

Do Financial Knowledge and Financial Experience Affect the Gender Risk Taking Attitude?

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Abstract

In today's advance and complex financial world financial literacy is essential for male and female. The study analyzed the effects of financial knowledge and financial experience on risk taking attitude of male and females of two major cities namely Rawalpindi and Islamabad by utilizing the results of survey from the questionnaire. From the results, it was found that with an increase in financial experience and financial knowledge of male investors, their risk taking propensity is expected to increase. However for females, the risk taking propensity is likely to increase with an increase in financial knowledge and it expected to decrease with increase in financial experience. The reason for such negative relation between financial experience and risk aversion propensity may be "over-cautiousness"

Keywords: Financial Knowledge, financial experience, gender, risk taking attitude

1. Introduction

In traditional finance it is assumed that all investors are rational but in behavioral finance the assumption is different. Behavioral finance assumed that the investors are normal. Sometimes they make good investment decision and sometimes bad. This assumption of behavioral finance is more realistic as compare to traditional finance. Behavioral finance, as compared to other fields of finance, is different because it studies the psychology of individual investor's. An investment option is dependent on individual psychology and behavior. Male and female investors behave differently. An individual's behavior based on various factors including income level, gender, source of income, education level, socioeconomic status and age. These factors may also influence the investing decisions of such entities. Investing in different options represents the underlying psychological motives of such decisions. These motives explain why would people buy or sell an investment option?

Generally online magazines, newspapers, brokers, friends and family are some of the sources utilized by individual investors to acquire information about various investment options. Behavioral finance lays emphasis on the underlying motives in understanding, interpreting and responding to such investment options. That's why a broad knowledge of the behavioral processes regarding investment decisions is necessary in understanding the underlying motives. This is also vital for investment advisors as, it helps in devising various strategies regarding assets allocation for their prospective clients.

Investment is the present cash expenditure for the sake of some benefit that may be realized in future. Individual investments are mainly for two reasons- risk management and return. Return has normally an incremental effect in future. While risk management is used as a precautionary measure.

From the last few decades, due to highly volatile and turbulent conditions in Pakistan investors' confidence has vanished nowhere. Investing in such conditions depict highest levels of risks. That is the reason that most individuals do not take such risks. However, other individuals turn out to be high risk takers and they invest in even worst conditions.

Risk is one of the most important innate components of investment. Therefore, most of the investment decisions include some risk. So, risk behavior is the attitude of individual investors in making certain choices about the given investment options. Many factors like wealth, income level, age, financial experience and financial knowledge can possibly affect the risk behavior of an individual. Based on gender, the effects of financial experience and financial knowledge on individual investors is the focus of this study.

Males are more confident in their financial decisions as compared to females as they have relatively more financial experience and financial knowledge (Bruce, 1995). That's why female Investors exhibit more risk averse behavior. Based on the risk appetite, there are three types of investors- High risk takers normally invest in relatively risky options like equity share markets and commodity markets. Moderate risk takers take slightly

meager levels of risks. They invest in bonds and mutual funds. While the risk averse individuals are those who invest in saving accounts, government bonds and treasury bills. These instruments normally include lower levels of risks. Similarly, investment options can also be categorized as risky, moderate and less risky options. Risky instruments include stocks and commodities, moderate instruments include bonds and mutual funds while less risky instruments include preferred shares, treasury bills, real estate and government bonds. The study at hand is aimed to investigate the risk taking behavior of individuals based on various investment options.

There is a general proposition that male investors normally invests in stocks, real estates and saving accounts while female investors tend to invest in jewelry and banks. The reason behind this trend is that female are more risk averse and having little financial knowledge and experience with other investment options. This shows that why the investment behavior of males and females is different. Therefore, this study is aimed to study the risk taking behavior of male and females through various investment options.

