# Fasting and Honesty 

# Experimental Evidence from Egypt 

Online Appendix

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## Appendix A: Honesty Game Instructions

## (Translation from Arabic)

On this table [the experimenter points to the table at the front of the room], all the cups are the same. Each cup contains six folded paper clips. On every clip, a number from one to six is written. Now we need a volunteer to double check the cups and its content. If you want to volunteer, please raise your hand.
[The experimenter chooses a random subject from those who raise their hands]
[To the volunteer] Please proceed to the table, pick a cup at random, check the folded papers and read what is written on every paper aloud.
[To the rest of the subjects] Anyone else wants to check the cups before we start?
Now we can start.
You are required to proceed to the table one by one, pick a cup at random, pick one of the folded papers, throw the rest of the cup's content in the box on the table, and go back to your seat. Please keep the paper you picked folded until further instructions.

We will start from the front left seat. Please proceed to the table one by one.
[Wait for everyone to finish this step]
Now, everyone has a single folded paper clip? [wait for eveyone to say yes] Please check it privately, keep the number written in your mind and refold the clip.

[^0]Please insert the folded clip into one of the small envelopes you have. Please seal the envelope well. Please deposit the sealed envelope in the box in the middle of the room.

Everyone has an empty paper on their desks. Do we all have that? [make sure everyone has an empty paper]

On this empty paper, you can write the number you will get money for. Meaning that, if you told us the number you drew is:

One - you get EGP 5
Two - you get EGP 10
Three - you get EGP 15
Four - you get EGP 20
Five - you get EGP 25

## Six - you get EGP 30

Depending on the number you write on the empty paper, we will provide you with a cheque to cash out at the end of the session.

Please write down the number.
Is everyone done?
Now I will pass by you to write you the cheque.
[When this step is completed:]
Now please deposit the paper you wrote on in the other small envelope you have. Please seal the envelope well. Please deposit the sealed envelope in the box in the middle of the room.

## Appendix B: Real Effort Task Instructions

## (Translation from Arabic)

In this task, you are required to search for 40 letters in different pages, lines, and places. For every correct letter you find, you win EGP 2. Meaning that if you correctly found all letters, you win EGP 80. Please note that we will correct your answer sheets and you will be paid only for your correct answers.

In order to be considered for payments for this session, you have to attempt to find at least the first 10 letters. After the 10th, you are free to continue the task or to stop it while still being considered for the payment for the session.

We look for the letters from left to right, for example on the first page, the first line, the third letter is s. ${ }^{1}$ Can you all find that? Anyone has a question?

OK, so what is the letter on page 2, line 2, letter 4? Please say it aloud [i]. Anybody could not find it?

OK, now you have exactly 20 minutes to find the 40 letters once I say start.
Please start.
[wait for 20 minutes]
Time is up! Please write down the code on your answer sheet and hand it in to the experimenter. We will correct the sheets and give them back to you by the end of the session. We will then write you a cheque for this game to be cashed out at the end of the session.

[^1]
## Appendix C: Additional Tables and Figures

Table C1: Mean Subjects' Characteristics by Group and Round

|  | Full Sample |  |  | Restricted Sample |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { HF } \\ (\mathrm{N}=96) \end{gathered}$ | $\begin{gathered} \mathrm{EF} \\ (\mathrm{~N}=71) \end{gathered}$ | Diff. | $\begin{gathered} \mathrm{HF} \\ (\mathrm{~N}=71) \end{gathered}$ | $\begin{gathered} \mathrm{EF} \\ (\mathrm{~N}=50) \end{gathered}$ | Diff. |
| Female | 0.44 | 0.39 | -0.043 | 0.45 | 0.44 | -0.011 |
|  | [0.50] | [0.49] | (0.578) | [0.50] | [0.50] | (0.853) |
| Age |  |  |  |  |  |  |
| less than $30 \mathrm{y} / \mathrm{o}$ | 0.47 | 0.47 | -0.004 | 0.41 | 0.36 | -0.048 |
|  | [0.50] | [0.50] | (0.953) | [0.50] | [0.48] | (0.592) |
| 30 to $39 \mathrm{y} / \mathrm{o}$ | 0.36 | 0.48 | 0.122 | 0.38 | 0.58 | 0.200* |
|  | [0.48] | [0.50] | (0.113) | [0.49] | [0.50] | (0.031) |
| 40 to $49 \mathrm{y} / \mathrm{o}$ | 0.09 | 0.06 | -0.036 | 0.13 | 0.06 | -0.067 |
|  | [0.29] | [0.23] | (0.394) | [0.34] | [0.24] | (0.228) |
| $50 \mathrm{y} / \mathrm{o}$ or more | 0.06 | 0.00 | -0.061* | 0.07 | 0.00 | -0.070* |
|  | [0.24] | [0.00] | ( 0.034) | [0.26] | [0.00] | (0.056) |
| Job ${ }^{\text {a }}$ |  |  |  |  |  |  |
| Academic | 0.14 | 0.24 | 0.096 | 0.13 | 0.20 | 0.073 |
|  | [0.35] | [0.43] | (0.110) | [0.34] | [0.40] | (0.278) |
| Admin | 0.57 | 0.56 | -0.008 | 0.61 | 0.66 | 0.054 |
|  | [0.50] | [0.50] | (0.917) | [0.49] | [0.48] | (0.544) |
| Blue-collar | 0.18 | 0.10 | -0.085 | 0.24 | 0.14 | -0.099 |
|  | [0.39] | [0.30] | (0.125) | [0.43] | [0.35] | (0.179) |
| Student | 0.08 | 0.10 | 0.017 | 0.01 | 0.00 | -0.014 |
|  | [0.28] | [0.30] | (0.703) | [0.12] | [0.00] | (0.401) |

Standard deviation in brackets. Wilcoxon-Mann-Whitney test p-values in parentheses. Full sample includes all BR round. Restricted sample includes the set of subjects who showed up for both rounds.

