## Online Appendix

Does Aid Reduce Anti-Refugee Violence? Evidence from Syrian Refugees in Lebanon<br>American Political Science Review<br>M. Christian Lehmann \& Daniel T.R. Masterson

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## A. 1 Theoretical framework

In this section we present a very simple economic model to illustrate how humanitarian aid to refugees affects hostility against them. Although much existing policy and academic literature suggests that aid would increase violence, our main conclusion is that the effect is ambiguous. As much existing work suggests, aid can increase resentment that refugees receive aid from humanitarian organizations while host communities do not, thereby fueling anti-refugee sentiment and hence hostility. On the other hand, hostility may emerge from the (perceived) adverse economic consequences of refugees for host communities - as strategic tool (to impede refugees from causing economic harm, extract transfers, or vengeance) or as instinctual emotional reaction (caused by anger) and aid may reduce hostility by increasing refugees' capacity to appease hosts through transfers and 'Keynesian multiplier type' benefits (more demand for local goods and services).

Basic setup. We consider an area inhabited by a population of hosts that faces the sudden arrival of refugees. This area could be a country, town, village, or other community. The model is suited for both refugees and internally displaced persons (IDPs). There are two players: one randomly drawn member $h$ from the host community population $H$, and one randomly drawn refugee $r$ from the refugee population $R$. In practice, $r$ encounters $h$ on various occasions, including at home (having a host as neighbor or landlord), at the market, while working or searching for work, etc. We model one of these encounters.

Consumption. Consider the impact of refugees on $h$ 's consumption. In the recent Syrian refugee crisis, media and popular press provide many examples of politicians and other civil society representatives (e.g., labor unions) arguing in favor of adopting measures to limit the inflow of refugees because refugees allegedly (i.) drive down wages and increase unemployment, (ii.) increase crime, and (iii.) receive benefits from the host government financed through taxes paid by the host population. ${ }^{1}$ All three claims imply a decrease in consumption for hosts.

Let $c_{h}$ be consumption of $h$ in the absence of refugees. Consumption of $h$ in the presence of refugees as $c_{h}-\sum_{i=1}^{R} \epsilon_{i}$, where $\epsilon_{i}$ denotes the decrease in consumption that $h$ attributes to refugee $i$ 's behavior. Below we show that if $h$ is right or wrong in thinking that $\epsilon$ is caused by refugees does not matter for his decision to adopt hostile measures; what matters in what $h$ believes, which has policy relevance, because it implies that policy makers (or media, or other institutions that form public opinion) can either fuel hostility by suggesting to citizens that a current economic downturn is due to refugees, or reduce hostility for example by highlighting that the current downturn has causes unrelated to refugees (e.g., business cycle fluctuations).

Warm glow and resentment. Warm glow, henceforth $\gamma$, is the positive feeling associated with helping others. ${ }^{2}$ Hosts are helping refugees by proving refuge from the perils of war, and may thus experience warm glow.

[^0]Resentment is the bitter indignation at having been treated unfairly. During fieldwork in host communities in Lebanon we encountered two types of resentment caused by refugees. The first type is that host community members allegedly feel that refugees came to their community not for humanitarian but for economic reasons (e.g., "to make money") at the cost of local residents (stealing local jobs and driving down wages), because if safety was the primary objective of refugees, then refugees could have fled to places in Syria that are not under siege. This type of resentment also appears frequently in the media in high-income host countries, where refugees are accused of fleeing there to earn higher wages or receive generous social security benefits, and it seems that much of the political resistance to accept more refugees is centered around this type of resentment.

The second type of resentment concerns the distribution of humanitarian aid. Allegedly, host communities resent that refugees receive extensive humanitarian aid, while host communities are not compensated for ever falling incomes.

Altogether, this suggests that $h$ 's resentment against $r$, henceforth $\rho_{r}$, is an increasing function of $r$ 's effect on $h$ 's consumption (first type of resentment), $\epsilon_{r}$, as well as the amount of humanitarian aid that $r$ receives relative to $h$ (second type of resentment), $\alpha_{r}-\alpha_{h}$.

