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THE OVERCONFIDENCE PERCEPTIONS OF INDIVIDUAL INVESTORS IN CONCEPT OF SOCIO DEMOGRAPHIC FACTORS: EVIDENCE FROM IZMIR[1]

SOSYO DEMOGRAFİK FAKTÖRLER BAĞLAMINDA BİREYSEL HİSSE SENEDİ YATIRIMCILARININ AŞIRI GÜVEN DÜZEYİ ALGILARI: İZMİR İLİ ÖRNEĞİ

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ABSTRACT

The aim of this study is to determine the level of overconfidence perceptions in terms of socio-demographic factors of individual stock investors living in İzmir, Turkey. The survey has been conducted to 622 individual stock investors. There are five indepedent variables as age, gender, marital status, education and field of profession in the socio-demographic part of the survey. The results of the study show that "the overconfidence level perception of individual stock investors" differs according to age, marital status and education, however the differences are centered upon low confidence level. The overconfidence level perception of individual stock investors is not significantly different according to the gender.

Keywords: *Socio demographic factors, Individual Stock Investor, Confidence Perception Level*

Jel Codes: *G02*

ÖZ

Araştırmanın temel amacı İzmir'de yaşayan ve hisse senedi piyasalarında yatırım yapan bireysel hisse senedi yatırımcılarının sosyo-demografik faktörler bağlamında aşırı güven düzeyi algılarının belirlenmesidir. Bu kapsamda hazırlanan anket formu 622 bireysel yatırımcıya uygulanmıştır. Anketin sosyo-demografik bölümünde yaş, cinsiyet, medeni durum, eğitim durumu ve meslek türü şeklinde beş bağımsız değişken yer almıştır. Araştırma sonucunda "Bireysel hisse senedi yatırımında aşırı güven düzeyi algısının" yaş, medeni durum, eğitim durumu ve meslek türüne göre farklılık gösterdiği ancak farklılıkların güven düzeyi düşüklüğünde yoğunlaştığı belirlenmiştir. Cinsiyet değişkenine göre ise "Bireysel hisse senedi yatırımcılarının aşırı güven düzeyi algısı" farklılık göstermemektedir.

Anahtar Kelimeler: *Sosyo-Demografik Faktörler, Bireysel Hisse Senedi Yatımcısı, Güven Düzeyi Algısı*

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1. INTRODUCTION

According to Fama (1970), the concept of efficient market is defined as where many rational investors try to estimate the future values of financial instruments and all market participants can easily reach important and immediate news. So, it is impossible to gain abnormal returns from such a market. The prices of financial instruments occur randomly. If prices consist of all information, the prices of instruments change when new information comes to the market. Accordingly, the changes in prices cannot be estimated, in other words, if prices reflect all the information estimated, changes in the prices will occur just because of new information.

All participants are assumed to behave rationally in an efficient market. Rationality defines two cases here. First, investors update their predictions about markets as noted in Bayes' law when they have new information. Second, they make investment decision consistent with Savage's Subjective Expected Utility theory. However, studies show that it is not easy to understand the stock markets and individual investor behaviors by traditional finance paradigm (Barberis, Thaler, 2003:1053).

Behavioral finance is an approach which has been come out in response to the difficulties faced by the traditional finance. In broad terms, some financial cases can be better understood by using models in which investors are not fully rational (Barberis, Thaler, 2003:1053).

Studies show that, the prices in financial markets do not only depends on estimated information and investors risk-return expectations, but also investors' irrational behaviors. Investors' optimistic or pessimistic mood, anxiety, happiness, etc. lead them to exhibit irrational investment behavior. The irrational investment behavior of investors has attracted the attention of many researchers and "Behavioral Finance" concept has been come out.

Behavioral finance, refuses the Efficient Market Hypothesis' rational investor concept and states that people have limited cognitive abilities, so they mostly behave irrationally. As a result, price anomalies can be seen in financial markets. One of these anomalies is the overconfidence of investors.

