

## An experimental analysis of moral self-regulation

Erdem Seçilmiş

To cite this article: Erdem Seçilmiş (2018) An experimental analysis of moral self-regulation, Applied Economics Letters, 25:12, 857-861, DOI: [10.1080/13504851.2017.1374530](https://doi.org/10.1080/13504851.2017.1374530)

To link to this article: <https://doi.org/10.1080/13504851.2017.1374530>



Published online: 06 Sep 2017.



Submit your article to this journal [↗](#)



Article views: 327



View related articles [↗](#)



View Crossmark data [↗](#)

ARTICLE



## An experimental analysis of moral self-regulation

Erdem Seçilmiş

Department of Public Finance, Hacettepe University, Ankara, Turkey

### ABSTRACT

This article examines the validity of the moral self-regulation hypothesis in a laboratory setting. The experiment is comprised of a public good game preceded or followed by a matrix task. The data show that the recall of an immoral action (cheating in the matrix task) motivates the individual to do morally right thing (contributing to group account) and the recall of a moral action (contributing to group account) motivates the individual to act out self-interest (cheating in the matrix task). Both moral licensing and moral cleansing hypotheses are confirmed by the results of the experiment. Additionally, the findings indicate that the subjects who had been given a chance to cheat 'at first' allocated more funds to the group account; and the subjects who had been given a chance to voluntarily contribute 'at first' cheated more in the matrix task.

### KEYWORDS

Moral self-regulation; moral cleansing; moral licensing; public good game; matrix task

### JEL CLASSIFICATION

C90; C91; D03

## 1. Introduction

The abundant evidence regarding the moral behaviour of people at different occasions and circumstances indicates that the rational economic man of standard theory is inadequate to explain individual decision-making process (Bénabou and Tirole 2011). What plays the main role in individuals' decisions on whether to behave morally or immorally? Despite the arguments such as kin selection, reciprocal altruism, warm-glow, identity, guilt aversion, etc. (e.g. Andreoni 1990; Battigalli & Dufwenberg, 2007; Charness and Dufwenberg 2006; Fehr and Fischbacher 2003),<sup>1</sup> the question still awaits much more detailed and informed analysis.

One possible answer to the above-stated question might be moral self-regulation, which emphasizes the need of human beings to equalize good and bad actions through balancing behaviour (Nagel 2014). Recent studies (e.g. Blanken, Van De Ven, and Zeelenberg 2015; Brañas-Garza et al. 2013; Clot, Grolleau, and Ibanez 2013; Ploner and Regner 2013) define this equalization need as the main impulse for a broad spectrum of moral/immoral act, from voluntarily giving to cheating.

Moral self-regulation occurs through two distinct pathways: moral licensing and moral cleansing. Moral licensing suggests that past moral behaviour that generates moral credits makes individuals more likely to display potentially immoral behaviours. Moral cleansing posits that past immoral behaviour pushes individuals to engage in future moral behaviour.

Although many scholars from psychology and marketing have experimentally studied moral licensing and/or moral cleansing effects, the number of the economists who focus on the analysis of the moral self-regulation is limited. Recently, various scholars have presented different experimental approaches to this phenomenon (e.g. Brañas-Garza et al. 2013; Clot, Grolleau, and Ibanez 2013; Clot, Grolleau, and Ibanez 2014; Clot, Grolleau, and Ibanez 2016; Cojoc and Stoian 2014; Lewis et al. 2012; Meub et al. 2016; Ploner and Regner 2013).

The goal of the present study was to further examine the effect of internal balancing of moral self-worth on economic decisions, with an original design. To the best of knowledge, this is the first study on moral self-regulation, which uses a matrix task and a public-good game in this context.

**CONTACT** Erdem Seçilmiş ✉ [ies@hacettepe.edu.tr](mailto:ies@hacettepe.edu.tr) 📍 Hacettepe University, Department of Public Finance, Beytepe, Çankaya, Ankara 06800, Turkey

<sup>1</sup>Andreoni (1990) uses a simple application of the public goods model in order to question the validity of the conventional view of charitable giving. Battigalli and Dufwenberg (2007) develop a general theory of guilt aversion in order to explain the economic behaviour of the agents who are affected by guilt. Charness and Dufwenberg (2006) investigate the influence of communication in a one-shot principal-agent game designed to capture the essence of hidden action. Fehr and Fischbacher (2003) identify conditions in order to show the interaction between selfish and strongly reciprocal individuals.