* p -value $<0.10$.

Table C2: Mean Subjects' Performance in the RET by Attrition, Round and Group

|  | RET Attempted | RET Accurate | RET Success |
| :--- | :---: | :---: | :---: |
| Full Sample |  |  |  |
| Shows | 25.37 | 21.83 | 85.43 |
|  | $[5.44]$ | $[5.61]$ | $[15.81]$ |
| No shows | 26.19 | 23.02 | 88.95 |
|  | $[6.43]$ | $[5.52]$ | $[13.66]$ |
| Diff. | 0.82 | 1.19 | 3.52 |
| Before Ramadan | $(0.787)$ | $(0.229)$ | $(0.117)$ |
| Honesty First |  |  |  |
|  | 24.49 | 21.59 | 88.17 |
| Effort First | $[5.51]$ | $[5.68]$ | $[12.59]$ |
|  | 27.13 | 22.94 | 84.03 |
| Diff. | $[5.69]$ | $[5.41]$ | $[17.81]$ |
|  | $2.64^{* *}$ | 1.35 | -4.14 |
| During Ramadan | $(0.001)$ | $(0.084)$ | $(0.097)$ |
| Honesty First |  |  |  |
|  | 29.42 | 26.65 | 90.18 |
| Effort First | $[5.2]$ | $[6.17]$ | $[11.68]$ |
|  | 33.2 | 28.74 | 86.79 |
| Diff. | $[4.45]$ | $[5.88]$ | $[14.65]$ |
|  | $3.78^{* *}$ | $2.09^{*}$ | -3.39 |
| Standard deviation in brackets. Mann-Whitney test's p-values in parentheses. |  |  |  |
|  | $* *$ p-value $<0.05,{ }^{*}$ p-value $<0.10$. |  |  |
|  |  |  |  |

Table C3: Descriptive Statistics for the Mechanisms Variables

|  | N | Mean | St. Dev. | Min. | Max. |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Tarawih | 232 | .54 | .50 | 0 | 1 |
| Fajr | 230 | .24 | .43 | 0 | 1 |
| Abstention_H | 242 | .31 | .46 | 0 | 1 |
| Caff_Dep | 242 | .60 | .49 | 0 | 1 |
| Smoke | 242 | .31 | .47 | 0 | 1 |
| RETS_H | 242 | .51 | .50 | 0 | 1 |
| Neg_Imp | 242 | .22 | .41 | 0 | 1 |



Figure C1: Percentage of Liars by Lie Size, Group, and Round
Note: In both rounds and across both treatment groups, the majority of subjects did not lie.

## Appendix D: Mechanisms

## D1- Religiosity

Table D1 -Religiosity as a Mechanisms of Dishonesty
(Dependent Variable: Lie ${ }_{i t}$ )

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ramadan | $\begin{gathered} 0.013 \\ (0.033) \end{gathered}$ | $\begin{gathered} \hline 0.013 \\ (0.033) \end{gathered}$ | $\begin{gathered} \hline 0.057 \\ (0.045) \end{gathered}$ | $\begin{gathered} 0.013 \\ (0.033) \end{gathered}$ | $\begin{gathered} \hline 0.030 \\ (0.052) \end{gathered}$ | $\begin{gathered} 0.011 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.033 \\ (0.038) \end{gathered}$ | $\begin{gathered} 0.011 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.026 \\ (0.040) \end{gathered}$ |
| EF | $\begin{aligned} & -0.047 \\ & (0.052) \end{aligned}$ | $\begin{aligned} & -0.051 \\ & (0.053) \end{aligned}$ | $\begin{aligned} & -0.047 \\ & (0.053) \end{aligned}$ | $\begin{aligned} & -0.012 \\ & (0.071) \end{aligned}$ | $\begin{gathered} -0.034 \\ (0.075) \end{gathered}$ | $\begin{aligned} & -0.054 \\ & (0.052) \end{aligned}$ | $\begin{aligned} & -0.049 \\ & (0.052) \end{aligned}$ | $\begin{aligned} & -0.047 \\ & (0.056) \end{aligned}$ | $\begin{aligned} & -0.050 \\ & (0.058) \end{aligned}$ |
| Ramadan $=1 \times \mathrm{EF}=1$ | $\begin{gathered} 0.106^{* *} \\ (0.051) \end{gathered}$ | $\begin{gathered} 0.106^{* *} \\ (0.051) \end{gathered}$ | $\begin{aligned} & 0.098^{*} \\ & (0.051) \end{aligned}$ | $\begin{gathered} 0.107^{* *} \\ (0.051) \end{gathered}$ | $\begin{gathered} 0.155^{* *} \\ (0.076) \end{gathered}$ | $\begin{aligned} & 0.109^{* *} \\ & (0.052) \end{aligned}$ | $\begin{aligned} & 0.101^{*} \\ & (0.053) \end{aligned}$ | $\begin{gathered} 0.109^{* *} \\ (0.052) \end{gathered}$ | $\begin{aligned} & 0.116^{*} \\ & (0.060) \end{aligned}$ |
| Tarawih |  | $\begin{gathered} -0.037 \\ (0.046) \end{gathered}$ | $\begin{aligned} & -0.002 \\ & (0.052) \end{aligned}$ | $\begin{aligned} & -0.003 \\ & (0.061) \end{aligned}$ | $\begin{gathered} 0.010 \\ (0.069) \end{gathered}$ |  |  |  |  |
| Tarawih X Ramadan |  |  | $\begin{aligned} & -0.072 \\ & (0.050) \end{aligned}$ |  | $\begin{gathered} -0.029 \\ (0.066) \end{gathered}$ |  |  |  |  |
| Tarawih X EF |  |  |  | $\begin{aligned} & -0.078 \\ & (0.093) \end{aligned}$ | $\begin{gathered} -0.029 \\ (0.105) \end{gathered}$ |  |  |  |  |
| Tarawih X EF X Ramadan |  |  |  |  | $\begin{gathered} -0.103 \\ (0.103) \end{gathered}$ |  |  |  |  |
| Fajr |  |  |  |  |  | $\begin{aligned} & -0.080 \\ & (0.052) \end{aligned}$ | $\begin{aligned} & -0.042 \\ & (0.060) \end{aligned}$ | $\begin{aligned} & -0.068 \\ & (0.064) \end{aligned}$ | $\begin{gathered} -0.042 \\ (0.074) \end{gathered}$ |
| Fajr X Ramadan |  |  |  |  |  |  | $\begin{aligned} & -0.077 \\ & (0.061) \end{aligned}$ |  | $\begin{aligned} & -0.054 \\ & (0.075) \end{aligned}$ |
| Fajr X EF |  |  |  |  |  |  |  | $\begin{aligned} & -0.034 \\ & (0.110) \end{aligned}$ | $\begin{gathered} 0.000 \\ (0.127) \end{gathered}$ |
| Fajr X EF X Ramadan |  |  |  |  |  |  |  |  | $\begin{gathered} -0.069 \\ (0.130) \end{gathered}$ |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 224 | 224 | 224 | 224 | 224 | 223 | 223 | 223 | 223 |
| Overall $R^{2}$ | 0.07 | 0.07 | 0.08 | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |

