



## Does Gender Difference Impact Investment Decisions? Evidence from Oman

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### ABSTRACT

Humans are believed to be rational decision makers and documentary evidence proves a significant heterogeneity across individuals when it comes to investment decision making and risk bearing. The study is an attempt to explore and understand the heterogeneity of investment decision when it comes to gender behavior with focus on women. The aim of this research is to explore role of gender in investment decision making and to identify the points of difference between the two genders with respect to their vulnerability towards various behavioral bias in their pursuit for prospective financial gains. The research attempts to understand the susceptibility of genders to normative influences and herd tendencies in the context of Oman.

**Keywords:** Behavioral Finance, Prospect Theory, Risk, Herd Behavior

**JEL Classifications:** G02, G21, G24

### 1. INTRODUCTION

The hand that rocks the cradle rules the world is a popular saying for women. Saving is a habit attributable and embodied to women. Even in the past, when women mainly depended on their spouses' income, they used to save to meet emergencies as well as for future activities. In-fact in almost all culture they have been the prime factor for household savings. In today's modern world where women are more educated, more employed and well informed, they have started to take their own investment decisions. No more are they averse to various financial claims on offer by financial institutions. This study is an endeavor to study the perception of women investors towards various avenues of investments as compared to their male counterpart who are traditionally bearing the role of the investors and to unravel the potential that women investors have by profiling them for financial institutions offering plethora of financial products.

Increasingly around the world researcher are ever keen to unravel the behavioral aspect of investment decision making among humans. In order to provide answers to why human make irrational financial decisions, behavioral finance field

was born which is a judicious mix of conventional economics and finance with behavioral and cognitive psychological theory. According to the prospect theory losses have more emotional impact than an equivalent amount of gains. Each investor is influenced and motivated to take higher risks in order to avert losses.

The sultanate of Oman is one of the developing countries of the Middle East with a growth rate of GDP of 4.62% (NCSI) and has a robust financial system, including a vibrant capital market. Increasingly the government of Oman has taken steps to encourage investors to save and invest in its financial system. There has been a lot of progress in the number of investors who are presently investing in the financial market of Oman.

The objective of this research is to investigate:

- The role gender plays in investment decision making and to explore the effect of behavioral finance phenomenon on women investor in Oman
- Identify the points of difference between the two genders with respect to their vulnerability towards various behavioral phenomena

## 2. LITERATURE REVIEW

Rationality of human behaviors has long been an issue challenged by several researchers for over a decade (Kahneman and Tversky, 1979). Further studies started to explore the impact and role of human behavior in investment decisions. Thus Behavioral Finance as a field of study was born.

Behavioral Finance analyses the psychological influences of investors on financial decision making and markets. It analyses how investors struggle to find a way through the give and take between risks and return (Bernstein, 1996). Investor tends to remain afloat, even when predictability is low, in a sea of uncertainty of financial markets and even flourish in such an environment.

The impact and role of gender in financial decision making has been a favorite issue of inquiry and a huge amount of literature is widely available on the role and impact of gender on financial decision making.

The first aspect of research has been the clarity of financial goals. The Task Goal Theory postulates that specific and different goals can lead to higher levels of performance (Locke and Lathan, 1991). Every human being sets goals which are an outcome of their motivational and behavioral patterns (Fishburn, 1977) based on their preconceived targets of return. They continuously assess the consequence of previous decision and compare their financial targets based on their risk tolerance.

A well-defined financial goal provides clear check points for individuals to compare their performance with the standard (Cai, 2012).

According to the Milestone 3 Report 2006 titled "Gender Differences and Investment Behavior," it was found that financial advisors and print media were the major sources of financial information for most of the investor surveyed in USA. It was also found that the investors less frequently personal computer-based investment tools primarily for investment analysis or management. While reluctance to use personal computers and the Internet was mainly attributed to high security concerns and confusing websites which were the most common deterrents. More than half of respondents, however, said that they were simply not interested in using investment software. It became clear that a majority of participants preferred to talk to a person when making an investment decision.

A great deal of experimental studies had been conducted to find out risk attitude of males and females. Almost all studies have concluded that women are more risk averse than men (Croson, and Gneezy, 2009). An experimental study conducted by Powell and Ansic (1997) conclude that female are less risk seeking than males irrespective of familiarity and framing, costs or ambiguity Dwyer et al. (2002) had established that women exhibit less taking than men in their most recent, largest, and riskiest mutual fund investment decision.

Olsen and Cox (2001) concluded that women are more risk averse even when decision makers of both genders have the same level

of expertise and experience. It found that women investors' weight risk attributes, such as possibility of loss and ambiguity more heavily than their male colleagues. A study by Jianakoplos and Bernasek (1998) provided evidence that women perceive themselves to be less inclined to risk taking than males.

## 3. RESEARCH METHODOLOGY

The research study is an analytical research study using data collected from the sultanate of Oman to explore the gender behavior towards investment decisions. The primary data was collected from salaried investors (the respondents) with the help of a structured questionnaire, using on-probabilistic sampling method, with a judicious mix of convenience and judgmental sampling. The final sample size was 225, with representation from a wide cross-section of the Omani population. Chi-square test has been used for statistical analysis. The sample was collected during December 2014, from five major cities of Oman. The demographic profiles of the respondents are described in Tables 1-4.

