



Institute for Empirical Research in Economics
University of Zurich

Working Paper Series
ISSN 1424-0459

Working Paper No. 181

Matching Donations
Subsidizing Charitable Giving in a Field Experiment

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February 2004

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Subsidizing Charitable Giving in a Field Experiment

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August 20, 2003

Abstract:

This paper tests the effect of a matching mechanism on donations in a controlled field experiment. We match the donations of students at the University of Zurich who, each semester, have to decide whether they wish to contribute to two Social Funds. Our results support the hypothesis that a matching mechanism increases contributions to a public good. However, the effect depends on the extent to which the contributions are matched. Whereas a 25 percent increase of a donation does not increase the willingness to contribute, a 50 percent increase does have an effect. In addition, people need to be socially inclined to react to the matching mechanism. The field experiment provides some evidence suggesting that the matching mechanism crowds-out the intrinsic motivation of giving.

Keywords: Public Goods, Field Experiment, Matching Mechanism, Donations

JEL classification: C93, D64, H00

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This paper tests, in a controlled field experiment, whether matching charitable contributions increases donations. A matching donations mechanism decreases the cost of giving because the donors' contribution is worth more. We study contributions to two Social Funds at the University of Zurich. Each semester students have to anonymously decide, whether to contribute to the two Funds or not. The donations of 600 students are matched by 25 percent and by 50 percent if they contribute to *both* Funds, depending on the treatment group. The resulting behavior is compared with the control group, whose donations are not matched. The results of the randomized field experiment support the hypothesis that matching donations increases the contributions to a public good. However, the effect depends first of all on the amount of the matching mechanism. We find that a low amount has no effect on the willingness to contribute. Secondly, the effect of matching donations depends on the 'type' of person whose potential donations are subsidized. People need to be already pro-socially inclined to react to the relative price effect of the matching mechanism.

This research is relevant because donations and pro-social behavior in general are important activities in society. Many organizations ultimately depend on charitable donations, and the charitable sector constitutes a large part of 'economic' activities.¹ The question how giving behavior can be fostered is therefore crucially important for many charitable organizations, and gives insights into what ultimately motivates people to donate money. From the point of view of economic theory, decreasing the price of a donated monetary unit should stimulate donations. Such subsidizing can be done either by a rebate or a matching mechanism towards charitable giving. Concerning the rebate mechanism, a large literature exists, which analyzes how tax deductions for charitable contributions influence their size. The estimated price elasticities are in the range of between -0.79 and -1.26 (e.g. Auten et al., 2002). This means, for example, that the

¹ For estimations of the size of the charitable sector in different countries, see Salamon and Anheier (1997).

elimination of tax deductibility for charitable contributions would increase the price of a unit of giving for a taxpayer formerly faced with a marginal tax rate of 30% from 0.7 to 1.0. Taking the estimated price elasticities seriously, charitable contributions would decrease between 25 and 36 percent.

A second approach to subsidize charitable contributions is to match donations. This mechanism is popular in a number of corporations in the U.S. and Europe, where employers match charitable contributions on the part of their employees. There is, however, little research analyzing the effect of matching donations on charitable contributions. One reason for this may be the practical problems involved. The observation that the employees of a firm, where a matching mechanism is implemented, donate more than the employees of a firm without such a mechanism, cannot support the hypothesis that matching leads to a behavioral effect. The higher contribution rate in the first firm may be due to various reasons not connected with the matching mechanism, e.g. it may be that, due to the fact that the first firm has a matching mechanism, more pro-social employees select to work for that firm. To test the effect of matching donations, people have to be randomly assigned to a matching mechanism. This can be analyzed in an experimental setting. Eckel and Grossman (2003) present the only study we are aware of which systematically analyzes matching donations in a laboratory experiment. They analyze whether the rebate and the matching mechanism lead to the same behavioral effects. From a theoretical point of view the two mechanisms should yield the same results. It should not matter whether you pay 50 cents for a donation of 1\$ due to the fact that you get 50 cents back, or someone increases your donation by 50 cents. The results of the experiments show, however, that it is important whether the rebate mechanism or the matching mechanism is used. To match donations leads to a higher amount of charitable giving than a rebate and is therefore more effective. This paper tests only the matching