The remainder of the article is organized as follows. [Section II](#) exposes the experimental strategy. The results are discussed in [Section III](#). [Section IV](#) concludes.

## II. Experimental design

Two treatments were employed.<sup>2</sup> In treatment 1, part 1 is a matrix task (Mazar, Amir, and Ariely (2008)) to investigate if participants are immoral. This task gives the opportunity to the decision-maker to report a higher performance level than the actual one so as to increase payment. The main advantage of the Mazar, Amir, and Ariely (2008) matrix task is to directly observe personal ability to cheat.<sup>3</sup> In part 2, subjects play a standard one-shot public good game and decide how much to allocate to the group account. Part 2 gives a chance to subjects to offset their negative feelings (if any) relevant to their matrix task experience<sup>4,5</sup>.

In treatment 2, the order of the matrix task and public good game is changed. So, in treatment 2, part 1 is a public good game, which gives subjects the opportunity to behave moral (to donate). In part 2, the matrix task is performed and gives a chance to subjects to cheat or, in other words, to use their moral credits (if any) relevant to their public good game experience.<sup>6,7</sup>

In this particular experiment, ‘contributing to public good’ is perceived as a moral behaviour, because moral norms are closely related to intentions to give to charities. Plus, ‘cheating in the matrix task’ is considered as an immoral behaviour, because it is interpreted as a sign of dishonesty.

In the matrix task, subjects are given a sheet with matrices. They are instructed to look for a unique set of numbers that sum up exactly to 10, and to circle the numbers and mark the corresponding ‘Got it’ box when they find a set. After they complete the

task, they throw the material in the garbage and pay themselves<sup>8</sup> with the money provided on their desk.<sup>9</sup>

In the standard one-shot public good game, groups of three are formed randomly.<sup>10</sup> Each subject is given an initial endowment of 30 TL, and decided how much to contribute to the public account. Every contribution to the public account is doubled and divided equally between the group members. ‘No contribution to public account’ is a single-shot dominant strategy.

Using the experimental setup described above, the following two hypotheses are tested to examine the validity of the theory of moral self-regulation:

**Hypothesis 1:** *Subjects who cheated more in the matrix task contribute more to the group account.*

**Hypothesis 2:** *Subjects who contributed more to the group account cheat more in the following matrix task.*

The experiment was conducted in 12 sessions at Hacettepe University, Turkey. A total of 360 students were recruited from undergraduate classes. Subjects were 21.1 years old on average, and 52% were female. The average session duration was 20 min, whereby participants earned 59.2 TL on average, including show-up fees.<sup>11</sup>

## III. Results

### Treatment 1

**Result 1:** On average, the subjects who were exposed to the matrix task prior to the public good game allocated more to the group account than subjects in control 1.

[Figure 1](#) suggests that subjects in treatment 1 donated more than subjects in control 1. The difference between the control 1 and treatment

<sup>2</sup>Additionally, two benchmark experiments are implemented in order to control the results.

<sup>3</sup>Past studies generally focus on drawing inferences on the distribution of lying behaviour (e.g. Ploner and Regner 2013; Meub et al. 2016).

<sup>4</sup>Past research mostly uses a dictator game (e.g. Brañas-Garza et al. 2013; Clot, Grolleau, and Ibanez 2013).

<sup>5</sup>The benchmark experiment in treatment 1 is named as control 1. The subjects who participated in control 1 only played the public good game.

<sup>6</sup>Part 1 and part 2 are not within the same domain in this study. However, the past research regarding the moral licensing indicates that this is not a problem (e.g. Miller and Effron 2010; Tiefenbeck et al. 2013).

