


How Does Being Trusted Affect Sharing? Findings from the Ultimatum Game

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ABSTRACT

According to economic models, individuals are rational, possess full knowledge, and strive to maximize their utility beyond their actual characteristics. Nevertheless, in the real world, people shape their behavior within a social structure and can display altruistic attitudes. This study investigates how trust facilitates sharing among individuals. To determine this, the Ultimatum Game was conducted with 412 participants. Three cases were determined, and the bidder was instructed to divide 10 thousand TL first in the typical game. Afterward, it was said that the other person was in need, and the bid was requested to be renewed. At the last stage, bids were received if there was any doubt about the needy. According to the typical game, people are more empathetic towards those in need and offer 6667 TL rather than 4264 TL. However, when a question of reliability is raised, 4658 TL is offered regardless of need. The findings show that the neoclassical economics concept of homo economicus, which seeks to maximize utility, is not valid in real life.

Keywords: Ultimatum game, Reliability, Sharing, Equity, Altruism.

JEL Classification Codes: C78, C91, D64

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INTRODUCTION

The problem of how collective behaviors such as cooperation, coordination, security, and justice among individuals emerge in dynamic systems is of interest to researchers from many disciplines of social and natural sciences such as Evolutionary Biology, Economics, Physics, Social Sciences, and Computer Sciences. The studies aim to determine how the desired collective behavior is shaped in a typical and evolutionary way. In the real world, interactions between individuals or firms are asymmetrical, and players may have different roles, characteristics, or bargaining power (Cimpeanu et al., 2021, 1-2).

The Ultimatum Game (UG) is a well-known game in Game Theory. Güth, Schmittberger, and Schwarze (1982) designed UG to model bargaining situations, such as contracts or other job interviews. In this game, the first player is given an amount of money. This actor bids the second player an amount of the money given to him, and the second player accepts or rejects the offer. If the second player accepts the bid, the money is shared. Neither player can get money from the game when the bid is rejected. The game has strategies to maximize the utility of both players. For example, the bidder seeks to find the lowest bid that the second player will accept.

With changing conditions, the behavior of the bidders and offerees differs.

On average, in a typical UG, players tend to offer 40-50% of the purse. Such offers are generally accepted. This ratio maximizes the bidder's return. On the other hand, offerees lower their acceptance rate when they encounter lower bids, and the acceptance rate approaches zero for bids below 20%. Offerees react to unfair treatment, rejecting the bid knowing they will not receive any money and punishing the bidder (Tabibnia et al., 2008). Informal institutions (traditions, customs, relationship of affinity) of the society are among the reasons for rejecting the bid in the UG (Camerer, 2011, 9-11).

Previous research shows that encountering a new situation (emotion regulation strategy) significantly increases the acceptance rate of unfair offers. Facing a new situation can make people see the positive side of accepting offers (for example, getting some money or generously paying more to someone who might need money). Therefore, recognizing the positive effects of making and accepting offers by regulating the negative emotions associated with violating the norm of justice can play an essential role in making more effective economic decisions in UG (Park et al., 2021, 3).

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It should be noted that applied UG studies are limited in the Turkish literature¹. A study conducted by Dilek and Keskingöz (2018) on university students in Kastamonu found that students shared 33% of the total money given to them. Boyacı and Sultan (2016), on the other hand, conducted a 4-round study on university students in Istanbul, and the average bids ranged from 31% to 54%. Hatipoğlu (2021) found in his study that people bid 36% of their money. In another study, Kırış and Dilek (2021) examined people's economic decisions according to their religiosity typologies. According to the findings, religiosity typologies and Islam religion affect human behavior. Consequently, there is evidence that traditionally religious individuals make more altruistic decisions than secular individuals.

