

Supplementary Information for ‘In-Group Loyalty and The Punishment of Corruption’

A. Study 1: Question Wordings, Descriptive Statistics and Number of Respondents

Table A.1: Question Wordings and Descriptive Statistics

Variable	Mean	SD	Min.	Max.
“How satisfied are you with the national government”	2.52	2.53	0 (not)	10 (very)
“Is there a Party you feel closer to than all other parties?”	1.58	0.49	1 = No	2 = Yes
“Which Party do you feel closer to?”	0.12	0.32	0 = other Party	1 = the PP
“Did you vote in last election?”	0.72	0.50	0=no	1=yes
“Which of these activities best describes your situation (in the last seven days)?	0.44	0.50	0 = not in paid employment	1 = in paid employment
“Which of the descriptions on this card comes closest to how you feel about your household’s income nowadays? [1) Living comfortably on present income, 2) Coping on present income, 3) Finding it difficult on present income, 4) Finding it very difficult on present income]”	2.15	0.89	1	4
“About how many years of education have you completed? Whether full-time or part-time? Please report these in full-time equivalents and report compulsory years of schooling”	12.5	6.01	0	51
Respondent age [calculated from birth year]	48	18	16	103
Reported Gender	0.52	0.50	0 = Male	1 = Female
“How satisfied are you with the state of the economy”	2.17	2.04	0 (not)	10 (very)
Religiosity	4.48	3.05	0 (not)	10 (very)

B. Study 1: Main Regression Results with Alternative Treatments

The treatment can be specified in a variety of different ways. In the analyses reported in the manuscript we use treatment 1.

Table B.1: Three Different Ways of Specifying the Treatment

	Start-Date	End-Date	Duration	N
Treatment1	31 st January	14 th February	2 Weeks	952
Treatment2	31 st January	7 th of February	1 Week	560
Treatment3	31 st January	21 st February	3 Week	1220

Main regression results with alternative treatment specifications are shown below. The baseline treatment effect is a model that includes the treatment effect as well as the individual level covariates and time fixed effects (table 2, Model 3). The interaction effect and average treatment effects reflect the full models presented above which include both the interaction term as well as the individual level covariates and time fixed effects (table 3, model 1).

Table B.2: Different Treatment Specification

	<u>Treatment 1</u>		<u>Treatment 2</u>		<u>Treatment 3</u>	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Treatment Effect	-0.495**	0.180	-0.459***	0.216	-0.442***	0.178
PP Identifiers	1.727***	0.390	1.639***	0.387	1.640***	0.375
Treatment*PP	0.769*	0.526	0.838*	0.532	0.626	0.422
ATE PP Identifiers	1.537*	0.866	0.378	0.504	0.184	0.398

Notes: Significant at *** $p \leq 0.01$ level, ** $p \leq 0.05$ level, * $p \leq 0.10$ level.

C. Study 1: Full Results With Individual Level Covariates

Table C.1: Full Results With Individual Level Covariates

	Table 2, Model 3	Table 3, Model 1
Treatment (Ti)	-0.468** (0.180)	-0.495** (0.180)
Government Identifier		1.727*** (0.370)
Treatment* Government		0.767* (0.433)
Age	0.011** (0.005)	0.009** (0.004)
Gender	-0.288** (0.141)	-0.240* (0.133)
Employed	-0.142 (0.153)	-0.122 (0.144)
Education	0.017 (0.013)	0.016 (0.012)
Income	-0.114 (0.080)	-0.092 (0.075)
Religiosity	0.169*** (0.024)	0.125*** (0.023)
Economic Satisfaction	0.628*** (0.036)	0.554*** (0.035)
Voted Last Election	-0.006 (0.168)	-0.242 (0.160)
Constant	0.027 (0.478)	0.289 (0.451)
Region Fixed Effects	✓	✓
Observations	907	907

This table presents the full results accompanying those reported in model 3 in Table 2 and model 1 in Table 3. Significant at *** $p \leq 0.01$ level, ** $p \leq 0.05$ level, * $p \leq 0.10$ level.

