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Cooperative Attitudes in Nonprofit Firms

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Workers of Social Cooperatives

CEEL Working Paper 1-11

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Abstract

We investigate strategic choices of individuals working for social cooperatives in Italy. Specifically, a 2-players Prisoner's Dilemma is administered as an attachment to a nationwide survey of nonprofit organizations. We experimentally manipulate social proximity of the participants and efficiency of cooperation. We show that higher efficiency of cooperation has a significant positive impact on the cooperation rate in the game, while closer social proximity does not significantly affect choices. In addition, a positive correlation between perceived organizational fairness and self–reported intrinsic motivation is identified in the sample under investigation. This finding provides stimulating insights on the interplay between organizational features and workers' motivational factors.

Keywords: Cooperation, Field Experiments, Social Dilemmas, Nonprofit Organizations

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1 Introduction

Nonprofit organizations are economic entities characterized by a "nondistribution constraint" (Hansmann, 1980). This means that, differently than for traditional economic organizations, individuals who control the organization cannot appropriate the profits generated by the organization. According to Hansmann (1980), the emergence of nonprofit organizations can be viewed as the solution to market failures in a condition of incomplete contracts. Indeed, the nondistribution constraint reduces the incentives of exploiting the information asymmetry that may potentially lead to a market failure. However, according to some authors, the constraint on profit distribution alone does not provide an effective insurance against the selfish exploitation of informational asymmetries (e.g., Ortmann, 1996). Nonprofit organizations may also have important consequences for economic growth because they favor civic participation and, as a consequence, the creation of social capital. (Putnam, 1993). While their economic justification is still object of dispute, nonprofit organizations represent a relevant actor of modern economic systems. As an example, Boris and Steuerle (2006) report that the Bureau of Economic Analysis estimated that the nonprofit sector contributed for 4.2% to the GDP of the United Stated in year 2000 and, in the same year, about 1.36 million organizations were registered with the Internal Revenue Service as tax-exempt organizations.

We experimentally investigate cooperative attitudes of workers of social cooperatives that operate in Italy. Rapoport and Chammah (1965) were the first to experimentally investigate behavior in strategic interactions which are characterized by a trade-off between cooperation and individual interest. Building on this pioneering contribution, the economic literature has devoted a lot of attention to behavior in strategic interactions characterized by conflicting individual and collective interests (i.e., *Social Dilemmas*). Situations of this kind can lead to the so-called "tragedy of the commons" (Hardin, 1968), i.e. lose-lose situations in which a public good is under-produced (or over-exploited). The strategic tension typical of Social Dilemmas is well captured by Prisoner's Dilemma (henceforth, PD) games. In a two-players PD game the two parties in the interaction can choose whether to defect or to

cooperate. Each individual has a private incentive to defect, but both are made better off by mutual cooperation. According to standard economic reasoning, the only Nash equilibrium in the game is mutual defection. However, mutual cooperation is frequently observed in experimental settings. Andreoni and Miller (1993) collect choices in a repeated PD game, with participants either interacting with strangers or with partners. On average, the cooperation rate in the former condition starts at about 40% and falls below 20 % in the last round. In the latter condition, cooperation starts at about 60 % and falls below 20 % over time. Thus, cooperation rate in the game is positive but declines over time and, moreover, is higher in the condition in which reputation spillovers are present. Cooper *et al.* (1996) also focuses on the impact of reputation in a PD game. Overall, the results obtained are in line with those of Andreoni and Miller (1993), with higher cooperation rates in the condition with social spillovers and a decrease in cooperation rates over time.

