How do people tend to behave and make decisions in certain situations encountered in the market? Are they likely to behave and make decisions according to their moral values or religious beliefs? This study aims to reveal the university students' points of view to explain the concept of fairness in terms of the Muslim devotees and non-religious Muslims. The participants are requested to assess whether or not the disparities in prices of the goods determined by the firms and traders in various situations are fair. Moreover, they are asked to respond to several questions in terms of the increases and decreases in the workers' wages determined by employers and to assert whether or not they are equally fair. In other words, the tendency of Muslims' fairness in accordance with their religious status as well as their cognitive biases are examined through their decisions made upon presentation of the options either positively or negatively. Along with this study, it would be revealed whether or not the religiousness status of individuals triggers fairness on profit-seeking and how rational those individuals behave. It is tried to determine whether or not the Muslims, who consider themselves religious or not, tend to behave more fairly and the extent to which they behave.

**Contribution/ Originality:** The paper's primary contribution is finding that it would be revealed whether or not the religiousness status of individuals triggers fairness on profit-seeking in market and how rational those individuals behave.

## 1. INTRODUCTION

Throughout recent years, various economic, psychologic, and sociologic research studies have been carried out to explain the circumstances which are effective on the individuals' decision-making process. In our study, following the discussion of some of the sociologists' and philosophers' views on religion, it is discussed whether or not the concept of religion underlies the decision-making of Muslims in the market. In addition, it is aimed to reveal whether or not religious individuals are also involved in a variety of irrational behaviors and framing effects that constitute the subject of behavioral economics. Although the influence of Marx as one of the classical sociologists on religion is well-known, Karl Marx did not explicate the religion in detail. Marx established his ideas about religion largely by utilizing the works of Ludwig Andreas Feuerbach, who is considered to be among the Left Hegelians. Feuerbach, in his book entitled “The Essence of Religion” published in 1846, stated that religion consists of the
virtues and ideas which humanity produces in the process of cultural development, but that it is wrongfully attributed to gods or divine powers. Since humanity does not fully comprehend its own history, it tends to attribute its own rules and virtues to gods (Feuerbach, 2004). In the case of elementary society argued by another classical sociologist Durkheim’s work entitled “The Elementary Forms of the Religious Life” published in 1912, it is also asserted that the main source of religion was the community itself, and in small traditional cultures, religion penetrated almost all aspects of life. Religion is not just a set of emotions, ideas, and activities, but it also determines the way individuals think in traditional cultures. Durkheim believed that the influence of religion would have been gradually diminished along with the development of modern societies since scientific thought replaced religious statements and religious activities began to occupy a little place in individuals’ lives according to him (Durkheim, 1964).

As another classical sociologist, Weber’s writings on religion mainly focused on the relationship between religion and social change, whereas Durkheim did not mention such an issue. Those studies are in contrast with Marx’s works because, according to Weber, religion was not a necessary conservative power, but the movements influenced by religion have caused remarkable social changes. Weber’s seminal work entitled “The Protestant Ethic and the Spirit of Capitalism” published in 1905 regarding the impact of Protestantism on the development of the West explains how religion triggered and steered social and economic structures in different societies. Protestantism, especially Puritanism, constitutes the basis of the capitalist image of the modern West (Weber, 2005).

The holy book of Qur’an contains the verses with advice about fairness. For instance, Allah commands, “And weigh with the true and straight balance. And defraud not people by reducing their things, nor do evil, making corruption and mischief in the land” in Shuara Chapter at Verse 181 (for other verses, see: Nahl Chapter Verse 90; Nisa Chapter Verse 135; Mumtahana Chapter Verse 8; Mutaffifin Chapter Verses 1-6; Isra Chapter Verse 35) (Directorate of Religious Affairs Official Website, 2019). Islam did not impose a definite amount of profit in the sales and purchase contracts and left it to market conditions. Nonetheless, public authorities are entitled to intervene with the prices in case of abusive activities in the market through which the black marketeers are involved in excessive prices of goods that can be considered as indispensable needs of the people. The definition of the excessive price is based on the determination of the experts in the market conditions of the day (DRAOW, 2019). Hence, Islamism does not tolerate opportunism, unjust gains, and unfair wages.

