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Some effects of moral context in economicdecision-making in Mexican workers

KEYWORDS: Rational choice theory, moral context, dictator game.

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ABSTRACT *Several economic experiments have tested limitations of Rational Choice Theory. In most of them, researchers have found that people tend to be "irrational" when they have economic interactions with other agents. Some studies that explore social and moral aspects in economic decision-making indicate that people have different kinds of motivations, which is not necessarily increase their own utility. In this paper we examine the effects of moral context in economic decision-making. Specifically, decisions of people who participated in a Dictator Game. A sample of 46 Mexican employees was divided in two groups.A moral context variable was introduced in the experimental group to assess whether the moral variable increased the altruism to the Receiver. Our results showed that when Dictators were in a moral context they were more altruistic in monetary distributions. An important contribution of this study is that it was conducted in non-university population, unlike the majority ofeconomic experiments.*

Introduction

Rational Choice Theory

The *Rational Choice Theory* (RCT) matches the rationality with the exclusive quest of self-interest, which, requires that the agents will develop strategies for maximizing their utility in any decision they make (Arrow, 1951; Neumann &Morgestern, 1947; Raiffa, 1968). The RCT has generated a number of models and prescriptive theories, such as the *Subjective Expected Utility*

(Savage, 1954), but all the rational choice variations share as a basic assumption that individuals are totally selfish (Tena&Güell, 2011) and always choose the options that provide more utility to them. Although the RCT is probably the most important theory among the social sciences, it has been questioned for decades.

Facing the requirements of rational choice, several researchers have opposed descriptions of constraints and biases in individuals that prevent them from fully conform to such requirements. First, Simon (1955, 1982) proposed a "bounded rationality", people can only be partly rational due to our limitations to process and evaluate information. Kahneman&Tversky (1979, 1984) within their *Prospective Theory* provided evidence about the inevitable cognitive biases that strongly influence our choices, such as the *framing effect* or the *loss aversion*. Sen (1986) described as "rational idiots" those examples of the economic man represented in RCT, i.e., individuals that lack of sympathy and commitments that in the social reality are practically nonexistent. Moreover, under this perspective many choices might be seen as rational and irrational simultaneously. The faithfulness to the commitments might be seen as an inspired behavior in values and social norms, but also as a motivated behavior by the self-interest of being reputed as a reliable and worthy credit agent, for instance, in business or professional activities (Laca, 2012).

Furthermore, although rational choice models based on expected utility establish that individuals are totally selfish, and they always try to obtain the maximum satisfaction (Boudon, 2006), these models do not consider that someone else's welfare may also be part of our own concerns. This has been verified in *Dictator Game* (DG) and *Ultimatum Game* (UG).

Ultimatum Game

The Ultimatum Game is to make anonymous pairings between two participants (A and B), giving the experimenter an amount of money to the subject A, and asking him to propose distribute it with subject B, who can accept or reject the offer. If subject B accepts it, the deal is done, if he rejects it, the money is returned to the experimenter and participants receive nothing.

According to the rational choice theory, subject B should accept any offer from the subject A because any amount offered is always better than none. Meanwhile, according to the assumptions of the RCT, the subject A should always do the lowest possible offer assuming that subject B, being rational, will not reject any amount gifted. However, it has been shown repeatedly that the assumption of rational choice to maximize its own profit by subject B and not to reject any "gift" from subject A is not met in practice (Bowles, 2004). Equal or close to 50 % of deals are almost always accepted. Lower offers are frequently rejected, and the likelihood of rejection increases as the offer descends (Camerer, 2003).

The results in UG do not seem to depend on the amount of money involved. Experiments have been conducted with quantities ranged from 100 to 400 dollars (Hoffman, McCabe, & Smith, 1996), with equal amounts to the monthly income of the subjects (Cameron, 1999), and where incentives became 25 times larger (Slonim& Roth, 1998), all of them with no significant differences in the outcomes. In this way, one the most controversial questions towards the experiments of the UG was eliminated: violations of the principles of RCT were because the amounts involved were so small that they did not cause a real motivation on the participants.

As well, the results in UG depend on the experimental treatment. When the offers made to subject B are random, that is to say, the subject A did not choose the quantity to offer, the same low offers that are rejected from the standard treatment are accepted (Bowles, 2004). In this case,

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there is not a responsible to be "punished" through the rejection of the offer.