Hostility. A host who perceives a drop in his utility due to refugees - due to lower consumption and/or resentment, and which is not offset by warm glow - may adopt hostile measures (e.g.,violence) against refugees, for either "rational" or "irrational" reasons. Rational hostility is when $h$ deliberately (strategically) uses hostile measures either with the objective to make $r$ stop doing whatever $h$ thinks reduces his consumption (e.g., stop working), or for vengeance (i.e., $h$ gains utility from inflicting disutility on $r$ ), or both. Irrational hostility, on the other hand, is an instinctual (i.e., not premeditated) emotional reaction caused by anger/resentment.

We henceforth focus on the analytically more interesting case of rational hostility (below we discuss the implications of humanitarian aid for irrational hostility). When deciding whether to carry out a hostile action $h$ weighs expected benefits and costs. The expected benefit consists of two components: first, the belief $\beta_{r} \in[0,1]$ that hostility intimidates $r$ (makes $r$ stop doing whatever $h$ thinks reduces his consumption, i.e., $\epsilon>0$ becomes $\epsilon=0$ ). The second benefit is utility derived from vengeance, $\nu_{r}$, which we assume to be an increasing function of resentment $\left(\rho_{r}\right)$.

The costs of exercising hostility include direct costs $\kappa$ (in the case of violence, for example, the expected disutility of being fined or jailed, or some intrinsic disutility of hurting another person).

We can thus write $h$ 's expected utility of hostility as

$$
\begin{equation*}
\beta_{r} u\left(c_{h}-\sum_{i \neq r}^{R} \epsilon_{i}\right)+\left[1-\beta_{r}\right]\left[u\left(c_{h}-\sum_{i=1}^{R} \epsilon_{i}\right)\right]-\kappa+\nu_{r}\left(\rho_{r}\right)+\sum_{i=1}^{R} \gamma_{i}-\sum_{i=1}^{R} \rho_{i} \tag{A1}
\end{equation*}
$$

Note that in this formulation, $h$ believes that hostility against $r$ affects only the behavior of $r$, i.e., only $\epsilon_{r}$, but not that of other refugees. Further, whether or not hostility intimidates $r$, a host gets utility from vengeance.

We are not suggesting that every host seeks vengeance, or feels resentment, or experiences a drop in consumption. Our theoretical framework merely illustrates the multiple possible causes of hostility. In reality, we think each of these causes are distributed among the host population according to some cumulative distribution function, hence vengeance caused by resentment may be the primary reason for hostility for some hosts, while for other hosts it may be the hope that hostility intimidates refugees, while again other hosts may turn hostile for irrational reasons as described above.
$h$ 's utility when abstaining from hostility against $r$ is given by

$$
\begin{equation*}
u\left(c_{h}-\sum_{i=1}^{R} \epsilon_{i}\right)+\sum_{i=1}^{R} \gamma_{i}-\sum_{i=1}^{R} \rho_{i} \tag{A2}
\end{equation*}
$$

Consequently, $h$ exercises hostility against $r$ if (A1) $\geq$ (A2). Assuming that the intrinsic cost of hostility, $\kappa$, is distributed among the host population according to some cumulative distribution function $F$ and, for ease of exposition, linear utility in consumption $(u(\cdot)=\cdot)$, then the probability that $h$ exercises hostility against $r$ is

$$
\begin{equation*}
\operatorname{Pr}(\text { hostility })=F\left(\beta_{r} \epsilon_{r}+\nu_{r}\left(\rho_{r}\right)\right) \tag{A3}
\end{equation*}
$$

which is increasing in $h$ 's belief that hostility intimidates $r$, the reduction in consumption that $h$ attributes to $r$, and resentment caused by $r$.

The reduction in consumption and resentment caused by refugees other than $r$ do not affect $h$ 's decision be hostile towards $r$, which is due to our assumption that hostility against $r$ affects only $r$ 's behavior but not that of other refugees. If we would assume that hostility against $r$ potentially intimidates other refugees as well (e.g., r's family and friends), and allow vengeance utility to depend not only on $h$ 's resentment against $r$ but also $h$ 's resentment against other refugees (e.g., family and friends of $r$ ), then the probability of hostility against $r$ would be increasing in the reduction in consumption and resentment caused by refugees other than $r$.