Maxwell (2008) stated fairness judgments depend on social and economic factors. Both economic and social components affect determinations of price fairness. Dickson and Kalapurakal (1994) found that rules that treat cost increases and decreases in the same direction are fair. Increasing price to profit from demand is unfair. Frey and Pommerehne (1993) argued that perceived price fairness for a price increase with overmuch demand is higher when supply can expand. Increasing price to increasing demand is unfair. Fehr et al. (1993) conducted an experiment and tested that results provide evidence for the validity of the fair wage-effort hypothesis. Fehr and Schmidt (1999) indicated that the economic environment determines whether the fair types of the selfish type’s dominant equilibrium behavior. They found that a minority selfish people forced the majority of fair-minded people to behave in all-out selfish manner. Blinder and Choi (1990) found that the reason for the wage cut seemed to matter. According to them, wage reductions made to save the firm from failure or to align wages with those of competitors are viewed as justifiable and fair while those made just to raise profits are not.

Furthermore, several studies on how individuals decide are firstly mentioned since the study focuses on whether or not the levels of religiousness are effective when individuals make decisions within a particular interest. There are some studies examining the economic behavior and religiousness in Turkey. Akay et al. (2013) found that lower positional concerns by their participants during Ramadan month compared to outside of the month of Ramadan. Akay et al. (2015) argued that the average amount contributed to the public good was much lower during Ramadan compared to outside of the month of Ramadan.
Another variable of our study is rationality and decision-making. Kahneman and Tversky, in their article entitled “Prospect Theory” published in 1979, refuted the definition of the rational individual which the mainstream economics does not recognize by doing certain experiments. They stated along with a series of experiments that individuals make decisions with a certain set of heuristics or bias, and they cannot make fully rational decisions. Moreover, they conducted a series of experiments pertaining to the framing effect, which a cognitive bias is stating that individuals’ choices against the same event or situation are affected by the way the event or situation is presented and they tend to make different decisions (Kahneman and Tversky, 1974; Tversky and Kahneman, 1981; Kahneman and Lovallo, 1993; Kahneman, 2003) (other studies on decision making, see (Samuelson and Zeckhauser, 1988; Loewenstein and Lerner, 2003; Loewenstein et al., 2012)). According to Tversky and Kahneman (1979) the framing effect is one of the two parts that constitute the expectation theory, while the other part is editing (Tversky and Kahneman, 1979). Framing, consisting of preliminary analyses of the decision-making problem which frame influential acts, results, and probability is controlled by the fashion in which the preference issue is introduced as well as by habits, norms, and expectations of the decision-maker (Kahneman and Tversky, 1974; Tversky and Kahneman, 1981; Kahneman, 1991; Kahneman, 2003) According to Redelmeier and Tversky (1992) framing effect is indicate that depends on the representation of the problem. Further operations that are conducted prior to the assessment are comprised of the abolishment of common elements and the termination of options that are considered to be imposed by others. In the second stage, the framed prospects are assessed, and the prospect of the ultimate value is selected. Selection between prospects is categorized by the theory into two distinct ways; either by detecting that one is dominated by another or by comparison of their values (Tversky and Kahneman, 1979;1986). Tversky and Kahneman (1981) scenario regarding an outbreak of “Asian disease”, which required decision-making whether people would have lost their lives or have been saved, is a classic example of the framing effect. Participants were asked about their decisions in different conditions pertaining to a fatal disease that would affect 600 people. They were asked to choose between two different treatment options. Supposedly, the U.S. was preparing for an outbreak of a rare Asian disease that was expected to kill 600 people. Two alternative programs were proposed to combat the disease. The scientific prediction of the results of those programs was as follows;

1. Program: If Program A program was chosen, definitely 200 people would have been saved. If Program B was implemented, 600 people would have been saved with 1/3 probability, whereas no one would have been saved with 2/3 probability. Which of those two programs would the participants have preferred?

2. Program: If Program C was applied, certainly 400 people would have been killed. If Program D was implemented, no one would have been killed with 1/3 probability, whereas all 600 people would have been killed with 2/3 probability. Which of those two programs would the participants have chosen?