mechanism and uses a different approach. The effect of matching donations is tested in a *controlled field experiment*. In a similar field experiment on mechanisms to increase donations, List and Lucking-Reiley (2002) analyze the impact of ‘seed money’. An exogenous increase in seed money from 10 to 67 percent increases donations by a factor of six, with an effect on both participation rates and contributions. In another field experiment about donations, Falk (2003) provides potential donors with either no gift, a small gift or a large gift in the solicitation letter. The relative frequency of donations increases by 75 percent if a large gift is incorporated compared to the ‘no gift’-treatment. To our knowledge, this paper presents the first evidence on the matching donations mechanism outside of the laboratory.

The effect of the matching donations mechanism is not trivial due to two counterproductive effects: firstly, a classical crowding-out effect can decrease the overall amount donated so that people reduce their contribution to the point that the total amount of giving (the matching contributions included) equals the amount donated without matching.² Secondly, a motivational crowding-out effect can take place (Deci and Ryan, 1980; 1985; Frey, 1997). People may perceive the matching donations as controlling, which may destroy their intrinsic motivation to donate. When the matching amount is very small, a motivational crowding-out effect may be stronger than the ordinary price effect (Gneezy and Rustichini, 2000) and donations may decline. The result of our field experiment can neither confirm nor deny the two counterproductive effects. However, some patterns of behavioral reaction to the matching donations mechanism suggest that there is more at work than just the normal relative price effect.

² The crowding-out effect can be estimated by experimental (e.g. Andreoni, 1993) or econometric studies (e.g. Ribar and Wilhelm, 2002).

The paper is organized in the following manner: Section II presents the field experiment and the data. Section III formulates the behavioral hypothesis. Section IV shows the results. The last section V offers an evaluation of the results and draws conclusions.

II. *Field experiment and data*

The field experiment was implemented in a naturally occurring decision situation at the University of Zurich. Each semester, every student has to decide anonymously whether or not he or she wants to contribute to two Social Funds – in addition to the compulsory tuition fee. On the official letter for renewing their registration, the students are asked whether they want to voluntarily donate a specific amount of money (CHF 7.-, about US\$ 4.20) to a Fund which offers cheap loans to students in financial difficulties and/or a specific amount of money (CHF 5.-, about US\$ 3) to a second Fund supporting foreigners, who study for up to three semesters at the University of Zurich. Without their explicit consent (by ticking a box), students do not contribute to any Fund at all. Students have the choice of donating to no Fund, only one Fund or both Funds. The panel data is composed of the decisions of all students for the nine semesters from the winter semester 1998/99 up to and including the winter semester 2002/2003. We observe the decisions of 37,624 students, who decide on average 4.75 times, depending on how many semesters they have already attended University.

In the experimental intervention, we selected 600 students at random and provided them with information about the matching mechanism. With the official letter for renewing the registration and the decision about contributing to the two Funds (for the winter semester 2002/2003), the University administration supplied the selected students with a sheet of paper containing the following information: “If you contribute to *both* Social Funds, an anonymous donor matches

your contribution with CHF 3” (treatment ‘*Matching 25%*’); or “CHF 6” (treatment ‘*Matching 50%*’). The potential donations are therefore matched by 25% and 50%, respectively. The sheet of paper that the two treatment groups received differed only with respect to the amount matched. The subjects were informed that the matched money would be split equally between the two Funds. The two Funds received the additional money after the experiment.

Due to the ‘institutional difference’ that freshmen have to pick up the registration form at the counter of the administration office, only students who had decided at least once in the past are in the treatment groups. We therefore took only a subsample of the student population. The freshmen are also excluded in the control group. As some of the students decided not to renew their registration, we could observe the decisions of 532 subjects in the two treatment groups. Students decide anonymously at home about the contribution to the two Social Funds.³

Table 1 shows the summary statistics for the control group and the treatment group. As the assignment was random, no significant differences emerged between the characteristics of subjects in the treatment group and the rest of the student population.