## 4. DATA ANALYSIS AND RESULTS

In order to study the impact of investment decision six hypotheses are formulated and analyzed. Chi-square ( $\chi^2$ ) test of independence has been applied to all the tests of hypotheses using significance level,  $\alpha = 0.05$ .

**Table 1: Gender versus age**

Age	Below 30	30 to <50	>50	Total
Gender				
Male	30 (23)	60 (46)	40 (31)	130 (100)
Female	18 (19)	67 (71)	10 (11)	95 (100)
Total	48	127	50	225

**Table 2: Gender versus employment**

Employment	Public sector	Private sector	Family buss	Total
Gender				
Male	56 (43)	42 (32)	32 (25)	130 (100)
Female	46 (48)	33 (35)	16 (17)	95 (100)
Total	102	75	48	225

**Table 3: Gender versus level of income**

Level of income	Below 12000	12000 to <24000	>24000	Total
Gender				
Male	28 (22)	63 (48)	39 (30)	130 (100)
Female	23 (24)	49 (52)	23 (24)	95 (100)
Total	51	112	62	51

**Table 4: Gender versus academic qualification**

Academic qualification	Below 12000	12000 to <24000	>24000	Total
Gender				
Male	70 (54)	44 (34)	16 (12)	130 (100)
Female	59 (62)	29 (31)	7 (7)	95 (100)
Total	129	73	23	225

### 4.1. Clarity of Financial Goals versus Gender

Null hypothesis 1: When taking investment decisions, having clear financial goals are independent of gender.

Having a precise financial goal is the first step towards intelligent investment decision and include having a clear vision about perceived financial goals which the investor wants achieve within a given time horizon. The more the preciseness the more is the clarity of the financial goal of the investor. The following Table 5 elucidated the results of the respondents towards clarity of financial goal.

On applying Chi-square ( $\chi^2$ ) test, we get P valued as 0.000502464, with having no expected frequency <5, which indicates that there is sufficient evidence to reject the null hypothesis. We, therefore, can conclude that male respondents are more precise in clarity of financial goals than females. A significant percentages (42%) of female have no idea of financial goals compared to that of male (19%). Therefore, there is a difference between male and female investors with regard to clarity of financial goals.

### 4.2. Gender Preference for Current Income versus Future Growth

Null hypothesis 2: The main (primary) objectives are indifferent to the gender of the investors.

Any investment decisions hinge on two priorities either preference for current income for future growth prospects in the investment option. Usually most of the investor gives equal weight to both and try to seek a balance between the two preferences.

The survey results with regards to the preference for current income and future growth are tabulated in the given cross Table 6.

On applying the chi-square ( $\chi^2$ ) test on the above data (no expected frequency <5), the P value happened to be 0.352865506. So, statistically there is no evidence to reject the null hypothesis. Therefore, as far as the male and female are concerned, they do not differ significantly with regard to the main objectives of their investment decision.

### 4.3. Risk Aversion and Appetite versus Gender

Null hypothesis 3: Tendency of risk aversion and appetite is not related with the gender of the investor.

Every investor strives to get the maximum returns and the lowest possible risk. Risk aversion is one of the basic strategies in an investment decisions. However investors are also ready to take higher risk and thus have big risk appetite if they strongly contemplate heavy returns from an investment option. The responses of male and female respondents with regard to risk aversion and appetite have been tabulated in the following contingency Table 7.

On applying the Chi-square test, we reject the null hypothesis, with P value being 0.000030897, and can conclude that level of risk appetite significantly differs between male and female. Male investors are ready to take more risk as the survey shows that 37%

**Table 5: Cross table of gender versus clarity of financial goals**

Observed	Clarity of financial goals			Total
	Highly precise	Somewhat precise	No idea	
Gender				
Male	36 (28)	69 (53)	25 (19)	130 (100)
Female	14 (15)	41 (43)	40 (42)	95 (100)
Total	50	110	65	225

P=0.000502464

**Table 6: Cross table of gender preference for current income versus future growth**

Main investment objective	Growth	Income	Both	Total
Gender				
Male	56 (43)	48 (37)	26 (20)	130 (100)
Female	32 (34)	42 (44)	21 (22)	95 (100)
Total	88	90	47	225

P=0.352865506

**Table 7: Cross table of gender versus risk aversion and appetite**

Risk aversion and appetite	Aggressive	Moderate	Conservative	Total
Gender				
Male	48 (37)	62 (48)	20 (15)	130 (100)
Female	20 (21)	35 (37)	40 (42)	95 (100)
Total	68	97	60	225

P=0.000030897

**Table 8: Cross table of gender versus market information reaction**

Market information reaction	Yes	No	Total
Gender			
Male	69 (53)	61 (47)	130 (100)
Female	52 (55)	43 (45)	95 (100)
Total	121	104	225

P=0.805169801

of the respondents are “aggressive,” while the survey depicts that 42%of the female investors are generally more “conservative” in taking risk while making investment decisions.