2. Study Theoretical Framework

2.1 Research Problem and Questions

This study is about to investigate whether any difference exist between male and female investors behavior or not and to underline the significant impact of financial knowledge and financial experience affect on the investment behavior of both. In addition to this it has been investigated whether female investors are more risk averse after having required financial experience and knowledge or not.

According to the research problem, the main question that can be formulated in this research is “Do financial knowledge and financial experience affects the gender risk taking attitude in Pakistan? From this main question, two research questions were derived:

1. to what extent financial knowledge and experience matters for investment decisions of gender in Pakistan?
2. Whether an increase in financial knowledge and financial experience of male and female investors, their risk taking propensity is expected to increase or decrease?

2.2 Research Objective

The study aims to explore the impact of financial knowledge and financial experience on gender risk taking attitude in Pakistan. More, it is to investigate whether increasing financial knowledge and experience affect the risk behavior of males and females differently or not?

2.3 Research Significance

Lack of financial knowledge and experience is a problem of investors in developing economies; male and female investors fail to demonstrate a strong grasp of basic financial principles. They cannot avoid managing their financial risks effectively and avoiding financial pitfalls. The level of financial knowledge and experience matters for risk taking attitude of gender. Financial literacy is a important measure for investment, credit and debt management decisions. This study helps male and female investors for number of reasons (i) to manage risky investments (ii) increases earning potential (iii) defending portfolio from unnecessary losses (iv) providing peace of mind as per investment level.

2.4 Research Limitations

This study is however constrained by certain limitations. Firstly, the sample size was relatively smaller; a larger sample is necessitated for more generalizability. Secondly, the study should have been extended to some other major cities of Pakistan. And lastly, other factors could have been included besides financial knowledge and financial experience. Future researches may be carried on by considering large geographical area, by increasing the sample size and by including other factors influencing gender risk behavior.

3. Literature Review

The literature includes the study of those variables which can possibly affect the risk taking behavior of individuals. For instance Kabra et al. (2010) identified age and gender as the two important factors that may influence the risk taking propensity of individual investors. It was also inferred that the risk appetite in individuals may change with age variations in age and gender.

Similarly, gender, education, age and income were identified by AjmiJy. A. (2008). They used a survey on 1500 respondents to recognize the factors involved in risk tolerance. The results included that less educated investors are more risk averse, men are more risk takers in comparison to females, and more affluent investors are relatively more risk tolerant. Similarly, age was also considered as an important predictor in risk tolerance.

A study was conducted by Tamimi, H.A.H. (2009) in UAE to categorize various factors that may affect the investor's behavior. Past performance of the firm, expected corporate earnings stock marketability and expectations of future cash inflows were identified as key factors to investor's behavior.

The genetic and environmental factors were investigated by Barnea et al. (2010) in an investor's behavior.

The results concluded that, 45 percent of variations in stock market investments, portfolio risk choices, and asset allocation are due to the genetic component. It was inferred that genetic instinct is more vital as compared to age, education, income etc. in an investor's behavior.

The variations in risk appetite are studied by various authors. For instance, Bruce & Tohnson (1994) studied that women are less risk takers as compared to male in the united states. Similarly, Jianakoplos and Bernasek (1998) proposed that naturally, males have a relatively more risk taking propensity than females. Women are observed to be less confident in taking chances. Men normally buy or sell 45 percent more than women in the financial market. (Barber and Odean, 2001)

Some other factors like conservatism, under confidence, financial condition and information asymmetry were studied by Chandra, A. (2008) for Indian investors. Univariate and multivariate data analysis techniques were used for this purpose.

Nayak, M. K. (2010) argued that professionals and servicemen are relatively more educated therefore; they are more balanced in their choices while the entrepreneurs are risk lovers, more adventurous, and business minded. The agriculturists are usually not used to invest and hence having less information or financial knowledge. Thus, form of employment and information asymmetry was the two significant factors in an investor's behavior.