TABLE 1 ABOUT HERE.

The unique data set has some special characteristics which may be important – especially when comparing the results of our analysis to results from laboratory experiments. Firstly, the field experiment is based on a trichotomous decision. Students can decide whether to contribute to no Fund, one Fund or both Funds. Most students either decide not to contribute at all or to contribute to both Funds. No marginal adjustment is possible in the sense that people increase their contribution by one or more monetary units. For an experimental effect to become visible, many students in the treatment group have to change their donation behavior. Secondly, people in the

³ For details on contribution to the two Funds and an analysis of behavior over time, see Frey and Meier (2002).

treatment group decided at least once before the field experiment started whether to contribute or not. On average, subjects decided 10 times before being faced with the matching donation mechanism. If contributing has become a habit, the matching donations must be expected to have limited effect on behavior.

The field experiment and the decision setting have two clear advantages over previous studies:

- (1) The field experiment presented closes the gap between field studies and laboratory experiments in an area where no study has been done outside of the laboratory. While experimental research may provide important insights about human behavior, it is unclear how these results can be applied outside of the lab. Our controlled field experiment allows us to keep many factors constant, like in a laboratory, while still observing decisions in a natural setting, where people are not aware of being part of a scientific study.
- (2) Due to the panel structure of the data set, pro-social preferences, as revealed by past behavior, can be included in the analysis. This allows us to identify how different ‘types’ of people react to the matching donation mechanism. This issue is important when considering the different goals of such a mechanism: either one wants to increase overall contributions and/or one wants to animate people who rarely behave pro-socially to contribute. The first goal can also be reached by inducing increased donations by already pro-socially inclined people. To identify people according to their revealed behavior in the past has many advantages over the questionnaire approach normally undertaken.

The next section presents the hypotheses for the field experiment.

III. Behavioral Hypotheses

Charitable giving is subject to the relative price effect, just like any other activity: if donations are getting cheaper, people will undertake this activity more. For the field experiment in this paper, this leads to three hypotheses:

H1: More people donate to both Funds in the treatment groups than in the control group, because, due to matching, giving is cheaper in the treatment groups.

H2: The higher the matching benefit of each Swiss franc donated, the more people donate. In the field experiment, more people are expected to donate in treatment ‘Matching 50%’ than in the treatment ‘Matching 25%’.

H3: People who otherwise donate to only one of the Funds are strongly motivated to contribute to both Funds due to the fact that they can ‘profit’ from the whole matching amount by a slight increase in their contribution.

The derived hypotheses are based on assumptions about (1) the character of the charitable giving and (2) the effect of a change in relative prices. However, these assumptions are crucial, because there are counterproductive effects which can put the hypothesis in question.

(1) Charitable donations are assumed to have a Joy-of-Giving (or ‘warm glow’) effect (e.g. Cornes and Sandler, 1994; Andreoni, 1990). This suggests that it is important that people personally donate to the two Funds. The larger the effect they can personally achieve by donating the more they enjoy giving. This assumption contrasts with the neutrality results of public goods models, where people reduce their donations when they see that the government or other individuals increase their share of the public good (see e.g. Roberts, 1984; Andreoni, 1988). Pure altruism models would predict for the matching donations mechanism that people decrease their

share, because, due to the matched amount, they can still effect the same donation amount as if no such mechanism existed. Which model is appropriate is an empirical issue. Pure altruism models are not supported in the empirical literature: people's donations are not completely crowded-out by government contributions (e.g. Ribar and Wilhelm, 2002)⁴, nor do people reduce their contribution when the contributions of others increase (e.g. Frey and Meier, 2003b).

(2) A motivational crowding-out effect can work against the relative price effect (Frey, 1997).

