

Men-women and the story of the tortoise and the hare

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Abstract: The aim of this study is to see if there are any differences between men and women’s overconfidence. We have made a social experiment through a survey to get reliable results, and our audience consisted of both men and women, and also a few people from LGBTQ community also agreed to participate.

Regarding overconfidence, our research results showed that men are more overconfident than women and people of LGBTQ community. The outcomes of this research are compatible with many other aspects of life and can be found even in literature. Moreover, the same results can be observed in also economy; overconfidence in men may lead to wrong economic decisions that will have undesirable consequences in many fields, such as stock exchange.

Keywords: men, women, LGBTQ, behavioural economics, overconfidence.

Introduction

The story of *The Tortoise and The Hare* teaches us that being overconfident might lead to lose a race because of “the overconfidence effect”. The overconfidence effect is observed when people’s subjective confidence in their own ability is greater than their objective (actual) performance (Samson, 2018, p.95). However, women are less overconfident especially in economic decisions than men (Fehr-Duda, De Gennaro, & Schubert, 2006); (Deaves, Lüders, & Luo, 2009), (Dahlbom, Jakobsson, Jakobsson, & Kotsadam, 2011). This may be caused by our acquired features from evolution.

Regarding daily behaviour, there are sex differences between males and females in primates and non-primate species. But this should not cause discrimination because there is no predominance between the species. (Lonsdorf, 2017) reports that “...taken as a whole, consistent and accumulating reports of sex differences in primate behavioural development suggest that, although gender socialization in humans plays a role in magnifying the differences between young males and females, these behavioural sex differences are rooted in our biological and evolutionary heritage...” On the other hand, (Christian, 2011) says “...a popular theory is that such people have a brain with physical characteristics that match the sex they identify with. So, for a man who feels like he is a woman – a male-to-female transsexual – the proposal is that he has a female brain “trapped” in a male body...” “We could make an inference that...transsexual (male to female) people could feel as a woman while their brains carry characteristics of men...” (Savic & Arver, 2011). If some homosexuals feel and behave like a woman while some lesbians feel and behave like a man, does the overconfidence situation is caused by their biological gender? This question leads to a research.

There is still a meaningless argument about men’s success vs women’s success in science and technology. For example, there is a stereotype that boys are more successful than girls in mathematics, but the reason behind it is not the gender.

There are many studies and surveys about this subject matter and one of them comes from Pehkonen, Erkki (Torner & Kalesse, 1996). The researcher reports a project’s results which was made

in Finland amongst secondary school students, and the results indicated that girls had clearly lower confidence than boys with their abilities to learn and mathematics.

In an interview, this finding is expressed by Dr Claudie Haignere, a former astronaut and the president of Unverscience, as:

“The truth is that there are too many countries where parity is not achieved; and yes women are still reluctant to progress into certain sectors of science and technology – like computer science, physics, maths, or engineering. In France, at present, 27.8% of students in these fields are women; yet we know that for instance girls perform as well as boys in mathematics. Girls censor themselves; they lack confidence. Education and family have an important role in this, because they teach girls not to expect things...” (Cartwright John, 2015).

Self-confidence is something that seems to be acquired, but the origin comes from evolution. In primitive ages, men had to feed their families because women had to stay in the cave to look after their babies. Because of this, men had always fought and took more risks than women. In our opinion, this is the reason why women avoid, but men take risks. However, in modern times men exaggerate the risk taking and they are more overconfident than women. Similarly, in stock exchanges, usually men will trade more than women do and literature takes it as a proxy of overconfidence. Barber and Odean (2014, p.289) have studied this matter with using account data of over 35,000 households from a large discount brokerage, and analysed the common stock investments of men and women from February 1991 through January 1997. The researchers report that men trade 45% more than women. Thus, the claim that men being more overconfident.

(Dahlbom et al., 2011, p.326) have conducted a survey where high school students were asked what grade they thought they would get in a mathematics test they would take a week later. These results were then compared with their actual grades. The researchers report that boys were overconfident about their grades, whereas girls were underconfident. Similar results have been found by (Bengtsson, Persson, & Willenhag, 2005, p.202) for Swedish university students, and (Jakobsson, Levin, & Kotsadam, 2013, pp.137-141) for El Salvadorian children.

(Nisbett, Choi, Peng, & Norenzayan, 2001, p.291) claims “...find East Asians to be holistic, attending to the entire field and assigning causality to it, making relatively little use of categories and formal logic, and relying on ‘dialectical’ reasoning, whereas Westerners are more analytic, paying attention primarily to the object and the categories to which it belongs and using rules, including formal logic, to understand its behaviour...”. We can claim that the major difference between Eastern and Western cultures is that people in the East are more conservative and traditional than the general population of the West. If so, how about overconfidence between two main cultures? However, since this paper does not focus on comparing Eastern and Western cultures, we do not give more research results. (Yates, Lee, & Bush, 1997, pp. 87-94) have been studying cross-national variations of overconfidence and reported that “Indications of extreme Chinese overconfidence were unaffected by whether the judgments were direct or inferred from decisions while American subjects’ inferred judgments were even more overconfident than their direct judgments”.

We can claim that predominantly Turkish culture seems to have more similarities with Eastern culture than Western. So, overconfidence could be different and should be investigated. In this paper we searched this topic. The paper is organized as follows. Section 2 gives information about data and methodology. In section 3, empirical results were given while the last section is conclusion.