Ledyard (1995) provides a survey of experimental studies of PD-based interaction structures. Among factors affecting cooperation, identification with the individuals with whom interacting seems to play a major role in fostering cooperation. On this aspect, Dawes (1991) shows that cheap-talk pre-play communication fosters cooperation in a social dilemma game. According to the author this is due to the formation of a shared group identity among subjects interacting in the communication stage. The relevance of group identity for the emergence of cooperation is confirmed also by field experiments. Ruffle and Sosis (2006) run a common-pool resource game with Israeli kibbutz members and Israeli city residents. Results from the common-pool resource game show that members of the kibbutz tend to cooperate more when they are anonymously matched with other members of the kibbutz than when they are matched with an "out-group" individual. In the latter case, the behavior of the kibbutz members does not statistically differ from that of the general population. Cardenas (2003) investigates about cooperation in a common-pool resource game among inhabitants of Colombian villages. The main finding of the study is that cooperation is fostered by face-to-face communication. However, socio-economic features of the participants may affect the gain in efficiency due to

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communication. Specifically, higher levels of wealth and more dispersion in the wealth distribution seem to negatively affect cooperation.

The present study investigates about cooperation levels of workers employed by Italian nonprofit organizations. We employ a novel empirical methodology, which combines a survey questionnaire and a controlled strategic interaction scheme. This allows us to obtain detailed background information about a heterogeneous sample of participants. We collect choices in a two-players PD under alternative experimental treatments. In the low social distance condition, two players from the same organization anonymously interact in the game. In the high social distance conditions, the two players belong to distinct organizations. In addition to this, monetary incentives to cooperate are set at two different levels (i.e., high and low).

Evidence collected shows that cooperation among workers of social cooperatives is quite sustained. In addition, returns from cooperation positively influence cooperation rates in the game. In contrast, social distance does not affect choices in the strategic interaction. For what concerns socio-demographic features of the participants, only age positively predicts cooperative behavior. Finally, those who cooperate in the game perceive the organization to which belonging as more fair and report higher intrinsic motivation levels on the workplace.

2 Method

2.1 Social Cooperatives in Italy

Paid workers of social cooperatives that operate in Northern Italy compose the sample of participants in our study. Main objective of social cooperatives is to provide health care and educational services (i.e., type A cooperatives) and to improve the social inclusion of disadvantaged individuals (i.e., type B cooperatives).

According to the ISTAT 2007 census (ISTAT, 2007), 7363 social cooperatives were operating in Italy in year 2005. The large majority (i.e., 70%) of organizations of this kind were established after

year 1991. Among active social cooperatives in year 2005, 59% were of type A and 32.8% were of type B. The remaining organizations were either a mixture between the two types or networks of social cooperatives. Social cooperatives were employing 244,000 paid workers and 34,000 volunteers. The value produced by social cooperatives in year 2005 was about 6,400 million Euros, with type A cooperatives producing about 65% of this value.

2.2 The Questionnaire

Our analysis focuses on actions in a 2-players PD game. The game was embedded in a questionnaire administered to Italian social cooperatives. The study (ICSI2007) was coordinated by the University of Trento and involved 3 research units, 10 coordinators of the interviewers and 44 interviewers. The sample of organizations taking part to the questionnaire was designed with the support of the National Statistical Office (ISTAT). Main dimensions taken into account in the definition of the sample were the geographical location (North West, North East, Center, South and Highlands), the type (A or B), and the size (less than 16, between 16 and 49, and more than 49 workers) of the organizations. Four distinct surveys were distributed to the organizations conditional upon the targeted responder (Organizations, Managers, Paid Workers and Volunteer Workers).

Overall, 313 cooperatives and 3.981 paid workers answered the survey. The interaction structure under investigation was administered only to organizations located in the Northwest and Northeast of Italy. Table 1 provides a list of the geographical units taken into account.

[Table 1 here]

The analysis presented in section 3 focuses on this sub-sample of organizations. The interaction structure was presented as a normal form game attached to the questionnaire. The participants had to choose the preferred action between two alternative actions. Section 2.3 provides a detailed description of the interaction structure under examination.

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2.3 The Interaction Structure

The interaction structure under investigation is the well-known PD game. In Table 2 a generic normal form representation of the game is provided.

[Table 2 here]

Given the condition *S<P<R<T*, the unique Nash equilibrium outcome in pure strategies is given by both players choosing *B* (i.e., mutual defection). However, the equilibrium outcome obtained under the assumption of common knowledge of rationality is inferior, in Pareto terms, to the outcome obtained when both players choose *R* (i.e., mutual cooperation). Thus, the game entails a trade-off between private and collective incentives.