1.1. Overconfidence

Confidence can be defined as reliability, trust, etc. Individuals' experiences in their life leads them to determine the deadlines about their different levels of confidence. In this context, it is possible to state conditional, unconditional confidence and obtained by experience (Barutçugil, 2002a: 97/98).

Individuals who have overconfidence, do not accept limitations, overestimate his/her abilities, think that his/her opinion is the best one, refuse suggestions and helps (Barutçugil, 2002b; 83). In behavioral finance, overconfidence is an approach which states that investors have more confidence than the usual while investing in financial instruments, so they show irrational behaviors. Most of studies in cognitive psychology show that investors have overconfidence and this leads them to see their knowledge more valuable, overestimate their ability of controlling events (Döm, 2003:61). There are three factors that leads to overconfidence in behavioral finance: Self-Attribution Bias, Illusion of Knowledge and Illusion of Control.

1.1.1. Self Attribution Bias

Self attribution bias states that investors tend to attribute their financial successes to their own abilities and financial failures to bad luck or action of other investors. Successful investments lead them to have more overconfidence about their abilities and this causes them to trade more speculative operations (Barber ve Odean, 2002: 459-460). Hoffman and Post (2014) state that if people have higher returns in previous periods, they say that their recent financial performances reflects their investment abilities and market return does not effect their financial performance Hsu and Shiu (2007) show that frequent bidders earn higher than the infrequent ones in their first bids and this leads them to have overconfidence augmented by self attribution bias. Overconfidence leads them to bid more aggresivelly in their following bids and in the long run, their earnings are less than the infrequent bidders.

1.1.2. Illusion of Knowledge

Investors have tendency to believe that the more information they have, the more accurate their forecasts about the market will be. This leads investors to overconfidence and is called illusion of knowledge. More information may not have negative effect in decision making. However, this is not always true. If investors do not have enough abilities and experience to interpret the information as confirmation of his/her prior beliefs and opinions, more information will not be useful in financial decisions, besides confuses the investors and may cause loss (Nofsinger, 2001: 14-15).

1.1.3. Illusion of Control

People attribute outcomes of an event to their own actions. So, they believe that they can control the effects of events and this is called illusion of control. (Harris and Osman, 2012: 615). However, successes obtained by chance cannot be controlled.

2. LITERATURE

There are many studies about overconfidence perception of individual stock investors in stock market. In these studies the effects of different factors on overconfidence have been investigated. However, most of these studies are focused on the sociodemographic factors' effects on overconfidence level of investors.

Mishra and Metilda (2015) show that men have more overconfidence than women and overconfidence increases by investment experience and education according to a survey study conducted on 309 mutual fund investors.

Xia, Wang and Li (2014) state that the higher financial literacy people have, the more overconfidence they have and participation in stock markets.

Pandey (2014) expresses in his study that the number of male investors who claim that they have high confidence is more than female investors. However, he could not find any statistical difference between male and female investors in terms of overconfidence.

Lee et al. (2013) found that men and women show different biases which can affect their investment performances and because men and women have different risk perceptions, men tend to take more risk than women.

Erdem, Arık and Yüksel (2013) show in their studies that men trade and loose more than women do because of having more overconfidence. Additionally, elderly investors gained more in stock investments in the period of 2011-2012 in Borsa İstanbul.

Sharma and Vasakarla (2013) examined the risk aversion and overconfidence of investors in terms of gender. According to their findings, men prefer more risky financial instruments than women do, however, they could not find any statistical differences differences between men and women in terms of their overconfidence level.

Yeh and Yang (2011) tell in their study that overconfidence increases the price distortion, volatility of the market and trading volume of investors.

Johansson and Nordblom (2010) have used an economics exam in order to see if there is statistical difference between male and female students about overconfidence at Gothenburg University, Sweden. According to their findings, there are not statistical differences between male and female students.

Zaiane and Abaub (2010) show that men trading in Tunisian Stock Market are more confident than women and overconfidence leads them to overtrade.

Deaves, Lüders and Luo (2009) exhibit in their study that people who have overconfidence because of supposing himself/herself smarter and more intelligent than others trade more and men are not more confident than women.