People who donate in an anonymous situation to a public good have an intrinsic motivation to do so. Due to the underlying incentive structure, contributions are not utility maximizing in strict monetary terms.⁵ Offering these individuals a matching mechanism can be perceived as controlling. According to Deci (1975) and Deci and Ryan (1985), this may lead to a decrease in pro-social behavior, due to a perceived reduction in self-determination. A strong motivational crowding-out effect may lead to an overall effect contrary to the relative price effect. This theory has been supported in many empirical studies (for a survey, see Frey and Jegen, 2001). There can be two divergent overall effects of matching contributions. Firstly, the crowding-out effect dominates the relative price effect of matching. This is likely to be the case when the relative price effect is small, as in our small matching treatment ('*Matching 25%*'). Secondly, the relative price effect dominates the crowding-out effect. This is likely to be the case when the incentives due to matching are large ('*Matching 50%*'). Gneezy and Rusticini (2000) find experimental support for the proposition that the relative price effect dominates when the monetary reward is sufficiently large.

⁴ Experimental studies on private contributions provide evidence of sizable crowding-out effects (Andreoni, 1993; Bolton and Katok, 1998).

⁵ There may, of course, be other reasons why people donate money, such as prestige (Harbaugh, 1998), signaling their wealth (Glazer and Konrad, 1996), or reciprocity (Rabin, 1993).

In addition to the two counterproductive effects, people may be heterogeneous with respect to their pro-social preferences which might be important where the effect of matching donations is concerned. Andreoni and Vesterlund (2001) show, for example, that about 44% of their subjects are completely selfish, while others are motivated by pro-social preferences. As stated in a survey on previous experimental studies, “the most important heterogeneity is the one between purely selfish subjects and fair-minded subjects” (Fehr and Schmidt, forthcoming: 37). Pure egoists, who are not pro-socially inclined towards the Funds at all, are expected not to react to the relative price effect induced by the matching donations mechanism.

In the following section, we test the hypotheses and present the results.

IV. Analysis and Results

Effect of Matching Donations

Table 2 presents the descriptive statistics for the field experiments. The table shows the contribution rates to both Funds, only one Fund or no Fund for the control group and the two treatment groups in the semester when the field experiment was undertaken. The last three columns present t-tests for the differences in contribution rates between the control and the treatment group and between the two treatment groups.

TABLE 2 ABOUT HERE.

Table 2 shows three results in line with the hypotheses:

(1) People react to the matching donations mechanism. In both treatment groups, contribution rates to both Funds are higher than in the control group. These figures are consistent with *hypothesis 1*, suggesting that people react to the relative price effect. Taking the treatment groups

together, however, no statistical significant difference between control and treatment group emerges. This may be due to the fact that either a classical crowding or a motivational crowding effect kicks in.

(2) The increasing effect of matching donations is only present for the treatment ‘Matching 50%’. As revealed in table 2, the contribution rate to both Funds is 4.75 percentage points higher than in the control group ($t=1.614$; $p<0.107$). For treatment ‘Matching 25%’, the contribution rate is only slightly higher. Due to the relative price effect, the subjects in treatment ‘Matching 50%’ should react most strongly, because the price effect then clearly dominates the countervailing crowding-out effect. This is not the case with ‘Matching 25%’. In that case, the two effects turn out to be of similar magnitude, and therefore there is no significant effect on donations. The results nevertheless suggest that the effect of matching donations in our field experiment is due to the higher change in relative prices in treatment ‘Matching 50%’. The pattern corresponds with *hypothesis 2*.

(3) The patterns of giving to only one Fund or no Fund are consistent with *hypothesis 3*. Individuals reduce contributing to only one Fund, because with just a slightly higher contribution, subjects can ‘gain’ the whole matching amount. This applies especially for the higher incentive to contribute when the contribution rate to only one Fund is 3.43 percentage points lower for treatment ‘Matching 50%’ compared to the control group. This effect is statistically significant at the 95%-level. The contribution rate to only one Fund is also lower for treatment ‘Matching 25%’, but the difference is not statistically significant. Interestingly enough, a larger number of subjects do not contribute at all in treatment ‘Matching 25%’, compared to the control group. The pattern for ‘Matching 25%’ thus supports a motivational crowding-out effect. People *reduce* their contributions as a result of the incentive given, which is in contrast to the standard economic

prediction. The result, however, is not statistically significant. For the treatment ‘Matching 50%’, the contribution rates are as expected. The share of people who do not contribute at all decreases. The pattern of giving, however, shows that the effect of matching donations comes from the high matching mechanism and mostly from subjects who change from giving to one Fund to giving to both Funds. The effect of the matching mechanism to start giving at all seems quite modest.