Furthermore, Dilek and Yıldırım (2023) examined gender differences in UG. The first finding is that women bid higher than men. As for the acceptance of proposals, there is no difference between men and women. Additionally, men and women do not decide based on the gender of the other party when making or receiving offers. Alternatively, Cevizli and Bilen (2021) examined the sharing game based on anchoring and emotional factors. People between the ages of 20-30 are affected by both emotional and environmental factors when making sharing decisions.

The findings in this study will reveal how people change their behavior when they are sure of the economic actor with which they cooperate or coordinate (the situation where their property rights are guaranteed). In addition, it is revealed to what extent people's demographic characteristics (age, gender, and employment status) affect the decisions. A possible explanatory finding will be whether the bidder increases its bid to the other party in case of incomplete information (doubtful situation), based on the theory of New Institutional Economics (NIE). In neoclassical economics, contracts are taken as data. Accordingly, the parties fulfill the requirements of the contract. In the real world, as bounded rationality, opportunism, transaction costs, asymmetrical information, and problematic property rights are encountered, inefficiency occurs in the markets (Çetin, 2012, 56). Due to the lack of research analyzing the UG with the concepts of NIE, this study is expected to contribute to the literature.

THEORETICAL BACKGROUND

In explaining and understanding economic theory, neoclassical economics has made important contributions. However, models have been constructed based on assumptions that do not correspond with reality, such as complete information, rational individuals, and zero transaction costs. With full knowledge and considering their own interests, economic agents make accurate, benefit-maximizing decisions. In contrast to these assumptions, economic activity and exchange in the real world include asymmetric information, bounded rationality, opportunism, incomplete contracts, poorly defined property rights, and positive transaction costs (North, 1990, 11). Neoclassical economics usually ignores emotions and unconscious processes underlying the assumptions it makes.

In contrast, Institutional Economics argues that individuals have limited capacity to cope with uncertainty and unobservable events due to their insufficient knowledge. Based on the NIE, the concept of rationality is replaced by the concept of bounded rationality, which rejects the unrealistic assumption of complete information (Ankarloo, 2002, 12). Simon (1957, 198) contends that the human mind is incapable of comprehending all possible conditions in reality. Because real life is filled with uncertainty and unpredictability. As a result, an individual is not fully rational, but rather bounded rational. Humans are not capable of understanding all situations, and their behavior differs based on their rationality. Therefore, people's predictions and inferences are often inaccurate and unrealistic. This is why neoclassical economics doesn't hold true to its assumptions of complete information and rational individuals.

As human factors, Williamson argues that individuals are motivated by opportunistic behavior and self-interest, given that economic units have bounded rationality. As a result of these two basic assumptions, most economic agents are prone to deception, concealment, and trickery (Williamson, 1990). Opportunism is the ability of economic actors to pursue their own interests. Concepts such as cheating and acting strategically are included in this understanding. Asymmetrical or incomplete information leads to more opportunistic behaviors. As a result of asymmetric information, one party may be able to use it against the uncertainty if their information is superior. This situation causes adverse selection and abuse behaviors after the contract (Akerlof, 1970).

Williamson (1985, 30-32) describes four situations that emerge when bounded rationality and opportunism are

¹ For further studies of game theory in Turkey, Demirci and Palancı (2019) may be of relevance.

evaluated together. The parties are more reliable than ever without opportunism and bounded rationality. The situation, however, is utopian. However, when there is opportunism, there may be situations where there is unbounded rationality, and without opportunism, there is bounded rationality. Real-life situations contain opportunism and bounded rationality.

As a result of bounded rationality, contracts are incomplete (Foss and Klein, 2010, 4). The neoclassical theory of economics assumes that contracts are given and based on these assumptions, they are complete. However, NIE contends that contracts will not be fully executed due to problems, such as uncertainty about the future, bounded rationality, positive transaction costs, and opportunism (Pollak, 1985). Since contracts are created under limited foresight and bear a cost element, they tend to be incomplete in the real world (Williamson, 1979, 237).

