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## Inefficient but effective? A field experiment on the effectiveness of direct and indirect transfer mechanism

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**Inefficient but Effective? A field experiment on the  
effectiveness of direct and indirect transfer mechanisms**

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# Inefficient but Effective?

A field experiment on the effectiveness of direct and indirect transfer mechanisms\*

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## Abstract

We conduct a field experiment on direct and indirect transfer mechanisms. It shows that people are willing to donate significantly more if the donation is indirect, i.e., it is tied to the purchase of a good with a price premium, rather than made directly. This points to an efficiency–effectiveness trade–off: even though indirect donations are less efficient than direct donations, they are more effective in mobilizing resources. Our findings hold for ‘Fair Trade’ coffee as well as for ‘normal’ coffee. However, the strength of the efficiency–effectiveness trade–off is higher in the case of ‘Fair Trade’.

*JEL Classification:* C93; D63; D64; H21; H41

*Keywords:* Tied transfers, donations, charity, efficiency versus effectiveness, ‘fair trade’

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# 1 Introduction

It is a long held tenet of welfare economics that – in the absence of external effects – efficient transfers must not distort prices. In contrast, indirect transfers that are tied to economic activities, such as subsidized producer prices, lead to overproduction and thus deadweight losses. By the same logic, donations that are tied to an economic activity will give rise to similar inefficiencies – the respective economic activity will exceed the level that is optimal from a welfare perspective. For instance, donations may take the form of a premium over the world market price that consumers are willing to pay for a particular product with the premium going to some charity or to the producers themselves. This makes the donation conditional upon production and sale of the goods. Instead of equalizing marginal production costs and prices, producers will extend the production up to a point where marginal costs equal price plus donation premium and thus produce too much compared to a situation in which (the same amount of) donations were made directly. This results in excessive supply and eventually a reduction of the world market price which runs counter to the intended effect. If the same amount of donations were given directly to the charity or the producers, production decisions would be optimal and the charity or the producers would be better off. Why then would it be in the interest of a charity to raise tied donations?

The development of the ‘Fair Trade’ (FT) movement raises this question forcefully: It emerged from being a small scale operation, catering to a small group of developmental activists, as a major player that now sells its products – initially coffee, tea, chocolate, handicrafts, and now an increasing range of products – to the general public in supermarket chains and canteens of large companies. "Global sales figures of Fair Trade products in 2006 are estimated to be in excess of (...) 2 Billion [Euro, authors] and Fair Trade continues to grow at rates of 20 to 30 percent a year, with food sales in particular soaring" (IFAT (2006), p. 6).<sup>1</sup> Fair Trade organizations<sup>2</sup> do rely on tied transfers. They sell their products at higher than world market prices with the promise to remunerate producers ‘fairly’, i.e., better than at going world market prices (Leclair (2002), p. 949).<sup>3</sup>

Given that many consumers are willing to pay this premium in order to support the producers, why are FT organizations not seeking to obtain untied transfers, thereby avoiding the allocative inefficiencies described above? Conversely, should other charities such as the RED CROSS or SAVE THE CHILDREN adopt this business model? Are tied transfers inefficient, but more effective? This is the concern of our paper.

In order to answer this question we conduct a field experiment that compares the willingness to donate through direct and indirect transfer mechanisms. In one treatment subjects choose between ‘normal’ coffee and FT coffee, which is sold at a premium; in another treat-

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<sup>1</sup>The amount of sales increased between 1999 and 2006 by 440 percent from 11.816 to 52.077 metric tonnes, cf. <http://www.fairtrade.net/coffee.html>.

<sup>2</sup>SERRV (US), Oxfam (UK), GEPA (D), and Fairtrade (NL) are examples of FT companies in the West.

<sup>3</sup>FINE (2001), p. 1, defines: "Fair Trade is a trading partnership, based on dialog, transparency and respect, that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers - especially in the South."

ment subjects can buy normal coffee only (at the same price as in the first treatment), but are given the opportunity to make direct donations to producers of FT coffee. We can thus compare the willingness to donate under both mechanisms. However, the willingness to pay a premium in the first treatment could be due to the appreciation of a perceived higher quality of, or better production standards for FT coffee rather than the motive to donate money to the producers.<sup>4</sup> In addition, in the case of FT products, individuals may have a preference to donate to poor producers through an increased price as they want to give them what they regard a fair compensation for their work. They may regard direct donations inferior to indirect – tied – donations as they consider the former charitable giving and the latter a fair remuneration.<sup>5</sup> This motivation refers to the way transfers are *given* to the recipients, not the way they are *raised*, which is the concern of this paper.

To control for such possibilities we added a third and fourth treatment: In the third treatment subjects could choose between the same two prices as in the first treatment, however for the same coffee; the price difference went to a charity project that benefits producers in the third world (but not particularly the producers of the consumed coffee). The fourth treatment was the same as the second with the exception that the donations now went to the same charity project as in the third treatment. The comparison of the two sets of treatments allows us to assess the extent to which the special attributes of FT products contribute to a higher willingness to pay for these products. In both setups it turns out that the willingness to donate is substantially higher when subjects are offered the indirect donation mechanism compared to the direct donation mechanism. Thus the way in which money is *raised* matters for the mobilization of resources. This points towards an important efficiency–effectiveness trade–off for voluntary transfers.