Warm glow $(\gamma)$ does not enter the probability of hostility because we assume that exercising hostility does not prevent $h$ from experiencing warm-glow, which may be realistic in some cases but not in others. For example, a local shop owner may turn hostile to entice $r$ to start paying his bills. But that must not prevent the shop owner from feeling warm-glow that he helps refugees by letting them shop on credit. If, on the other hand, hostility entices a refugee to, for example, go back to his origin country, then $h$ should stop experiencing warm-glow. If we would allow for this last possibility, then $\gamma$ would enter with a negative sign in expression A3, i.e., hosts experiencing more warm-glow are less likely to exercise hostility.

Impact of international aid to refugees on hostility. Little more than inspection of the probability of hostility is necessary to see that international aid (in the form of cash transfers) to refugees has an ambiguous effect on hostility. On the one hand, it reduces the likelihood of hostility by increasing refugees' capacity to appease hosts through transfers and 'Keynesian multiplier type' benefits (more demand for local goods and services) - i.e., through decreasing $\epsilon$. On the other hand, aid increases the likelihood of hostility by increasing resentment that refugees receive aid while hosts not, hence incentives for vengeance.

This suggests that if hostility emerges from the (perceived) adverse economic consequences of refugees for host communities, international aid is likely to reduces hostility. If, on the other hand, hostility is caused mainly by resentment that refugees receive aid from humanitarian organizations while host communities not, then more aid further fuels anti-refugee sentiment, and hence hostility.

In principle, the same reasoning also applies for international aid given in-kind (rather than cash) to refugees (e.g., food parcels), because standard economic theory would predict that refugees
sell some (not all) of their in-kind aid (e.g., food) to buy other goods (e.g., clothing) that enter their utility function. But since they will only sell some of their in-kind aid, cash transfers are likely to create more demand for local goods and services than in-kind transfers. This suggests that cash transfers are more effective in reducing hostility than in-kind transfers.

Lastly, we have limited our analysis to rational hostility, but we believe our results extend to irrational hostility. Above we define irrational hostility an instinctual (i.e., not premeditated) emotional reaction caused by resentment. I.e., hostility is triggered instinctually when resentment exceeds some threshold value (which is distributed among the host population according to some cdf). Above we explained that there are two types of resentment, the first type resulting from the feeling that refugees came not for humanitarian but for economic reasons, at the cost (wages, jobs, etc.) of local residents. This first type of resentment is thus increasing in $\epsilon$. International aid to refugees decreases $\epsilon$ by increasing refugees' capacity to compensate hosts, hence it reduces this first type of resentment. On the other hand, aid increases the second type of resentment that refugees receive aid while hosts not. Therefore, also the effect of aid on irrational hostility is also a priori ambiguous: aid is likely to reduce irrational hostility only if it emerges mainly from the first type of resentment.

## A. 2 Detailed description of aid program and background

## A.2.1 The Syrian Refugee Crisis in Lebanon

In January 2011, the uprising in Tunisia against the ruling regime marked the start of what would later be called the Arab Spring. Tunisia's revolution led to other popular uprisings in nearby countries that, like Tunisia, were governed by autocratic leaders. As a consequence, by February 2012, rulers had been forced from power in Tunisia, Egypt, Libya, and Yemen.

The wind of revolution blowing from Tunisia to Egypt did not take long to reach Syria. In March 2011, peaceful protesters took to the streets calling for governmental reforms, first in Dara'a
and then in many other Syrian cities. Watching leaders fall across the region, the Syrian leadership reasoned that a harsh response would stop the protests. Aside from token reforms, the government's strategy was indiscriminate violence against protesters and civilians. Syrians, however, were not cowed by the crack-down and protests only spread. As government violence continued, officers defected from the Syrian Armed Forces in July 2011 and created the Free Syrian Army, marking the official beginning of a two-sided armed conflict.

The international community has repeatedly failed in efforts to find a negotiated political solution. The US government and allies have imposed economic sanctions on Syria, condemned Asad, and called on him to step down. The UN Security Council has been constrained by repeated vetoes by China and Russia. Separate attempts to broker peace plans by Russia and the Arab League have failed. UN-led peace conferences, called Geneva I and Geneva II, also failed. As the war continued and more radical insurgent groups emerged, a negotiated end to the war seemed less and less feasible. As of late 2018, the government controls a majority of national territory, containing a vast majority of Syria's population. Yet despite the apparent proximity of a government victory, nationwide civilian casualties have barely dropped over time. Estimates of the number killed in the war, including both civilians and fighters, approach a half million dead.