A 2×2 factorial design was employed in our experiment. One of the factors in the experiment is represented by the relative return on cooperation (*RC*). Alternative payoff specifications were employed in the empirical inquiry. In particular, in the *Low Return (RC.l)* condition, the following payoff specification is employed: *R*=40, *S*=10, *T*=70, and *P*=20. In the *High Return (RC.h)* condition, the following payoff specification is employed: *R*=60, *S*=10, *T*=70, and *P*=20. The other factor in the experiment is social proximity (*SP*). In the *Low Social Proximity (SP.l)* condition, the social distance between participants is defined by randomly matching participants from distinct organization. In the alternative condition (*High Social Proximity (SP.h)*), the social distance between participants is defined by randomly matching participants from the same organization.

Overall, four treatments were obtained by combining the two levels of each factors: [*SP.l*:*RC.l*], [*SP.l*:*RC.h*], [*SP.h*:*RC.l*] and [*SP.h*:*RC.h*]. As displayed in Table 1 the treatments were randomized across Italian provinces by sorting the provinces according to their alphabetical order and by distributing treatments according to quartiles of the estimated total population reached by the survey.

All the treatments were conducted following a between-subjects design. All the choices were anonymous and real incentives were provided for choices in the game. Section 2.4 explains in more details the procedure followed to collect the data.

2.4 Procedures

The experiment was implemented in a paper-pencil fashion. After having filled in the survey, participants were asked to read the instructions and to choose their action in the game. Specifically, they had to choose between action A (i.e., cooperation) and action B (i.e., defection). Details about the nature of the interaction and about the mode of payment were provided in the instruction sheet accompanying the game. The instructions were written in an abstract form and no reference was directly made to concepts like cooperation or defection.

The following procedure was followed to provide real incentives to the participants. A total of 24 subjects were randomly chosen among those who took part in the survey and were then randomly matched into couples. The matching of the participants was performed by taking into account the treatment condition to which they had been exposed. This implies that in a condition of high social proximity (*SP.h*) subjects in a couple were drawn from the same organization. Accordingly, in a condition of low social proximity (*SP.l*), subjects in a couple were drawn from distinct organizations. To avoid matching between subjects exposed to distinct levels of relative returns on cooperation (*RC*), subjects in a couple were always drawn from the same province. Second, the actual choices of those in a couple were matched and the payoffs in the game were computed accordingly.

Payments were administered by ordinary mail. The payment procedure followed the procedure described in the instructions provided to the participants. Money were put in a sealed envelope and sent to the social cooperatives employing the randomly selected participants. A manager of the organization was made responsible of payments and was asked to inform the participants about the personal identification numbers extracted. The sealed envelope was given to the extracted participant after she/he had presented the original instruction sheet with her/his personal identification number stamped on it. Some payments were not actually dispensed because selected participants were not able to present the original instructions sheet and thus, as stated in the instructions, were not eligible to receive

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the payment. The average earnings in the game, among those who were randomly chosen for payment amounted to Euro 48.33.

2.5 Methodological Aspects

Following the taxonomy of experiments proposed by Harrison and List (2004), our experiment can be classified as an *artefactual field experiment*. Field experiments of this kind are "the same as a conventional lab experiment but with a nonstandard subject pool"[p. 1014]. Exporting laboratory experiments to the field may represent a valid solution to the external validity issue of laboratory experiments. Artefactual field experiments enjoy the control of laboratory experiments but are not penalized by the reduced variance in idiosyncratic, often unobservable or unobserved, characteristics of participants in laboratory experiments. With our work we not only extend the experimental inquiry to a non-conventional sample, but also collect several pieces of background information from our participants through a detailed survey. This allows us to control for several dimensions when evaluating choices in the strategic interaction.