Our experiment is related to, but differs in focus from, the empirical literature on giving and altruism. Most empirical studies analyze the socio-economic determinants of individual donations. For instance, Yen (2002) identifies age, education and income as significant determinants for donations to charities, religious and other institutions, whereas household size influences only giving for religious purposes. Duquette (1999) shows that marital status and the existence of dependents is important. The level of urbanization and community size is significant in the study of Feldstein and Clotfelter (1974). Abrams and Schmitz (1984) test for poverty and find that donations are positively affected by the level of neediness in the residence state. For an overview see Schokkaert (2006).

Likewise, laboratory experiments have analyzed determinants of giving, mostly in the framework of dictator games, in which a player decides about the distribution of a given endowment between him/her and a second player.<sup>6</sup> Eckel and Grossman (1998) find a significant gender difference in giving. Framing effects are also important: for instance the lower the social distance to the other player, the higher the share allocated to him/her

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<sup>4</sup>The ‘Fair Trade’ product standards include social, economic and environmental development issues as well as labor standards. See [http://www.fairtrade.net/fileadmin/user\\_upload/content/Generic\\_Fairtrade\\_Standard\\_SF\\_March\\_2007\\_EN.pdf](http://www.fairtrade.net/fileadmin/user_upload/content/Generic_Fairtrade_Standard_SF_March_2007_EN.pdf) for a detailed description.

<sup>5</sup>Economically such a tied transfer is still a donation if cheaper coffee of the same quality is available.

<sup>6</sup>See Camerer (2003), Ch. 2, for a survey.

[Charness and Gneezy (in press) , Brañas-Garza (2006b), Brañas-Garza and Espinosa (2006), Bohnet and Frey (1999), and Hoffman et al. (1996), among others].<sup>7</sup>

Yet we are not primarily interested in the individual determinants of giving or sharing as such, but rather in how the mechanism to transfer resources – direct vs indirect – influences the willingness to give. The paper that comes closest to our own research question is Brañas-Garza (2006a), who analyzes the dictator game in the laboratory under three different scenarios: the dictator (i) has no information about the second player, (ii) knows that the recipient comes from a poor country and (iii) knows that donations will be sent as medicine for poor recipients. The average donations account for (i) 10 percent, (ii) 66 percent and (iii) 80 percent, respectively, of the dictator’s endowment. Thus the willingness to give depends on the neediness of the recipient, and also on the form that the transfer eventually takes (monetary vs in kind). Contrary to Brañas-Garza (2006a), we study monetary donations only and are interested in how the money is raised, rather than how it is given to the recipients. Moreover, we conduct a natural field experiment in coffee shops, which subjects visit as part of their daily routine and where they spend their own money.<sup>8</sup> The only change is that they are now given a choice (to donate or not, to buy a different coffee and/or to pay a higher price) where they previously had none. We thus believe that our experiment can provide some realistic insights in the different inclination for (small) donations under direct and indirect transfer mechanisms.

The remainder of the paper is organized as follows: Section 2 describes the design of the experiment, Section 3 examines the results and Section 4 concludes.

## 2 Design

### 2.1 General Setup

We are interested in determining differences in the willingness to make small donations through direct and indirect transfer mechanisms in a typical, realistic setting. Since FT products are the most commonly known vehicles for small indirect donations, we chose coffee, one of its main product, as donation vehicle for our experiment. As locations we chose university coffee shops that are self-administered by student unions. In order to avoid different endowment effects we selected only coffee shops that did not sell Fair Trade or organic coffee prior to the experiment or collected any donations. Likewise, the price of a cup of

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<sup>7</sup>A third somewhat related strand of literature from marketing science is concerned with the question whether sales will increase if the product is combined with corporate philanthropy or a specific humanitarian cause (Varadarajan and Menon (1988), Adkins (1999)). Strahilevitz (1999) and Strahilevitz and Myers (1998) analyze which characteristics make a product suitable for donations to charities. They find that ‘frivolous’ products lend themselves more easily to charity incentives than practical ones.

<sup>8</sup>On the potential biases in laboratory and field experiments see Harrison and List (2004), Levitt and List (2007) and the literature cited. Particularly relevant for our context is Benz and Meier (2006) who compare individual donation behavior in laboratory experiments with the behavior of the same people in the field. They find only a weak correlation ranging from 0.25 to 0.4 and frequently stark differences in behavior.