Random effects analysis. Standard errors in parentheses. Sample restricted to fasting individuals. Controls include gender, age, job, and the draw of six. Omitted categories are males, less than 30 years old, and academic.

* p-value $<0.10,{ }^{* *}$ p-value $<0.05$.

Note: This table is replicated using LieSize as a continuous dependent variable in Table E3.1.

## D2- Alimentary Abstention

Table D2 -Alimentary Abstention as a Mechanisms of Dishonesty
(Dependent Variable: $L i e_{i t}$ )

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ramadan | $\begin{gathered} 0.013 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.013 \\ (0.033) \end{gathered}$ | $\begin{aligned} & \hline-0.010 \\ & (0.036) \end{aligned}$ | $\begin{gathered} 0.013 \\ (0.033) \end{gathered}$ | $\begin{aligned} & -0.026 \\ & (0.039) \end{aligned}$ | $\begin{gathered} 0.013 \\ (0.033) \end{gathered}$ | $\begin{aligned} & -0.022 \\ & (0.045) \end{aligned}$ | $\begin{gathered} 0.014 \\ (0.033) \end{gathered}$ | $\begin{aligned} & \hline-0.005 \\ & (0.052) \end{aligned}$ |
| EF | $\begin{aligned} & -0.047 \\ & (0.052) \end{aligned}$ | $\begin{aligned} & -0.045 \\ & (0.052) \end{aligned}$ | $\begin{aligned} & -0.043 \\ & (0.052) \end{aligned}$ | $\begin{aligned} & -0.085 \\ & (0.063) \end{aligned}$ | $\begin{aligned} & -0.103 \\ & (0.064) \end{aligned}$ | $\begin{aligned} & -0.047 \\ & (0.052) \end{aligned}$ | $\begin{gathered} -0.047 \\ (0.052) \end{gathered}$ | $\begin{aligned} & -0.073 \\ & (0.076) \end{aligned}$ | $\begin{aligned} & -0.053 \\ & (0.082) \end{aligned}$ |
| Ramadan X EF | $\begin{gathered} 0.106^{* *} \\ (0.051) \end{gathered}$ | $\begin{gathered} 0.106^{* *} \\ (0.051) \end{gathered}$ | $\begin{aligned} & 0.100^{*} \\ & (0.051) \end{aligned}$ | $\begin{gathered} 0.106^{* *} \\ (0.051) \end{gathered}$ | $\begin{gathered} 0.142^{* *} \\ (0.063) \end{gathered}$ | $\begin{gathered} 0.106^{* *} \\ (0.051) \end{gathered}$ | $\begin{aligned} & 0.106^{* *} \\ & (0.051) \end{aligned}$ | $\begin{aligned} & 0.105^{* *} \\ & (0.051) \end{aligned}$ | $\begin{gathered} 0.065 \\ (0.081) \end{gathered}$ |
| Abstention_H |  | $\begin{aligned} & -0.016 \\ & (0.049) \end{aligned}$ | $\begin{aligned} & -0.055 \\ & (0.055) \end{aligned}$ | $\begin{aligned} & -0.067 \\ & (0.066) \end{aligned}$ | $\begin{aligned} & -0.133^{*} \\ & (0.074) \end{aligned}$ |  |  |  |  |
| Abstention_H X Ramadan |  |  | $\begin{gathered} 0.080 \\ (0.055) \end{gathered}$ |  | $\begin{aligned} & 0.137^{*} \\ & (0.073) \end{aligned}$ |  |  |  |  |
| Abstention_H X EF |  |  |  | $\begin{gathered} 0.113 \\ (0.099) \end{gathered}$ | $\begin{gathered} 0.176 \\ (0.110) \end{gathered}$ |  |  |  |  |
| Abstention_H X Ramadan X EF |  |  |  |  | $\begin{aligned} & -0.129 \\ & (0.111) \end{aligned}$ |  |  |  |  |
| Caff_Dep |  |  |  |  |  | $\begin{aligned} & -0.034 \\ & (0.047) \end{aligned}$ | $\begin{aligned} & -0.061 \\ & (0.053) \end{aligned}$ | $\begin{gathered} -0.051 \\ (0.060) \end{gathered}$ | $\begin{gathered} -0.065 \\ (0.068) \end{gathered}$ |
| Caff_Dep X Ramadan |  |  |  |  |  |  | $\begin{gathered} 0.058 \\ (0.051) \end{gathered}$ |  | $\begin{gathered} 0.030 \\ (0.067) \end{gathered}$ |
| Caff_Dep X EF |  |  |  |  |  |  |  | $\begin{gathered} 0.043 \\ (0.093) \end{gathered}$ | $\begin{gathered} 0.011 \\ (0.105) \end{gathered}$ |
| Caff_Dep X Ramadan X EF |  |  |  |  |  |  |  |  | $\begin{gathered} 0.069 \\ (0.104) \end{gathered}$ |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 |
| Overall $R^{2}$ | 0.07 | 0.07 | 0.08 | 0.08 | 0.09 | 0.07 | 0.08 | 0.07 | 0.08 |

Random effects analysis. Standard errors in parentheses. Sample restricted to fasting individuals. Controls include gender, age, job, and the draw of six. Omitted categories are males, less than 30 years old, and academic.