The methodology employed here has been introduced in economics by the work of Fehr *et al.* (2002). The authors investigate behavior in a sequential trust game of participants in a survey representative of German adults. The novelty of the method is the matching between survey data and experimental data collected from representative population samples. Recently, experimental investigations about trust and trustworthiness were carried out on representative population samples in the UK (Ermisch *et al.*, 2009) and in the Netherlands (Bellemare and Kröger, 2007).

In our inquiry, differently than in Fehr *et al.* (2002), we adopt a simultaneous game and our survey does not contain questions that directly relate to the strategic interaction. Employing a simultaneous game instead of a sequential one greatly simplifies the data collection process because actions in the game are independently chosen and matching between pairs of actions can happen at a later stage with respect to the data collection. The decision to not insert questions directly connected to the strategic interaction in the survey imposes a limit on the use of survey data in interpreting the behavior in the

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game but, at the same time, avoids problems of priming that can emerge when hypothetical questions are presented before the undertaking of the controlled interaction.

Finally, the large number of participants and the geographical dispersion of the survey allow us to implement 4 between-subjects treatments and to reach a heterogeneous sample in terms of socio-economic indicators.

2.6 Research Questions

The 2-by-2 design of our experiment allows us to answer the research questions that motivate our inquiry. First, does the level of "efficiency" of cooperation facilitate cooperation in PD-like situations? In a deterministic pure-selfish condition, the increase of marginal return from cooperation should not affect behavior as long as the equilibria in the game are not affected. However, larger incentives for cooperation may induce stronger positive beliefs about cooperation of the other party and thus decrease the subjective risk of being exploited in the game. If this was true, we would expect higher rates of cooperation when higher rewards are associated to cooperation (for an earlier contribution on this aspect see, Rapoport and Chammah, 1965).

Second, does social proximity increase cooperation? In our setting two interacting individuals are socially close when they work for the same organizations. Previous experimental contributions have shown that group membership may well affect behavior in strategic interactions. Dawes (1991) registers an increase in cooperation in a social dilemma game when common group membership is established prior to the interaction. Recent theoretical works have investigated about the role of shared identity in aligning contrasting interests in organizations (Akerlof and Kranton, 2005, e.g.,). Given this, we expect to observe higher cooperation rates in treatments with higher social proximity of the interacting players.

In addition to the two main research hypotheses that motivate our inquiry, we are also exploring some socio-demographic aspects and organizational features that may help understand the determinants of cooperative behavior in strategic interactions. In performing this exploratory analysis

we will heavily rely on information extrapolated from the survey. In particular we focus on socio-economic information about the player in the game and on self-reported measures about fairness of the organization, motivations on the workplace, social norms in the work-group and other-regarding attitudes of the respondent.

3 Results

The analysis of the results is organized as follows. First, an overview of choices in the game is provided by some descriptive statistics of cooperation rates across treatments. Second, a more detailed picture of choices in the game is drawn via a regression analysis that controls for idiosyncratic factors and for potential correlation of unobserved factors at the organization level. Finally, an exploratory correlation study of self-reported measures and choices in the game is presented.

3.1 Descriptive Statistics

Table 3 presents the distribution of cooperation/defection across treatments for the 1846 individual observations available.

[Table 3 about here]

According to standard economic prediction, cooperation should not be observed in the setting under investigation. In contrast, a strong tendency to cooperate is observed in all treatments. The estimated rate of cooperation in the experiment is always significantly bigger than .5 according to a series of binomial tests. This suggests that the tendency to cooperate is not the byproduct of a randomization over the two choices available in the game.

Concerning differences across treatments, a Pearson's Chi-squared test shows that cooperation choices in treatment [$SP.l$:$RC.l$] and treatment [$SP.l$:$RC.h$] statistically differ at the 5% confidence level ($p-value$=0.015). Similarly, we identify a statistically significant difference between [$SP.l$:$RC.l$] and [$SP.h$:$RC.h$] ($p-value$=0.024). No statistically significant differences are registered for all the other

pairwise comparisons. Thus, returns from cooperation seem to affect cooperation choices, with higher returns inducing higher cooperation rates.