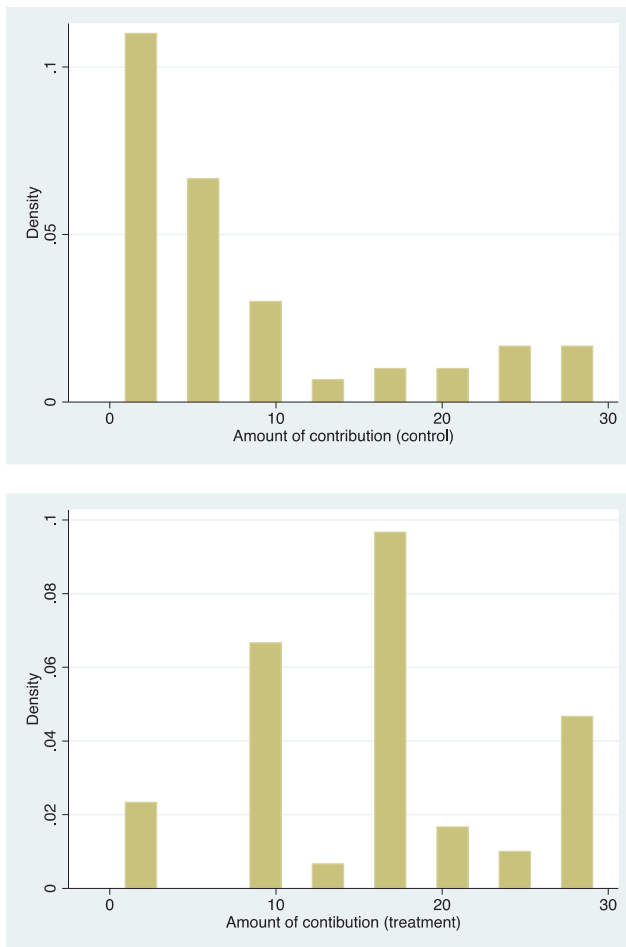
<sup>7</sup>The benchmark experiment in treatment 2 is named as control 2. The subjects who participated in control 2 only took the matrix task.

<sup>8</sup>1.5 TL per correct matrix (this amount was equivalent to about 0.5 USD at the time of the experiment).

<sup>9</sup>Because the same number is written into the last cell of the sample matrix, it is possible to identify each individual.

<sup>10</sup>All groups in the study are mixed gender.

<sup>11</sup>Show-up fee is 5 TL.



**Figure 1.** Histograms of amount of contribution (control 1 and treatment 1).

1 group is statistically significant ( $t = 6.04$ ,  $p < 0.001$ ).<sup>12</sup> In absolute terms, subjects who chose to contribute to the group account in treatment 1 (mean = 15.97) give (%102) more than in control 1 (mean = 7.91).

An OLS regression model is used to test Hypothesis 1 – whether the level of cheating affects the tendency to voluntarily contribute. The dependent variable is *charitable giving* which shows the funds allocated to group account. The independent variables are *level of cheating* and *gender*. The regression shows that the *level of cheating* affects *charitable giving*.<sup>13</sup> In

other words, the main explanatory variable in the decision to give is the difference between solved and reported matrices in matrix task (coefficient = 3.78,  $p = 0.00$ ). However, *gender* and the other control variables (*age*, *class level*, *income*) have no significant impact. This finding confirms the moral cleansing hypothesis: The recall of an immoral action (cheating in the matrix task) motivates the individual to do morally right thing (contributing to group account).<sup>14</sup>

## Treatment 2

**Result 2:** On average, the subjects who played the public good game prior to the matrix task cheated more than subjects in control 2.

Figure 2 suggests that subjects in treatment 2 cheated more than subjects in control 2. The difference between the control 2 and treatment 2 group is statistically significant ( $t = 6.71$ ,  $p < 0.001$ ).<sup>15</sup> In absolute terms, subjects who chose to lie in treatment (mean = 2.06) cheat (%183) more than in control 2 (mean = 0.72).

