

Gift-Exchange in Society and Individuals' Attitudes toward Supporting the Integration of Immigrants

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Abstract

Massive migration inflows challenge societies as a whole, the integration of migrants is critical for the sake of themselves and host countries alike. While the provision of public services clearly fosters the integration process, the citizens of the host countries have to contribute likewise to its success. Recent empirical evidence, however, suggests that only a minority is willing to engage actively. Accordingly, one might ask how to motivate a larger share of the host country's society to support the integration of migrants actively. Our study builds upon the observation that most people are *homines reciprocans*, and that gift-exchange is often critical for successful social and economic interactions. We examine the idea that the population's willingness to support refugees increases as a reciprocal response after being informed about refugees' contributions to society in the form of volunteer activities. By implementing a treatment intervention within a nationwide survey ($N=1637$) on the latest flow of refugees to Germany, we find that local residents' willingness to support newcomers personally and financially rise significantly. Importantly, this result also holds for a subgroup which is vital for the overall integration process: those who have not been in contact to refugees before.

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1. Introduction

Due to the massive migration inflows starting in 2015, the European Union was facing roughly a total of 2.6 million asylum applications by the end of 2016.¹ A large number of these people is likely to stay² and, hence, has to be provided with access to living spaces, education, social relations and the labor market. This might not only raise the local populations' fear that public expenditures are put under pressure, but also that wages fall or jobs are taken away (Malchow-Møller et al. 2008).³ Noneconomic factors seem to be similarly important. Mayda (2006) shows that security concerns as well as cultural and national-identity worries are key noneconomic factors that affect the local populations' attitudes (see also Bansak et al. 2016, Dustmann and Preston 2007). Hainmueller and Hiscox (2007) argue that cultural values and beliefs are even more important than fears about labor-market competition. Consequently, it is not surprising that the number of individuals that favors more open migration policies is limited, Facchini and Mayda (2008) show that this is especially the case for some Western European countries.

In addition to official governmental support programs, natives' attitudes and, associated therewith, their willingness to support the new arrivals are key factors for securing integration in everyday life (Constant et al. 2009).⁴ In line with the previous literature, however, representative survey results show that citizens' engagement for refugees is limited: Eisnecker and Schupp (2016) report for Germany that 82 percent of the respondents have neither supported refugees through practical help during the year 2015 nor were they willing to provide support in the future. Even though the latest research suggests that the provision of information e.g. on refugees educational level can improve people's attitudes toward immigrants (Lergetporer et al. 2017, Grigorieff et al. 2016), the positive effects of such information policies are limited since they

¹ See <http://ec.europa.eu/eurostat/web/products-datasets/-/tps00189>. Eurostat provides monthly data on asylum and first time asylum applicants.

² In 2016 alone, the European Union granted protection status to 672,900 asylum seekers in the first instance. See http://ec.europa.eu/eurostat/web/products-datasets/-/migr_asydcfsta.

³ A number of studies point to similar economic factors that influence attitudes toward immigration (Haaland & Roth 2017, Ortega & Polavieja 2012, Facchini & Mayda 2009, O'Rourke & Sinnott 2006, Scheve & Slaughter 2001).

⁴ Since the labor market integration of refugees is closely related to their social integration (Eisnecker & Schacht 2016), a missing acceptance of refugees might interfere the potential long-run economic benefits. For Europe as a whole, the European Commission (2016) suggests that well integrated refugees could e.g. help address demographic challenges or respond to regional economic shocks due to higher labor mobility. They additionally argue that, due to more intense competition, human capital of native workers might rise. If the integration of refugees is successful, Brühl (2016) and Fratzscher and Junker (2016) argue that in five to fifteen years, their yearly gross value contributions could overcompensate the fiscal costs of unemployed refugees in Germany.

have to rely on facts which can hardly be influenced in the short-run. Hence, the question arises how the local population's willingness to support and to integrate the number of refugees could actively be enhanced otherwise. Due to a wide dissemination of positive reciprocal inclinations in the German society (Dohmen et al. 2008), gift-exchange between natives and refugees might depict a feasible option. Therefore, we flip the general direction of support and suggest voluntary work of refugees as one possible gift for native society members. Refugee volunteering is predestined since it serves the society per se but also provides the refugees with e.g. valuable contacts, the possibility to expand language skills or to experience the social values and norms of their host country. Furthermore, many refugees are thankful and wish to give something back to their new host society (Worbs and Bund 2016). Hence, a policy that encourages migrants to volunteer —as expressed by opening the federal voluntary service for refugees with good remaining forecasts in December 2015, for example⁵— does not represent an intervention imposed from above but a response to the refugees' desire for making themselves useful. Finally, refugee volunteering may take two forms that are suitable to test: mutual gift-exchange where people respond directly to good deeds, and third-party gift-exchange where refugees' volunteering activities benefit someone else.