‘normal’ coffee was 50 Eurocent in all shops and the physical setting was similar.<sup>9</sup> Beside coffee, all shops sold other products such as non-coffee beverages. We found suitable venues in Darmstadt, Hamburg and in two different universities in Berlin so that communication between the patrons of different treatments was impossible. Unfortunately, it was not possible to find coffee shops in which the clientele was academically homogeneous, i.e., in each shop students of particular departments were overrepresented.<sup>10</sup>

We used the following protocol: Each coffee shop was sent a letter with instructions (see Appendix A), which all sales persons were requested to read. The treatments were conducted over a period of two weeks with observations recorded on Tuesdays, Wednesdays and Thursdays. In the first week the sales persons recorded the number of coffees and other products sold at each particular day. These accounts serve as reference points, in order to find out whether the treatment attracted more people, which may result in biased samples for the different treatments. Fortunately this was not the case.<sup>11</sup> In the second week the treatments were implemented (see below) while normal coffee continued to be sold at the regular price. We clearly marked the introduction of a new alternative (different coffee at higher price, donation box etc.) through signs and material provided by the respective institutions (GEPA and MISEREOR) directly at the counter where the coffee was sold. Signs and material were in all treatments of equal size and color, so that the level of awareness and information about the new alternative was equal in all treatments. We used a standard type of donation box which is used widely for charitable donations at counters or in street collections and is easily recognizable as such.<sup>12</sup> We specifically instructed all sales personnel in all treatments not to proactively advertise the new alternative so that people were clearly aware of the alternative, but did not feel pressured to opt for it.

On the last day of every treatment patrons were interviewed using a standardized questionnaire. The intention was to determine whether populations were comparable in their socio-economic composition. Also we wanted to analyze whether individuals regarded Fair Trade mainly as a means to donate or whether they associated specific product attributes with FT coffee for which they might have the willingness to pay a premium. Interviews were done only at the last day and only after the subjects had bought coffee, in order to avoid influencing their future behavior in the experiment. Until this point patrons were not aware

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<sup>9</sup>The endowment effect describes a behavioral pattern in which individuals value a good more highly when they are endowed with it and have to forego it than if they want to acquire it. Thus willingness to pay for a good is regularly lower than the compensation that they require to forego the product, cf. Kahneman et al. (1990). A related effect could occur in our context: the number of people opting for FT coffee could be higher if we introduced normal coffee at 50 Eurocent when they previously were offered only FT coffee at 60 Eurocent compared to a situation in which people initially could buy only normal coffee at 50 Eurocent and we introduced FT coffee at 60 Eurocent. We thus chose in all treatments the same baseline scenario of normal coffee being sold at 50 Eurocent.

<sup>10</sup>In Darmstadt patrons were mostly from architecture and other technical fields, whereas in Hamburg the coffee shop was located in the humanities building. The coffee shop at the Freie Universität Berlin was mainly visited by students from social science and humanities while patrons at the Humboldt Universität Berlin mostly studied economics either as major or minor.

<sup>11</sup>The Wilcoxon-signed-rank test rejects the null for each treatment, thus there is no significant structural difference in the samples.

<sup>12</sup>Three example settings are shown in Appendix B.

that we were conducting an experiment.<sup>13</sup>

## 2.2 Four Treatments

We conducted four independent treatments.<sup>14</sup> The announcements were similarly designed, except for the differences between treatments.

### **Treatment 1 (T1):**

The consumer could choose between ‘normal’ coffee at 50 Eurocent and ‘Fair Trade’ coffee at 60 Eurocent. This premium of 20 percent approximately reflects the price difference in the market.<sup>15</sup>

### **Treatment 2 (T2):**

Besides buying ‘normal’ coffee people could make a donation in a newly installed donation box. The donation in this case was given to the most prominent FT organization in Germany, GEPA, indicated by a corresponding sign "gepa - Das Fair Handelshaus" ("gepa - The Fair Trade Company").<sup>16</sup> This is the same company that produced the FT coffee used in the first treatment.

We cannot exclude the possibility that the willingness to pay a price premium for FT coffee is not entirely, or even not primarily motivated by the wish to donate. Instead individuals could be willing to pay extra for the specific production standards under which Fair Trade coffee is produced (cf. fn. 4), or for a perceived higher quality of FT coffee compared to normal coffee. They could also regard the higher price as a vehicle to achieve a ‘fair’ remuneration for the producers’ work and thus prefer to channel the donation to the producers through the indirect mechanism. Unlike the indirect donation mechanism they may regard the direct donation mechanism as charitable giving and not a ‘fair’ remuneration. Some might not even be aware of the donation component in the indirect mechanism. Likewise, subjects might consider the FT company GEPA not as a charity, which would reduce the inclination to put money in the donation box. These effects would lead to a larger difference between the indirect and direct donation treatment than is caused by the different methods to donate.

Therefore, we conducted a second set of treatments: We used ‘normal’ coffee as in the first treatment, sold at the regular price and in the third treatment also at the higher price. This excludes different product attributes as a reason to pay a premium. Moreover, we used

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<sup>13</sup>This may be important as people aware of being part of an experiment may have a stronger self-image or sense of identity and therefore behave differently, cf. Akerlof and Kranton (2000) and Levitt and List (2007). Studying people’s behavior in their natural habitat without them being aware that they are under study will avoid such – potentially large – biases.