D. Study 1: Matching Results

Table D.1: Results Using Nearest Neighborhood Matching

	All (1)	Not PP Identifiers (2)	PP Identifiers (3)
Treatment	-0.378** (0.201)	-0.342** (0.196)	0.297 (0.511)
Observations	933	817	116

This table replicates the main findings reported model 3 in Table 2 using a nearest-neighbour matching technique based on employment. The effect of not-PP and PP identifiers is based on a split sample technique. ** significant at $p < 0.05$ level (one-tailed).

E. Study 1: Predicting Being in the Treatment Group by PP Identification

Table E.1: Predicting Who Is In The Treatment Group

	Being in Treatment Group
PP Identifier	-0.057 (0.042)
Age	-0.0003 (0.001)
Gender	-0.017 (0.026)
Employed	0.095** (0.028)
Education	-0.001 (0.002)
Income	-0.003 (0.015)
Religiosity	0.0003 (0.005)
Voted Last Election	-0.003 (0.031)
Constant	0.588*** (0.086)
Observations	919

Table entries are coefficients of a linear probability model. The dependent variable in this analysis is if a respondent belongs in the treatment group versus the control group. Significant at *** $p \leq 0.01$ level, ** $p \leq 0.05$ level, * $p \leq 0.10$ level.

F. Study 1: Placebo Tests

We conduct a similar analysis with two placebo dates that were randomly chosen within the fieldwork period. Table E.1 below provides the placebo treatment dates.

Table F.1: Two Placebo Dates

	Start-Date	End-Date	Duration	N
Placebo1	20 st February	6 th March	2 Weeks	608
Placebo2	2 nd March	15 th March	2 Weeks	946

In Table E.2 we re-estimate the main analysis presented in Table 2 with the placebo date variables rather than the treatment variable. The results reported below show that we find no effects of randomly chosen dates in the fieldwork on government satisfaction.

Table F.2: Estimating Government Satisfaction Using Placebo Dates

Independent Variables	Dependent Variable: Government Approval (0-10)							
			Placebo1				Placebo2	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Placebo	0.252 (0.232)	0.386 (0.240)	0.175 (0.200)	0.292 (0.202)	0.033 (0.173)	-0.058 (0.178)	-0.182 (0.150)	-0.182 (0.152)
Government Identifier				2.074*** (0.301)				2.252*** (0.263)
Placebo*Government				-0.509 (0.604)				-0.113 (0.399)
Constant	2.481*** (0.123)	2.299*** (0.594)	-0.187 (0.780)	-0.322 (0.746)	2.443*** (0.103)	2.809*** (0.377)	-0.388 (0.557)	-0.213 (0.526)
Fixed Effects		✓	✓	✓		✓	✓	✓
Individual Covariates			✓	✓			✓	✓
Observations	601	601	577	577	931	931	899	899
R-squared	0.002	0.056	0.378	0.433	0.000	0.049	0.356	0.410

Table entries are ordinary least squares regression coefficients with standard errors in parentheses. The time fixed effects used are dummies for the day of the interview was taken. Individual level covariates included are age, gender, education, income, employment status, economic satisfaction and religiosity. Models 1-4 correspond with placebo1 and models 5-8 with placebo2.

*** p<0.01, ** p<0.05, * p<0.1

G. Study 2: Overview of Variables

Table G.1: Descriptive Statistics

Variable	Mean	SD	Min.	Max.
Vote Choice	0.50	0.50	0	1
Caught (in Corruption Audit)	0.10	0.30	0	1
Same Identity	0.50	0.50	0	1
Difference in Tokens	0.00	1.13	-3.33	3.33

Table G.2: Covariate Balance Across Painter Groups

Variable	Klee	Kandinsky	P-value	N
Gender	0.44	0.57	0.31	60
Age (birth year)	1992	1992	0.53	60
Class	2.06	2.07	0.97	60
Political interest	2.75	2.71	0.88	60
Left-right ideology	4.50	4.21	0.54	60
Risk Aversion	11.93	6.07	0.18	60

H. Study 2: Main Results with Individual Level Covariates

Table H.1: Table 3 with Individual Level Covariates

Independent Variables	Dependent Variable: Vote Choice
Caught	-0.394** (0.163)
Same Identity	0.179** (0.087)
Caught*Same ID	0.442* (0.239)
Difference in Tokens	0.344*** (0.036)
Constant	-6.920 (53.490)
Fixed Effects	✓
Individual Level Covariates	✓
Observations	1,168
Number of Clusters	30

Table entries are panel probit regression coefficients with standard errors clustered on participants in parentheses. This regression includes fixed effects for rounds and blocks, and a host of individual level covariates: gender, age, class, political interest, left-right ideology and risk aversion.