Dictator Game

The Dictator Game has the same structure as the Ultimatum Game, but subject B is not capable to reject the offer from subject A. Since player A is powerless, any donation from player B implies altruism. The DG has been used in different experiments to find evidence of restrictions on the requirement of always maximizing the self-profit (Camerer, 2003; Forsythe, Horowitz, &Savin, 1994; Kahneman, Knetsh, &Thaler, 1986). The DG structure allows a better study of decision-making of subject A. In the UG, where offers are usually close to 50 % of the amount at shake, it was not clear whether the decision of the bidder is a strategic issue to preserve at least some of the money, believing that subject B will probably reject an unequal offer, or whether such offers are due to a sense of fairness indeed. The equitable distributions in DG descend significantly, given that only 20 % of the subjects offer the half of money, and 3 in 10 of Dictators take it all (Forsythe et al., 1994). In experiments conducted under double-blind conditions, 6 out of 10 Dictators offered no quantity of money and only 1 in 10 made offers above 30 % of the amount involved (Hoffman et al., 1996).

Although the offers pattern results clearly more selfish in the UG, the constant in the experiments is that agents do not routinely perform the actions that suit them economically (List, 2007).Kahneman et al. (1986) applied a DG where subject A was provided with $ 20 and two delivery options: 50/50 or 90/10, $ 10 for each or $ 18 for the Dictator and only $ 2 for the Receiver, finding that two-thirds chose the first alternative. Besides that, when the identities of the Dictator and Recipient are known, and there is a possibility of communicate, average often approaches 50 % of the amount at stake (Frey &Bohnet, 1995), which would indicate the weight that the social factors have in the decisions of the agents.When Dictators are told that the Receiver of the money would be the American Red Cross, 31 % of them donated some of the money, 17 % gave the half and 10 % gave all the money to the institution (Eckel & Grossman, 1996).In a similar context, where the Receivers of the money were people living in extreme poverty, levels of altruism in monetary distributions were significantly increased in comparison with the results obtained in the standard version of DG (Aguiar, Brañas-Garza, & Miller, 2008). Other studies have also shown a significant increase in the percentage of money given by Dictators when they had as a Recipients a charity institution (Carpenter, Connolly, & Myers, 2008).

According to Aguiaret al. (2008), decisions of Dictators seem to be based in three main issues: I) conditions under which the Dictator is, whether or not there is anonymity; II) the information about the Receiver, to whom the money will be delivered?; and III) the way in which the game has been framed and the language used in the instructions. In this paper, we focus on the review of the influence of the second factor, specifically, when Dictators know the financial situation of the Recipients. The experiment was conducted in non-university population, specifically in Mexican co-workers. This is an important point because most economic experiments have been performed with students. And, although some authors report that university students are an appropriate subject pool for studying social behavior (Exadaktylos, Espín, &Brañas-Garza, 2013), this situation has generated many questions to the external validity of the experiments (Carpenter, Burks, &Verhoogen, 2004), and also has limited the understandingof how socio-economic aspects and cultural environment affect the outcomes (Madrigal &Alpizar, 2009).

Method

Sample description

The experiment was conducted with 46 Mexican workers of a company:30women and 16 menAges ranging:18-74 years. Level of schooling: 43.50 % high school, 30.40 % middle school,17.40%undergraduate and 8.70% elementary school.

Experiment design

The subjects were randomly assigned to each group:

Treatment1. Control group. The standard version of DG was conducted providing $50 pesos toeach Dictator, both the Dictator and the Receiver ignored each other identity.

*Treatment2. Experimental group (moral context):*The Dictators were also asked to allocate $50pesos between themselves, but on this occasion, they were told that the Recipients would be a co-worker with financial problems. As in control group, the identities of the Dictator and the Receiver remained anonymous.

Written instructions were given to the participantsin both groups, and all Dictators had the same options to distribute the money: 50-0, 40-10, 30-20, 25-25, 20-30, 10-40,and 0-50.

Statistical analysis

Data were analyzed using IBM SPSS Statistics 21.0. We considered a standard error of 0.05 and a confidence level of 95%. Because of the characteristics of the sample, we decided to use nonparametric test to analyze the data.

Results

On average, each subject kept $ 20.54 pesos (SD = 9.08). The statistical mode value was $25-$25, because 21 out of 46 subjects divided the money in a half.Dictators in the control group kepton average $24.57 pesos (SD = 6.80), while the experimental group had a mean of $16.52 (SD = 9.30).The amount of money taken by Dictatorsin the experimental group was significantly lower than in control group (U = 119.00, p = 0.001, N = 46). Even, it is noteworthy that in the experimental group nobody took more than half of the money involved (Figure 1).Furthermore, it can also be seen that egalitarian distributions were the most frequent in both groups.