Aside from these contributions of the NIE, economics developed new economic models since the early 1970s with input from other scientific fields. Behavioral Economics (BE) was developed as a result of integrating psychology with economics. Traditional economics accepted intuition and rationality as theoretical constructs and used them as data. BE is shaped by deviations from traditional economic theory. Since in the real world, opportunistic and non-utilitarian behaviors and paradoxes cannot be resolved by traditional economic logic (Kenning and Plassman, 2005, 343). Experimental games and real-world situations both exhibit bounded rationality. Modern criticisms of rationality emphasize the fact that individuals make systematic mistakes even when the right choice is obvious (Gül and Pesendorfer, 2005, 21). With the behavioral approach, it becomes possible to capture the real individual in mainstream economics, which has fallen into error by accepting the idea that economic agents are selfish.

Factors influencing bounded rationality include emotion, culture, and age. Emotions play a significant role in determining whether people face moral dilemmas while making decisions. A person may not be able to act rationally in this situation and may act on emotion instead. It leads people to make decisions before they have a clear understanding of the possibilities (Loewenstein et al., 2008). Therefore, ignoring the emotional aspect of human behavior will result in an incomplete understanding of human behavior (Ardalan, 2018, 203-204). Decisions are also influenced by age. In the literature, a number of studies have examined how age influences risk taking. According to these studies, risk taking decreases with

age (Morin and Suarzez, 1983; Riley and Chow, 1992). Additionally, cultural differences can influence economic decisions. Societies form informal institutions, and these institutions direct the codes of tradition, culture, and behavior (Mako & Mitchell, 2013).

Likewise, altruistic behaviors are influenced by these institutions. This phenomenon explains the behavior of many people who are willing to sacrifice their own interests for the benefit of others. It also explains why people are willing to cooperate for mutual benefit and work together in order to maximize their collective success. Altruism also plays an important role in the formation of social ties and trust between individuals, leading to stronger communities and greater social cohesion. For instance, a study conducted by Fehr & Schmidt (2006) found that people are more likely to contribute to public goods when they are aware that their contributions are helping others in the group.

This study, different from the literature, discusses whether the bidders show altruism if the offerees are in need and whether they increase or decrease their bids. For this purpose, first, a typical UG design is created, and the money is given to the bidder to share. In the second stage, the bidder is asked to share the relevant money with someone in need. The study then compares the results of the first stage to those of the second stage, to see if the bidders increase or decrease their bids when the offerees are in need. It is hypothesized that the bidders will demonstrate altruistic behavior, as they are aware of the other person's situation and want to help them out. There is also a third case about the needy, but there is doubt as to whether the indigent actually need it. This would lead the bidder to assume that the other offeree is acting opportunistically. The proposal will be evaluated in order to see how opportunism and bounded rationality affect it. The results of the evaluation will provide insight into how altruism and opportunism play a role in the bidding process. This information could then be used to guide future bidding strategies and to better understanding how people interact in a competitive bidding situation.

METHOD

Online questionnaires were used in this study. All necessary information about the game was conveyed to the respondents to ensure the clarity of the questions asked in the survey. Participation in the survey was random, and 412 people responded out of about 1000 people. The demographic structure of the respondents confirms the randomness. The bid amount of 10

thousand TL has been determined by considering the 2022 minimum subsistence limit.

Research was conducted in March 2022. As of this date, the pandemic has ended. Due to the new normal brought about by the pandemic period, social behaviors have changed with practices like social distance, quarantine, and distance education. Furthermore, income distribution changed during the pandemic (Chen vd., 2021).

Since the survey was conducted in three stages instead of a one-stage game, the participants' opinions on reliability put forward from different perspectives. Thus, it will be clearly understood how the norm of sharing is shaped according to changing emotional circumstances. Participants were asked the following questions:

Bid 1: "You are given 10.000 TL in cash. You are asked to share this with a stranger. You will give this person a portion of the money. 10.000 TL will be divided by the amount offered if this person accepts the bid. If the person refuses the bid (maybe because he does not like it, thinks it is too low, etc.), neither of you will receive any money. The offeree is aware that 10.000 TL was shared. How much would you bid?" has been prompted. Bidders were allowed to bid from zero TL to 10 thousand TL in 1000 TL increments.