As individual investors are the net buyers of stocks. Therefore, an investor's behavior is affected by attention and news. Similarly, it is also influenced by the source of information (Barber et.al, 2008).

Individual investors usually use five kinds of investment strategies identified by Tripathi, V. (2008). These strategies include: momentum strategies, FII's investment behavior, buying stocks on 30 days moving average basis, size based strategies and buying stocks based on relative strength index. Momentum strategies are those where investment is made in high yielding projects of last 3-12 months and selling the instruments which have low rates of returns from the last 3-12 months. In moving average strategies, prices are determined on the changing averages from one period to another. Investments are made through observing the foreign investors in FII strategies. While size of an investment and its relative strength base index are the two factors that determines its risk and return properties in sized-base strategies.

Assuming that education, knowledge, experience and age have insignificant influences on an individual's risk taking propensity. It was found by Powell and Ansic (1997) that females are still less confident in investment decisions. The difference in investment decisions in males and females can be attributed to the underlying priorities behind investment motives. As male are more risk takers because they look for high returns while females are more risk averse because they need security or assurance in their investments.

Bajtelsmit et.al (1999) studied the relationship between asset allocation and gender. Significant differences were found in retirement pension plans and investment plans for gender. It was also concluded that in asset allocation, females are more risk averse. That is the reason that males and females opt different modes of investments having lower combinations if risks.

Similarly, Jinakoplos and Bernasek (1998), Hintz, McCarthy and Turner (1997), Bajtelsmit and Bernasek (1996), also inferred that females are relatively more risk tolerant than males. This risk aversion propensity is seen in several activities that involve finance and investments.

Behavior of individual investments in asset allocation for pension saving plans was studied by Benartzi and Thaler (2001). It was observed that femalestend to adopt a relatively more diversifiable plan in their retirement saving plan. However, due to less financial experience the investment portfolios are not high yielding. Similarly, Bernasek and Shwiff (2001) argued that in retirement saving schemes, females are more conventional as compared to males. It was also concluded that gender differences is an important predictor of individual investing behavior.

Over confidence as a vital factor in investor's behavior found by various authors like (Beyer and Bowden, 1997; Bengtsson et.al, 2005). They observed overconfidence in both genders. However, females were observed to be less confident while male are normally over optimistic or more risk takers in investment decisions.

Arano, Parker and Terry (2010) investigated the role of wealth in risk taking behavior. It was found that relatively more wealth increases the ability to take risks. Therefore, wealthy individuals generally take more risks as compared to less affluent individuals. Similarly, men possess more wealth than women; therefore they are more risk takers as compared to women.

Wealth and financial knowledge were studied by Atkinson, Baird and Frye (2003). The study was conducted on male and female mutual fund managers. It was found that female managers exhibit the same levels of risk appetite as males till wealth and financial knowledge are controlled. Females having some financial knowledge, feel relatively more confident and comfortable in taking chances. Generally, females are considered as more risk averse. However, financial knowledge and wealth will eventually decrease this risk aversion propensity.

Difference in investment decisions for five investment options based on gender was studied by S. Siva (2012). Significant differences were found for gender in investment choices- real estate, debentures and equity shares. While the difference for banks and a mutual fund was found insignificant.

Financial knowledge and financial experience being important predictors of an investor's behavior were

studied by Bruce, (1995). It was found that men are generally more affluent than females therefore having more financial knowledge and experience. That's why they are relatively more risk takers as compared to females. But females are expected to be extra risk tolerant because of less financial experience and knowledge. A similar relationship was found by Graham et al. (2002).

Sachse et.al (2012) investigated the co-relationship between financial knowledge, risk perception and financial experience. The results showed that financial experience, risk perception and financial knowledge are significantly associated. With increased financial knowledge and financial experience the risk perception about the investment decreases. Diversification is a tool used by investors when financial knowledge and financial experience increases.