*** p<0.01, ** p<0.05, * p<0.1

I. Study 2: Main Results Using Linear Probability Model

Table I.1: Table 3 Using Linear Probability Model

Independent Variables	Dependent Variable: Vote Choice
Caught	-0.137** (0.068)
Same Identity	0.067 (0.048)
Caught*Same ID	0.158* (0.093)
Difference in Tokens	0.126*** (0.024)
Constant	0.477*** (0.034)
Fixed Effects	✓
Observations	1,168
R-squared	0.10

Table entries are ordinary least squares regression coefficients with robust standard errors clustered on participants in parentheses. This regression includes fixed effects for rounds and blocks.

*** p<0.01, ** p<0.05, * p<0.1

J. Detailed Information about Our Laboratory Experiments

Part J.1: Information about Subjects, Procedures, Information and Payoffs

Our experiments were conducted with subjects who were randomly assigned to our experiment from a subject pool from the University of Birmingham Experimental Economic Lab (BEEL) where the experiments were conducted. The subject pool consists of undergraduate students from all faculties at the University of Birmingham. The standard procedures of experimental economics are followed, granting full anonymity and confidentiality.

Candidates and voters receive the following information. Voters only receive information about which of the two candidates is the winner that round, what their earnings are given the winning candidate, what their earnings would have been if the other candidate would have been the winner, how many valuable red tokens the computer found while flipping the tokens that were kept by each candidate, and their own group identity and that of the candidate. Candidates were informed about whether or not they were the winner in that round or not, how many valuable red tokens the computer found while flipping the tokens they decided to keep, and about their own group identity and those of the voters.

The payoffs in the experiment are calculated in the following way. First, everybody participating in the experiment received a show-up fee of £ 2.50. Second, candidates receive a fixed amount of two valuable red tokens every round and one extra valuable red token if they are the winner in that given round. In addition, they can keep the number of valuable red tokens that they decide not to send to voters, if none of them are flipped. The exchange rate is: 4 tokens equals £ 1.00. Third, the amount voters receive per round depends on the number of valuable red tokens sent by the candidate who won that round. The number of valuable red tokens sent by the candidate are doubled and divided equally among voters. The average earning per participant was £ 17.00 and the average duration of each session was one-and-a-half hours.

Part J.2: Experimental Instructions

Introduction

The purpose of this experiment is to study how people make decisions in a particular situation. Feel free to ask the monitor any questions you may have as they arise. No communication with other participants is allowed until the end of the session.

This experiment consists of four modules. Outcomes of past modules can be used in future modules. We ask that you stay until the end of the session, which will last about 90 minutes. Instructions will be handed out at the beginning of each module.

- a) In this module everyone will be shown five pairs of two paintings by the artists Paul Klee and Wassily Kandinsky. You will be asked for each pair to choose which painting you like most.
- b) On the basis of your five choices of paintings you will be classified as a member of the KLEEs (or as a KLEE as a shorthand) or a member of the KANDINSKYs (or KADINSKY as a shorthand). To be more precise, participants will be divided into two roughly equally sized groups, KLEEs and KANDINSKYs, based on the similarity of their members' artistic preferences.
- c) Everyone's identity as a KLEE or KANDINSKY will stay fixed throughout the experiment. You will be informed about your classification, whether you are a KLEE or KADINSKY, privately.

Module 2: Questionnaire

Question 1 : Gender

Are you ...

1 - male

2 - female

Question 2: Age

What year were you born?

[] [][] [] (year of birth (4 digits))

Question 3 : Social Class

Taking everything into account, how would you characterise the standard of living of the family in which you were born?

If you think of a scale from 1 to 7, where 1 means a poor family, 7 a rich family, and the other numbers are for the positions in between, about where would you place the family you were born in?

1 poor family	2	3	4	5	6	7 rich family
1	2	3	4	5	6	7

Question 4 : In political matters people talk of “the left” and “the right”. What is your position? Please indicate your views using any number on a scale from 0 to 10, where 0 means “left” and 10 means “right”. Which number best describes your position?