Chuang and Lee (2006) claim that investors who have overconfidence overreact to the private news about firms and give low reaction to the public announcements, The previous gains lead people to have overconfidence, so they trade more in the following periods. This also increases the volatility of the market.

Barberis and Odean (2001) show that men are more overconfident than women while investing, This is especially seen in single men and women. This leads male investors to trade and loose more in market.

3. RESEARCH

This section consists of the aim of the study, statistical analyse method and hypothesis .

3.1. Aim of the Study

The main aim of this study is to determine the overconfidence perceptions of individual stock investors live in İzmir in terms of sociodemographic factors. The sociodemographic factors (independent variables) of the study are age, gender, marital status, education level and field of profession. The dependent variable of the study is the question of “What would you gain if the stock market yields 10% in a given period?” in order to identify the overconfidence perception of individual stock investors. The investors who mark %10 return and below indicates that they are not overconfident, whereas above %10 indicates that they are overconfident, in other words, they are above the average.

3.2. Statistical Analyse Method

The individual stock investors live in İzmir have been conducted a survey in the period of 01.03.2015-31.05.2015. The research population is the individual investors living in İzmir. There were 103.444 registered stock investors in 2014 according to the CSDI (Central Securities Depository Institution) data. According to the formula below, minimum sample population is 383 stock investors. The number of participants in the study is 622.

$$n = \frac{N \times P \times Q \times z_{\alpha}^{2}}{(N-1) \times \sigma_{\bar{x}}^{2} + P \times Q \times z_{\alpha}^{2}} = \frac{103444 \times 0{,}25 \times 1{,}96^{2}}{(103444-1) \times 0{,}05^{2} + 0{,}25 \times 1{,}96^{2}} = 382{,}74$$

In order to analyze the data, Chi-square test has been applied.

3.3. The Main Hypothesis of the Study

The hypothesis have been designed in concept of sociodemographic variables "age, gender, marital status, education level and occupation" of study.

H_0: There is no difference in terms of ……. variable in overconfidence perception of individual stock investors.

H_1: There is a difference in terms of ……. variable in overconfidence perception of individual stock investors..

4. FINDINGS

The participants' mean age and standard deviation is 36,6±8,05. The mean age according to gender for women (n=193) is 34,4±7,05 and for men (n=429) is 37,6±8,27.

"Individual stock investors' overconfidence perception" differs according to age groups (χ_1^2 =14,964 p=0.002). As a result, H_0 is rejected for age variable. Although 30-39 age group has the highest overconfidence, it is seen from the Table 1 that most of participants have low confidence in all age groups.

Table 1: Overconfidence Perception and Age Groups

Expected Return		**Age Groups**				**Total**
		=<29	30-39	40-49	>=50	
=<%10	n	80	284	118	30	512
	%	12,9	45,7	19,0	4,8	82,3
>%10	N	28	58	12	12	110
	%	4,5	9,3	1,9	1,9	17,7
Total	N	108	342	130	42	622
	%	17,4	55,0	20,9	6,8	100

Table 2 shows the overconfidence perception of individual,investors in terms of gender. Although male investors have more overconfidence (%11,6) than female investors (%6,1) have, "Individual stock investors' overconfidence perception" does not differ according to gender (χ_2^2 =0,772 p=0.380). As a result, H_0 is not rejected for gender variable (Table 2).

Table 2: Overconfidence Perception and Gender

Expected Return		**Gender**		**Total**
		Female	Male	
=<%10	n	155	357	512
	%	24,9	57,4	82,3
>%10	n	38	72	110
	%	6,1	11,6	17,7
Total	n	193	429	622
	%	31,0	69,0	100

Table 3 shows the overconfidence perception of individual,investors in terms of marital status. According to test results, "Individual stock investors' overconfidence perception" differs according to marital status (χ_3^2 =11,117 p=0.001). So, H_0 is rejected for marital status variable. It is seen from the Table 3 that most of participants have low confidence level in married and single groups.