Bid 2: " You are again awarded 10.000 TL in cash. The rules are the same as in the previous question. A total of 10.000 TL will be shared. You will make the bid, and the offeree will have the option to accept or reject it. If he/she refuses, neither of you will get paid. This time, you are told that the other individual is a 'needy person.' What would your offer to the other person be in this situation?"

Bid 3: " You are again awarded 10.000 TL in cash. The rules are the same as in the previous questions. 10 thousand TL will be shared. You will make the bid, and the offeree can accept or reject it. If he/she refuses, neither of you will receive any money. The context has modified with the prior question in that you have been notified that the other person is in need, but you are unsure whether that individual is in need. You are told that the other individual is a 'needy person but you are skeptical'. In this instance, what would your offer to the other individual be?"

Cronbach's Alpha Reliability Coefficient and ANOVA statistical methods were used to analyze the findings.

DEMOGRAPHIC STRUCTURE

Demographic information was requested from the respondents. These included questions about gender, age range, education, employment status, and, if unemployed, the reason why. It is hypothesized that the differentiation in these factors will alter the players' bids in light of the literature's findings.

Table 1: Demographic Characteristics (%)

Participants' Demographics	
Number of Participants (n=412)	n (%)
Gender	
Female	225 (%54.6)
Male	187 (%45.4)
Age Range	
15-19	19 (%4.6)
20-29	118 (%28.6)
30-39	160 (%38.8)
40-49	81 (%19.7)
50-59	19 (%4.6)
60 ve üzeri	15 (%3.6)
Graduation Degree	
Primary education	11 (%2.7)
High school	71 (%17.2)
College of faculty	205 (%49.8)
Postgraduate	125 (%30.3)
Employment	
Employed	272 (%66.1)
Unemployed	140 (%33.9)
Unemployment Reason	
Student	55 (%39.3)
Housewife	41 (%29.3)
Retiree	17 (%12.1)
Job Seeker	27 (%19.3)

Demographic characteristics of the participants are given in Table 1. According to the table 54.6% are female, and 45.4% are male. Many studies reveal that women are less willing to negotiate and bargain than men. One reason for the emergence of the gender gap is that women are given less credit for success and receive lower wages than men (Demiral & Mollerstrom, 2020; Heilman & Kusev, 2017). In addition, men and women take different degrees of risk when making decisions (García-Gallego et al., 2012).

Some other studies reveal that age is another determining factor in UG. Because emotions are starting

to have a more significant impact on decisions as people get older. Additionally, intentions vary between age groups (Bailey et al., 2013; Sutter, 2007). As given in Table 1, the respondents are predominantly between the ages of 20-49. The percentage of respondents aged 20-29 is 28.6%, aged 30-39 is 38.8% and aged 40-49 is 19.7%.

Another demographic factor used is the level of education, which represents the equality of opportunity and whether the person makes rational decisions. The graduation degree explores proper decision-making behavior and the psychological mechanisms underlying it. With the impact of this factor, people have different opinions about making a fair bid (Nguyen et al., 2011; Eisenkopf et al., 2013). Among the respondents, the rate of high school graduates is 17.2%, the rate of graduates from college or faculty is 49.8%, and the rate of graduate education is 30.4%. The rate of people with undergraduate and graduate is 81.1%.

As another determining factors, employment which represents the economic and cultural conditions was considered. Diverse behaviors can exist between social groups, and differentiations can significantly contribute to the explanation of behavioral disparities (Henrich et al., 2005). On the other hand, it is necessary to use participation in the labor market as a deciding factor in the bids. Because the salary level of the employees varies with the decisions (Fehr et al., 2009). For this reason, the participants were asked whether they were employed or not. 66% of people are employed, while 34% are unemployed. Most unemployed are students (39.3%) and housewives (29.3%). Furthermore, 19.3% are looking for a job.

