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**Analyzing Framing Effecty by an Experiment among
Students in Turkey**

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Abstract. This study investigates the framing effect of experiments that conducted among students. The main aim of this work is to show the results of an experiment conducted in Turkey how could affect behavior of subjects who were students in banking and insurance business studies department. By expressing a particular topic in negative and positive way we could observe the behaviors. In conclusion, these subjects mainly focused on positive expression to avoid risks.

Keywords. Behavioral economics, Framing effect, Risks, Choices

JEL. D70, D80.

1. Introduction

The framing effect shows the different choices of people on on the idea of loss or gain that is conducted by an experiment. Kahneman and Tversky are among the main economists in this field. In this article, by using similar ways of Kahneman and Tversky, we tried to conduct an experiment among students and ask the experimental questions whether the results are as Kahneman and Tversky explained. By this experiment, we could analyze how students perceive risks on a particular topic. We asked several questions by different expressions such as by negative and positive way to observe their behaviors. Subjects were the students of banking and insurance business studies. Therefore, the questions about taking risks were the main interests of these students to conduct experiments.

In this work, the results obtained from the experiments show that students avoided risks because of positive expression on a particular topic. By this way, we could have a supposition about behaviors. Such presuppositions about human's unchanging pleasures, ability to always take correct decisions according to the rationality of traditional economy, have started to be tested with the experiments conducted in the field of behavioral economics. However, the conclusion was the different. The expression effect the rationality idea in economics.

Amos Tversky and Daniel Kahneman's works are towards converging psychology and economics, adapting human behavior to economics with the understanding of subjects' psychology. By the framing effect, we could investigate whether individuals' perception of the risk could be affected by the sentences related to the risk. The experiments conducted for human behaviors in economics took its place in literature. Thus, behavior economics gained importance to show

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that human behaviors could be affected by other factors based on many components. Therefore,

In the first part of this work the frame effect in behavioral economics and the experiments of the frame effect in literature will be investigated and after that, in the second part, the results of the frame effect experiment we conducted in Turkey will be analyzed.

2. Investigation of Framing Effect

Framing provides mental ability to help decision makers to understand the complex world by simplifying and organizing it. Framing is a way to observe results from behaviors of subjects on a particular topic in economics (Tversky and Kahneman, 1981; 453). Framings are the parts of memories and notions that can push people to reflect suddenly in a decision. Framings emerge by norms, habits and personal features in progress of time and they became the main parts of decisions. These decisions change human behaviors to understand the rationality in daily life. The decisions mark human behaviors to show how they perceive economic conditions. Therefore, risks and uncertainty influence on the choices of decision makers. Loss and gain are the two components to influence on behaviors in terms of framing. Interestingly, if a decision maker perceives loss, he takes more risk. If this decision maker perceives gained, he wants to protect what he has. Hence, he avoids risks. Therefore, this is named “risk aversion” (Kahneman ve Tversky, 1979; 268).

The framing effect which is the part of the cognitive error shows that the same factor can change choices of decision makers. The decision makers change choices according to questions asked by different expressions. The manner of asking, sentences, words, and mentions influence on human behaviors. The most important evidence from the problem of traditional framing; individuals does not choose risks if they gain something at the end. However, they choose risks if they loss. According to the classic rational expectation theories, people if rational in their decision, their decisions should not be related to options of framing. The different decisions that made by an individual shows that he behaved according to framing. Therefore, we can name it irrational behavior. For expectation theories, individual has two steps when he decides; the first step points loss and gain reflects in neutral reference as a loss, the second step reflects possibilities for subjective values and options. Then we can compare options with each other that shapes a framing S.