The Syrian conflict sparked a large refugee crisis. Since the beginning of the conflict in 2011, Syrians have fled to Lebanon, Jordan, Turkey, Iraq, Egypt and beyond. Using UN registration numbers, which will provide a conservative estimate of displacement, four million Syrians have fled to neighboring countries and eight million are displaced inside Syria.

As of November 2013, at the beginning of the cash transfer program we study in this paper, more Syrian refugees resided in Lebanon than in any other country (although Turkey has hosted the largest number of Syrian refugees since December 2014). In terms of land area Lebanon is three-quarters the size of the third smallest U.S. state, Connecticut. ${ }^{3}$ Lebanon's GDP per capita was $\$ 9,870$ in 2013. The economy has been stable and growing, with inflation in the single-digits since 2008 (except for a twelve-month period from June 2012 to June 2013, when inflation stayed around $10 \%$ ). Wealth, however, is concentrated mainly in the metropolitan area along the Lebanese coast, where services and industry dominate. But poverty is widespread when moving beyond the

[^1]country's metropolitan coast, particularly in the mountains - the region we are studying - where agriculture is the main source of livelihood.

Due to the massive inflow of refugees, Lebanon's population increased by a quarter in less than four years. The magnitude of this inflow can only be understood relative to Lebanon's population of 4.5 million people. Lebanon is located directly next to the populous western area of Syria that has seen much intense fighting and brutality since the conflict began in 2011. The pace of the refugee flow more than quadrupled between 2012 and 2014. At the beginning of 2013 there were 130,799 Syrian refugees in Lebanon. By the beginning of April 2013 this had increased to a quarter of a million. By the beginning of 2014, there were 807,000 refugees, and in May 2014 the number passed one million. The number of refugees has stayed similar since 2015 when the Lebanese government effectively closed the borders.

The UN has not established official refugee camps in Lebanon. Syrian refugees live in over 1,300 communities across the country. This is similar to the situation for the majority of Syrian refugees in Jordan, where $80 \%$ live outside camps, and Turkey, where $70 \%$ live outside camps. Worldwide, this is the norm rather than the exception, since only one third of the world's refugees live in camps today. In the top-six refugee hosting countries (Pakistan, Iran, Lebanon, Jordan, Turkey, and Kenya) the share of refugees living outside camps is $63 \%$ in Pakistan, $97 \%$ in Iran, $100 \%$ in Lebanon, $80 \%$ in Jordan, $70 \%$ in Turkey, and $8 \%$ in Kenya.

## A.2.2 The UN cash transfer program

In November 2013, the UN started a new aid program for almost a hundred thousand Syrian refugee families in Lebanon. The goal of the program was to help refugees stay warm, dry, and healthy during the cold wet winter months. Since the program was only intended for the winter it ended in April 2014. Eligibility was determined by geographic criteria, to target refugees living at high altitudes exposed to cold weather, as well as demographic criteria, to target only poor and vulnerable refugees. Eligible refugee households received an ATM card from the UN. Between November 2013 and March 2014, the UN transferred about $\$$ US 100 per month to a bank account linked to each ATM card, $\$ \mathrm{US} 575$ in total over the course of six months (which is roughly $\$ \mathrm{US} 1,000$ in PPP
terms). Next we describe the targeting and benefits in detail.

Targeting criteria. The UN conducted a proxy-means test to classify households as 'poor' and 'not-poor'. The test consisted of a simple poverty score calculated as the weighted sum of number of children, adults, elderly, and disabled (each broken down into smaller age brackets). The weights associated with children, elderly, and disabled were positive, and the weight for adult males was negative. A higher number of dependents (i.e. children, elderly, or disabled) thus generated higher poverty scores. Based on available funding, the UN chose a cut-point. Households above the cut-point were considered 'poor'. The variables for the proxy-means test were collected when a refugee household registered with the UN at any one of numerous UN registration centers across Lebanon. Refugees were advised through flyers and other advertisements to register at one of the centers. Of the 158,129 refugee households that registered between March 2011 and October 2013 the UN classified 89,597 as 'poor'.

In addition to being classified as 'poor' a refugee household needed to reside at or above 500 meters altitude to be considered eligible for the aid program. The UN's altitude measure is defined at the village level according to where respondents were registered as living at the time of treatment assignment. The UN used GIS data for all communities in Lebanon, where it took the highest geographic point within each community as altitude for the community as a whole.