By implementing a small treatment intervention within a nationwide survey ($N=1637$) on the latest European refugee crisis in spring 2016, we investigate whether reporting refugee volunteering increases the population's willingness to integrate their new fellow citizens as a reciprocal response to the refugees' good deeds. We transfer refugees' social commitment into short information texts and ask afterwards whether respondents would be willing to provide financial support for the integration of refugees (e.g. similar to a solidarity tax) or whether they could imagine getting to know and supporting a refugee family within their region. To identify a causal effect of refugees' gift-giving on our respondents' attitudes toward immigration, respondents were randomly assigned to one of three questionnaires which differed in the provided information text only. While respondents in the control group were informed about the actual discussion about supporting refugees, respondents in the so-called *third-party support* treatment additionally got to know that in some places refugees do already volunteer work for the society. By comparing the responses of the two groups, we test whether attitudes toward

⁵ See the press release from the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ, in German only): <https://www.bmfsfj.de/bmfsfj/aktuelles/presse/pressemitteilungen/bundesfreiwilligendienst-fuer-fluechtlinge/102904?view=DEFAULT>.

immigration change due to indirect reciprocity. A third treatment, called *mutual support*, was implemented to analyze the change in attitudes due to direct reciprocal behavior: It takes additionally account of the possibility of a mutual gift-exchange between one local (or a local family) and one refugee, e.g. by undertaking small everyday tasks in doing housework or childcare —as reported several times by the media in late 2015 and early 2016.⁶

Laboratory and field experimental research has shown that, for a large share of people, cooperative behavior is conditional.⁷ Croson (2007) emphasizes a predominance of reciprocity over theories of commitment or altruism. Even though the so-called in-group-out-group bias suggests that an individuals' social preferences toward others are significantly affected by their group membership (see, e.g., Ben-Ner et al. 2009, Ruffle and Sosis 2006), Charness et al. (2007) and Bouckaert and Dhaene (2004) prove that people show regard for others despite social distance or different ethnic origins. An extensive number of studies shows that gift-exchange is an important driver of human behavior e.g. in labor market settings or the provision of public goods.⁸ Whether gift-exchange between migrants and the local population might influence attitudes toward immigration and increase the willingness to support the migrants' integration process, has not been looked at yet. So far, there is only some evidence that volunteering facilitates labor market integration (Baert and Vujic 2016). Somewhat related, immigrants' motivation to volunteer has been analyzed: Besides paying something back (Manatschal 2015), some hope that volunteering has the potential to serve as a stepping stone to integration (Khvorostianov and Remennick 2017, Handy and Greenspan 2009). As regards charitable gift-giving, which is rather close to our research question, Falk (2007) points out that already adding a small gift from the potential donation receiver (a child from Dhaka) to a fundraising letter boosts the number of donors. Given that List and Price (2009) find that the amount of money raised by a door-to-door fundraising solicitation is lower for minority solicitors, it is questionable whether the previous result holds if the solicitation aims at supporting newly arrived refugees. Hence, it is

⁶ Caritas Austria, for example, actively promotes this neighborhood assistance as so-called integration activities, supported by the municipal administration. See their website (in German only):

<https://www.caritas-vorarlberg.at/unsere-angebote/fluechtlinge/aufeinander-zugehen/integrationstaetigkeiten/>

⁷ See, e.g., Kocher et al. (2008), Frey and Meier (2004), or Fischbacher et al. (2001). Indirect reciprocity constitutes a similarly strong motivator for prosocial behavior (Khadjavi forthcoming, Mujcic & Leibbrandt forthcoming, Van Apeldoorn & Schram 2016, Seinen & Schram 2006). Theoretical models underline the explanatory power of reciprocity for human behavior, too (Falk & Fischbacher 2006, Dufwenberg & Kirchsteiger 2004).

⁸ See, e.g., Cooper and Kagel (2015) for a recent survey on gift-exchange in labor market settings and Chaudhuri (2011) for a survey on the role of conditional cooperation in the provision of public goods.

an open empirical question whether the proposed kind of gift-exchange could lead to a higher supportiveness of new fellow citizens in the German society.

We find that individuals with a high reciprocal inclination show a more pronounced willingness to get to know and support a local refugee family compared to the control group (in both treatments *third-party support* and *mutual support*). Importantly, we find that also for the subgroup of people which is vital for the overall process of social integration —those who have not been in contact to immigrants before—, gift-giving updates attitudes toward the support of immigrants. As regards the willingness to support refugees financially, we find a positive effect in treatment *third-party support* only. Notably, our subgroup analyses reveal that, contrary to the willingness to privately support a local refugee family, this finding is driven by respondents with lower levels of reciprocal inclination, indicating that they prefer a less personal support according the positive correlation between reciprocity and openness to new experiences (Dohmen et al. 2008). Consistent with the finding that individuals are less willing to contribute financially, the impact of the *third-party support* treatment intervention is slightly smaller compared to its impact on the willingness to contribute time by supporting a local refugee family privately. Nevertheless, the results show that gift-exchange and reciprocity is not only applicable in labor market settings or the provision of public goods, but also in the context of social integration which might become increasingly important within the next years.