3.2 Regression Analysis

Table 5 presents the results of a regression estimation of determinants of cooperation in the interaction setting under investigation. The variables in the model are described in Table 4. The dependent variable is a dichotomous variable which is equal to 1 when the participant decides to cooperate and is equal to 0 when the participant decides to defect. The main explanatory variables are represented by the experimental factors. When the game is characterized by high (low) social proximity, the variable SP.h is equal to 1 (0). When returns on cooperation are high (low) RC.h is equal to 1 (0).

A control about idiosyncratic features of the respondent is provided by the following variables: age, gender, income, and education.

[Table 4 about here]

Table 5 reports on the estimation outcome of a random-effects logistic regression. This model specification has been chosen to account for the dichotomous nature of the dependent variable and to control for possible clustering of errors due to unobserved factors operating at the organization level (e.g., team spirit, organizational culture). The analysis relies on a total of 1617 incentive compatible choices made by paid workers, collected over a total of 157 organizations, which operate in Northern Italy.

[Table 5 about here]

Concerning treatment effects, only returns on cooperation have a significant impact on the choice to cooperate. In particular, an higher return associated to mutual cooperation, when keeping fixed the expected return of other combinations of actions, seems to foster cooperative behavior (coef.=0.367). Social proximity does not significantly affect choices in the game. Among control variables only age

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has a statistically significant—positive—impact on the propensity to cooperate in the game (coef.=0.030). Income, age, gender, and education do not significantly affect choices in the game.

3.3 Self-Reported Measures and Choices in the Game

The self-reported measures available in the ICSI2007 survey may provide us with a better understanding of cooperative behavior in the game under investigation. Being able to obtain incentive-compatible choices in the game and survey answers from the same individual allows us to identify some correlation patterns linking perceived characteristics of the organization and individual features and motivations. The exploratory inquiry undertaken focuses on the following dimensions (see also Table 6): non-monetary motivations on the workplace (Questions 1 and 2); monetary satisfaction associated to the salary, both in relative and absolute terms (Questions 3 and 4); life-satisfaction (Question 5); trust and cooperation feelings towards co-workers (Question 6 and 7); procedural fairness within the organization (Question 8); length of the work relationship (Question 9); concerns for the profit/non-profit nature of the organization when applying for the job (Question 10); having served as a volunteer (Question 11). Table 6 presents the survey questions taken into account in our analysis, the associated evaluation scales, the average score conditional upon the choice in the game (i.e., cooperate or defect), and the p-value of the statistical test employed to test the score distributions of the cooperators and of the defectors.

[Table 6 about here]

Previous contributions (e.g., Frey, 1997) suggests that intrinsic motivations may foster cooperation. Our findings corroborate this piece of evidence. Indeed, subjects cooperating in the game tend to report higher levels of intrinsic motivations on the workplace than those undertaking an opportunistic strategy. A difference in the reported scores is observed both in Question 1 (social relations on the workplace) and in Question 2 (social mission of the organization).

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For what concerns salary satisfaction, both in absolute (Question 3) and relative terms (Question 4), no statistically significant difference is observed when comparing the sample of cooperators and defectors. Similarly, the same–high–levels of life satisfaction are reported by the two samples.

According to Frey and Meier (2004), the existence of strong cooperation and trust attitudes on the workplace may influence beliefs about the behavior of partners in the game and trigger high levels of (conditional) cooperation in the game. However, no significant differences are observed between the two types of players in self-reported assessments of cooperative attitudes of the coworkers (Question 6) and feelings of trust on the workplace (Question 7). While the perception of coworkers does not differ in the two samples of players, higher perceived levels of fairness by the side of the organization (Question 8) are reported by cooperators.

The cooperators maintain a longer working relationship with the organization. Moreover, the cooperators were less interested in working for a for-profit organization when searching for a job (question 10). Finally, the behavior of volunteers in the game does not differ from that of non-volunteers (Question 11).