* p-value $<0.10,{ }^{* *}$ p-value $<0.05$.

Note: This table is replicated using LieSize as a continuous dependent variable in Table E3.2.

## D3- Ego Depletion

Table D3 -Ego Depletion as a Mechanisms of Dishonesty
(Dependent Variable: Lie ${ }_{i t}$ )

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ramadan | $\begin{gathered} 0.013 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.013 \\ (0.033) \end{gathered}$ | $\begin{aligned} & -0.016 \\ & (0.046) \end{aligned}$ | $\begin{gathered} \hline 0.012 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.038 \\ (0.052) \end{gathered}$ | $\begin{gathered} 0.013 \\ (0.033) \end{gathered}$ | $\begin{aligned} & \hline-0.013 \\ & (0.036) \end{aligned}$ | $\begin{gathered} 0.012 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.015 \\ (0.037) \end{gathered}$ |
| EF | $\begin{gathered} -0.047 \\ (0.052) \end{gathered}$ | $\begin{gathered} -0.048 \\ (0.053) \end{gathered}$ | $\begin{gathered} -0.054 \\ (0.053) \end{gathered}$ | $\begin{aligned} & -0.057 \\ & (0.064) \end{aligned}$ | $\begin{aligned} & -0.003 \\ & (0.070) \end{aligned}$ | $\begin{gathered} -0.052 \\ (0.053) \end{gathered}$ | $\begin{gathered} -0.047 \\ (0.053) \end{gathered}$ | $\begin{gathered} -0.122^{* *} \\ (0.061) \end{gathered}$ | $\begin{gathered} -0.081 \\ (0.062) \end{gathered}$ |
| Ramadan X EF | $\begin{gathered} 0.106^{* *} \\ (0.051) \end{gathered}$ | $\begin{gathered} 0.107^{* *} \\ (0.051) \end{gathered}$ | $\begin{aligned} & 0.114^{* *} \\ & (0.052) \end{aligned}$ | $\begin{aligned} & 0.106^{* *} \\ & (0.051) \end{aligned}$ | $\begin{gathered} -0.007 \\ (0.076) \end{gathered}$ | $\begin{gathered} 0.107^{* *} \\ (0.051) \end{gathered}$ | $\begin{aligned} & 0.100^{* *} \\ & (0.051) \end{aligned}$ | $\begin{aligned} & 0.108^{* *} \\ & (0.051) \end{aligned}$ | $\begin{gathered} 0.025 \\ (0.060) \end{gathered}$ |
| RETS_H |  | $\begin{aligned} & -0.006 \\ & (0.035) \end{aligned}$ | $\begin{gathered} -0.031 \\ (0.045) \end{gathered}$ | $\begin{aligned} & -0.015 \\ & (0.049) \end{aligned}$ | $\begin{gathered} 0.009 \\ (0.061) \end{gathered}$ |  |  |  |  |
| RETS_H X Ramadan |  |  | $\begin{gathered} 0.050 \\ (0.057) \end{gathered}$ |  | $\begin{gathered} -0.044 \\ (0.072) \end{gathered}$ |  |  |  |  |
| RETS_H X EF |  |  |  | $\begin{gathered} 0.018 \\ (0.072) \end{gathered}$ | $\begin{aligned} & -0.109 \\ & (0.092) \end{aligned}$ |  |  |  |  |
| RETS_H X Ramadan X EF |  |  |  |  | $\begin{gathered} 0.251^{* *} \\ (0.116) \end{gathered}$ |  |  |  |  |
| Smoke |  |  |  |  |  | $\begin{gathered} 0.033 \\ (0.050) \end{gathered}$ | $\begin{gathered} -0.013 \\ (0.056) \end{gathered}$ | $\begin{gathered} -0.073 \\ (0.068) \end{gathered}$ | $\begin{aligned} & -0.070 \\ & (0.076) \end{aligned}$ |
| Smoke X Ramadan |  |  |  |  |  |  | $\begin{aligned} & 0.095^{*} \\ & (0.054) \end{aligned}$ |  | $\begin{aligned} & -0.008 \\ & (0.071) \end{aligned}$ |
| Smoke X EF |  |  |  |  |  |  |  | $\begin{gathered} 0.223^{* *} \\ (0.098) \end{gathered}$ | $\begin{gathered} 0.114 \\ (0.110) \end{gathered}$ |
| Smoke X Ramadan X EF |  |  |  |  |  |  |  |  | $\begin{gathered} 0.241^{* *} \\ (0.107) \end{gathered}$ |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 |
| Overall $R^{2}$ | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.08 | 0.11 | 0.13 |

Random effects analysis. Standard errors in parentheses. Sample restricted to fasting individuals. Controls include gender, age, job, and the draw of six. Omitted categories are males, less than 30 years old, and academic.

* p-value $<0.10,{ }^{* *}$ p-value $<0.05$.

Note: This table is replicated using LieSize as a continuous dependent variable in Table E3.3.