2. Study Design

In cooperation with a German online portal which operates as an intermediary between aid agencies and citizens who would like to support refugees by either volunteering activities or donations, we ran a phone survey among more than 1600 randomly drawn German residents within an eight-week period in spring 2016. The survey was intended to ask for respondents' worries about the current migration inflows, for their future prospects and their willingness to contribute to the process of refugees' integration. Since the aim of this study is to investigate whether gift-exchange between migrants and the native population is a suitable device to increase individuals' willingness to support refugees' integration, we used the following questions as outcome variables, which could be answered on a scale from 0 (disagree completely) to 7 (agree completely):

1. *I would be willing to provide a financial support for the integration of refugees, e.g. similar to a solidarity tax.*
2. *I could imagine getting to know and supporting a refugee family within my region.*

To identify a causal effect of gift-exchange on individuals' attitudes toward contributing to the refugees' integration, we implemented three versions of the questionnaire which differed only in a short information presented before asking the set of questions which include our variables of interest. Interviewees learnt about none, one or two pieces of information:

[All] Currently, there is a lot of talk about how voluntary work of German residents can support refugees' integration into the society.

[1] Less often, however, it is mentioned that likewise refugees could support the local population. Hence, recently launched projects aim at appointing refugees as volunteers themselves. In some places, refugees already do volunteer work for society, e.g. as caregivers in elderly residences.

[2] In practical, refugees' volunteering activities can also constitute a direct exchange relationship comparable to neighborhood assistance: A native supports a refugee with visits to the authorities. In turn, the refugee thanks her helper by undertaking small everyday tasks in doing housework or childcare.

The control group aims at capturing the general sentiment toward supporting refugees. By providing paragraph [1] (in addition to [All]) to a second group of interviewees, our so-called *third-party support* treatment, we test inasmuch individuals generally honor refugees' good deeds for natives by an increased willingness to support the refugees based on indirect positive reciprocity. A third group of interviewees received the *mutual support* treatment, covering all paragraphs presented above. Here, paragraph [2] additionally points to a potential peer-to-peer gift-exchange between a native supporter and a refugee and, hence, a direct reciprocal relationship.

Due to the random allocation of interviewees to the three groups, systematically different responses to the outcome questions would reveal the significance of gift-exchange for refugees' integration into the society. However, some individual characteristics, which are likely to influence the willingness to support refugees' integration, might not be distributed perfectly across these groups. Thus, we use additional data collected during the survey to control for these

differences using regression analysis. Besides respondents' gender, age and their current labor market status, we control for whether both parents were born in Germany since these factors have been shown to determine individuals' attitudes towards immigration (d'Hombres and Nunziata 2016, Markaki and Longhi 2013, Mayda 2006, Hainmueller and Hiscox 2007, O'Rourke and Sinnott 2006). Furthermore, since positive reciprocity is associated with receiving higher wages and working harder (Dohmen et al. 2008), it is likely to affect individuals' susceptibility toward gift-exchange in society. To obtain interviewees' reciprocal inclination, we used the average of three questions on positive reciprocity based on the measure developed by Perugini et al. (2003), but on an extended 8-point Likert Scale to avoid a tendency toward the central response option. We additionally include dummies for both being in contact with refugees and doing volunteering work in refugee aid. Finally, we control for interviewees' worries about the migration inflows. To capture the full scope of possible concerns, we asked whether they worry about their own economic situation, the development of crime, the cohesion of society and the immigration in general on a scale from 0 (= not concerned at all) to 2 (= very concerned). We built an index over the four items ('worries about immigration') by averaging all answers.

To obtain a representative sample that captures all potential German households, it is vital to integrate also phone numbers which are not officially listed in public available sources like phone books. In order to achieve this, we used extensive lists of pseudo-randomly generated telephone numbers according to the wide spread and generally recognized Gabler-Häder method (see Häder and Gabler 2009) provided by the GESIS institute Mannheim.⁹¹⁰ Since the sample is based on numbers instead of names, we were able to ensure anonymity to the respondents and, hence, reduce biased answers according to social desirability.

⁹ Due to this specific method, a large fraction of the generated numbers does not exist. Together with unanswered calls or denied interviews, almost 30,000 calls were necessary to obtain the 1637 interviews.