<sup>14</sup>A pretest using the first two treatments was run in Freiburg and Köln to check the setup. It showed strong differences between direct and indirect donations. Results are disregarded due to a different reference price for a cup of coffee, i.e., 1 Euro.

<sup>15</sup>We used a middle class coffee of a well-known German roaster (Tchibo) as baseline, since all coffee shops used middle class coffee prior the experiment. Hence, it is appropriate to relate the price of middle class coffee to the price of FT coffee.

<sup>16</sup>Although ‘GEPA’ is not a charity as such and does not raise donations directly, it is the institution which is widely known as the leading fair trade organization in Germany. Since ‘GEPA’ does not have a way to accept donations, they offered to donate the money to ‘MISEREOR’.



a well-known charity as recipient of the donations in both treatments in order to exclude the second reason for a bias in the above treatments, namely that FT organizations may not be seen as a charity and therefore direct donations may be low. Since the money went to poor producers in general and not particularly to the producers of coffee that the subjects were consuming, the third motivation – a fair remuneration of producers for the consumed product – was absent as well. Thus we focus on the different method of raising donations.

**Treatment 3 (T3):**

Participants could choose to buy the same ‘normal’ coffee at 50 Eurocent or at 60 Eurocent. If they opted for the second possibility, the difference was donated to a MISEREOR relief project for small-scale producers, including coffee producers, in a developing country.<sup>17</sup>

**Treatment 4 (T4):**

The fourth treatment is the same as the second, in which normal coffee is sold and a donation box is installed, except that the donation goes to the same MISEREOR relief project as in the third treatment.

A comparison between T3 and T4 will show a possibly different inclination to donate through indirect and direct donation mechanisms. Moreover, it will show whether a difference in the donation vehicle has an impact on the amount of resources mobilized. A comparison between T1 and T2 may show this as well, but results might be biased due to different perceived product attributes of FT coffee compared to normal coffee (see above). Such a difference in the evaluation of the product will be shown by comparing T1 and T3. A second bias may arise because people regard the FT organization GEPA not as a charity and therefore are less inclined to donate directly. If that was true it would show up by comparing T2 and T4. This is summarized in table 1.

Treatments	T2	T3
T1	direct vs. indirect (incl. attributes)	attributes (of product)
T4	attributes (of organization)	direct vs. indirect

Table 1: Measured Effects by Comparison of Treatments

We note that there is evidence that donations are more frequent and higher if others can observe them compared to a situation of anonymity [e.g., Andreoni and Petrie (2004), List et al. (2004), and Soetevent (2005)]. In a poorly designed experiment, this could lead to a bias if the degree of observability was not uniform across treatments. For our case we are confident that our results are not affected by such a bias because public observability of the act of donating was the same in all treatments: the donation was made in public and could be observed by others only at the time it was made, but not afterwards. People could observe the dropping of the coin in the donation box, likewise, they could overhear the order for the fair trade coffee or the coffee purchased at a premium. Once the transaction was

<sup>17</sup>The donations went to the project P22302 of MISEREOR. For details of the project see their internet appearance on [http://www.misereor.de/Projekte.8492.0.html?&no\\_cache=1](http://www.misereor.de/Projekte.8492.0.html?&no_cache=1), "Haiti: Karibikparadies - vom Winde verweht" ("Haiti: Caribbean paradise - Gone with the wind").

concluded there was no visible sign of the donation, nor was there any indication in any of the treatments how many people had donated before. The donation box was intransparent, so that the amount donated thus far could not be discerned, and there was no record of how many people had opted for the more expensive coffee. Likewise people could not distinguish FT coffee (T1) or other coffee purchased at a premium (T3) from regular coffee purchased at 50 Eurocents once it was sold since cups, smell, color etc. were identical.

### 3 Results

Table 2 reports the sale statistics for all treatments for both subsequent weeks. For the first week, before the treatment was implemented, we record all sales of regular coffee and other products. For the second week, the treatment week, we record again all sales of regular coffee and other products. Additionally, for T1 we record the number of FT coffees sold at 60 Eurocents, for T3 the number of regular coffees sold at a premium price of 60 Eurocents and for T2 and T4 we record the number of donations made in connection with the purchase of regular coffee or other products. (No donation was made without any purchase.) We do not observe the individual donation, but we have the total amount donated in each box.

In the indirect donation mechanism (T1 and T3) the amount of donation was restricted to the price premium of 10 Eurocent. For the direct donation mechanism (donation box, T2 and T4) the individual donation was not restricted and unobservable to us. In our context that is of little consequence since we are interested in possible differences of the *total amount* of resources mobilized per capita, which we do observe. We thus essentially compare differences in per capita donations by comparing imputed distributions of standardized donations. For the direct donation mechanism we compute how many people would have donated the same total amount if indirect donations were restricted to 10 Eurocent as in the case of indirect donations and use nonparametric tests to compare the mean of the distribution. We thereby account for different number of subjects in the four treatments.