DESCRIPTIVE ANALYSIS

Table 2 summarizes the responses in the Bid 1 column. When the bids were evaluated, the rate of offering half of 10 thousand TL was 59.7%. Furthermore, the percentage of submitting an offer of more than 5000 TL is 11.2%. The percentage of bidders that bid less than 5000 TL is 29.1%. The bidder is utilizing his bidding power in this case. However, as two extremes, those who donate no money (4.1%) are lower than those who offer 10 thousand TL (5.6%).

The question in Bid 2 changes the scenario by informing the bidder that the offeree is in need. Table 2, column 2 displays the responses. The distribution has shifted significantly between Bid 1 and Bid 2. At this point, the percentage of bidders for 5000 TL reduced from 59.7% to 27.2%. The percentage of bids over 5000 TL increased

from 11.2% to 61.2%. Furthermore, the proportion of those who offered the full 10.000 TL surged from 5.6% to 23.5%. The percentage of bids under 5000 TL declined from 29.1% to 11.7%.

The responses to Bid 3 are presented in Table 2's Bid 3 column. Bid 2 and Bid 3 have different bid rates. For example, the proportion of those offering 5000 TL has risen from 27.2% to 45.4%. This ratio, however, may be deceptive because the 45.4% bid is lower than the 59.7% bid of 5000 TL in Bid 1. Furthermore, the bid rates for less than 5000 TL in Bid 3 are 36.1%. This rate was 11.7% in Bid 2.

Individuals boost their low offerings even if they are skeptical of the needy. As a result, when people doubt trustworthiness (due to incomplete contract status), they withdraw their offers. Additionally, when the bids beyond 5000 TL are reviewed, the rate drops from 61.2% in Bid 2 to 18.5% in Bid 3. Nonetheless, this rate is greater than the 11.2% in Bid 1. Furthermore, whereas 23.5% of people donated the full 10.000 Turkish Lira to the needy person in Bid 2, this plummeted to 6.8% in Bid 3.

Table 2: Bid Rates (%)

	Bid 1	Bid 2	Bid 3
0 TL	4.1	1	4.1
1000 TL	5.8	2.2	6.6
2000 TL	2.9	1,2	3.6
3000 TL	8.3	3,4	10.4
4000 TL	8	3.9	11.4
5000 TL	59.7	27.2	45.4
6000 TL	2.7	14.3	5.6
7000 TL	0.7	11.2	2.9
8000 TL	1,2	8.3	2.2
9000 TL	1	3.9	1
10.000 TL	5.6	23.5	6.8

Table 3 shows the average bids of the 412 participants that took part in the survey.

Table 3: Offered Amount (TL)

Bid 1	Bid 2	Bid 3
4264	6667	4658

The amount in the typical UG (Bid 1) is consistent with the literature. Bid 1 is 4624 TL, Bid 2 is 6667 TL, and Bid 3 is 4658 TL. People raise their bids when someone is in need by acting more altruistically. 412 participants increased the offers to needy persons by nearly 2400 TL per person. When there is a lack of confidence, however, offers are

lowered despite the necessity. The average difference between the offers made to the reliable needer (Bid 2) and the unreliable needy person (Bid 3) is around 2000 TL. Again, although it is unreliable, it can be seen that people have increased their offers to the needy by 400 TL (comparison of Bid 1 and Bid 3).

Findings on Demographic Characteristics

This section summarizes the level of the respondents' bids according to their demographic structure. Table 4 presents the amounts offered by gender. When the bids are examined, it is seen that women offer higher than men in general. In Bid 1, the typical UG, women offer 6% more than men on average, while this rate rises to 15% in Bid 2, which is given to the needy. However, when there is doubt about reliability, women's offer is very close to men's, and only 1% more is offered.