¹⁰ Notice that the interviewers only ran landline numbers in this study, as, according to the Federal Statistical Office, 91.0 percent of all German households still have a landline number. For the data, see: https://www-genesis.destatis.de/genesis/online/logon?language=de&sequenz=tabellen&selectionname=63111*.

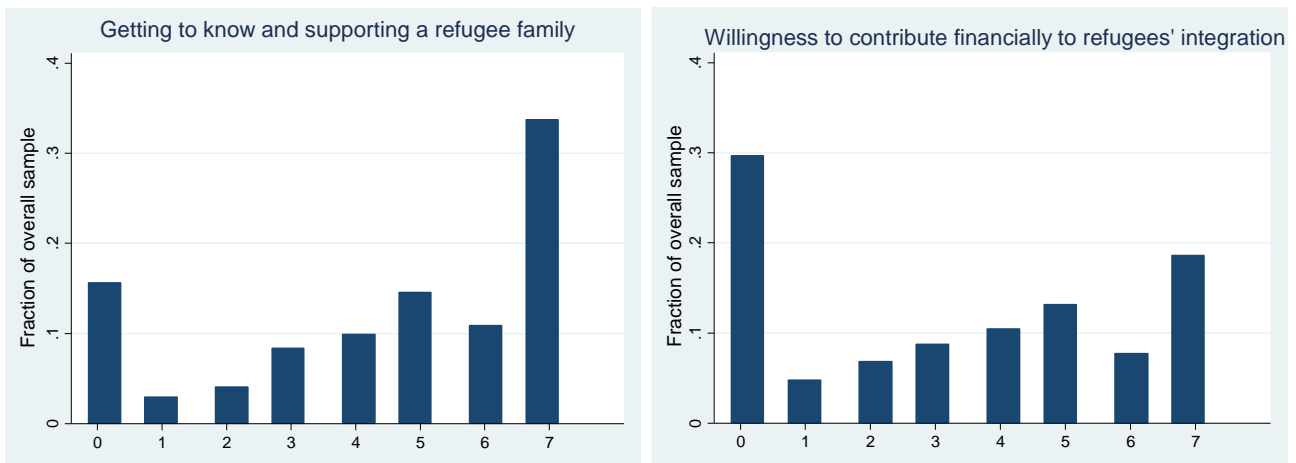
3. Results

3.1 Descriptive Statistics

In total, our data set consists of 1637 completed interviews. Even though our interviews have been conducted primarily during day time, we have a sizeable share of 41.9 percent employed individuals within our sample.¹¹ Roughly 40 percent of the interviewees have already had contact to refugees and 13 percent were engaged in volunteering work in refugee aid. This number is very similar to the one recently reported in a large public opinion survey on refugees in Germany: Eisnecker and Schupp (2016) note that about one tenth of respondents have been active in helping and supporting refugees (as of February 2016, SOEP). Even though we observe a substantial number of individuals that have already been in contact with refugees, it appears that our sample also covers a noticeable amount of individuals who state to be worried when thinking about the refugee inflow: roughly 22 percent are very concerned about two or more out of the four dimensions we asked about.

When looking at the distribution of responses to the questions of interest, as shown in Figure 1, we observe a similar divisiveness. We find that, overall, about 50% of the respondents take one of the two the extreme positions on an eight-point scale: they either agree or disagree completely to be willing to support refugees' integration by getting to know a family within the region or by contributing financially. The remaining 50% are distributed in between.

Figure 1: Distribution of Interviewees' Claimed Willingness to Support Integration



Note: 0 means “strongly disagree” and 7 “strongly agree”.

¹¹ Further descriptive statistics on our sample composition can be found in Appendix A.1.

Looking at the average value of responses differentiated by treatments, we get a first impression of whether the gift-exchange treatments had an impact on individuals' attitudes toward supporting refugees' integration. Whereas the control group has an average value of 4.29 when being asked about the willingness to support a refugee family, this value is as high as 4.56 in the *third-party support* treatment group, and rises even further to 4.68 in the *mutual support* treatment group. As regards financial contributions, Figure 1 shows that generally fewer people are willing to support the integration of refugees, resulting in an average value of 3.20 within the control group. Again, we observe an increase among the *third-party support* treatment group with an average of 3.40. The *mutual support* treatment group shows an average of 3.29.

3.2 Regression Analyses

Specification (1) in Table 2 supports the suggestion that refugees' volunteering activities can have a positive effect on natives' willingness to get to know and support a refugee family privately. Controlling for their observable characteristics, we find a highly statistically significant impact of both gift-exchange treatments (with $p = 0.006$ and $p = 0.017$, respectively). Given that the point estimates are nearly identical ($p = 0.739$), we cannot confirm the conjecture that individuals would honor refugees' volunteering activities only if they benefit from their activities themselves.