In the above analysis, individual heterogeneity generates a lot of noise, which makes it difficult to estimate the effect of matching donations. Therefore a logit model is estimated, taking into account personal fixed-effects and semester fixed effects. Although the subjects are randomly assigned to the different treatment groups, the fixed-effects model allows us to reduce the noise in our estimations.

TABLE 3 ABOUT HERE.

Table 3 presents the results for the logit model with personal fixed effects. The dependent variable takes on the value 1 if people contribute to both Funds and 0 otherwise. The general picture of table 2 is confirmed. The probability that subjects faced with the matching donation mechanism ‘Matching 50%’ contribute to both Funds increases in a statistically significant way (at the 90%-level). The effect of ‘Matching 25%’ on the contribution rate of subjects in this treatment group is much smaller. The behavioral difference, compared to the control group, is not statistically significant. Our results are consistent with hypothesis 1 and hypothesis 2 in so far as the amount of matching may be decisive for the success of the matching donation mechanisms. Our results suggest that a small change in relative prices does not produce any significant effect on behavior. This result is consistent with a motivational crowding effect. However, the field experiment cannot discriminate between this and various rival explanations.

The next section analyzes who, in fact, is most sensitive to the change in the price of giving induced by the matching donation mechanism.

Who reacts to matching donations?

People are heterogeneous with respect to their pro-social preferences. Some may be selfishly inclined, while others put more emphasis on other people's well-being (or have pro-social preferences for other reasons). In this section, we analyze the giving patterns of various 'types' of people and their reaction to a change in the price of giving.

In the panel data set, we use past behavior as a proxy for how altruistically inclined people are. People who never contributed to even one Fund are expected not to react to matching donations.

FIGURE 1 ABOUT HERE.

The coefficient of 'past behavior' indicates in how many previous decisions the subject decided to contribute to at least one of the two Funds. The coefficient ranges from 0 to 1. A coefficient of e.g. 0.5 indicates that this particular individual contributed in half of the decision situations in which he or she was involved. Figure 1 shows the distribution of 'types' over the whole student population. More than 50 percent of the students contributed in all previous decisions. Around ten percent never contributed to either of the two Funds. The rest sometimes did.

FIGURE 2 ABOUT HERE.

Figure 2 shows the effect of the treatment 'Matching 50%' for the different types. The figure is consistent with the hypothesis that selfish people do not react to matching donations. Matching donations is a policy instrument, which does not seem to be able to activate pro-social behavior of selfishly inclined persons. This result is in line with empirical studies analyzing the effect of taxes on charitable giving. Clotfelter (1980) presents evidence that new itemizers may be less

sensitive to price changes than former itemizers. Figure 2 shows that, for people who never contributed in the past, the matching donations mechanism has a negative effect.⁶ The mechanism may strengthen their conviction not to contribute. In contrast, the effect of matching donations has the greatest effect on pro-socially inclined people. People who contributed half of the time to at least one Fund react the most. For people who almost always contributed in the past, this means that they don't stop their contribution.⁷ The matching donation mechanism therefore helps to stabilize the contributions of the most pro-socially inclined subjects.

TABLE 4 ABOUT HERE.