A thorough study of literature shows that there have most of the times a significant variance in risk taking attitude for both genders. While the contributing factors to such difference are: wealth, age, income, financial experience, education and financial knowledge. However, financial knowledge and financial experience are seen to be significantly contributing to the levels of risk.

4. Research Methodology

4.1 Independent Variables

4.1.1 Financial knowledge

Financial knowledge is one of the independent variables in this study. It refers to the capability of an individual which enables him/her to make efficient and effective decisions about his/her financial resources. Financial knowledge is considered as one of the important features that may possibly affect the risk taking attitude of males and females. The overall literacy rate generally and the female literacy rate specifically, is very low in Pakistan. So it is very logical to observe a very low financial knowledge. Since, female have less literacy rate and financial knowledge, they turn out to be more risk averse. So, with an increased financial knowledge it is expected that the risk taking attitude may also increase. As a matter of fact, the sample in this study constitutes of those females who invested in different investment options along with managing their home affairs. Therefore, they have relatively more financial knowledge and financial experience. Financial knowledge has been studied as a predictor variable on risk taking attitude, based on gender.

4.1.2 Financial Experience:

Financial experience in this study denotes the experience of individuals regarding handling and investing in different financial assets. Current financial experience is expected to affect the future risk taking attitude of individuals. Generally, females in this part of the world are expected to manage domestic affairs. Hence, they do not enjoy much financial freedom in their investment decisions. Therefore; they have relatively less financial experience, and if they are supposed to take such financial decisions, they will exhibit more risk averse behavior. However, more financially experienced individuals both male and female are likely to take relatively more risks.

4.2 Dependent Variables

4.2.1 Risk Behavior of Gender:

"Taking chances in investment decisions" is what risk behavior refers to in this study. The risk taking attitude in individuals is determined by various factors like gender, experience, age, knowledge, income etc. however, this study is constrained to the affect of financial knowledge and financial experience on risk taking propensity of individuals. It is already established from literature that females are relatively more risk averse because of lack of financial knowledge and financial experience. This study was aimed to find out that whether financial knowledge and financial experience have any contributions on the risk taking attitude based on gender.

4.1 Study Model



4.3 Research Hypotheses

Research Hypotheses Based on related literatures, the research tries to investigate the following hypotheses:
 The first main hypothesis of the research:

H1: There is statistically significant impact of financial knowledge on risk behavior of gender.

H2: Financial Experience has a statistically significant influence on gender risk taking behavior.

4.4 Sampling

The sample size includes 100 respondents from two cities of Rawalpindi and Islamabad. Convenient sampling was used to draw the sample. After data collection, ordinary least square regression and correlation have been used for data analysis in this study.

4.5 Statistical Techniques

After data collection data was entered in the computer to extract required statistical results. SPSS is used to process the data. Primarily, the Cronbach's alpha coefficient, Correlation coefficient and Multiple regression analysis are used to explore the relationship between dependent and independent variables.

- 1) Cronbach's alpha coefficient: it is used to test the reliability of the study instrument under which the data were collected.
- 2) Correlation coefficient: it is applied to indicate the association between dependent and independent variables.
- 3) Multiple regression analysis: it is tested to explore the impact of independent variables on dependent variable.

5. Data Collection

Primary data collection has been used in this study. A questionnaire was used to collect the data. The questionnaire has been adopted from the study titled "Factors Influencing Investment Decisions of Generation in India- an Econometric Study" conducted by Gaurav Kabra (2010). The instrument was designed in such a way to collect information about the risk taking attitude, characteristics of individual, financial experience and financial knowledge.

The sample size includes 100 respondents from two cities of Rawalpindi and Islamabad. Convenient sampling was used to draw the sample. After data collection, ordinary least square regression and correlation have been used for data analysis in this study. As, the purpose was to find out the extent of association between risk attitude based on gender, financial experience and financial knowledge.