Due to differences in individuals' reciprocal inclination, it is feasible to assume that there is heterogeneity in interviewees' response to the two gift-exchange treatments. Hence, we apply a median split and analyze the sample according to individuals' reciprocal inclination, see specifications (2) and (4) in Table 2. For the less reciprocally inclined individuals, the estimated coefficients of both treatments remain positive in sign but, in fact, they turn out to be insignificant. To the contrary, the point estimates for the highly reciprocal individuals rise to 0.472 and 0.477, respectively.

Table 2: Individuals' Willingness to Contribute Time

	(1) All	(2) Low reciprocal inclination	(3)	(4) High reciprocal inclination	(5)
<i>Third-party support treatment</i>	0.336*** (0.122)	0.234 (0.208)	0.293 (0.266)	0.461*** (0.158)	0.403* (0.240)
<i>Third-party support treatment X previous contact to refugees</i>	--	--	-0.176 (0.313)	--	0.152 (0.320)
<i>Mutual support treatment</i>	0.297** (0.121)	0.104 (0.208)	-0.098 (0.331)	0.477** (0.191)	0.614** (0.275)
<i>Mutual support treatment X previous contact to refugees</i>	--	--	0.475 (0.399)	--	-0.315 (0.311)
Contact to refugees	0.696*** (0.094)	0.779*** (0.170)	0.686*** (0.231)	0.633*** (0.104)	0.690*** (0.183)
Volunteering work in refugee aid	0.827*** (0.176)	1.104*** (0.288)	1.106*** (0.292)	0.604*** (0.223)	0.588** (0.230)
Some worries about immigration	-1.033*** (0.102)	-1.136*** (0.164)	-1.112*** (0.171)	-0.940*** (0.150)	-0.933*** (0.150)
High worries about immigration	-2.600*** (0.158)	-2.498*** (0.262)	-2.480*** (0.260)	-2.861*** (0.205)	-2.846*** (0.204)
Positive reciprocal inclination	0.468*** (0.049)	--	--	--	--
Constant	2.018*** (0.516)	4.113*** (0.593)	4.135*** (0.594)	5.576*** (0.549)	5.521*** (0.582)
<i>Further controls:</i>					
Socio-demographics	Yes	Yes	Yes	Yes	Yes
<i>N</i>	1637	765	765	872	872
Adjusted <i>R</i> ²	0.319	0.267	0.268	0.293	0.293

Note: Claimed willingness to get to know and to support a refugee family within the region as dependent variable. OLS estimates. Standard errors clustered on the day of the interview in parentheses. Besides age and gender, the socio-demographics include whether both parents were born in Germany and respondents' labor market status (job-seeking, student, employed with and without possessing an academic degree). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Since the impact of the treatments is especially interesting for those individuals who have not been in contact to refugees before—they might be exceptionally doubtful about their new fellow citizens—, we include interaction terms between our treatment interventions and previous contact, see specifications (3) and (5) in Table 2. Even though the significance level goes down, the point estimates for our treatment interventions barely change if looking at the more reciprocally inclined individuals in specification (5). Here, the *mutual support* treatment seems to have a slightly bigger impact than the *third-party support* treatment. This difference is, however, statistically insignificant ($p = 0.371$). For the less reciprocally inclined respondents in specification (3), we still do not find a statistically significant impact of the treatment interventions but we observe a rather large point estimate for individuals with previous contact to

refugees in the *mutual support treatment*. If at all, the less reciprocally inclined individuals seem to value the idea of a directly reciprocal relationship.

Result 1: Refugees' volunteering activities increase interviewees' claimed willingness to get to know and support a refugee family privately. The prospect of a mutually beneficial relationship has no additional impact. The results are driven by highly reciprocal individuals. Importantly, the effects hold when looking at those individuals who have not been in contact to refugees before.

Besides the finding that above median reciprocally inclined individuals are more sensitive to our treatment intervention, we generally observe that the more reciprocal individuals are, the higher is their willingness to support refugees' integration. A one point increase on the 8–point Likert Scale is associated with slightly less than a 0.5 point increase in individuals' stated willingness to contribute time. Additionally, there is a sizeable difference in the estimated constants for the two subsamples, roughly 4.0 for less reciprocally inclined individuals vs. 5.5 for individuals with a higher reciprocal inclination. This positive association might be explained by a positive correlation between reciprocal inclination and the Big Five personality trait openness to experience (Dohmen et al. 2008).

As to be expected, we find that those who have already been in contact to refugees before and those who even volunteered in refugee aid have a more positive attitude towards contributing time to support refugees' integration. The most pronounced correlation, however, is to what degree interviewees are worried about the current migration inflow. If a respondent is somewhat¹² worried, the claimed willingness for private support shrinks by about one point on the 8–point Likert Scale. Being highly worried about immigration is even more extreme: Respondents' stated willingness for private support is between 2.48 and 2.85 points lower compared to individuals who have no or only minor worries about immigration.