For instance in treatment T2, a total of 6 people made a donation, which summed up to 3.00 Euros (cf. Table 2). That is a per capita donation of 50 Eurocent for those donating. One donating individual did not buy coffee, but an other product, which we have to exclude for reasons of comparison, because this person would not have had a chance to donate in the indirect donation treatments 1 and 3. Thus we have a total donation of 2.50 Euros for the 5 people that donated and bought coffee. If each individual were restricted to a 10 Eurocent donation, the sum of 2.50 Euros would have been achieved if 25 people had donated out of the 281 people that bought coffee in that treatment. Thus, when comparing treatments T1 and T2 we compare the actual distribution of treatment T1 with 71 people donating 10 Eurocent each through their FT coffee purchases at a higher price and 32 people buying coffee at the cheaper price and donating nothing with the imputed distribution in treatment T2, in which 25 out of 281 people donated 10 Eurocent (see Table 3). The analogical calculus is done for treatment T2 (see below, Table 4).

<b>Treatment 1</b>				
Day	Normal Coffee	Fair Trade Coffee	Other Products	
Tuesday	38		44	
Wednesday	39		47	
Thursday	23		12	
Tuesday	9	32	53	
Wednesday	15	23	43	
Thursday	8	16	19	

<b>Treatment 2</b>				
Day	Normal Coffee	Donation	Other Products	Donation
Tuesday	103		294	
Wednesday	123		395	
Thursday	98		310	
Tuesday	74	1	395	1
Wednesday	106	2	311	0
Thursday	101	2	360	0
Total amount donated	3.00 Euros			

<b>Treatment 3</b>			
Day	Normal Coffee	Coffee incl. Donation	Other Products
Tuesday	14		3
Wednesday	9		3
Thursday	12		5
Tuesday	5	10	6
Wednesday	8	2	1
Thursday	5	10	2

<b>Treatment 4</b>				
Day	Normal Coffee	Donation	Other Products	Donation
Tuesday	89		9	
Wednesday	63		12	
Thursday	70		9	
Tuesday	76	16	1	1
Wednesday	46	13	10	1
Thursday	55	14	11	0
Total amount donated	5.40 Euros			

Table 2: Sales Statistics of Treatments 1 to 4

A first impression of the different inclination to donate in the four treatments is given by Figure 1. It denotes the share of people in each treatment that have donated the actual or imputed donation of 10 Eurocent. There is a marked difference between direct and indirect donation mechanisms which is larger for the ‘Fair Trade’ treatments (T1 and T2) than for the relief project treatments (T3 and T4). This points to the existence of the biases described above in Section 2.2.

Table 3 gives the actual and imputed distributions for treatments T1 and T2, respectively,

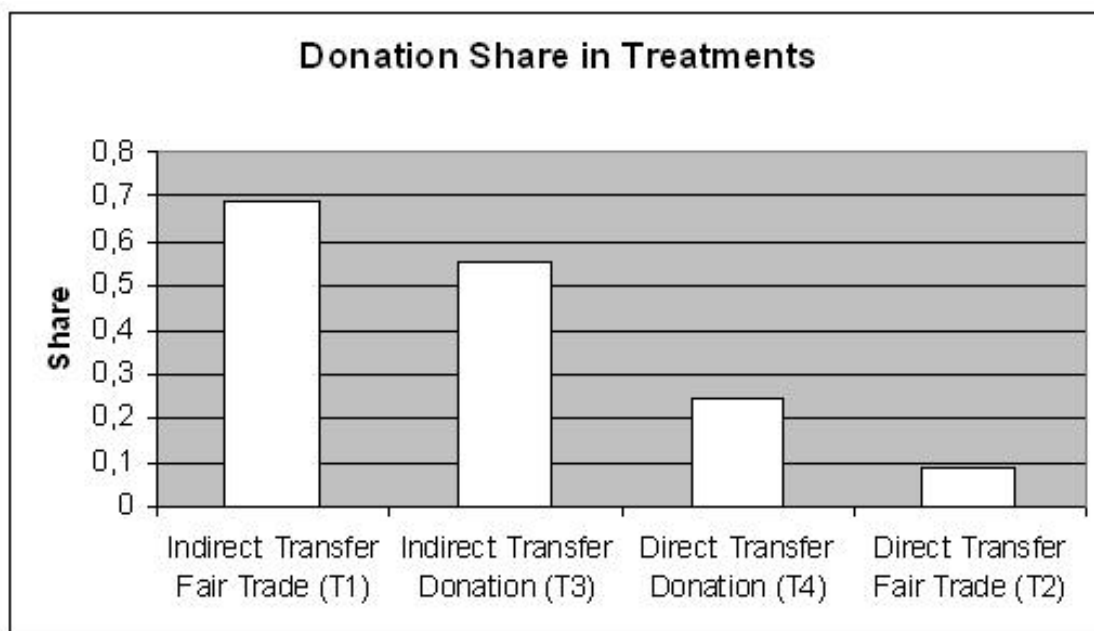


Figure 1: Donations per Treatment

between donation and no donation. The imputed distribution was generated as described above. We find a significant difference in donation behavior between T1 and T2; Fisher's exact test rejects the null hypothesis of equal means at the one percent level of significance. The direct donation mechanism raises an average donation of 0.9 Eurocent whereas the indirect donation mechanism commands a per capita donation of 6.9 Eurocent.