4 Discussion and Conclusions

The present work investigates about cooperative attitudes of workers of Italian nonprofit organizations. Choices of the workers in a Prisoner's Dilemma game are collected in an incentive-compatible fashion. In addition, several pieces of information about the socio-economic background of those taking part in the study are obtained from answers to a survey. This allows us to perform a joint examination of incentive-compatible choices and of self-reported answers.

The empirical study evidences a very high cooperation rate among workers of social cooperatives. In the experiment, the rates of cooperation are overall higher than 60 %. This figure is higher than what registered in previous studies with conventional samples of college students. Four treatments were implemented in a between-subjects fashion. The treatments resulted from the controlled manipulation of two factors, returns from cooperation and social proximity. The former factor refers to the payoffs

associated to mutual cooperation, either high or small. The latter is proxied by shared membership to the social cooperative: if the two interacting individuals are both members of the same organization, social proximity is low; if the two interacting are not belonging to the same organizations, social proximity is low.

From the large number of observations collected it emerges a tendency to cooperate more when higher returns are associated to mutual cooperation. Thus, incentives to cooperate seem to positively affect cooperative attitudes, though cooperative attitudes are already very high. In contrast, social proximity does not affect cooperation in a statistically significant way.

Among socio-economic background variables, age affects the rate of cooperation in a positive way. Gender, income and education do not affect the observed cooperation rates in a significant way. These results are in line with what observed by Fehr *et al.* (2002) in a study about trust adopting a methodology which inspired our inquiry.

The joint participation to the survey and to the game by the same subject allows us to explore patterns of correlation between choices in the game and self-reported measures. Contrary to what expected, social norms in the work group are not correlated with behavior in the game. Higher cooperation in the PD is generally associated to higher levels of perceived fairness by the organizations and to higher levels of intrinsic motivations on the workplace. This piece of evidence opens for two alternative explanations for the high level of cooperation in the sample of social cooperatives under investigation. On the one hand, a self-selection process may be at work. The institutional setting of social cooperatives may attract cooperative types. On the other hand, the institutional setting of social cooperatives may favor the insurgence of cooperative preferences among its workers. In other terms, cooperative preferences may be endogenously determined by the institutional setting to which workers are exposed (Bowles, 1998). It is beyond the scope of the present work to discriminate between these two sources of explanation. However, a useful indication for further research is given by one of the questions in the survey. Indeed, those who were looking for a job in a for-profit organization before

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entering the social cooperative, are less likely to cooperate in the game. If job perspectives are taken as a proxy for embedded social preferences, the self-selection explanation seems to prevail over the one relying on endogenous preferences.

To conclude, our study highlights the existence of high levels of cooperation among workers of Italian social cooperatives. Moreover, the provision of incentives to cooperate further fosters cooperation rates in the strategic interaction. Our contribution is a first attempt to understand the determinants of cooperative attitudes within organizations. Further research will try to investigate the implications of cooperation among employees for choices of the organizations. In this perspective, the presence of networks linking social cooperatives and the spread of knowledge across the boundaries of the organizations may be a reflection of the ability to attract and sustain high cooperative attitudes of the workers.

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5 Tables

Table 1: Geographical Units and Treatments

Treatment							
[*SP.l*:*RC.l*]		[*SP.l*:*RC.h*]		[*SP.h*:*RC.l*]		[*SP.h*:*RC.h*]	
Province	Code	Province	Code	Province	Code	Province	Code
Alessandria	AL	Cremona	CR	Novara	NO	Torino	TO
Valle d'Aosta	AO	Forlì-Cesena	FC	Piacenza	PC	Trieste	TS
Bergamo	BG	Ferrara	FE	Padova	PD	Treviso	TV
Biella	BI	Genova	GE	Pordenone	PN	Udine	UD
Belluno	BL	Gorizia	GO	Parma	PR	Varese	VA
Bologna	BO	Imperia	IM	Pavia	PV	Verbania	VB
Brescia	BS	Lecco	LC	Ravenna	RA	Vercelli	VC
Bolzano/Bozen	BZ	Lodi	LO	Reggio-Emilia	RE	Venezia	VE
Cuneo	CN	Milano	MI	Rimini	RN	Vicenza	VI
Como	CO	Mantova	MN	Rovigo	RO	Verona	VR
		Modena	MO	Sondrio	SO		
				La Spezia	SP		
				Savona	SV		
				Trento	TN		