Table 4: Amount Offered by Gender (TL)

	Bid 1	Bid 2	Bid 3
Female	4733	7093	4684
Male	4492	6155	4625

Table 5 summarizes the bids given by the respondents by age range. In the first game, people between 30-39 and 50-59 make the highest bid. In the second bid to those in need, people in the 50-59 age range again made the highest bid, increasing their bids to an average of 7526 TL. In other words, they allocate 25% of the relevant amount for themselves. On the other hand, when there is doubt about reliability, the group between the ages of 50-59 gives the lowest offer compared to all other age groups. All age groups reduced their offers to unreliable needers compared to reliable ones. In addition, those aged 20-29 gave the lowest bids.

Table 5: Amount Offered by Age Range (TL)

	Bid 1	Bid 2	Bid 3
15-19	4421	6368	4421
20-29	4313	6364	4288
30-39	4831	6812	4950
40-49	4716	6704	4765
50-59	4864	7526	4158
60 and above	4533	6600	4800

Table 6 presents the offers given according to employment status. Generally, the offers given by the employed are higher than the unemployed. The offer of the employed group in the first game is 3% higher than the unemployed, 2.5% in the second game, and 7.5% higher in the third game.

Table 6: Amount Offered by Employment Status (TL)

	Bid 1	Bid 2	Bid 3
Employed	4673	6724	4772
Unemployed	4528	6557	4436

The unemployed individuals were also asked the reason for their unemployment, and the bids of the relevant subgroups were formed as in Table 7. The table shows students and job seekers gave the lowest offer in typical UG. In the second game, all segments increased their bid amounts significantly. Housewives provide the highest level of assistance to those in need and offered approximately 7 thousand TL of 10 thousand TL to the other party. In addition, students and retirees also offered approximately 6500 TL. In case of doubt, all segments significantly reduced their offers. Housewives gave the highest bid at this stage, while job seekers offered the lowest bid. The offer made by job seekers to the reliable needy is 61.5% more than the one made to the needy who doubt reliability. When Bid 1 and Bid 3 are compared, students and housewives in the unemployed group cautiously increased their offers to the needy. Although they are suspicious, job seekers and retirees lowered their offers compared to the first situation.

Table 7: Bids Given by the Unemployed (TL)

	Bid 1	Bid 2	Bid 3
Student	4364	6527	4436
Job seeker	4370	5925	3667
Housewife	4804	7073	4951
Retiree	4647	6412	4412

STATISTICAL FINDINGS

In this section, the findings will be evaluated using statistical methods. First, consistency analysis was performed with Cronbach's Alpha Reliability Coefficient. Then, ANOVA was used to investigate whether there was a statistical difference between the respondents' bids in 3 different situations.

Table 8: ANOVA Results

Bids						
Variance Source	Sum of Squares	Degrees of Freedom	Average Squares	F value	p-value	F table value
Between Groups	1128433657	2	564216828.5	111.1508	0***	3.003
Bids by Gender						
Bid 1	5948925	1	5948925.289	1.4109	0.2356	3.86423927
Bid 2	89901501	1	89901500.96	15.648	0.00009***	3.86423927
Bid 3	352799	1	352798.6317	0.0696	0.7921	3.86423927
Bids by Age Groups						
Bid 1	19905527	5	3981105.376	0.9426	0.4532	2.2362
Bid 2	30091883	5	6018376.531	1.0116	0.4104	2.2362
Bid 3	36840651	5	7368130.237	1.465	0.2001	2.2362
Bids by Graduation Degree						
Bid 1	6618097	3	2206032.45	0.5208	0.6682	2.6268
Bid 2	17415310	3	5805103.4	0.9755	0.4042	2.6268
Bid 3	1399834	3	466611.4972	0.0916	0.9646	2.6268

Reliability Analysis

Cronbach's Alpha Confidence Coefficient was calculated to determine the test's reliability about three survey questions. This coefficient is used to measure the internal consistency of a set of questions. It evaluates how well the questions measure the same construct and is a measure of the reliability of the test.