Donation	T2	T1	Total
no	256	32	288
yes	25	71	96
Total	281	103	384

Fisher's exact  $P = 0.000$

Table 3: Test of Difference between T1 &amp; T2

We find the same qualitative result of a significantly higher average donation for indirect donations than for direct donations for treatments T3 and T4. Direct donations raise an average of 2.4 Eurocent, indirect donations are on average 5.5 Eurocent. Again Fisher's exact test rejects the null hypothesis at a one percent level of significance.<sup>18</sup>

<sup>18</sup>In treatment T4, a total of 45 people made a donation, which summed up to 5.40 Euros (cf. Table 2). That is a per capita donation of 12 Eurocent for those donating. Two people did not buy coffee, but other products, which we have to exclude for reasons of comparison described above. This results in a total donation of 5.16 Euros for those who bought coffee. If each donation were restricted to a 10 cent, the sum of 5.16 Euros would have been achieved if 52 people had donated out of the 177 people that bought coffee in that treatment. Thus, we compare the actual distribution of treatment T3 with 22 people donating 10 Eurocent each through their coffee purchases at a premium and 18 people buying coffee at the regular price with the imputed distribution in treatment T4, in which 52 out of 177 people donated 10 Eurocent (see Table 4).

Donation	T4	T3	Total
no	125	18	143
yes	52	22	74
Total	177	40	217

Fisher's exact  $P = 0.003$

Table 4: Test of Difference between T3 & T4

Yet as mentioned above, people may not see Fair Trade companies as charities, because they do not collect (direct) donations, but operate as 'normal' companies. That may reduce the willingness to donate directly and thus donations per capita could be lower in T2 than in T4. In addition, one motivation for buying FT coffee at a premium may be perceived differences in standards of production or in quality (T1 vs T3). The latter effect would show if the probability to donate was significantly higher in T1 than in T3. T3 uses the same normal coffee as prior to the experiment and thus there are no different standards or quality as a motivation to pay extra.<sup>19</sup>

Donation	T1	T3	Total
no	32	18	50
yes	71	22	93
Total	103	40	143

Fisher's exact  $P = 0.124$

Table 5: Test of Difference between T1 & T3

There seem to be differences in the distribution, but Fisher's exact test rejects the null only at a 12% level of significance, which is slightly above the normal significance levels. Thus we cannot reject the hypothesis of equal means.

Likewise, we test whether there are significant differences in the direct donations to FT organization GEPA and the MISEREOR relief project by comparing T2 and T4. Indeed, direct donations to GEPA are significantly lower than to the well-known charity MISEREOR, as shown in Table 6. The null hypothesis is rejected at the one percent significance level.

This finding indicates that Fair Trade is not seen as charity in the traditional sense and therefore subjects are disinclined to donate directly; yet they seem to be more inclined to purchase the more expensive FT coffee in T1 than the coffee sold at a premium in T3. In

<sup>19</sup>Theoretically the motivation to donate to coffee producers could differ from the one to donate to producers in general. Yet it is not clear why consumers should have different degrees of altruism towards different groups of poor producers in developing countries.

Donation	T2	T4	Total
no	256	125	381
yes	25	52	77
Total	281	177	458

Fisher's exact  $P = 0.000$

Table 6: Test of Difference between T2 & T4

order to explore this issue further we asked 82 subjects at the last day of the respective treatment "What do you associate with 'Fair Trade'?" and asked them to check up to three answers out of six answers given.<sup>20</sup> Results are given in Figure 2. It turns out that most