0 left	1	2	3	4	5	6	7	8	9	10 right
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Question 5: Political Knowledge

Now some questions about Britain. For each one, could you please tell me whether you believe they are true or false?

		true	false
	The unemployment rate in Britain is roughly 8 percent at the moment	1	2
	The British Secretary of Health is Jeremy Hunt.	1	2
	Individuals must be 25 or older to stand as candidates in British general elections.	1	2
	There are 969 members of the British House of Commons	1	2

Question 6: Political Interest

To what extent would you say you are interested in politics? Very, somewhat, a little, or not at all?

- 1 - very
- 2 - somewhat
- 3 - a little
- 4 - not at all

Module 3: Experiment

- a) This module consists of five blocks of five rounds. At the beginning of each block you will be assigned to a group with four other participants, and the composition of the group will remain the same throughout the block. You will not know the identity of the other group members.
- b) In each group two members will act as candidates – Candidate X and Candidate Y – and the other three as voters. Your role stays fixed throughout the different blocks of this module. Your identity and those of other group members will not be revealed after the experiment is completed.
- c) At the beginning of the block voters are informed about which type of player each candidate is, KLEE or KADINSKY.
- d) In every round each candidate receives 18 tokens. There are two types of tokens: red tokens which are valuable and blue tokens that are worthless. Between one and six of the 18 tokens that each candidate receives are randomly assigned to be valuable red tokens.

- e) At the beginning of each round voters need to decide which candidate to vote for. The candidate that receives the majority of votes, two or more, will be called the winner.
- f) Before knowing the outcome of the vote, candidates send six tokens to voters and can decide how many of these six are valuable red tokens. The candidates keep the rest of the tokens (12 in total). The value, i.e. colour, of the 12 tokens that each candidate keeps for himself is unknown to voters except for two tokens which are randomly flipped by a computer. The flipping of the tokens by the computer will reveal if none, one or both tokens that a candidate keeps are valuable. If the computer finds one or more valuable red tokens, all other valuable red tokens held by the candidate will become worthless. This information will be made available to the voters in the group.
- g) Your earnings in this module will be calculated in the following way:
- h) Everybody will receive a show-up fee of **2.5 £**.
- i) The exchange rate is: **4 tokens = 1 £**
- j) If you are a candidate: You will receive a fixed amount of two valuable red tokens every round and one extra valuable red token if you are the winner in that given round. In addition, you can keep the number of valuable red tokens that you decide not to send to voters, if none of them are flipped.
- k) If you are a voter: The amount you receive per round depends on the number of valuable red tokens sent by the candidate who won that round. The number of valuable red tokens sent by the candidate will be doubled and divided equally among voters.
- l) The information you receive is:
- m) As a candidate: whether you are the winner in that round or not, and how many valuable red tokens the computer found while flipping the tokens you decided to keep.
- n) As a voter: which candidate is the winner that round, what your earnings are given the winning candidate, what your earnings would have been if the other candidate would have been the winner, how many valuable red tokens the computer found while flipping the tokens that were kept by each candidate.

Module 4: Risk attitudes

- a) In this Module you will make ten choices, but only one of them will be used in the end to determine your earnings in this module. Each decision is a paired choice between "Option A" and "Option B." Even though you will make ten decisions, only one of these will end up affecting your earnings, but you do not know in advance which decision will be used. Each decision has an equal chance of being used in the end. When you have made your ten choices, the server will select one of them at random, and a second random selection will determine your earnings for that particular choice (A or B).
- b) The sort of decisions you are going to make are the following: Decision 1, Option A pays 2.00 pounds with a probability of 10%, and it pays 1.60 pounds with a

probability of 90%. Option B yields 3.85 pounds with a probability of 10%, and it pays 0.10 pounds with a probability of 90%. The other decisions are similar, except that the probability of getting the highest payoff for each option will increase. In fact, for decision 10, Option A pays 2.00 pounds with probability 100%, and Option B yields 3.85 pounds with probability 100%. In this case, the second random selection of the server will not be needed in order to calculate the payoffs since both options definitely yield the highest payoff, so here your choice is between 2.00 pounds or 3.85 pounds.

c) These earnings will be added to your previous earnings, and you will be paid all earnings in cash when we finish.