While the participants’ preferences were mathematically identical, Program A in the positive domain was more favorable than Program C in the negative domain where gains were exaggerated. Tversky and Kahneman (1979) suggested in their expectancy theory that individuals did not provide logical responses in the circumstances involving risks. According to prospect theory, the value of the decisions made by individuals varies according to whether the sentence is positive or negative (Tversky and Kahneman, 1981). It was obtained similar result in another study conducted on framing effect in Turkey (Kamilçelebi and Ünal, 2014). In this study, it is aimed to elicit the perspectives of the students of a university located in Turkey in a way to explain fairness on being Muslim devotees and non-religious Muslims by utilizing a portion of Kahneman et al. (1986;1991). Kahneman et al. (1986) asked the participants of the survey to respond to how they decided in various situations in the market and whether or not they were fair. According to the response, the participants made statements about their prejudices and whether or not they were rational. In the article, the participants are asked some questions in different words to detect the framing effect. The participants are evaluated upon considering two different questions (one being fair, and the other being unfair) which reveal the same conclusion. Therefore, it is revealed that individuals are biased and have bounded rationality.
2. METHODOLOGY

In the study, the participants were asked various questions regarding profit, wage, and price, and they were requested to respond according to their opinions of fairness divided into four different categories such as “very fair, acceptable, unfair and not fair at all”. Then, the responses collected were explained over the two distinct opinions, such as “acceptable” and “not fair” (Kahneman et al., 1986; Thaler, 1992). This article also contains certain questions from that study. Also, participants were asked whether or not they were devoted a religion and whether or not they were religious regardless of attending any place of worship (World Value Survey, 2012).

The survey questionnaire was applied on a voluntary participation basis. The study was conducted over the period from January 11, 2019, to February 22, 2019, in a closed lecture room with students via the survey method. The participants were seated and given enough room to maintain their privacy. The survey questionnaire study was conducted with totally 296 students (151 females, 145 males; 276 Muslims, 14 atheists, 4 theists, 2 unaffiliated) studying at a university located in Turkey. 51 % of the respondents consist of female students, 49 % consists of male students, and the average age was 21. Of the 276 Muslim students; 202 were religious, 71 of them were Muslims but non-religious, whereas 3 of them did not make any statement. Of the 202 religious students; 122 (60 %) were females, 80 (40 %) were males, and the average age was 21. The evaluations in this study are conducted through the surveys questionnaire of 273 Muslim students. 276 (95 %) of the survey participants claimed that they believed in Islam and 202 of them (73 %) were religious, 71 (26 %) were Muslims but not religious and 3 (1 %) were unaffiliated.

3. RESULTS

The numbers and percentages of the answers marked as “not fair” given by the participants are indicated below. The reliability value of the survey responses is .66. Hypotheses are as follows;

$H_0$: No difference between the evaluations of Muslim devotees and non-religious Muslim in terms of fairness.

$H_1$: There is a relationship between religious level and fairness in these questions results.

Question 1. A hardware store owner has been selling snow shovels at Turkish Liras\(^1\) (TRY) 15. The morning following a massive snowstorm, the store increases the price to TRY 20 per shovel. Please select one among the following options to assess such action: Definitely Fair, Acceptable, Unfair, and Definitely Unfair. The two favorable and the two unfavorable categories are grouped in this report to reveal the percentages of respondents who assessed the action as acceptable or unfair. In this example, 65% of Muslim devotee respondents (N=201), and 52% of non-religious Muslim respondents (N=71) assessed it unfair for the hardware store owner to make profit out of the short-term demand increase due to a snowstorm.

Question 2. The owner of a grocery store has stocked several months’ supply of peanut butter, stored both on the shelves and in the storage. The store owner is informed that the wholesale price of peanut butter has risen up and instantly increases the price on the stocked peanut butter. In this example, 60% of Muslim devotee respondents (N=201), and 46% of non-religious Muslim respondents (N=71) assessed such action as unfair. According to the first in, first out (FIFO) method, the goods to be sold or to be produced must be chosen from the goods that are first entered into the stocks. Therefore, in this question, since the grocery store purchased peanut butter before the wholesale price increased, the FIFO method would have sold them first without increasing their prices.