Table 4 presents a probit model for the semester in which the field experiment was undertaken. The dependent variable is 1 when people contributed to both Funds in the respective semester. As the coefficients in the probit model are difficult to interpret, marginal effects are computed, indicating how much the probability of contribution changes compared to the reference group. Model I presents an estimation for all subjects to test the effect of being in the two treatments (the control group constitutes the reference group). The results show that the treatment 'Matching 50%' increases the probability that people contribute to the two Funds by 4.9 percentage points. This effect is statistically significant at the 90%-level. The treatment 'Matching 25%' has no effect on the probability to contribute to both Funds. However, these results look different when one *excludes* subjects who never contributed in the past. Model II shows the result for this subsample. The marginal effect of treatment 'Matching 50%' increases to 6 percentage points ($p < 0.05$). The marginal effect of treatment 'Matching 25%' increases to 4.2 percentage points, but is not statistically significant.

⁶ A negative effect may be possible, because some people who never contributed in the past start contributing. However, the probability that this happens decreases for people in the treatment group.

⁷ The willingness to contribute to the Funds otherwise decreases with repetition (Frey and Meier, 2002).

The *control variables* show the following effects: the probability that females contribute to both Funds is 3 percentage points lower than for men. Gender, as well as all other control variables, have coefficients which are statistically significant at a 99%-level. The gender effect contradicts other, mostly laboratory, studies, which find that women tend to be more generous in donating (e.g. Eckel and Grossman, 1997). However, there are also studies in line with our estimates (for a review, see Eckel and Grossman, 2001).

Economists behave less pro-socially than non-economists.⁸ Age has a positive effect on pro-social behavior. Older people behave more pro-socially than younger people. This result is in line with many studies about giving behavior (for a survey, see Clotfelter, 1997). With repetition of the decision, people's willingness to contribute to both Funds decreases (Ledyard, 1995).

V. Conclusion

This paper tests the effect of a matching mechanism on donations in a controlled field experiment. We match the donations of students at the University of Zurich who, each semester, have to decide whether they wish to contribute to two Social Funds. Our results support the hypothesis that a matching mechanism increases contributions to a public good. However, the effect depends on the extent to which the contributions are matched. Whereas a 25 percent increase of a donation does not increase the willingness to contribute, a 50 percent increase does have an effect. In addition, people need to be socially inclined to react to the matching mechanism.

The field experiment provides some evidence suggesting that the matching mechanism crowds-out the intrinsic motivation of giving.

⁸ This difference is due to a selection effect, which is shown for this data set in Frey and Meier (2003a).

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Table 1: Summary statistics for donations, winter term 2002/03

Personal characteristics	Control group excluding Freshmen	Treatment 'Matching 25%'	Treatment 'Matching 50%'
Observations	12,518	265	267
Number of semesters	11.5 (8.3)	11.3 (8.3)	11.3 (7.4)
Age	28.3 (7.3)	28.5 (7.7)	28.0 (7.8)
Gender (=Female)	51%	53%	50%
Economists	11%	9%	12%
Coefficient of past behavior	0.73 (0.36)	0.71 (0.38)	0.73 (0.35)

Notes: Standard deviations in parentheses.

Source: Own experiment and data provided by the accounting department of the University of Zurich.

Table 2: Patterns of Giving to the Two Funds

Percentage who contribute ...	Control group	Treatment 'Matching 25%'	Treatment 'Matching 50%'	Difference 'Matching 25%'- Control	Difference 'Matching 50%'- Control	Difference 'Matching 50'- 'Matching 25'
... to both Funds	65.29% (0.43)	65.66% (2.9)	70.04% (2.8)	0.37% (t=0.125; p<0.900)	4.75% (t=1.614;p<0.107)	4.38% (t=1.080;p<0.281)
... to only one Fund	6.80% (0.22)	4.91% (1.3)	3.37% (1.1)	-1.89% (t=1.214;p<0.225)	-3.43% (t=2.213;p<0.027)	-1.53% (t=0.089;p<0.375)
... to neither of the Funds	27.91% (0.40)	29.43% (2.80)	26.59% (2.70)	1.52% (t=0.546;p<0.585)	-1.32% (t=0.476;p<0.634)	-2.84% (t=0.729;p<0.466)
N	12518	265	267			

Notes: Standard errors in parentheses.

Source: See Table 1.