### 4.4. Effect of Market Information on Gender

Null hypothesis 4: Reaction over the new market information is independent of gender.

Information plays a very important role in the conduct of the financial markets and certain information act as “sentiments” which may cause prices to steeply rise or fall without any fundamental justification. Investors are also sensitive to market information as they have a tendency to react in order to make gains. This results in artificial increase in the prices of security or unjustified decrease in the price of security.

The responses of male and female respondents with regard to tendency to react to market information have been tabulated in the following contingency Table 8.

The result of chi-square ( $\chi^2$ ) rejects the above mentioned hypothesis with P value being 0.805169801 (no expected frequency is <5). As far as the “over-reaction” on financial news is concerned, it seems gender has no effect on it. Both, male and female, react almost the same way to the market information and use it in their investment decisions.

**4.5. Gender and Investor Over-confidence**

Null hypothesis 5: Level of overconfidence is independent of investors’ gender.

One of the basic principles in investing is to have confidence in your own analysis and estimation to successfully accomplish a given objective. But if it leads to overdoing it leads to over confidence which can results in negative returns leading to even losing confidence in those decisions.

Investors has to ensure that they do not cross this thin line of demarcation between confident investing and being overconfident as it could result in self-defeat and demotivation to invest further.

The survey result with reference to male and female respondents tendency to overreact and be over confident are tabulate in cross Table 9.

The chi-square ( $\chi^2$ ) test of independence was performed to examine the relation between gender of the investors and their level of over confidence. As the analysis shows, P=0.000575091 (and no expected frequency <5) there seems to be no relationship between the gender of the investors and their respective level of over-confidence. In other words, the level of confidence, statistically, has relevance with the gender of the investor. Thus it shows that male investors have a tendency to become more over confident than female investors.

**4.6. Gender and Herd Behavior**

Null hypothesis 6: Susceptibility to herd behavior is independent of gender.

When investor blindly follow what the majority of investors are doing it tantamount to being susceptible to “herd” behavior. Usually the investors follow suit of others as it gives them confidence in the decision of the majority even if on an individual basis they have preferred not to take that decision. Going with the herd seems safe and self-fulfilling.

The responses of male and female respondents with regard to susceptibility to herd behavior have been tabulated in the following cross Table 10.

The Chi-square test of independence was applied to test the null hypothesis and it gave out the P valued as 0.188142042 and no expected frequency <5. Thus it can be concluded that the herd behavior of investor is not related with the gender of the investor. Both the gender is equally susceptible to herd behavior.

**5. CONCLUSION AND IMPLICATIONS**

The entire research analysis concludes that investors are prone to emotions and react in accordance to their own behavioral cues,

sometime overdoing it leading to suboptimum investments result. They tend to behave a human and not machines and are largely satisfied with their performance in investing even though the results is at sub optimum level.

The research also concludes that there is a variation in the gender behavior once it comes to investment decisions. A summary result is shown in the Table 11.

While men and women are independent with each other on clarity of financial goals, risk aversion and appetite and investor’s overconfidence they tend to be similar with regards to primary financial goal, market information reaction and susceptibility to herd behavior.

The research implications for the financial service industry of sultanate of Oman are far reaching. This research has established a great variation in the behavior of the gender in the country and therefore it has significance for the future of the investment climate in the country. The financial service industry must understand the entire populace of Oman is behaviorally inclined and there is a dire need to use psychometric testing techniques to measure the demographic and psychographic characteristic of the Omani populace in order to construct customized behavioral portfolios.

Given the variation in the financial behavior of both men and women it is now imperative that the financial industry must

**Table 9: Cross table of gender versus over-confidence**

Investor over-confidence	Above average	Average	Below average	Total
Gender				
Male	15 (12)	89 (68)	26 (20)	130 (100)
Female	16 (17)	41 (43)	38 (40)	95 (100)
Total	31	130	64	225

P=0.000575091

**Table 10: Cross table of gender versus herd behavior**

Susceptibility to herd behavior	Susceptible to a large extent	Susceptible to a small extent	Not susceptible	Total
Gender				
Male	49 (38)	61 (47)	20 (15)	130 (100)
Female	39 (41)	49 (52)	7 (7)	95 (100)
Total	88	110	27	225

P=0.188142042

**Table 11: Summary**

Hypothesis	Decision	Conclusion
Clarity of Financial Goals	Reject the H <sub>0</sub>	Clarity of financial goals, risk appetite, and investors’ over-confidence are related to the investors’ gender
Risk aversion and appetite	Reject the H <sub>0</sub>	
Investor over-confidence	Reject the H <sub>0</sub>	
Effect of market news	Accept the H <sub>0</sub>	Effect of market news, main investment objective, and herd behavior are not related to the investors’ gender
Current income versus future growth objective	Accept the H <sub>0</sub>	
Susceptibility to herd behavior	Accept the H <sub>0</sub>	

wakeup to the call of offering gender specific investment vehicles and options specially designed in accordance to the respective behavioral preferences and emotions.

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