Question 3A. A single employee has been working in a small photocopying business for six months and has been paid TRY 9 per hour. Although the business is good, the unemployment rate has been increasing ever since a local industrial plant has been shut down. While other small business begins to hire dedicated employees at TRY

\(^{1}\) The exchange rate at the time of the experiments were 5.32 TRY = 1 USD and 5.48 TRY=1 USD, respectively.
7 per hour to conduct tasks similar to those maintained by the employee of photocopying business. The owner of the photocopying business decreases the employee’s salary down to TRY 7 per hour. In this example, 82% of Muslim devotee respondents (N=202), and 70% of non-religious Muslim respondent (N=71) assessed it as unfair.

Question 3B. The only employee of the photocopying business (as in Question 3A) quits his/her job, therefore the owner of the business considers hiring a new employee at TRY 7 per hour. In this example, 36% of Muslim devotee respondents (N=202), and 38% of non-religious Muslim respondents (N=71) assessed it as unfair.

The ongoing wage of an employee serves as a reference for assessing the fairness of future adjustments of that employee’s wage, but not necessarily for assessing the fairness of the wage paid to a newly hired employee. The newly hired employee is not necessarily entitled to the former employee’s pay rate. As indicated in the following question, the entitlement of an employee to a reference wage does not carry over to a new business transaction, even with the same business owner:

Question 4. Two assistants are hired by a house painter at TRY 9 per hour. The painter considers terminating house painting business and decides to venture into landscape services business in which the ongoing wage is lower. Then, the business owner decreases the employees’ wages down to TRY 7 per hour for the landscaping business. In this example, 36% of Muslim devotee respondents (N=201), and 43% of non-religious Muslim respondents (N=71) assessed it as unfair.

Although the wage decrease in Question 3A and the wage decrease in Question 4 are identical, 76% of the participants in Question 3A do not consider the wage decrease as fair, while the fairness rate falls to 59.5% in Question 4 considering Questions 3A and 4 both indicate framing effects; it is observed that individuals respond with a certain bias since they are influenced by the positive and negative words in the questions.

Question 5A. A small industrial plant manufactures tables and sells them at TRY 200 each. Due to changes in input prices, the cost of manufacturing a single table has just decreased by TRY 40. The owner of the plant decreases the price of a single table by TRY 20. In this example, 17% of Muslim devotee respondents (N=201), and 28% of non-religious Muslim respondents (N=71) assessed it as unfair.

Question 5B. Due to changes in input prices, the cost of manufacturing a single table has just decreased by TRY 20, whereas the owner does not change the price at all. In this example, 49% of Muslim devotee respondents (N=202), and 49% of non-religious Muslim respondents (N=71) assessed it as unfair.

The even division of opinions on Question 3B confirms the observations of the former study. In conjunction with the results of the former section, the findings are in favor of a dual-entitlement opinion: the rules of fairness allow a business not to share in the losses that it imposes on its transactors, without imposing on it an undoubtedly clear task to share its gains with them.

Question 6A. A business firm achieves a small profit. The nearby community encounters a recession with substantial unemployment without inflation. A large number of employees are anxious to work for the firm. The firm considers to reduce wage rates and salaries by 7% this year. In this example, 61% of Muslim devotee respondents (N=201), and 66% of non-religious Muslim respondent (N=71) assessed it as unfair.

Question 6B. The nearby community encounters a recession with substantial unemployment and inflation of 12%. The firm, in this case, considers raising the wage rates and salaries by merely 5% this year. In this example, 27% of Muslim devotee respondents (N=201), and 28% of non-religious Muslim respondents (N=71) assessed it as unfair.

Question 7A. Several employees are hired by a small business firm. The employees’ salaries have been about average for the nearby community. In recent months, there has not been increase in business for the firm as it had before. The owners of the firm consider decreasing the employees’ wages by 10% for the following year. In this example, 58% of Muslim devotee respondents (N=201), and 65% of non-religious respondent (N=71) assessed it as unfair.
Question 7B. Several employees are hired by a small business firm. The employees have been paid an annual bonus of 10%, and their total salaries have been about average for the community. In recent months, there has not been increase in business for the firm as it had before. The owners of the firm consider terminate the employees’ bonus for present year. In this example, 42% of Muslim and religious respondents (N=200), 44% of Muslim but not a religious respondent (N=71) considered it unfair. Upon making a comparison with the results of Kahneman et al. (1986) it is seen that similar results are obtained in this study. In other words, it is found out that the respondents do not consider such conditions in which workers’ wages or commodity prices changed to the disadvantage of workers and consumers as fair and that they respond to the questions related to the framing effect with a cognitive bias, i.e., they tend to give different responses to questions despite obtaining the same conclusion.