Information given to refugees. When refugees registered the UN did not provide any information about the cash aid program or its targeting criteria. UN staffers record basic demographic and address information during refugee registration. The system calculates the proxy-means score and residence altitude, and returns whether the household is eligible for aid. Only senior staff at UN headquarters know the exact variables and weights for the proxy-means test, as well as the score and cutoffs that determine eligibility. Headquarters sent implementing partners a list of eligible households. The UN works in close collaboration with non-government organization (NGOs). Each NGO is responsible for a particular geographic area. The implementing partner informs the refugee household via text message that it has been chosen for the aid program and where to pick
up the ATM card. ${ }^{4}$ The head of the household would pick up the card and receive a pin number. Beneficiaries were notified by text message whenever the UN transferred cash to the ATM card. The money could be withdrawn at any ATM in Lebanon.

Payments. The first cash aid was given out in November 2013. Households received an ATM card with 220,000 Lebanese Pounds (\$US 147) pre-loaded. For the following four distributions, from December 2013 to March 2014, eligible households received a monthly transfer of 160,000 Lebanese Pounds (\$US 107). The total amount of cash received between November 2013 and March 2014 was $\$$ US 575. The UN did not impose any restrictions or conditions on beneficiary behavior or spending. The size of the monthly cash transfer corresponds to roughly one third of control group households' food consumption. ${ }^{5}$ The value of cash aid was calculated to cover the costs of heating fuel. The November payment was higher than later payments to allow beneficiaries to buy a stove in addition to heating fuel. In fact, our RD estimates suggest that refugees spent about 70 percent of received cash on food and water, and less than 10 percent on winter-related items such as heating fuel.

Distribution of beneficiaries across altitudes. Figure A1 shows the distribution of refugees in Lebanon across altitudes. The upper graph plots a histogram of all 2,736 towns and villages in Lebanon. The middle graph shows the altitude distribution of all the 158,129 refugee households who registered with the UN between March 2011 and October 2013. Of those, 89,597 households were classified as 'poor' by the proxy-means test, and the lower graph plots the altitude distribution of these poor refugee households. The figure reveals two primary clusters where refugees settled. First, in Lebanon's metropolitan area, at sea level. And second, in the mountains around 1,000 meters altitude, close to the border with Syria. The remainder of the refugees are spread out between sea level and the mountains. When comparing refugees classified as poor vs. non-poor, we see that poor refugees are less likely to live in the metropolitan area and more likely to live in the

[^2]mountains. This is consistent with living costs being lower in the mountains.
Our empirical strategy, which we describe in detail in the next section, uses the 500-meter altitude eligibility cutoff to estimate a (sharp) regression discontinuity design (RD), using household and community level data we collected for all poor refugee households that were living between 450 and 550 meters altitude.

Other aid programs. The UN also has a food aid program that started in July 2012. Refugee households classified as 'poor' receive food aid, independent of altitude. Therefore, when the cash aid program started in November 2013, all poor refugee households residing both above and below 500 meters altitude received cash aid on top of food aid.

## A. 3 Detailed description of our empirical strategy and data (descriptive statistics)

The program's eligibility criteria offer two different empirical strategies. The first is to use the poverty score eligibility cutoff for a regression discontinuity design (RDD), and the second to use the altitude eligibility cutoff for an RDD. The former considers only refugees who live in communities at or above 500 meters altitude, and in these communities compares refugees with poverty scores slightly above and below the score's cutoff. The latter considers only refugees with poverty scores above the score's cutoff, and among these refugees compares those who live in communities slightly below 500 meters altitude to those living in communities slightly above 500 meters altitude.

We would have liked to conduct both RDDs, but available funding for data collection forced us to choose one of the two. ${ }^{6}$ We opted for the altitude RDD because it permits causal inference of household level impacts (e.g., consumption) and community level impacts (e.g., community prices or wages), and because it is less likely to violate the Stable Unit Treatment Value (SUTVA)

[^3]
## A.3.1 Altitude regression discontinuity design

Bandwidth and sample. To implement the altitude RDD we attempted to collect, six months after the start of the program, data on all refugee households that (i.) were classified as 'poor' (poverty score $\geq$ eligibility cutoff) by the UN and (ii.) lived between 450 and 550 meters altitude according to UNHCR records.