Table 2: Interaction Structure

		Y	
		A (coop)	B (defect)
X	A (coop)	R, R	S, T
	B (defect)	T, S	P, P

Table 3: Choices in the Game

	[*SP.l:RC.l*]	[*SP.l:RC.h*]	[*SP.h:RC.l*]	[*SP.h:RC.h*]
Cooperation	299 (62.2%)	345 (69.6%)	210 (65.6%)	378 (68.9%)
Defection	182 (37.8%)	151 (30.4%)	110 (34.4%)	171 (31.1%)
Total	481	496	320	549

Table 4: Regression Variables

Variable	Description	Range	Mean (sd)
Coop	Cooperation in the game	{0,1}	0.667 (0.471)
Age	Age in year 2007	{18,…,72}	37.720 (8.861)
Female	Gender	{0,1}	0.714 (0.452)
Income	Net Monthly Income (Euro)	{165,…,6453}	897.000 (294.443)
College	Tertiary education	{0,1}	0.301 (0.459)
SP.h	Social Proximity in the game	{0,1}	0.466 (0.499)
RC.h	Return on cooperation in the game	{0,1}	0.564 (0.496)

Table 5: Random-Effects Logistic Regression

Coop	Coeff (Std. Err.)
SP.h	0.144 (0.203)
RC.h	0.367 (0.186)**
SP.h×RC.h	-0.236 (0.274)
Age	0.030 (0.007)***
Female	-0.015 (0.129)
Income	-0.001 (0.001)
College	0.162 (0.128)
cons	-0.577 (0.349)*

***(1%); **(5%); *(10%) significance level

Table 6: Self Reported Measures and Choices in the Game

Survey question	Average reported value		Comparison
	Cooperators	Non-Cooperators	p-value
1. The relationship between you and the non-profit organization represents a bundle of relations that extends beyond the mere work relationship [Completely disagree(1)→Completely agree(7)]	4.934	4.742	0.033 (𝒲)
2. The relationship with the cooperative is a shared social commitment for you and the cooperative? [Completely disagree(1)→Completely agree(7)]	5.315	5.151	0.025 (𝒲)
3. How satisfied are you about your retribution, overall? [Very unsatisfied(1)→Very satisfied(7)]	4.043	4.046	0.834 (𝒲)
4. Do you think that your retribution is fair with when compared to the retribution of the other workers of the cooperative? [much less than fair(1) → much more than fair(7)]	3.734	3.741	0.695 (𝒲)
5. How satisfied are you of your life, overall [Very unsatisfied (1)→ Very satisfied(7)]	5.706	5.694	0.742 (𝒲)
6. Evaluate the following statement about you workgroup: people in my workgroup cooperate and overcome personal dislikes [Definitely no→Definitely yes]	5.485	5.446	0.925 (𝒲)
7. Evaluate the following statement about you workgroup: in my workgroup there are widespread feelings of trust and esteem [Definitely no→Definitely yes]	5.529	5.506	0.832 (𝒲)
8. How much do you agree with the following statement? Overall, the cooperative behaves correctly with its workers [Do not agree at all(1)→Completely agree(2)]	5.902	5.798	0.028 (𝒲)
9. When did you start working for the cooperative as a paid worker? [value expressed as number of years from 2007]	5.995	5.584	0.034 (𝒲)
10. When you were looking for a job or before being hired by the cooperative, were you mainly looking for a job in a for-profit organization? [No(0), Yes(1)]	0.019	0.031	0.043 (χ)
11. Have you ever served as a volunteer? [No(0), Yes(1)]	0.612	0.610	0.905 (χ)

𝒲 = Wilcoxon rank sum test with continuity correction; χ = Pearson's Chi-squared test