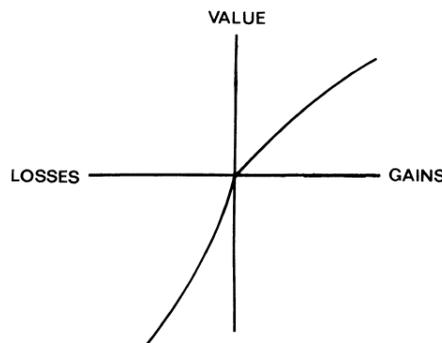


FIGURE 1. A Hypothetical Value Function

The function is a concave for gains, and a convex for loss. That shows, according to expectation theory, an individual does not take risk if he gains. However, if he feels that he losses, takes more risk. (Mc Elroya T. Setah, 2004,

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573; Mikels & Reed, 2009) McNeil, Pauker, Sox and Tversky (1982) and O'Connor, Pennie, & Dales (1996) these scholars in their works pointed out in medical sectors professional doctors creates alternatives related to framing. Miller (1997), Highhouse and Paese (1996) stressed that framing has effect in monetary decisions in their works.

Cullis, Jones and Lewis (2006), Fagley and Miller (1997) analyzed different choices made by different genders in terms of framing. According to their works, women show more inclination towards risks when they feel loss more than men. Berntsson, Lundberg and Krantz (2006) with Eagly, Diekman, Johannesen-Schmidt and Koenig (2004) pointed out in their works although women employment increased in today's world, their behaviors towards framings have not changed. That shows though the changing in the structure of society, the framing effect did not change among genders. If we consider age and gender even if people have different interests in a society, they take decisions based on framings. The framing causes delusion on a particular topic that expressed in a different way for an individual (Pompian, 2006: 237). That changes his behavior. We can show this effect by the figure 2.

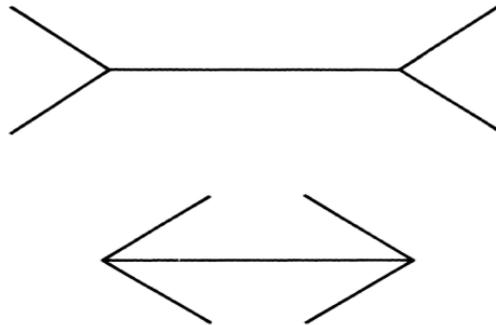


FIGURE 2. *The Müller-Lyer Illusion*

The figure 2 shows two shapes. If we ask people which shape is longer most of them answer the shape at below is longer than that of above due to optical illusion. However, two shapes are same.

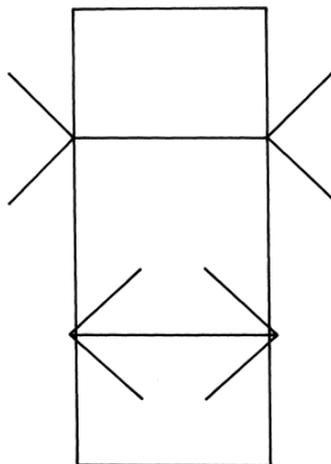


FIGURE 3. *A Transparent Version of the Müller Lyer illusion*

3. An Experiment in Banking and Insurance Business Studies

Kahneman and Tversky point out this illusion in the field of medical treatments. They analyze the decisions of patients who have options for medical care. Thus, in order to test framing effect, the expression of the problem has influence on patients not only by numbers but also ways of expression.

Tversky and Kahneman point out "It is often possible to frame a given decision problem in more than one way. Alternative frames for a decision problem may be compared to alternative perspectives on a visual scene. Veridical perception requires that the perceived relative height of two neighboring mountains, say, should not reverse with changes of vantage point. Similarly, reversals of preference by variations in the framing of acts, contingencies, or outcomes. These effects have been observed in a variety of problems and in the choices of different groups of respondents. Here we present selected illustrations of preference reversals, with data obtained from students at Stanford University and at the University of British Columbia who answered brief questionnaires in a classroom setting." (1981). Thus, we conducted a similar experiment in among the students in banking and insurance business studies department.

We conducted this experiment in 9 May 2013 among the students who joined this work voluntarily. The numbers of subjects were 85. We implement this work in two problems.

Problem 1.

In experiment, subjects had two choices; surgery or radiation treatment.

Case 1.

The 90 percent of people after medical operation could live. 68 percent of them continued life after one year, and 34 percent continued life after five years.

Case 2.

The 100 percent of people after radiation treatment could live. 77 percent of them continued life after a year and 22 continued life after five years.

Question 1;

Would you choose surgery or radiation treatment?