An OLS regression model is used to test Hypothesis 2 – whether the level of donation affects the tendency to cheat. The dependent variable is *level of cheating* which indicates the difference between the number of matrices really solved and reported ones. The independent variables are *charitable giving* and *gender*. The regression shows that *charitable giving* impacts the *level of cheating*. In other words, the main explanatory variable in the decision to cheat is the amount of contribution – the level of donation allocated in the public good game – (coefficient = 0.12,  $p = 0.00$ ). However, *gender* and the other control variables (*age*, *class level*, *income*) have no significant impact. This finding confirms the moral licensing hypothesis: The recall of a moral action (contributing to group account) motivates the individual to act out self-interest (cheating in the matrix task).<sup>16</sup>

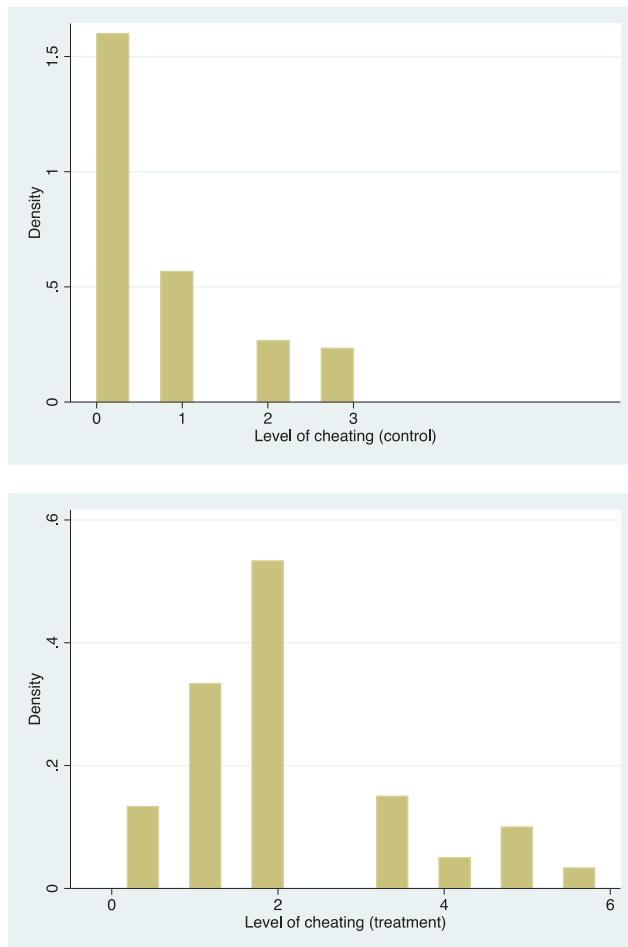
<sup>12</sup>Wilcoxon test gives a significant result, as well ( $z = 6.25$ ,  $p < 0.001$ ).

<sup>13</sup>The number of the subjects who cheated in the matrix task/treatment 1 was 81.

<sup>14</sup>Additionally, a probit regression model is created to check the results. *Charitable giving* is used as the binary dependent variable (if the amount of money donated smaller than 15, the dependent variable takes the value of 0, and 1 otherwise. The result confirms the relationship between the *level of cheating* and *charitable giving* (coefficient = 0.3,  $p = 0.00$ ).

<sup>15</sup>Wilcoxon test gives a significant result, as well ( $z = -6.45$ ,  $p < 0.001$ ).

<sup>16</sup>Additionally, a probit regression model is created to check the results. *Cheating* is used as the binary dependent variable (if the number of the difference is equal or smaller than 3, the dependent variable takes the value of 0, and 1 otherwise. The result confirms the relationship between *charitable giving* and *cheating* (coefficient = 0.2,  $p = 0.00$ ).



**Figure 2.** Histograms of level of cheating (control 2 and treatment 2).

#### IV. Conclusion

This study contributes to previous research on moral self-regulation by using a new experimental setup, which is a combination of a one-shot public good game and a matrix task and presents supporting evidence both for the moral licensing and moral cleansing effects. The recall of a moral/immoral action motivates the individual to equalize her/his good/bad actions through balancing behaviour. This finding is mostly in line with previous research documenting the validity of moral licensing/cleansing (e.g. Brañas-Garza et al. 2013; Clot, Grolleau, and Ibanez 2013; Ploner and Regner 2013). However, for robustness of the results, replication with a larger sample would enable the examination of the findings' generalizability.

#### Disclosure statement

No potential conflict of interest was reported by the author.