The Mann-Whitney U test was used to analyze the relationship between religiousness and fairness. The Mann-Whitney U test is a non-parametric test. It can be used to test the null hypothesis that two samples come from the same group or whether observations in one sample tend to be larger than observations in the other (Mann and Whitney, 1947).

<table>
<thead>
<tr>
<th>Question</th>
<th>Variable</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Mann-Whitney U</th>
<th>p</th>
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<tbody>
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<td>26377.00</td>
<td>6076</td>
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<td>10751.00</td>
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<td>26565.50</td>
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<td>0.106</td>
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<td>148.77</td>
<td>10562.50</td>
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<tr>
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<td>26841.50</td>
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<td>141.05</td>
<td>10014.50</td>
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<td>137.09</td>
<td>9733.50</td>
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<td>27929.50</td>
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<td>129.56</td>
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<td>5A.</td>
<td>Muslim devotees</td>
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<td>28323.50</td>
<td>6248,500</td>
<td>0.087**</td>
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<td>124.01</td>
<td>8804.50</td>
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<tr>
<td>5B.</td>
<td>Muslim devotees</td>
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<td>135.21</td>
<td>9600.00</td>
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</tbody>
</table>

N=Number, *U=6076, p< 0.05), **U=6248,500, p< 0.10).

The test results reported in Table 1, i.e., the results for the fairness experiment, indicate that only the Muslim devotees cause a significant relationship between fairness and religiousness only in one question (p-value <0.05). Although there is a significant relationship between fairness and the level of religiousness (p-value <0.10) also in Question 5A regarding the cost of the table, the Mann-Whitney U test results reveal no significant relationship in Question 5B which provides the identical results with Question 5A in terms of market sales. However, it is noteworthy that 28% of non-religious Muslims regard it as unfair. Although the market results in Questions 5A and 5B are the same, it is observed that the participants are influenced by the framing effect by giving different responses.
Table 2 shows that a more detailed analysis of Question 1 is performed using the Mann Whitney U test, which indicates that women participants respond more in favor of fairness than men (p-value <0.05). Women, who consider themselves Muslims and also religious, seem to be more likely to mark the “not fair” option in the first question than non-religious Muslims. Nevertheless, the test results in this question also indicate the existence of a significant relationship between religion and fairness.

Table 3 shows that a detailed analysis of the same question is conducted using the Kruskal Wallis test, which indicates that women who consider themselves as religious are more likely to evaluate it as fair than religious and non-religious men, and non-religious women (p-value <0.10). Therefore, the null hypothesis $H_0$ is rejected only in the first question, and no significant relationship is detected between the fairness evaluation and the degree of religiousness in other questions.

### 4. CONCLUSION

This paper investigates the role of religion on fairness and framing effect. As expected, there is no significant difference in terms of religiousness and fairness among those Muslim devotees and non-religious Muslims. The results indicate that the responses of the students who attended our survey are similar to of the participants who attended to the study of Kahneman et al. (1986). It is found that a significant relationship exists in only two questions regarding the level of religiousness triggering fairness. The market results in the cases of wage and price increases or decreases according to the participants are identical regarding the questions in which we try to determine whether or not the framing effect occurs. In both cases, it is observed that different decisions are made and that it has nothing to do with being religious or not since the respondents tend to make biased preferences according to the way in which the question is addressed that would affect the fair evaluation. As expected that, according to community standards, it is unfair to exploit shifts in demand by raising prices or cutting wages. Since our study deals with the psychological and religious foundations of individuals’ behavior concurrently, it would shed light on the future studies in the ways whether or not different religions besides Islam affect the psychological and economic decisions or the extent to which they affect the future.

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