In a next step, we estimated average marginal effects to assess the effect size of the interventions more properly. Table 3 shows both the distribution of individuals' stated willingness to get to know and support a refugee family privately within the control group and the average marginal

¹² The index on worries about immigration is distributed on a scale from 0 to 2. An average value of up to 0.5 is categorized as no or only minor worries about immigration (39.7% of all observations). Average values bigger than 0.5 and less than 1.5 are categorized as somewhat worried about immigration (38%). An average value that is 1.5 or higher means that individuals stated to be very concerned in at least 2 out of 4 dimensions (and somewhat concerned in the other two dimensions) so that they are categorized as being highly worried about immigration (22.3%).

effects that are obtained from ordered probit regressions. We observe that the categories 0 to 4 are chosen less often. Even though the estimated average marginal effects for the categories 1 to 4 seem to be rather small, they are not negligible given the overall low percentage shares for each one of these categories.

Table 3: Treatment Effects on the Distribution of Individuals' Willingness to Contribute Time

	Distribution in control group (<i>in percent</i>)	Average marginal effects of treatment interventions	
		Third-party support treatment	Mutual support treatment
0 = Strongly disagree	16.69	-0.033***	-0.032***
1	4.26	-0.004**	-0.004**
2	3.27	-0.005**	-0.005**
3	9.82	-0.008**	-0.007**
4	11.29	-0.005***	-0.005***
5	14.24	-0.001	-0.001
6	10.47	0.004***	0.004***
7 = Strongly agree	29.95	0.052***	0.050***

Note: Average marginal effects obtained from ordered probit regressions with claimed willingness to get to know and to support a refugee family within the region as dependent variable. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The reduction of individuals who stated not at all to be willing to support a refugee family privately by about 3.3 percentage points is, however, the more notable and probably also the most important change. This number means that the share of individuals with the most negative attitudes toward supporting the integration of refugees shrinks by almost 20 percent. To a slightly lower extent of about 17.5 percent, we do observe an increase of individuals who strongly agree to get to know and support a refugee family privately. Hence, the observed treatment effect is not only due to very skeptical individuals who become slightly more positive, there is an overall positive shift of respondents' attitudes toward private support.

Result 2: Refugees' volunteering activities have an especially large impact on both ends of the distribution of interviewees' willingness to contribute time. The share of individuals with the most negative attitudes shrinks by almost 25 percent.

As previously shown, people are on average more willing to get personally in touch with a refugee family than to spend their money for supporting the integration process. Getting to know a family might only be costly in terms of some time spent with visits to the authorities or the like, and the acquaintance can be broken up quite easily if it does not work out as the persons involved

have hoped for. Hence, the question arises whether the treatment intervention also increased individuals' willingness for financial support. Table 4 presents the corresponding regression results.

Looking at the *third-party support* treatment, we find an almost identical point estimate for the willingness to contribute money compared to previous results on the willingness to contribute time. To the contrary, the positive effect in the *mutual support* treatment disappears completely. One simple explanation thereof might be that people do not see a reason why they should additionally pay for refugees who already receive active support. Furthermore, one might argue that, if people themselves are part of such an arrangement, respondents could prefer giving money to refugees they are already in touch with.

Table 4: Gift-Exchange and Individuals' Willingness to Contribute Money

	(1) All	(2) Low reciprocal inclination	(3) High reciprocal inclination	(4) High reciprocal inclination	(5) High reciprocal inclination
<i>Third-party support treatment</i>	0.290*** (0.099)	0.436*** (0.143)	0.472** (0.225)	0.192 (0.204)	0.078 (0.275)
<i>Third-party support treatment X previous contact to refugees</i>	--	--	-0.104 (0.413)	--	0.266 (0.345)
<i>Mutual support treatment</i>	-0.004 (0.125)	0.075 (0.171)	0.012 (0.277)	-0.014 (0.213)	-0.185 (0.290)
<i>Mutual support treatment X previous contact to refugees</i>	--	--	0.147 (0.449)	--	0.397 (0.393)
Contact to refugees	0.485*** (0.106)	0.573*** (0.205)	0.559 (0.349)	0.453*** (0.143)	0.240 (0.257)
Volunteering work in refugee aid	0.806*** (0.186)	0.545 (0.387)	0.545 (0.388)	0.997*** (0.227)	0.997*** (0.228)
Some worries about immigration	-1.364*** (0.178)	-1.381*** (0.202)	-1.371*** (0.205)	-1.286*** (0.251)	-1.298*** (0.249)
High worries about immigration	-2.979*** (0.156)	-2.711*** (0.234)	-2.704*** (0.232)	-3.317*** (0.233)	-3.328*** (0.230)
Positive reciprocal inclination	0.449*** (0.056)	--	--	--	--
Constant	1.093*** (0.532)	3.484*** (0.784)	3.483*** (0.785)	3.969*** (0.498)	4.088*** (0.509)
<i>Further controls:</i>					
Socio-demographics	Yes	Yes	Yes	Yes	Yes
<i>N</i>	1627	763	763	864	864
Adjusted <i>R</i> ²	0.302	0.246	0.245	0.288	0.287