#### References

- Andreoni, J. 1990. "Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving." *The Economic Journal* 100 (401): 464–477. doi:10.2307/2234133.
- Battigalli, P., and M. Dufwenberg. 2007. "Guilt in Games." *The American Economic Review* 97 (2): 170–176. doi:10.1257/aer.97.2.170.
- Bénabou, R., and J. Tirole. 2011. "Identity, Morals, and Taboos: Beliefs as Assets." *The Quarterly Journal of Economics* 126 (2): 805–855. doi:10.1093/qje/qjr002.
- Blanken, I., N. Van De Ven, and M. Zeelenberg. 2015. "A Meta-Analytic Review of Moral Licensing." *Personality and Social Psychology Bulletin* 41 (4): 540–558. doi:10.1177/0146167215572134.
- Brañas-Garza, P., M. Bucheli, M. P. Espinosa, and T. García-Muñoz. 2013. "Moral Cleansing and Moral Licenses: Experimental Evidence." *Economics and Philosophy* 29 (2): 199–212. doi:10.1017/S0266267113000199.
- Charness, G., and M. Dufwenberg. 2006. "Promises and Partnership." *Econometrica* 74 (6): 1579–1601. doi:10.1111/ecta.2006.74.issue-6.
- Clot, S., G. Grolleau, and L. Ibanez. 2013. "Self-Licensing and Financial Rewards: Is Morality for Sale?" *Economics Bulletin* 33 (3): 2298–2306.
- Clot, S., G. Grolleau, and L. Ibanez. 2014. "Smug Alert! Exploring Self-Licensing Behavior in a Cheating Game." *Economics Letters* 123 (2): 191–194. doi:10.1016/j.econlet.2014.01.039.
- Clot, S., G. Grolleau, and L. Ibanez. 2016. "Do Good Deeds Make Bad People?" *European Journal of Law and Economics* 42 (3): 491–513. doi:10.1007/s10657-014-9441-4.
- Cojoc, D., and A. Stoian. 2014. "Dishonesty and Charitable Behavior." *Experimental Economics* 17 (4): 717–732. doi:10.1007/s10683-014-9391-2.
- Fehr, E., and U. Fischbacher. 2003. "The Nature of Human Altruism." *Nature* 425 (6960): 785–791. doi:10.1038/nature02043.
- Lewis, A., A. Bardis, C. Flint, C. Mason, N. Smith, C. Tickle, and J. Zinser. 2012. "Drawing the Line Somewhere: An Experimental Study of Moral Compromise." *Journal of Economic Psychology* 33 (4): 718–725. doi:10.1016/j.joep.2012.01.005.
- Mazar, N., O. Amir, and D. Ariely. 2008. "The Dishonesty of Honest People: A Theory of Self-Concept Maintenance." *Journal of Marketing Research* 45 (6): 633–644. doi:10.1509/jmkr.45.6.633.
- Meub, L., T. Proeger, T. Schneider, and K. Bizer. 2016. "The Victim Matters—Experimental Evidence on Lying, Moral Costs and Moral Cleansing." *Applied Economics Letters* 23 (16): 1162–1167. doi:10.1080/13504851.2016.1139674.
- Miller, D. T., and D. A. Effron. 2010. "Chapter Three—Psychological License: When It Is Needed and How It Functions." *Advances in Experimental Social Psychology* 43: 115–155.
- Nagel, V. (2014). Three Essays on Moral Self-Regulation of Honesty and Impression Management. Phd Dissertation. Universität Passau.

Ploner, M., and T. Regner. 2013. "Self-Image and Moral Balancing: An Experimental Analysis." *Journal of Economic Behavior & Organization* 93: 374–383. doi:[10.1016/j.jebo.2013.03.030](https://doi.org/10.1016/j.jebo.2013.03.030).

Tiefenbeck, V., T. Staake, K. Roth, and O. Sachs. 2013. "For Better or for Worse? Empirical Evidence of Moral Licensing in a Behavioral Energy Conservation Campaign." *Energy Policy* 57: 160–171. doi:[10.1016/j.enpol.2013.01.021](https://doi.org/10.1016/j.enpol.2013.01.021).