Analyzing Risk Behavior of Males

Table: 01 Correlations of risk behavior with predictors

Predictors Correlation with Risk Behavior	
Financial Knowledge	0.38
Financial Experience	0.41

Correlation coefficients are the primary indicators of any association between the dependent and independent variables. In this study, the correlation values were 0.38 between financial knowledge and risk attitude and 0.41 between financial experience and risk taking attitude, both for male investors. Both values indicate a positive association between the dependent and the independent variables. These values illustrate that with an increase in the financial experience and financial knowledge, the risk taking propensity of male investors is expected to increase.

Table: 02 Regression Coefficient Estimate (Financial Knowledge and Financial Experience with Risk Behavior of Males)

	Risk Behavior Co-efficient	t-Statistics
Intercept/Constant	0.66152	0.75813
Financial Knowledge	0.4878	5.3464
Financial Experience	2.094	5.6
RSquare	0.456	
Multiple R	0.675	
F-Statistics	23.069	

The table, regression estimates shows that financial experience and financial knowledge have a substantial association with risk taking behavior of male investors. The t-values 5.346 and 2.094 for financial knowledge and financial experience respectively represent the significance at 95 percent of confidence interval and 5 percent significance level.

Analyzing Risk Behavior of Females

Table: 03 Correlations of risk behavior with predictors

Predictors	Correlation with Risk Behavior
Financial Knowledge	0.488
Financial Experience	-0.28

The values of association for financial experience and financial knowledge in females were 0.48 and -0.28 respectively. The correlation coefficient 0.48 represent a positive association between financial knowledge and the risk behavior of females while -0.28 represents a negative association between financial experience and risk behavior of females. The results for financial experience are interesting as it indicates that, with rise in financial experience, females are expected to take little risk.

The table 4 below shows the results for financial knowledge and financial experience on risk behavior for females. For females, financial knowledge has the expected positive value of 2.049 while financial experience has a negative association of -0.343 in the regression equation. The results are significant at 5 percent of significance level. With an increase in financial knowledge the risk taking attitude is expected to increase in females while on the other hand, with an increase in financial experience females are likely to take very few chances or they exhibit more risk averse behavior.

Table: 04 Regression Coefficient Estimate (Financial Knowledge and Financial Experience with Risk Behavior of Females)

	RiskBehaviorCo-efficient	t-Statistics
Intercept/Constant	-0.233	-0.201
Financial Knowledge	2.049	4.03741
FinancialExperience	-0.343	-2.62193
RSquare	0.352	
MultipleR	0.593	
F-Statistics	10.62	

6. Study Instrument

After identifying study problem, determination of questions and hypotheses, the researcher adopted the study instrument, the questionnaire is the instrument used to gather information from the population of the research and develop it in a form that covers all model variables.

6.1 Demographic Variables: These characteristics include (sex, educational level, and investment experience in financial instruments).

6.2 Independent variables: Independent variables are represented by financial knowledge and financial experience.

6.3 Study Instrument Scale

Five points Likert scale is used in this study. This is the most widely used measure of estimation of judgment and opinions.

6.4 Instrument Validity

The questionnaire has been adopted from the study titled "Factors Influencing Investment Decisions of Generation in India-an Econometric Study" conducted by Gaurav Kabra (2010).

6.5 Instrument Reliability

To determine the internal consistency reliability of the elements, "Cronbach's alpha" was used. (George and Mallery, 2003) Provided the following categories for reliability: "(≥ .9) Excellent, (≥ .8) Good, (≥ .7) Acceptable, (≥ .6) Questionable, (≥ .5) Poor, and (< .5) Unacceptable". The larger value of Cronbach's alpha coefficient reflects a higher degree of internal consistency (Nunnally, 1978). The cronbach alpha was .60 and .87 for financial knowledge and financial experience respectively.