Note: Claimed willingness to financially support the integration of refugees as dependent variable. OLS estimates. Standard errors clustered on the day of the interview in parentheses. Besides age and gender, the socio-demographics include whether both parents were born in Germany and respondents' labor market status (job-seeking, student, employed with and without possessing an academic degree). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Splitting the sample once again according to individuals' reciprocal inclination, the result is somewhat contradictory to the theory that especially highly reciprocal interviewees should honor refugees' helpful behavior, the positive treatment effect seems to be driven by individuals with a lower reciprocal inclination. One possible explanation thereof might be found in the relationship between reciprocal inclination and other personality traits: Previous literature has proven a positive correlation between reciprocal inclination and the personality trait openness to experience, extraversion and agreeableness (Dohmen et al. 2008). Hence, the more reciprocally inclined individuals are, the more they tend to be compassionate and cooperative toward others and, arguably, tend to be curious about unknown cultures, and the more they seek the company of other people. Then, respondents with the highest reciprocal inclination should be prone to the treatment intervention as regards the willingness to help with meeting and supporting refugees personally whereas the less reciprocal ones could be responsive to the treatment when it is about the willingness to contribute financially. Again, the treatment effect holds for both groups of individuals, with and without previous contact to refugees.

Compared to the regression results for individuals' willingness to contribute time, we find similar correlations for reciprocal inclination and the worries about immigration. Having previously been in contact to refugees and volunteering in refugee aid still show positive point estimates but these results are less robust. Probably, this findings suggests that positively influencing individuals' willingness to contribute financially to refugees' integration is not as easy as influencing their willingness to contribute their time.

Result 3: Refugees' volunteering activities increase interviewees' claimed willingness to contribute financially, too. However, this is not the case if interviewees are pointed to a direct relationship between a native and a refugee. Contrary to the willingness to contribute time, the positive effect on the willingness to contribute money is driven by individuals with a lower reciprocal inclination.

Again, we estimated average marginal effects from ordered probit regressions as shown in Table 5. The results for both treatments look quite different from the results for the willingness to contribute time. Consistent with the OLS results, the mutual support treatment does not have any impact on the distribution of attitudes toward financial support. The average marginal effects for the third-party support treatment are estimated to be negative for the categories 0 to 3 and from category 4 onwards, they are estimated to be positive.

Table 5: Treatment Effects on the Distribution of Individuals' Willingness to Contribute Money

	Distribution in control group (<i>in percent</i>)	Average marginal effects of treatment interventions	
		Third-party support treatment	Mutual support treatment
0 = Strongly disagree	30.10	-0.033***	-0.001
1	6.09	-0.002***	-0.000
2	7.40	-0.002**	-0.000
3	8.55	-0.001**	-0.000
4	8.72	0.001**	0.000
5	13.49	0.005***	0.000
6	8.55	0.006***	0.000
7 = Strongly agree	17.11	0.027***	0.000

Note: Average marginal effects from ordered probit regressions with claimed willingness to financially support the integration of refugees as dependent variable. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Consistent with the finding that individuals are generally somewhat more reluctant to contribute their money, the positive impact of *the third-party support* treatment intervention on both categories 0 and 7 is not as strong as in the case of the willingness to contribute time. The share of individuals who stated not at all to be willing to contribute financially shrinks by only 11 percent whereas the share of individuals choosing category 7 increases by roughly 16 percent. These effects are still sizeable but somewhat lower than before.

Result 4: Again, we find the largest impact of the treatment intervention to be on both ends of the distribution. Compared to the willingness to contribute time, the impact on the willingness to contribute money is a little lower.

Finally, one might ask whether interviewees' responses are driven by a social desirability bias. Therefore, after the treatment intervention respondents also had to state how important the integration of refugees is for themselves. A social desirability bias should influence these responses, too. The average values are 5.66 (control group), 5.66 (*third-party support* treatment) and 5.70 (*mutual support* treatment). The point estimates for the treatment groups are 0.065 for the *third-party support treatment* ($p=0.524$) and -0.024 for the *mutual support treatment* ($p=0.826$) if re-estimating the baseline specification (1) as in the Tables 2 and 4. Given these results, a social desirability bias seem to be rather unlikely.