Table 3: Effect of Matching Donations

Dichotomous dependent variable: Contribution to both Funds
Conditional logit model with personal fixed effect

Variable	Coefficient (z-value)	P> z
<i>Treatment 'Matching 25%'</i>	0.208 (0.97)	0.331
<i>Treatment 'Matching 50%'</i>	0.397* (1.83)	0.067
Personal fixed effects	included	
Semester dummies	included	
N	79,776	
Log likelihood	-30146.136	

Notes: Test of differences for treatment '*Matching 25%*' -
Matching 50% = 0.0: $\chi^2(1) = 0.39$, $p < 0.5302$

Level of significance: * $0.1 < p < 0.05$, ** $0.01 < p < 0.05$, *** $p < 0.01$

Table 4: Pro-socially Inclined People React to Matching Donations

Dichotomous dependent variable: Contribution to both Funds
 Probit estimate

Variable	Model I		Model II (sample without ,selfish types')	
	Coeff. (z-value)	Marginal effect	Coeff. (z-value)	Marginal effect
<i>Treatment 'Matching 25%'</i>	-0.000 (-0.00)	0.0%	0.128 (1.38)	4.2%
<i>Treatment 'Matching 50%'</i>	0.136* (1.66)	4.9%	0.187** (2.07)	6.0%
Gender (Female=1)	-0.081*** (-3.51)	-3.0%	-0.098*** (-3.92)	-3.3%
Economists (=1)	-0.184*** (-4.99)	-7.0%	-0.204*** (-5.12)	-7.2%
Age	0.018*** (8.03)	0.7%	0.017*** (6.99)	0.6%
Number of Semesters	-0.022*** (-11.32)	-0.8%	-0.018*** (-8.58)	-0.6
Constant	0.196*** (3.67)		0.355*** (6.18)	
N	13,050		11,718	
Log likelihood	-8337.8526		-6974.1552	

Source: see Table 1.

Level of significance: * 0.1 < p < 0.05, ** 0.01 < p < 0.05, *** p < 0.01

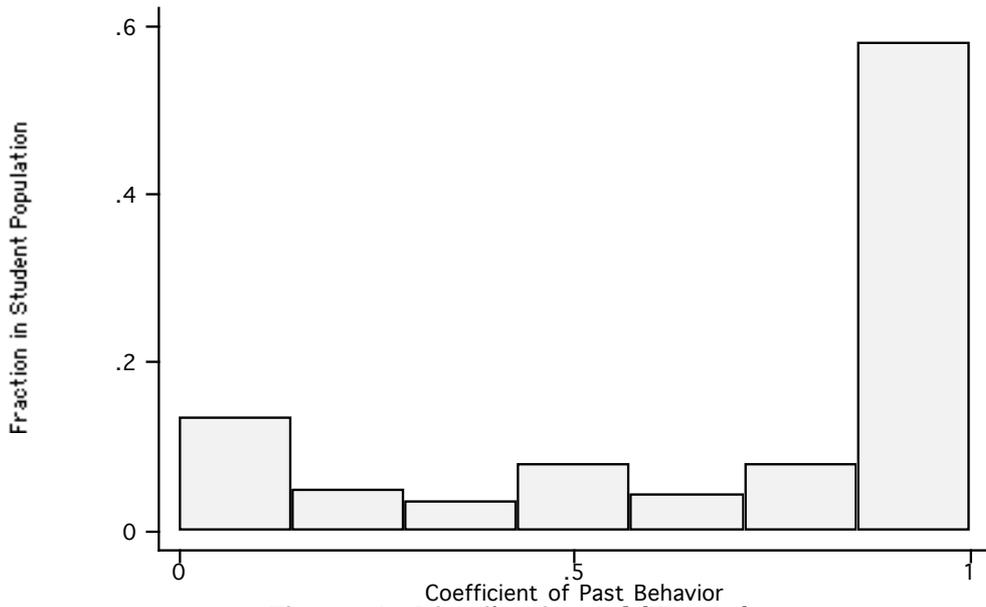


Figure 1: Distribution of 'Types'