## D4- Repetition

Table D4 - Repetition As a Mechanism of Dishonesty
(Dependent Variable: Lie $i_{i t}$ )

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Ramadan | 0.013 | 0.013 | 0.006 | 0.012 | 0.014 |
|  | $(0.033)$ | $(0.033)$ | $(0.035)$ | $(0.033)$ | $(0.036)$ |
| EF | -0.047 | -0.046 | -0.044 | -0.089 | -0.076 |
|  | $(0.052)$ | $(0.052)$ | $(0.052)$ | $(0.057)$ | $(0.058)$ |
| Ramadan X EF | $0.106^{* *}$ | $0.106^{* *}$ | $0.103^{* *}$ | $0.107^{* *}$ | 0.079 |
|  | $(0.051)$ | $(0.051)$ | $(0.052)$ | $(0.051)$ | $(0.058)$ |
| Neg_Imp |  | -0.041 | -0.061 | $-0.142^{*}$ | -0.135 |
| Neg_Imp X Ramadan |  | $(0.060)$ | $(0.067)$ | $(0.080)$ | $(0.090)$ |
|  |  |  | 0.045 |  | -0.014 |
| Neg_Imp X EF |  |  | $(0.066)$ |  | $(0.091)$ |
|  |  |  |  | $0.220^{*}$ | 0.162 |
| Neg_Imp X Ramadan X EF |  |  |  |  | $0.117)$ |
|  |  |  |  |  | $(0.131)$ |
| Controls | Yes | Yes | Yes | Yes | Yes |
| N | 224 | 224 | 224 | 224 | 224 |
| Overall $R^{2}$ | 0.07 | 0.07 | 0.07 | 0.09 | 0.10 |

Random effects analysis. Standard errors in parentheses. The dependent variable is a dummy in columns 1 and 2, and integer that varies from 0 to 5 in columns 3 and 4 . Sample restricted to fasting individuals. Controls include gender, age, job, and the draw of six. Omitted categories are males, less than 30 years old, and academic.

* p -value $<0.10{ }^{* *} \mathrm{p}$-value $<0.05$.

Note: This table is replicated using LieSize as a continuous dependent variable in Table E3.4.

# Appendix E: Replication of Analysis Using Lie Size as an Outcome 

## E1. Cross Section Analysis

Table E1: Cross-section Analysis of Dishonesty
(Dependent Variable: LieSize $_{i}$ )

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| EF | 0.019 | 0.016 | -0.024 | -0.021 | -0.009 |
|  | $(0.134)$ | $(0.133)$ | $(0.133)$ | $(0.135)$ | $(0.138)$ |
| Female |  | -0.070 | -0.043 | -0.017 | -0.017 |
|  |  | $(0.119)$ | $(0.118)$ | $(0.118)$ | $(0.118)$ |
| 30 y/o to 39 y/o |  |  | 0.179 | 0.183 | 0.176 |
|  |  |  | $(0.124)$ | $(0.126)$ | $(0.124)$ |
| 40 y/o to 49 y/o |  |  | 0.020 | 0.060 | 0.056 |
|  |  |  | $-0.100)$ | $(0.107)$ | $(0.109)$ |
| 50 y/o or more |  |  | -0.098 | -0.035 | -0.064 |
|  |  |  |  | $(0.085)$ | $(0.085)$ |
| Administrative |  |  |  | $(0.099)$ | $0.196^{* *}$ |
|  |  |  |  | 0.0947 | 0.035 |
| Blue-Collar |  |  |  | $(0.064)$ | $(0.066)$ |
|  |  |  |  | 0.069 | 0.029 |
| Student |  |  |  |  | $-0.098)$ |
|  |  |  | 0.094 |  |  |
| Six |  |  |  | $(0.078)$ |  |
|  |  |  |  |  |  |
| Constant | $0.141^{* *}$ | $0.175^{* *}$ | 0.098 | -0.069 | -0.029 |
|  | $(0.068)$ | $(0.081)$ | $(0.068)$ | $(0.098)$ | $(0.094)$ |
| N | 121 | 120 | 120 | 120 | 120 |
| Adjusted $R^{2}$ | -0.008 | -0.014 | -0.022 | -0.031 | -0.033 |

OLS regression. Standard errors in parentheses. Dependent variable varies from 0 to 5. Controls include the draw of six, gender, age group and job dummies. Omitted categories are males, less than 30 years old, and academic. The correlation coefficient between age and job type is -0.116 . ** p-value $<0.05$.

## E2. Panel Analysis

Table E2: Panel Data Analysis of Dishonesty: Fixed Effects vs. Random Effects (Dependent Variable: LieSize ${ }_{i t}$ )

|  | $(1)$ | $(2)$ | $(3)$ |
| :--- | :---: | :---: | :---: |
|  | FE | RE | RE |
| EF |  | 0.019 | 0.029 |
|  |  | $(0.160)$ | $(0.167)$ |
| Ramadan | 0.056 | 0.056 | 0.072 |
|  | $(0.104)$ | $(0.104)$ | $(0.104)$ |
| Ramadan X EF | $0.284^{*}$ | $0.284^{*}$ | $0.284^{*}$ |
|  | $(0.161)$ | $(0.161)$ | $(0.161)$ |
| Controls | No | No | Yes |
| Individual FE | Yes | No | No |
| N | 242 | 242 | 240 |
| Overall $R^{2}$ | 0.02 | 0.02 | 0.07 |

Panel analysis. Standard errors in parantheses. Dependent variable varies from 0 to 5 . Controls include the draw of six, gender, age group and job dummies. Omitted categories are males, less than 30 years old, and academic.

* p-value $<0.10$.


