5671(13)00129-9)
 50. Vohra, T., & Kaur, M. (2017). Women Investors: A Literature Review. *Metamorphosis: A Journal of Management Research*, 16(1), 11–19. <https://doi.org/10.1177/0972622517706624>
 51. Wang, A. (2011). Younger Generations' Investing Behaviors in Mutual Funds: Does Gender Matter? *The Journal of Wealth Management*, 13(4), 13–23. <https://doi.org/10.3905/jwm.2011.2011.1.005>
 52. Waweru, N. M. (2008). The effects of behavioural factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange Nelson Maina Waweru * Evelyne Munyoki Enrico Uliana. *Business and Emerging Markets*, 1(1), 24–41.
 53. Wubie, A. W., Dibabe, T. M., & Wondmagegn, G. A. (2015). The Influence of Demographic Factors on Saving and Investment Decision of High School Teachers in Ethiopia: A Case Study on Dangila Woreda. *Research Journal of Finance and Accounting*, 6(9), 64–69.
 54. Zahera, S. A., & Bansal, R. (2018). Do investors exhibit behavioral biases in investment decision making? A systematic review. *Qualitative Research in Financial Markets*. <https://doi.org/10.1108/QRFM-04-2017-0028>
 55. Zandi, G., Mansori, S., & Hai, O. B. (2019). The Effect of Demographic Variables and Ownership on Credit Card Market in Malaysia. *International Journal of Financial Research*, 10(5), 359. <https://doi.org/10.5430/ijfr.v10n5p359>