1,851 refugee households met these two criteria: 1,000 poor households between 450 and 499 meters altitude (ineligible for the aid program, henceforth referred to as control group), and 851 poor households between 500 and 550 meters altitude (eligible for the aid program, henceforth treatment group).

We chose this particular 450-to-550 meter altitude bandwidth based on available funding for the household survey, i.e., limited funding prevented us from collecting data on more than 1,800 households.

Figure A1 shows that our bandwidth is small relative to the entire range of the forcing variable, which stretches from sea level to 2,209 meters altitude; i.e., our sample consists of households that are located extremely close to eligibility cut-point of 500 meters altitude. The maximum altitude difference between a treatment group and a control group household in our sample is 96 meters (the lowest and highest community in our sample are located at 450 and 546 meters altitude, respectively). For comparison, this is precisely the height of Big Ben tower in London. We do not expect that average community and refugee characteristics vary systematically over the course of

[^4]such a small altitude range (we provide interval validity tests, including pre-program balance, in the next section)
Figure A1: The distribution of refugees across altitudes (one month pre-program).

 all refugee households which registered with the UN ( $\mathrm{n}=158,129$ refugee households) as of October 2013. The lower graph shows an altitude histogram of all refugee households classified as 'poor' according to the UN proxy means test ( $\mathrm{n}=89,597$ refugee households). 'Poor' refugee households residing above 500 meters altitude (long dashed line in figure) qualify for UN cash aid program. We use the 500-meter altitude eligibility cutoff to estimate a regression discontinuity design (RD), using data we collected for all refugee households classified as 'poor' by the UN that were living between 450 and 550 meters altitude (short dashed lines in figure). The bin width is 10 meters.

Estimation. Following Imbens and Lemieux (2008), we implement the RDD by running local regressions of the form

$$
\begin{equation*}
Y_{i}=\alpha+\beta \mathbf{1}\left(\mathrm{A}_{i} \geq 500\right)+f\left(\mathrm{~A}_{i}\right)+\epsilon_{i} \quad \forall 450 \leq A_{i} \leq 550 \tag{A4}
\end{equation*}
$$

where $\mathrm{A}_{i}$ is the altitude where household $i$ resides one month prior to the start of the program (October 2013). At that point, refugees where unaware of the program. The only information that refugees received (and only those who were selected as beneficiaries) was via text messages (SMS) starting in November 2013. The term $f\left(\mathrm{~A}_{i}\right)$ is a polynomial function of $\mathrm{A}_{i}$. The parameter $\beta$ measures the local average treatment effect (LATE) of aid on outcome $Y_{i}$ at $A_{i}=500$ meter.

We follow the suggestion of Imbens and Lemieux (2008) and use linear and quadratic functional forms for $f\left(\mathrm{~A}_{i}\right)$, and allow for different slopes of the regression function on both sides of the cutoff, i.e.,

$$
\begin{align*}
& f\left(\mathrm{~A}_{i}\right)=\gamma_{1}\left(\mathrm{~A}_{i}-500\right)+\gamma_{2} 1\left(\mathrm{~A}_{i} \geq 500\right) \times\left(\mathrm{A}_{i}-500\right)  \tag{A5}\\
& \text { and } \\
& f\left(\mathrm{~A}_{i}\right)=\theta_{1}\left(\mathrm{~A}_{i}-500\right)+\theta_{2} 1\left(\mathrm{~A}_{i} \geq 500\right) \times\left(\mathrm{A}_{i}-500\right) \\
&+\theta_{3}\left(\mathrm{~A}_{i}-500\right)^{2}+\theta_{4} 1\left(\mathrm{~A}_{i} \geq 500\right) \times\left(\mathrm{A}_{i}-500\right)^{2} \tag{A6}
\end{align*}
$$

## A3.2 Data collection

We hired the Lebanese survey firm Information International for data collection. The survey firm administered a household questionnaire consisting of 226 questions to the head of the household (the person who is mainly responsible for deciding how the household spends its money). Many of the survey's questions were adapted from Blattman et al. (2016). The questionnaire contains measures of (a) demographic characteristics; (b) consumption and subjective well-being (including received aid, labor supply, income, assets, debt and savings, inter-household transfers); and (c) anti-refugee violence. A random sub-sample of four respondents in all communities was asked 81 additional questions on community characteristics (prices, labor market, and geographic characteristics).