## E3. Mechanisms and Lie Size

## E3.1. Religiosity and Lie Size

Table E3.1: Religiosity and Lie Size
(Dependent Variable: LieSize ${ }_{i t}$ )

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ramadan | $\begin{gathered} \hline 0.100 \\ (0.102) \end{gathered}$ | $\begin{gathered} \hline 0.101 \\ (0.102) \end{gathered}$ | $\begin{aligned} & \hline 0.246^{*} \\ & (0.140) \end{aligned}$ | $\begin{gathered} \hline 0.101 \\ (0.102) \end{gathered}$ | $\begin{gathered} \hline 0.132 \\ (0.162) \end{gathered}$ | $\begin{gathered} 0.096 \\ (0.105) \end{gathered}$ | $\begin{gathered} \hline 0.175 \\ (0.117) \end{gathered}$ | $\begin{gathered} 0.097 \\ (0.104) \end{gathered}$ | $\begin{gathered} \hline 0.163 \\ (0.123) \end{gathered}$ |
| EF | $\begin{aligned} & -0.037 \\ & (0.170) \end{aligned}$ | $\begin{aligned} & -0.070 \\ & (0.170) \end{aligned}$ | $\begin{aligned} & -0.057 \\ & (0.170) \end{aligned}$ | $\begin{gathered} 0.060 \\ (0.229) \end{gathered}$ | $\begin{aligned} & -0.037 \\ & (0.242) \end{aligned}$ | $\begin{aligned} & -0.052 \\ & (0.169) \end{aligned}$ | $\begin{aligned} & -0.036 \\ & (0.169) \end{aligned}$ | $\begin{gathered} -0.016 \\ (0.184) \end{gathered}$ | $\begin{aligned} & -0.013 \\ & (0.189) \end{aligned}$ |
| Ramadan X EF | $\begin{gathered} 0.258 \\ (0.160) \end{gathered}$ | $\begin{gathered} 0.258 \\ (0.159) \end{gathered}$ | $\begin{gathered} 0.231 \\ (0.159) \end{gathered}$ | $\begin{gathered} 0.261 \\ (0.159) \end{gathered}$ | $\begin{gathered} 0.473^{* *} \\ (0.236) \end{gathered}$ | $\begin{gathered} 0.263 \\ (0.163) \end{gathered}$ | $\begin{gathered} 0.235 \\ (0.164) \end{gathered}$ | $\begin{gathered} 0.264 \\ (0.163) \end{gathered}$ | $\begin{gathered} 0.264 \\ (0.185) \end{gathered}$ |
| Tarawih |  | $\begin{gathered} -0.263^{*} \\ (0.150) \end{gathered}$ | $\begin{aligned} & -0.151 \\ & (0.168) \end{aligned}$ | $\begin{aligned} & -0.154 \\ & (0.198) \end{aligned}$ | $\begin{aligned} & -0.130 \\ & (0.222) \end{aligned}$ |  |  |  |  |
| Tarawih X Ramadan |  |  | $\begin{aligned} & -0.236 \\ & (0.158) \end{aligned}$ |  | $\begin{aligned} & -0.052 \\ & (0.207) \end{aligned}$ |  |  |  |  |
| Tarawih X EF |  |  |  | $\begin{aligned} & -0.256 \\ & (0.304) \end{aligned}$ | $\begin{aligned} & -0.048 \\ & (0.339) \end{aligned}$ |  |  |  |  |
| Tarawih X Ramadan X EF |  |  |  |  | $\begin{aligned} & -0.441 \\ & (0.320) \end{aligned}$ |  |  |  |  |
| Fajr |  |  |  |  |  | $\begin{aligned} & -0.184 \\ & (0.173) \end{aligned}$ | $\begin{gathered} -0.046 \\ (0.195) \end{gathered}$ | $\begin{gathered} -0.119 \\ (0.213) \end{gathered}$ | $\begin{gathered} -0.004 \\ (0.241) \end{gathered}$ |
| Fajr X Ramadan |  |  |  |  |  |  | $\begin{aligned} & -0.283 \\ & (0.189) \end{aligned}$ |  | $\begin{gathered} -0.237 \\ (0.232) \end{gathered}$ |
| Fajr X EF |  |  |  |  |  |  |  | $\begin{gathered} -0.191 \\ (0.366) \end{gathered}$ | $\begin{aligned} & -0.122 \\ & (0.415) \end{aligned}$ |
| Fajr X Ramadan X EF |  |  |  |  |  |  |  |  | $\begin{gathered} -0.136 \\ (0.404) \end{gathered}$ |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 224 | 224 | 224 | 224 | 224 | 223 | 223 | 223 | 223 |
| Overall $R^{2}$ | 0.06 | 0.08 | 0.08 | 0.08 | 0.09 | 0.07 | 0.08 | 0.07 | 0.08 |

Random effects analysis. Standard errors in parentheses. Dependent variable varies from 0 to 5 . Sample is restricted to fasting subjects. Controls include gender, age, job dummies, and the draw of six. Omitted categories are males, less than 30 years old, and academic.

* p-value $<0.10,{ }^{* *}$ p-value $<0.05$.


## E3.2. Alimentary Abstention and Lie Size

Table E3.2: Alimentary Abstention and Lie Size
(Dependent Variable: LieSize $_{i t}$ )