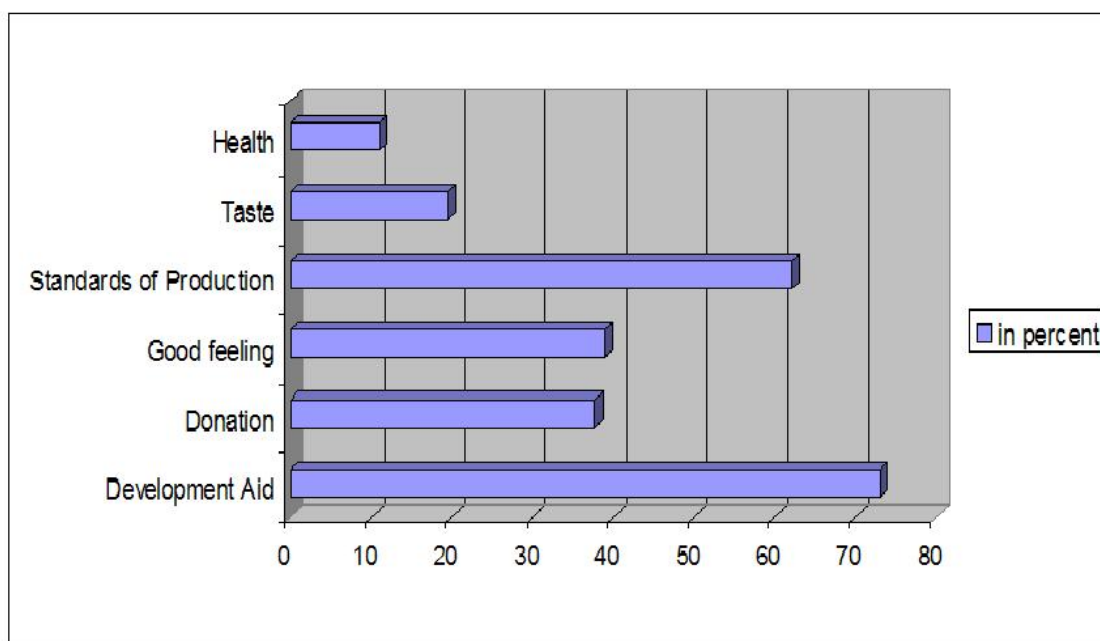


Figure 2: Associations with Fair Trade

of the subjects associate 'Fair Trade' with development aid and standards of production; a smaller share with donations and the 'warm glow' and a still smaller, but substantial part with better quality (taste or health). In other words, a very significant part of the respondents associate FT with special product attributes (production standards or quality, i.e., taste and health). This suggests that some of the willingness to pay a premium for FT coffee may be attributed to the valuation of these attributes, rather than only by the wish to donate to a group of people in need.

We tried to check whether the different results were driven by heterogenous samples. As is well-known charitable giving is affected by gender, wealth and income, age, and other socio-economic characteristics (for a short review of the literature see the introduction). At the last

<sup>20</sup>The questionnaire is available upon request. We asked for gender, number of semester, field of study, marital status, number of siblings, visits to developing countries, variables indicating the wealth status, religiousness, as well as a number of attitudes. Lastly we asked what people associated with 'Fair Trade'. We did not survey the subjects over the entire duration of the experiment, but only after they had made their decisions at the last day of the experiment, because we did not want to influence future behavior.

day we conducted a survey of the patrons in which we compiled the individual characteristics that have been found to influence charitable giving. We ran the Mann-Whitney-U test and the Kruskal-Wallis-H test, which test whether the samples are drawn from the same population. If confirmed, we are able to compare the results of each treatment with each other. Fortunately, this was the case with the only exception of the field of study (cf. fn. 10)<sup>21</sup> and the number of semesters (where we encountered a large number of ties). We cannot exclude entirely that results are affected by this selection, even though students had the same distribution of all other characteristics such as age, gender, wealth and religiousness.<sup>22</sup> But because the difference in the amount of donations are so marked between direct and indirect transfer mechanisms and the subject pools differed w.r.t. their field of study in all four treatments, we are confident that such a bias, if it existed, would not invalidate our results.

For treatments T2 and T4 the actual number of people who made a donation was smaller than the imputed one, which indicates that individual donations were larger per capita than the imputed ones (at 10 Eurocent). This raises the question whether we could have mobilized more resources with the indirect transfer mechanism if we had chosen a different premium. Since we already obtain the result that the indirect transfer mechanism raises significantly more money than the direct one, our basic result would be unaltered if we did. We may however underestimate the maximum difference – it may be even larger with an optimized premium. We do not think that this is a big issue because we approximately used the actual premium that we find in the coffee market, which should have already been optimized by the FT companies. Likewise, a willingness to donate an amount smaller than 10 Eurocent cannot materialize in the indirect donation mechanism, but in the direct one. This might bias results, however in the same direction.

## 4 Concluding Remarks

Our field experiment has shown, for our setup, that people are willing to donate significantly more if donations are tied to the purchase of a good rather than made directly. We used two sets of treatments; in both cases the final recipients of the donations were small farmers in the developing world. The first set of treatments channeled the donation through the ‘Fair Trade’ organization, the second set of treatments used a well-known charity. Each set consisted of one treatment, in which the donation could be made indirectly through a price premium for a cup of coffee that went to the recipient organization, and another treatment

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<sup>21</sup>This bias could not be avoided, as we had to find locations with similar setups, the same coffee price and no organic or Fair Trade coffee prior to the experiment. Moreover, the socio-economic profile needed to be the same and the coffee shops needed to be willing to cooperate. Under these restrictions, the optimal choice were student coffee shops. These are almost always located in university buildings that host specific subjects (humanities building, social science building etc.) so that the field of study was differently distributed among patrons of different treatments. We tried to have homogenous groups of students, for instance only students of humanities, but did not find enough coffee shops that satisfied the other criteria and were willing to cooperate. We also tried employee cafeterias in large department stores as locations, but the management would not cooperate.

<sup>22</sup>Frey and Meier (2003) find for the University of Zurich that students of business economics and natural science give less on average than students of arts and letters.

with a donation box for the same organization at the counter of the coffee shop. The amount of donations were significantly larger when the indirect donation mechanism was in place.