- 60 percent of subjects decided in surgery.
- 40 percent of subjects decided in radiation treatment

Problem 2.

Case 1.

The 10 percent of people lost their life in surgery. 32 percent died after a year and 66 percent died after five years.

Case 2.

Nobody died after the radiation treatment. 23 percent died after a year and 78 died after five years.

Question 2;

Would you choose surgery or radiation treatment ?

- 42 percent of subjects decided in surgery.
- 58 percent of subjects decided in radiation treatment.

As it was expected from first problem to second problem there is an increase in the radiation treatment option.

4. Conclusion

By the conducting the experiment of framing effect by questions about medical treatments we could observe the behavior of students. We could show that expression of the risky topic is an important factor to affect individuals' behaviors.

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The same problem asked by negative and positive ways but subjects gave different answers.

We implemented problems by asking to the students who take risk management lessons in the university. In order to understand their perception, we observed their behaviors to problems. In conclusion, they were influenced by positive sentences and avoided risk.

References

- Berntsson L, Lundberg U, Krantz G. Gender differences in work-home interplay and symptom perception among Swedish white collar employees. *Journal of Epidemiology and Community Health* 2006; 60(12): 1070-6.
- Cullis J G, Jones P R and Lewis A (2006) Tax Evasion: Artful or Artless Dodging? Chapter 9 in McCaffery E.J and Slemrod, J. (eds) *Behavioral Public Finance: Toward a New Agenda* New York: Russell Sage Foundation.
- Eagly, A. H., Diekmann, A. B., Johannesen-Schmidt, M. C., & Koenig, A. M. (2004). Gender gaps in sociopolitical attitudes: A social psychological analysis. *Journal of Personality and Social Psychology*, 87, 796-816. Reprinted in Levine, H. (Ed.), *Political psychology*. London: Sage Publications.
- Eliasz, K., & Rubinstein, A. (2011). Edgar Allan Poe's riddle: Framing Effects In Repeated Matching Pennies Games, *Games and Economic Behavior*, 71, 88–99.
- Fagley, N. S., & Miller, P. M. (1990). The effect of framing on choice: Interactions with risk-taking propensity, cognitive style, and sex. *Personality and Social Psychology Bulletin*, 16, 496–510.
- Fagley, N. S., & Miller, P. M. (1997). Framing Effects and Arenas of Choice: Your Money or Your Life?, *Organizational Behavior and Human Decision Processes*, 71, 355–373.
- Highhouse, S., & Paese, P. W. (1996). Problem domain and prospect frame: Choice under opportunity versus threat. *Personality and Social Psychology Bulletin*, 22, 124–132.
- Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision Under Risk, *Econometrica*, 47(2), 263-291.
- Kahneman, D., & Tversky, A. (1981). The Framing of Decisions and the Psychology of Choice, *Science*, New Series, 211(4481), 453-458.
- Kahneman, D., & Tversky, A. (1986). Rational Choice and the Framing of Decisions, *The Journal of Business*, 59(4), Part 2 (1986): The Behavioral Foundations of Economic Theory, 251-278.
- McElroya, T., & Setab, J. (2004). On the other hand am I rational? Hemispheric activation and the framing effect, *Brain and Cognition*, 55(3), 572–580.
- McNeil, B., Pauker, S. G., Sox, H. C., & Tversky, A. (1982). On the Elicitation of Preferences for Alternative Therapies. *New England Journal of Medicine*, 306, 1259–1262.
- Mikels, J. A., & Reed, A. E. (2009). Monetary losses do not loom large in later life: Age differences in the framing effect. *Journal of Gerontology: Psychological Sciences*, 64B(4), 457-460. doi: 10.1093/geronb/gbp043
- Muller-Lyer F.C. (1889). Optische Urteilstäuschungen. *Archiv für Physiologie Suppl.* 263–270.
- O'Connor, A.M., Pennie, R.A., & Dales, R.E. (1996) Framing effects on expectations, decisions, and side effects experience: The case of influenza immunization *Journal of Clinical Epidemiology*, 49(11), 1271-1276.
- Pompian, M. M. (2006). *Behavioral Finance and Wealth Management*, New Jersey, Wiley.



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