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ramadan | $\begin{gathered} \hline 0.100 \\ (0.102) \end{gathered}$ | $\begin{gathered} \hline 0.100 \\ (0.102) \end{gathered}$ | $\begin{gathered} 0.021 \\ (0.113) \end{gathered}$ | $\begin{gathered} \hline 0.099 \\ (0.102) \end{gathered}$ | $\begin{gathered} \hline 0.007 \\ (0.122) \end{gathered}$ | $\begin{gathered} \hline 0.102 \\ (0.102) \end{gathered}$ | $\begin{gathered} 0.076 \\ (0.142) \end{gathered}$ | $\begin{gathered} 0.102 \\ (0.102) \end{gathered}$ | $\begin{gathered} 0.104 \\ (0.165) \end{gathered}$ |
| EF | $\begin{aligned} & -0.037 \\ & (0.170) \end{aligned}$ | $\begin{aligned} & -0.045 \\ & (0.170) \end{aligned}$ | $\begin{gathered} -0.037 \\ (0.169) \end{gathered}$ | $\begin{aligned} & -0.242 \\ & (0.203) \end{aligned}$ | $\begin{gathered} -0.250 \\ (0.208) \end{gathered}$ | $\begin{aligned} & -0.040 \\ & (0.169) \end{aligned}$ | $\begin{aligned} & -0.040 \\ & (0.170) \end{aligned}$ | $\begin{aligned} & -0.033 \\ & (0.247) \end{aligned}$ | $\begin{aligned} & -0.002 \\ & (0.265) \end{aligned}$ |
| Ramadan X EF | $\begin{gathered} 0.258 \\ (0.160) \end{gathered}$ | $\begin{gathered} 0.257 \\ (0.160) \end{gathered}$ | $\begin{gathered} 0.234 \\ (0.161) \end{gathered}$ | $\begin{gathered} 0.257 \\ (0.160) \end{gathered}$ | $\begin{gathered} 0.266 \\ (0.198) \end{gathered}$ | $\begin{gathered} 0.255 \\ (0.159) \end{gathered}$ | $\begin{gathered} 0.256 \\ (0.160) \end{gathered}$ | $\begin{gathered} 0.255 \\ (0.159) \end{gathered}$ | $\begin{gathered} 0.189 \\ (0.254) \end{gathered}$ |
| Abstention_H |  | $\begin{gathered} 0.111 \\ (0.162) \end{gathered}$ | $\begin{gathered} -0.024 \\ (0.180) \end{gathered}$ | $\begin{aligned} & -0.137 \\ & (0.214) \end{aligned}$ | $\begin{aligned} & -0.295 \\ & (0.238) \end{aligned}$ |  |  |  |  |
| Abstention_H X Ramadan |  |  | $\begin{gathered} 0.281 \\ (0.171) \end{gathered}$ |  | $\begin{gathered} 0.327 \\ (0.230) \end{gathered}$ |  |  |  |  |
| Abstention_H X EF |  |  |  | $\begin{aligned} & 0.559^{*} \\ & (0.321) \end{aligned}$ | $\begin{aligned} & 0.610^{*} \\ & (0.356) \end{aligned}$ |  |  |  |  |
| Abstention_H X Ramadan X EF |  |  |  |  | $\begin{aligned} & -0.099 \\ & (0.347) \end{aligned}$ |  |  |  |  |
| Caff_Dep |  |  |  |  |  | $\begin{aligned} & -0.202 \\ & (0.152) \end{aligned}$ | $\begin{aligned} & -0.222 \\ & (0.171) \end{aligned}$ | $\begin{aligned} & -0.197 \\ & (0.196) \end{aligned}$ | $\begin{aligned} & -0.195 \\ & (0.221) \end{aligned}$ |
| Caff_Dep X Ramadan |  |  |  |  |  |  | $\begin{gathered} 0.041 \\ (0.161) \end{gathered}$ |  | $\begin{aligned} & -0.004 \\ & (0.210) \end{aligned}$ |
| Caff_Dep X EF |  |  |  |  |  |  |  | $\begin{aligned} & -0.012 \\ & (0.303) \end{aligned}$ | $\begin{aligned} & -0.064 \\ & (0.342) \end{aligned}$ |
| Caff_Dep X Ramadan X EF |  |  |  |  |  |  |  |  | $\begin{gathered} 0.110 \\ (0.328) \end{gathered}$ |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 |
| Overall $R^{2}$ | 0.06 | 0.06 | 0.07 | 0.08 | 0.09 | 0.07 | 0.07 | 0.07 | 0.07 |

Random effects analysis. Standard errors in parentheses. Sample restricted to fasting individuals. Controls include gender, age, job, and the draw of six. Omitted categories are males, less than 30 years old, and academic.

* p-value $<0.10,{ }^{* *} \mathrm{p}$-value $<0.05$.


## E3.3: Ego Depletion and Lie Size

Table E3.3: Ego Depletion and Lie Size
(Dependent Variable: LieSize $_{i t}$ )