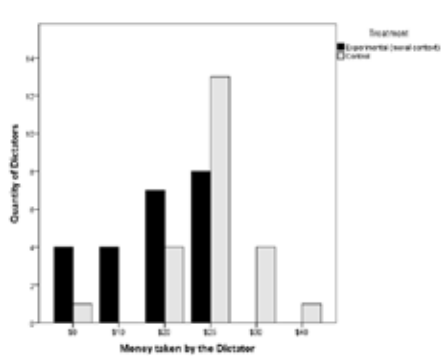

Figure 1.Shows the distribution of the money taken by Dictators in each treatment. In control group, most of Dictators divided by half the money provided (13 out of 23); four Dictators took $20 pesos for themselves and another four took $30; there was also a Dictator that kept only $10, and one that took $40. In the experimental group,

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eight Dictators kept the half of money and another seven took $20. Of the remaining eight Dictators, four took $10 and four did not take anything

There were no statistically significant differences in monetary distributions regarding gender of participants, neither the control group (U = 48.00, p = 0.325, n = 23) nor the experimental group (U = 56.00, p = 1.000, n = 23). Moreover, a Kruskal-Wallis test was run with the amount of money taken at each level of schooling. Either the control group or the experimental group were statistically significant differences (Table 1).

Wilcoxon Scores for variable Money taken by the Dictator, classified by variable Level of Schooling in both treatments.

Treatment	Level of schooling	N	Mean score	Kruskal-Wallis test	
Control group	Elementary school	4	14.13	Chi-Square	6.772
	Middle school	8	15.50	DF	3
	High school	7	9.57		
	Undergraduate	4	7.13	P	0.080
Experimental group	Elementary school	-	-	Chi-Square	3.997
	Middle school	6	11.08	DF	2
	High school	13	14.04		
	Undergraduate	4	6.75	P	0.136

Note: N = 46. There were no participants with Elementary school in the experimental group.

Finally, when we analyzed distributions of money in relation to the age of the subjects, in any of the groups association betweenthese variables was found (control r_s = 0.015, n = 23, p = 0.946; experimentalr_s = -0.291, n = 23, p = 0.178).

Discussion

As we have seen, Dictators who were in a moral context were more altruistic than those who participated in the standard version of DG, which is consistent with other experiments(Aguiar et al., 2008; Carpenter et al., 2008; Eckel & Grossman, 1996).The information about the financial situation of the Recipients of the money has caused Dictators feel compelled to help them. Eckel & Grossman's (1996) set that Receiver's circumstances determine what Dictators deem is right or appropriate to give.This is due to what Aguiaret al. call moral distance: "the degree of moral obligation that the Dictator has towards the recipient" (2008, p. 350).Inthe experimental group there was little moral distance between Dictators and Recipients. In contrast, in the control group there was greater moral distance. This was probably caused by the lack of information concerning to the financial condition of their co-workers, so they had no reason to behave altruistically.

Although the concept of moral distance is useful to explain altruism observed in the experimental group Dictators, could not be ensured that such decisions are motivated uniquely by moral norms. In the economic field, when participants of an experiment make decisions that differ from TER requirements, these behaviors are often termed "social preferences". These appear "if the person does not only care about the material resources allocated to her but also cares about the material resources allocated to relevant reference agents" (Fehr y Fischbacher, 2002, p. 2). So, it is also possible that such generosity is due to a desire to act in accordance with the socially appropriate. Elster (1989, 2009) suggests that our behavior is always influenced by social norms, and that we seek to adhere ourselves to the prescribed conduct, that is, to what is expected to do in a particular situation. As said by Akerlof&Shiller (2009), most of people want to seem righteous, fair and honest to the others. Further, we must remember that at workplace, social norms tend to promote cooperation among workers (Ostrom, 1990). Hence, despite the anonymity, social norms might have motivated the participants of this experiment.

Regardless of the agents are motivated by social or moral issues, it is important to recognize that human choice depends not only on self-interest, but also from their anticipated expectations about the pleasure or pain that others experience as a result of our actions (Simon, 1993). In this sense, some authors (Camerer, 2003; Tena, 2010) have pointed out the need to incorporate theoretical models that consider different types of motivations in economic decision-making, in order to better explain the behavior of the agents. Because if we consider the heterogeneity of human motivations, wewill surely have a deeper understanding about the factors involved in decision-making.

Concerning the predominance of egalitarian distributions, some authors have suggested that could be due to heuristics process (Messick, 1993). This kind of distributions represent a simple, effective and easily justifiable option. About this, Brañas-Heron, Leon-Mejia,& Miller(2007) mention that the analysis of the reaction time is a suitable approach to know ifsubject's decisions are intuitive or reflective.We suggest that using neuroscientific techniques would allow establishing with more accuracy thekind of decision thatDictator is carrying out.

Finally, we must note that although this study has limitations such as a small sample size, it is one of the first attempts to understand the economic behavior in of an average Mexican in Dictator Game, a tool that, unlike the hypothetical scenarios posed in a questionnaire, situates the agent in a real choice context.

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