Our findings are in line with earlier studies which show that framing matters a lot for the decision to give to other people. Contrary to earlier studies, however, we show that already the simple *mechanism* through which the money is raised is decisive for the amount of resources mobilized for a certain cause. We find that the less efficient mechanism raises more money than the efficient one. Our finding points towards an important trade-off between allocative efficiency and effectiveness. It may well be that a donation mechanism that is less efficient per dollar raised is preferable because it generates (so) many more resources. More generally, an exclusive focus on allocative efficiency may in some situations create analytical myopia as it overlooks a possible efficiency-effectiveness trade-off. Donations to charity certainly constitute such situations, but there may be important others as well.

We also show (at a twelve percent significance level) that people are willing to pay a premium for certain production standards and difference in quality. This implies that monetary donations may be combined implicitly with a donation in kind (costly better working conditions) in the indirect transfer mechanism. People are willing to donate more with the indirect donation mechanism. Moreover, they are willing to give even more if the product satisfies certain standards. They are also willing to pay even more if they know that the donation benefits the producers of the product they consume and thus produces a ‘fair remuneration’ to them. Yet this additional willingness to pay for these two reasons (difference in quality and production standards and preference to donate to the producers of the product) is small compared to the difference in the willingness to pay that is created by the mechanism through which the donation is raised: direct or indirect.

In our view the experiment raises two important questions. First, it is not yet clear to what extent our findings generalize to other charities and philanthropic causes and to situations beyond individual philanthropy. Our research was motivated by the soaring sales of the ‘Fair Trade’ organizations, which use the indirect donation mechanism as exclusive business model, but our result holds for a different charity as well. Anecdotal evidence suggests that our findings are not limited to our specific setup. For example, the ‘Bauhaus Archive’ for design<sup>23</sup> collects more than four times as much money through the sale of ‘overpriced’ chocolate than through a donation box at the entrance.<sup>24</sup> Our findings suggest that other charities and humanitarian causes may use indirect donation mechanisms to their advantage as well, even if they come at the cost of reduced efficiency. It needs to be established which characteristics make them most suitable for indirect transfers.

Second, we have shown that it may be rational for charities and other organizations raising money to use inefficient indirect donation vehicles, because they are more effective. The reason for that rationale is that individuals behave differently from what simple economics

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<sup>23</sup>The Bauhaus Archive is a non-profit organization that runs a museum and an archive on Bauhaus designs in commemoration of the group of artists, architects and designers in Germany that was founded in 1919 and dissolved by the Nazis, cf. [www.Bauhaus.de](http://www.Bauhaus.de).

<sup>24</sup>Telephone conversation with Ms. Seydell, Bauhaus archive, on 2007-01-09.



would predict. According to that view, normal individuals should be indifferent between donating through a price premium or donating directly; individuals understanding the inefficiency of tied aid should prefer direct donations. Our experiment shows the opposite to be true! People donate significantly more if they have the choice to buy a product at a normal price or the *same* product at a premium and to donate that premium than if they buy this same product and have a box to donate. In our experiment we point out this behavioral anomaly, show that it may be rational to exploit it and that this efficiency–effectiveness trade–off may be important for economic analysis, but we do not explain *why* people behave this way. This is the next step.

It may turn out that the logic of gift exchange experiments extends to the *mechanism* of donations. Falk (2007) shows that the frequency of charitable donations increased significantly when the solicitation letter was accompanied by a gift. More generally, people are more inclined to make a gift if they get something in return. In our context people may regard the purchased coffee as something received in return (for the donation plus the ordinary price), and thus are more inclined to make the donation. They may not have the same association when they buy coffee and make a donation in a box because these two transactions are not as clearly linked. Whether this hypothesis stands up to closer scrutiny is left for future research. If so, it would extend the applicability of the gift exchange logic to a much larger range of individual interactions.

## A Instructions for Sales Persons

- Do not say anything about an experiment! Be as you normally are.
- The experiment is conducted over two weeks, on Tuesday, Wednesday and Thursday.
  - In the first week nothing changes, except that you fill the tally sheet.
  - In the second week the experiment is conducted and the tally sheet is extended.
- Be extremely careful when filling the tally sheet and do not mix up the columns in order to record accurately sales of coffee, other products, donation and Fair Trade coffee.
- It is very important that you do everything meticulously and with a maximum of accuracy.
- If you have to sell different brands of coffee, it must be visible for consumers that they get the coffee that they paid for.
- If a consumer is asking why you are doing this never say anything about an experiment.
  - New coffee (T1): "It is a new coffee and we wanted to give you a choice."
  - Donation box (T2 and T4) or coffee with donation premium (T3): "We wanted to give you the opportunity to donate for this cause."
- Never open the donation box! If it is full you have to install another one.
- For T4 As you sell at different prices, the whole amount donated through the higher price must be donated for the mentioned purpose. Please provide a receipt. If you do not want to donate it, give it to us and we will donate it.

## B Experimental Settings





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