By using this method, 3 proposals from 412 participants were analyzed. This coefficient has a range of values from 0 to 1. A coefficient close to 1 means that the consistency is increased. If the coefficient is between 0.70 and 0.77, it has relatively high reliability (Taber, 2018, 1278). The scale calculated in our study was found to be 0.705. Accordingly, the scales created in our study from zero TL to 10 thousand TL are consistent. This means that our scale is reliable and can be used to measure people's views on the suggested monetary range. It is also an indication that the participants understood the questions and answered them accurately.

ANOVA Analysis

ANOVA was used to investigate whether there was a statistical difference between the bids in three different cases, and the results are presented in Table 8. When the difference between the groups is examined statistically, the null hypothesis, which is no difference between the averages of the groups, is rejected because the p-value is less than 0.05. Accordingly, the difference between

the respondents' bids in the three cases is statistically significant.

Second, it was examined whether bids were differentiated by gender. First and third bids do not show any statistical significance. Despite this, the second bid is statistically significant. Accordingly, the bids of men and women to those in need differ. As shown in Table 4, women offer 7093 TL on average in the second bid, while men offer 6155 TL.

Third, it was examined whether bids differed by age group. According to the findings, the difference between age groups is not statistically significant in all bids. So, the average bids of the young, middle-aged, and older do not change in all three bids.

Finally, the bids were analyzed according to graduation degree. The findings show that graduation degree does not reveal a significant relationship that will make a difference between the bids.

CONCLUSION

Making accurate decisions and predictions about distributing donations is a constant challenge for people. It is known that under incomplete contracts, people are bounded rational, and in such cases, opportunism arises. It is often a complex problem to solve how a party can target types of proper behavior when bidding or shape this complex interaction under limited knowledge. Thus,

understanding the implications of bounded rationality and opportunistic behavior is essential in order to make effective donation-distribution decisions.

Our study started with a typical UG. The average 4264 TL bid by respondents in this game does not contradict 40-50% of bidding literature findings. Then, people offered an average of 6667 TL of 10 thousand TL to those in need. This situation is inconsistent with the homo economicus assumption of maximizing its own utility, which is expressed in neoclassical economics. Because the bidders increased their offers to those in need by more than 50%. As a result of this kind of behavior, altruism is clearly exhibited. The third stage investigated how participants behaved when concerns about reliability arose. When people are doubtful of the other party due to the case of asymmetric information and incomplete contracts, they limit their offers to those in need and refuse to cooperate. As a solution, the protection of property rights and their operationalization by formal institutions will increase reliability. Consequently, reliable foundations must be established, and real needy people should be reached. This is important because unreliable conditions lead to a situation of mistrust, where people are not willing to cooperate, even if they are in need. Establishing reliable foundations and ensuring that real people in need are reached will help to create an environment of trust and cooperation, which will lead to better outcomes for all.

In another finding, men and women bid differently for those in genuine need. The reasons for this difference can be examined in more detail in future studies. There may also be an informal institutional structure and theological reasons for this differentiation. On the other hand, age range and graduation degree do not affect bids. This finding demonstrates that an individual's age and educational progress do not change their offers, implying that they adapt to the cultural structure of society. This indicates that gender is a more influential factor as opposed to age and educational progress when considering the amount of support and assistance someone is willing to provide to those in need. This may be due to the fact that certain gender roles and expectations are deeply ingrained in society, making it more likely for individuals to abide by them even in situations where they have the potential to be altruistic.

Increasing similar game-theoretic studies in Turkey is vital in revealing how and with what motives individuals make behavioral decisions in society. Because in different regions and social groups in Turkey, the efficiency of formal and informal institutions can vary. This can lead to a better understanding of how decision-making is

affected by incentives, power dynamics, and other factors, which in turn can lead to better policy. Furthermore, it can help identify the factors that contribute to and shape economic outcomes in the country.

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