4. Conclusion

While volunteerism is always good for society, we analyzed potential positive spill-over effects resulting from the notion that refugees are engaged in volunteer work. While the desire of many refugees to support their hosting countries has recently led to some formal and non-formal arrangements, we aimed on investigating whether the local population's willingness to support refugees' integration financially and privately increases as a reciprocal response if refugees engage in volunteer work. To this end, we conducted a nationwide telephone survey using an experimental variation. We find that individuals behave both directly and indirectly reciprocal as regards their stated willingness to get to know and support a refugee family within their region, a result which is driven by respondents with a high reciprocal inclination. We do not observe that the impact of the two treatment interventions differs depending on the respondents' previous contact to refugees. Contrary to the private support, the stated willingness to contribute financially to the refugees' integration process is significantly higher only after being informed about the refugees' general volunteering engagement and only for less reciprocal individuals. This finding might be explained by the personality traits which are related to an individual's level of reciprocal inclination since more reciprocally inclined individuals tend to be more compassionate and cooperative toward others, curious about unknown cultures, and they seek the company of other people. Hence, it is plausible that interviewees with the highest reciprocal inclination are prone to the treatment intervention as regards the willingness to help with meeting and supporting refugees personally whereas the less reciprocal ones are responsive to the treatment when it is about the willingness to contribute financially.

In a nutshell, the idea of gift-exchange between refugees and the local population seems to work for a variety of individuals and, hence, our results underline the importance of gift-exchange also in the context of social integration. Given that societies are always composed of different groups, such as majorities and minorities, our findings are not only good news for the integration of refugees but for the society as a whole since gift-exchange can foster cooperation even between in- and out-group members. Admittedly, we observed only respondents' stated willingness to support the integration process instead of real action so that our results have to be taken with care to a certain extent. However, the survey was completely anonymous so that interviewees had basically no incentives to respond according to social desirability, and this argument holds for all three treatment conditions. Even though our results do not seem to be huge in size, the

psychological ‘contact-hypothesis’ suggests that prejudices against minorities decline if being in contact (see, e.g., Binder et al. 2009, Finseraas and Kotsadam 2017). If refugees’ social commitment makes only some individuals to get in touch with their new fellow citizens—and we do find that the number of individuals who strongly agree to be willing to support a refugee family privately increases by about 8 percentage points—the decline of prejudices might also pass on to third-parties such as family and friends as kind of a self-amplifying effect.

From a political perspective, our results imply that it might pay off to support and foster volunteering work of refugees, for example by removing legal barriers or offering incentives. Even though institutionalized possibilities to volunteer became some attention e.g. by opening the federal voluntary service for refugees with good remaining forecasts, in some areas it is still the case that individuals without a German citizenship are not allowed to engage (Vogel et al. 2017). Furthermore, refugees might simply not be aware of what volunteering is or how exactly to engage so that it might be worth considering to approach them directly and inform them about the voluntary sector, which could e.g. be done by placement agencies that match organizations looking for volunteers with those individuals interested in volunteering. Given that especially refugees might not have a paid job yet, budget constraints could be another barrier to engage which could be removed by receiving small expense allowances. According to our empirical findings, removing barriers has to be followed by raising the local population’s awareness of immigrants’ volunteer work since indirect reciprocity, one of our proposed channels to influence attitudes toward immigration, can only operate if the good deeds to be reciprocated are observable (Yoeli et al. 2013).

Recapitulating our findings, the question arises under which conditions gift-exchange relationships between refugees and natives work out. One might, for example, critically examine whether natives honor refugees’ volunteering activities similarly if they engage only for strategic reasons, as proposed by Khvorostianov and Remennick (2017), since e.g. Engelmann and Fischbacher (2009) have shown that strategic reputation building weakens the reciprocal relation. Investigating this question remains a project for future research.

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Appendix

Table A.1: Sample Composition

	All	Control Group	Third-party support	Mutual Support
Previous contact to refugees (<i>yes</i>)	0.409	0.414	0.380	0.432
Volunteering work in refugee aid (<i>yes</i>)	0.130	0.128	0.118	0.143
Worries about immigration (<i>0-2</i>)	0.869	0.878	0.884	0.841
Positive reciprocal inclination (<i>0-7</i>)	5.974	5.957	5.982	5.987
Both parents born in Germany (<i>yes</i>)	0.790	0.787	0.794	0.791
Female (<i>yes</i>)	0.599	0.601	0.603	0.594
Student (<i>yes</i>)	0.128	0.119	0.122	0.143
Job-seeking (<i>yes</i>)	0.040	0.033	0.038	0.050
Employed – without academic degree (<i>yes</i>)	0.302	0.301	0.344	0.261
Employed – with academic degree (<i>yes</i>)	0.117	0.137	0.107	0.104*
Age	51.812	52.319	50.983	52.062
<i>N</i>	1637	611	524	502

Note: Wilcoxon rank-sum tests and Chi-squared tests, respectively, were used to test for differences between the control group and the particular treatment group. Significance levels are denoted as follows: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.