Data and methodology

We created a survey to carry out the overconfidence experiment and make use of the survey of approximately 130 Turkish and 21 non-Turkish people by an online survey. In the literature, overconfidence is measured by surveys with asking a question, and then evaluating the probability of accuracy (such as Yates Frank J. and et al. 1997, pp.87-94). In our survey, there were 8 questions in which 3 of them were descriptive. Our social experiment survey’s aim is to search overconfidence of participants with asking a fake hotel room price in a specific date which is 7th July 2018. Second question asks the probability of accuracy of the answer. In third question we informed the participant

that her/his answer was not correct and s/he should make a new prediction. Then we asked her/his last answer’s probability of accuracy. Last question was also same with the first question. The difference between the first and the last questions was options. We gave price options in the last question while we hadn’t given in the first one. The survey covers the dates between 1th April 2018 and 1th August 2018.

Empirical results

We have investigated gender, age and education against answers of questions 1 to 5 respectively. Regarding the first question’s answers, gender has no certain effects on it. But we observed **round off bias**. *Round off bias* means, when we make a guess about numbers, we directly focus on “0” and “5” ending numbers such as 100 and 155. It is slightly different from *Small Numbers Effect* which means we keep the numbers which ended with “0” and “5” in mind and round given fraction numbers to 0 and 5 such as 139.99 Euro to 140 Euro.

Table 1. Gender and First Question Answers

		100	150	200	250	300	400	500	
Gender	Women	8	3	8	7	4	4	9	69
	Men	5	3	10	6	5	3	4	61
Total		13	6	18	13	9	7	13	130

In the table 1, we have chosen only the most guessed hotel room prices in Euro. Even though participants were free to write their own prices, they have preferred to write mostly these numbers which gave evidence in Round off Bias’ favour.

In order to strengthen this evidence, we must also look at the answers to the third question. Table 2 show us the situation.

Table 2. Gender and Third Question Answers

		100	150	200	250	300	350	400	500	
Gender	Women	3	6	8	5	4	6	3	4	70
	Men	4	4	7	4	6	3	1	5	61
Total		7	10	15	9	10	9	4	9	131

Answers of third question are shown in Table 2 and have almost the same characteristics with the results in Table 1.

Last question was asking the same hotel room price one more time. Our aim was to be sure about men’s overconfidence against women.

Table 3. Gender and Fifth Question Answers

		Total									
		50-100	101-150	151-200	201-250	251-300	301-350	351-400	401-450	451 –500	
Gender	Women	3	7	11	9	5	5	6	3	21	70
	Men	4	6	6	11	10	5	2	3	13	61
Total		7	13	17	20	15	10	8	6	34	131

In this question we have given options from 50-100 to 451-500 Euros. However, the participants had their rights to write their own price preferences too. Interestingly, respondents have changed the estimated prices upwards and the most preferred price range is 451-500 Euros (34 respondents). Another interesting result is number of women is higher than men, which are 21 and

13 respectively. Second most preferred price rank was 201-250 Euros, of which the number of women compared to men was more or less the same.

After asked two overconfidence questions, which second one says participants' estimates are wrong, women more easily changed their opinion than men at given options. So, men have more overconfidence than women.

Now we can investigate confidence level of the participants. We asked the participants how many percent of their estimates were right after the two estimating questions.

Table 4. Gender and Second Question Answers

		50%	60%	65%	70%	75%	80%	Total
Gender	Women	15	5	5	10	4	10	70
	Men	13	2	2	12	7	14	61
Total		28	7	7	22	11	24	131

This question is related with the first question, which asked the participants' first prediction for the room prices. Participants have concentrated on 50%, 70% and 80%. As it could be seen in Table 4, women's confidence only exceeds men's confidence at 50% (15 against 13) while men's confidence exceeds women's 80% (14 against 10) and 70% (12 against 10). Therefore, male participants possess higher confidence levels. Another interesting result is the all highest percentages are smooth numbers and there are limited number of percentages such as 66%, 79% or 88%. Lower than 50% rates and higher than 80% rates are also limited and are not given here.

Table 5. Gender and Fourth Question Answers

		50	60	65	70	80	Total
Gender	Women	13	5	7	7	9	70
	Men	11	6	3	3	13	61
Total		24	11	10	10	22	131

This question is related with the third question in which participants have been informed that their estimations are wrong and were asked to make new predictions. Interestingly, 50% and 80% have changed their estimations. Like the first question, women's confidence is higher than men only at 50% (13 against 11). At 80%, men's confidence is higher than women's and by 13 against 9. Another interesting result like Table 4 is the all highest percentages are smooth numbers and there are limited number of percentages such as 66%, 79% or 88%. Lower than 50% rates and higher than 80% rates are also limited and are not given here.

We have also studied age and education relation with overconfidence but because the majority of the participants (64%) are young and well educated, answers are dominated by them. So, there is no unexpected results.

Summary

Our results confirm the literature which men are more overconfident than women such as (Barber & Odean, 2001). Regarding culture, as we mentioned earlier Turkish culture has more characteristic similarities with the Eastern culture than the Western. Our research results do not support (Acker & Duck, 2008)'s research results which they reported Asian students are more overconfident than British counterparts. In our research, 19 out of 139 respondents were foreigners. Turkish respondents' average room price estimations are higher for both two questions (The first and the third questions: Turkish participants (610.86 and 1078.54) while foreigners (282.31 and 315.52) respectively. But regarding the second and the fourth questions' percentages which are confidence

percentages of answers are 58.97% and 59.04 for Turkish participants while 68.26% and 63.52% for foreigner participants. So, foreign participants are more overconfident than Turkish participants.

At the beginning we have targeted to search homosexual and lesbian overconfidence but we could reach only five lesbians and three homosexual participants. Even statistically there is no evidence and we can claim that there is no significant difference between them regarding overconfidence. Interestingly, even though we have not aimed, we have found evidence about round off bias. Both genders round off their estimated percentages such as 60%, 80%.

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