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ramadan | $\begin{gathered} \hline 0.100 \\ (0.102) \end{gathered}$ | $\begin{gathered} \hline 0.100 \\ (0.102) \end{gathered}$ | $\begin{aligned} & -0.015 \\ & (0.145) \end{aligned}$ | $\begin{gathered} \hline 0.101 \\ (0.103) \end{gathered}$ | $\begin{gathered} \hline 0.154 \\ (0.162) \end{gathered}$ | $\begin{gathered} \hline 0.099 \\ (0.102) \end{gathered}$ | $\begin{gathered} \hline 0.021 \\ (0.111) \end{gathered}$ | $\begin{gathered} \hline 0.098 \\ (0.102) \end{gathered}$ | $\begin{gathered} \hline 0.128 \\ (0.115) \end{gathered}$ |
| EF | $\begin{aligned} & -0.037 \\ & (0.170) \end{aligned}$ | $\begin{aligned} & -0.038 \\ & (0.172) \end{aligned}$ | $\begin{aligned} & -0.063 \\ & (0.173) \end{aligned}$ | $\begin{gathered} 0.004 \\ (0.208) \end{gathered}$ | $\begin{gathered} 0.164 \\ (0.226) \end{gathered}$ | $\begin{gathered} -0.065 \\ (0.171) \end{gathered}$ | $\begin{gathered} -0.050 \\ (0.171) \end{gathered}$ | $\begin{aligned} & -0.314 \\ & (0.196) \end{aligned}$ | $\begin{gathered} -0.163 \\ (0.201) \end{gathered}$ |
| Ramadan X EF | $\begin{gathered} 0.258 \\ (0.160) \end{gathered}$ | $\begin{gathered} 0.259 \\ (0.160) \end{gathered}$ | $\begin{aligned} & 0.288^{*} \\ & (0.162) \end{aligned}$ | $\begin{gathered} 0.260 \\ (0.161) \end{gathered}$ | $\begin{gathered} -0.086 \\ (0.236) \end{gathered}$ | $\begin{gathered} 0.261 \\ (0.160) \end{gathered}$ | $\begin{gathered} 0.240 \\ (0.159) \end{gathered}$ | $\begin{aligned} & 0.267^{*} \\ & (0.159) \end{aligned}$ | $\begin{aligned} & -0.047 \\ & (0.187) \end{aligned}$ |
| RETS_H |  | $\begin{gathered} -0.007 \\ (0.113) \end{gathered}$ | $\begin{aligned} & -0.107 \\ & (0.144) \end{aligned}$ | $\begin{gathered} 0.031 \\ (0.156) \end{gathered}$ | $\begin{gathered} 0.079 \\ (0.192) \end{gathered}$ |  |  |  |  |
| RETS_H X Ramadan |  |  | $\begin{gathered} 0.200 \\ (0.180) \end{gathered}$ |  | $\begin{gathered} -0.092 \\ (0.224) \end{gathered}$ |  |  |  |  |
| RETS_H X EF |  |  |  | $\begin{aligned} & -0.082 \\ & (0.230) \end{aligned}$ | $\begin{gathered} -0.474 \\ (0.290) \end{gathered}$ |  |  |  |  |
| RETS_H X Ramadan X EF |  |  |  |  | $\begin{gathered} 0.783^{* *} \\ (0.365) \end{gathered}$ |  |  |  |  |
| Smoke |  |  |  |  |  | $\begin{gathered} 0.186 \\ (0.163) \end{gathered}$ | $\begin{gathered} 0.050 \\ (0.182) \end{gathered}$ | $\begin{aligned} & -0.191 \\ & (0.220) \end{aligned}$ | $\begin{gathered} -0.137 \\ (0.245) \end{gathered}$ |
| Smoke X Ramadan |  |  |  |  |  |  | $\begin{aligned} & 0.284^{*} \\ & (0.170) \end{aligned}$ |  | $\begin{gathered} -0.110 \\ (0.220) \end{gathered}$ |
| Smoke X EF |  |  |  |  |  |  |  | $\begin{gathered} 0.791^{* *} \\ (0.319) \end{gathered}$ | $\begin{gathered} 0.372 \\ (0.354) \end{gathered}$ |
| Smoke X Ramadan X EF |  |  |  |  |  |  |  |  | $\begin{gathered} 0.920^{* * *} \\ (0.332) \end{gathered}$ |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| N | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 |
| Overall $R^{2}$ | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.07 | 0.08 | 0.11 | 0.13 |

Random effects analysis. Standard errors in parentheses. Sample restricted to fasting individuals. Controls include gender, age, job, and the draw of six. Omitted categories are males, less than 30 years old, and academic.

* p-value $<0.10,{ }^{* *} \mathrm{p}$-value $<0.05$.


## E3.4. Repetition and Lie Size

Table E3.4: Repetition and Lie Size
(Dependent Variable: LieSize ${ }_{i t}$ )

|  | (1) | (2) | (3) | (4) | (5) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Ramadan | $\begin{gathered} 0.100 \\ (0.102) \end{gathered}$ | $\begin{gathered} 0.100 \\ (0.102) \end{gathered}$ | $\begin{gathered} 0.065 \\ (0.108) \end{gathered}$ | $\begin{gathered} 0.099 \\ (0.102) \end{gathered}$ | $\begin{gathered} 0.116 \\ (0.112) \end{gathered}$ |
| EF | $\begin{aligned} & -0.037 \\ & (0.170) \end{aligned}$ | $\begin{gathered} -0.036 \\ (0.170) \end{gathered}$ | $\begin{aligned} & -0.030 \\ & (0.169) \end{aligned}$ | $\begin{gathered} -0.168 \\ (0.186) \end{gathered}$ | $\begin{gathered} -0.096 \\ (0.188) \end{gathered}$ |
| Ramadan X EF | $\begin{gathered} 0.258 \\ (0.160) \end{gathered}$ | $\begin{gathered} 0.258 \\ (0.160) \end{gathered}$ | $\begin{gathered} 0.242 \\ (0.162) \end{gathered}$ | $\begin{gathered} 0.259 \\ (0.160) \end{gathered}$ | $\begin{gathered} 0.106 \\ (0.180) \end{gathered}$ |
| Neg_Imp |  | $\begin{aligned} & -0.007 \\ & (0.198) \end{aligned}$ | $\begin{aligned} & -0.108 \\ & (0.218) \end{aligned}$ | $\begin{aligned} & -0.311 \\ & (0.265) \end{aligned}$ | $\begin{aligned} & -0.257 \\ & (0.293) \end{aligned}$ |
| Neg_Imp X Ramadan |  |  | $\begin{gathered} 0.222 \\ (0.205) \end{gathered}$ |  | $\begin{gathered} -0.114 \\ (0.282) \end{gathered}$ |
| Neg_Imp X EF |  |  |  | $\begin{aligned} & 0.661^{*} \\ & (0.387) \end{aligned}$ | $\begin{gathered} 0.337 \\ (0.426) \end{gathered}$ |
| Neg_Imp X Ramadan X EF |  |  |  |  | $\begin{aligned} & 0.709^{*} \\ & (0.408) \end{aligned}$ |
| Controls | Yes | Yes | Yes | Yes | Yes |
| N | 224 | 224 | 224 | 224 | 224 |
| Overall $R^{2}$ | 0.06 | 0.06 | 0.06 | 0.08 | 0.09 |

Random effects analysis. Standard errors in parentheses. The dependent variable is a dummy in columns 1 and 2 , and integer that varies from 0 to 5 in columns 3 and 4 . Sample restricted to fasting individuals. Controls include gender, age, job, and the draw of six. Omitted categories are males, less than 30 years old, and academic.

* p-value $<0.10$ ** p -value $<0.05$.


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[^1]:    1. The instructions were in Arabic but the letters remained in English.