Table 3: Overconfidence Perception and Marital Status

Expected Return		**Marital Status**		**Total**
		Married	Single	
=<%10	n	312	200	512
	%	50,2	32,2	82,3
>%10	n	48	62	110
	%	7,7	10,0%	17,7
Total	n	360	262	622
	%	57,9	42,1	100

The data in Table 2 and Table 3 is shown in Table 4 severally and more detailed. According to the Table 4, both women and men regardless of they are married or single, have low confidence in stock market. However, both married and single women have more confidence in proportion to married or single men.

Table 4: Overconfidence, Gender and Marital Status

Gender	**Expected Return**		**Marital Status**	**Total**	**Marital Status**	**Total**
			Married		Single	
Female	=<%10	n	95	95	60	60
		%	85,6	85,6	73,2	73,2
	>%10	N	16	16	22	22
		%	14,4	14,4	26,8	26,8
	Total	N	111	111	82	82
		%	100	100	100	100
Male	=<%10	N	217	217	140	140
		%	87,1	87,1	77,8	77,8
	>%10	N	32	32	40	40
		%	12,9	12,9	22,2	22,2

	Total	N	249	249	180	180
		%	100	100	100	100

Table 5 shows the overconfidence perception of individual investors in terms of educational beackground. According to the test results, "Individual stock investors' overconfidence perception" differs according to educational background (χ_4^2 =7,884 p=0.048). So, H_0 is rejected for educational background variable . Most of participants have low confidence in all education levels. The group who has the highest overconfidence among educational background levels is university graduates. The group who has no overconfidence is primary-secondary school graduates.

Table 5: Perception of Overconfidence and Educational Background

Expected Return		**Education Level**				**Total**
		Primary/ Secondary	**High School**	**University Graduate**	**Post Graduate**	
=<%10	n	6	62	300	144	512
	%	1,0	10,0	48,2	23,2	82,3
>%10	n	0	6	78	26	110
	%	,0	1,0	12,5	4,2	17,7
Total	n	6	68	378	170	622
	%	1,0	10,9	60,8	27,3	100

Table 6 shows the overconfidence perception of individual,investors in terms of field of profession. According to the test results, "Individual stock investors' overconfidence perception" differs according to field of profession (χ_5^2 =42,984 p=0.000). So, H_0 is rejected for field of profession variable. Most of participants have low confidence in all level profession groups.

Table 6: Overconfidence and Field of Profession

Expected Return		**Occupation**								**Total**
		Finance Sector	**Student**	**Academician**	**Clerk**	**Worker**	**Trader**	**Self Employed**	**Other**	
=<%10	n	94	18	50	132	34	30	80	74	512
	%	15,1	2,9	8,0	21,2	5,5	4,8	12,9	11,9	82,3
>%10	n	48	4	8	30	6	0	6	8	110
	%	7,7	,6	1,3	4,8	1,0	,0	1,0	1,3	17,7
Total	n	142	22	58	162	40	30	86	82	622
	%	22,8	3,5	9,3	26,0	6,4	4,8	13,8	13,2	100

4. CONCLUSION

Behavioral finance states that investors tend to attribute their financial successes to their own abilities and financial failures to bad luck or action of others (self attribution bias), think that if they have more information, their capability of esmitaing the market will be higher (illusion of knowledge) and suppose that they can control the effects of events in the market (illusion of control). All these biases leads them to overconfidence. The investors who have overconfidence do not accept limitations, take more risk and think that their investment decisions are the best.

In this study, we try to see if overconfidence level of investors differ in terms of socio demographic factors. According to our findings, "the overconfidence level perception of

individual stock investors" differs according to age, marital status and educational background, however, the differences major on the low confidence level. The overconfidence level perception of individual stock investors is not significantly different according to the gender. However, both married and single men and women's confidence level major on low level.

Our findings are consistent with the studies of Pandey (2014), Sharma and Vasakarla (2013), Johansson and Nordblom (2010) and Deaves, Lüders and Luo (2009), inconsistent with the studies of Barber and Odean (2001), Zaiane and Abaub (2010) and Mishra and Metilda (2015).

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