7. Result

Many authors have studied the effect of financial experience and financial knowledge on risk taking attitude of an individual. By using Pearson correlation coefficient, Sachseet, al. (2012) studied the association of financial knowledge and perceived risk. It was found that financial knowledge and perceived risk for an investment option are significantly related ($r = -0.36$, $p = 0.00$, $N = 171$). It was deduced from the study that with high levels of financial knowledge, the perceived risk will be lower and hence the individual will tend to take more risks. Similarly, financial experience was also studied in the same study. The results for financial experience and risk perception were also found significant ($r = -0.21$, $p = 0.1$, $N = 171$).

Similarly, it was found by Christiansen et, al (2010) that the stock market investment is significantly affected by socio-economic variables and education is one of the prominent variables that may have a significant influence on investor's stock market behavior. The results included that people with relatively higher education, were more likely to invest in stocks while those having only basic education were found reluctant to participate in stock market investment decisions.

Another study about education and risk aversion propensity by Hibbert, et, al (2008) found a positive association among level of education and risk aversion propensity. It was argued that high levels of education will motivate to invest in more risky options. Since education and risk taking propensity are negatively related therefore, as long as the level of education rises, the risk taking attitude also rises.

The impact of financial experience was studied by Malmendier & Nagel (2010). It was concluded that financial experience significantly affects the risk taking attitude of individuals in stock market and bond market options. It was argued that experience with risky assets can affect the individual's risk taking propensity. Individuals with relatively more financial experience with stocks and bonds are expected to participate more in the same markets. This implies that with an increase in financial experience, the risk taking propensity of individuals is expected to increase.

This study has produced consistent results with the previous studies. It is well established that females are relatively more risk avert in their investment and financial decisions. However, it is evident from this study that as long as financial knowledge and financial experience increases in males, their risk taking attitude is expected to increase. As, the correlation coefficient was positive and significant for males. On the other hand, with more financial knowledge, females are expected to take more risks and with more financial experience they are likely to take fewer chances. The reason for such a negative association between financial experience and risk taking attitude may be that they gets more cautious with more financial experience and hence exhibit more risk averse behavior. When financial experience is less, curiosity, trust on the investment opportunity provider etc. are probably the motives for investment decisions.

8. Conclusion

The study at hand has analyzed the effects of financial experience and financial knowledge on risk taking attitude of male and females. From the results, it was found that with an increase in financial experience and financial knowledge of male investors, their risk taking propensity is expected to increase. However for females, the risk taking propensity is likely to increase with an increase in financial knowledge and it expected to decrease with increase in financial experience. The reason for such negative relation between financial experience and risk aversion propensity may be "over-cautiousness"

Generally, females have less financial experience and financial knowledge that's why they prefer to take fewer chances in their investment decisions. Financial experience and financial knowledge are matters of relevancy. For instance, with increased general literacy rate; more females join financial markets. These lead to more financial knowledge and off course, more financial experience. Hence, it results into more risk taking propensity.

In the current study, it was hypothesized that whether financial knowledge and financial experience affect the risk taking attitude in males and females? The results showed that financial knowledge and financial experience are positively associated with risk taking attitude of males. While for females the association for financial knowledge was found positive and for financial experience, it was found negative. In both cases the associations were significant as p- value was less than 0.05. So, the hypothesis that there is a statistically significant effect of financial experience & financial knowledge on risk taking attitude is accepted.

As discussed above, the results of this study are consistent with studied conducted by Christiansen et.al (2010) Sachse et al. (2011) Malmendier and Nagel (2016).

The study at hand is useful in diagnosing the risk behavior of male and female individuals. It is more useful to the companies, financial advisors and public institutions. Secondly, limited literature is available on this topic in Pakistan. This study will add some useful findings to the literature.

9. Recommendations

In light of the findings of this research, the following recommendations are proposed:

Understanding gender behavior is vital for investment banks. To identify the most influential investment option affecting the investor behavior of male and female investor would affect the future strategies and policies of the investment banks. This study will also supportive for investment advisors to make suitable strategies of asset allocation to fulfill the investment desires of their customers.

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