The survey was administered in April and May 2014, i.e., about six months after the start of the program. Interviews were conducted in respondents' homes or sometimes right outside their home. Generally, many other people were present in interviews - usually friends, family, and neighbors. For numerous reasons, it was usually infeasible to request to interview the respondent alone. ${ }^{8}$ This is a caveat, since it may lead respondents to under- or over-report in response to certain questions.

## A.3.3 Descriptive Statistics

The survey firm was able to find and interview 1,358 of the 1,851 refugee households (we discuss attrition in the next subsection), i.e, $73 \%$ ( $74.1 \%$ between 450-499 and meters altitude, and $72.7 \%$ between 500 and 550 meters altitude). Table A1 shows sample means of the control group (respondents residing between 450 and 499 meters altitude). We first present characteristics of the household, followed by community characteristics.

Demographic characteristics, housing characteristics, and assets. Respondents fled mainly with their immediate families: on average households are composed of 3.5 children (1.5 aged $0-4 ; 1.5$ aged $5-12 ; 0.5$ aged $13-17$ ) and 2.1 adults ( 2.0 aged $18-59 ; 0.1$ aged $60+$ ). The household head is 38 years old, and arrived in Lebanon 18 months prior to our survey. $28 \%$ of household heads have no schooling or did not complete primary schooling, while $33 \%$ completed primary school, $30 \%$ middle school, and $9 \%$ secondary school or higher.

Most respondents fled from Syrian regions that experienced heavy fighting between the Syrian government and insurgents ( $18 \%$ of household heads fled from the Syrian region of Aleppo, $16 \%$ from Idleb, $33 \%$ from Dara, $5 \%$ from Homs, and $28 \%$ from other regions in Syria). Respondents could rely on a family/friendship network when they arrived in Lebanon: respondents report they had 2.5 relatives and 1.0 friends in Lebanon before fleeing from Syria.

All respondents live outside UN-managed refugee camps: $89 \%$ of respondents live in a rented apartment, the remainder lives in tents or other improvised shelters.

[^5]Consumption. For food consumption, we asked respondents if members of the household ate or drank a certain food item in the past 7 days, and how much it would cost to buy the amount they consumed of the item. We multiplied the answers by 4 to get a monthly value. On average, households report food consumption worth $\$$ US 320 during the past 30 days, the most important item being bread (\$US 64), followed by vegetables (\$US 52), oils (\$US 34), meat (\$US 34), milk (\$US 21), eggs (\$US 16), rice (\$US 15), fish (\$US 15), water (\$US 14), \$US beans (\$US 13), sweets (\$US 8), potatoes (\$US 8), and fruits (\$US 6).

A household's self-reported food expenditure during the past 30 days, on the other hand, is only \$US 211. In humanitarian settings, consumption and expenditure differ when people receive in-kind humanitarian aid, which is captured in metrics of consumption but not expenditure. This is the case in our data, where we observe a difference between actual expenditure and the value of consumed food (\$US 320-211=\$US 109), explained by in-kind humanitarian aid received from charities, as well as being paid in-kind for working and possibly begging (although only $3 \%$ of respondents said they begged for money or food from strangers).

A household's self-reported non-food expenditure during the past 30 days is $\$ \mathrm{US} 457$, the most important item being rent (\$US 208), followed by health care (\$US 46), cleaning products (\$US 26), electricity (\$US 23), tobacco (\$US 23), public transportation (\$US 22), telephone calls (\$US 19), personal hygiene items (\$US 19), diapers (\$US 17), education (\$US 14), visa/residence permit renewals (\$US 14), clothing (\$US 10), heating fuel (\$US 8), home repairs (\$US 4), and private transport (\$US 3).

Labor supply, income, savings and debt. Household members worked a total 11.8 days during the past 4 weeks, with a labor income of $\$ \mathrm{US} 182.76 \%$ of respondents report casual labor in shops, agriculture, or construction, as the main occupation of household members. Other types of work reported by respondents include selling fresh meals ( $3 \%$ ), tailoring or weaving ( $3 \%$ ), carpentry and joinery $(2.7 \%)$, bakery $(1.7 \%)$, transport of other people ( $1.5 \%$ ), and repair of bicycles, shoes, etc. (1.1\%).

A household's self-reported amount of outstanding loans (cash and in-kind) is $\$ \mathrm{US} 743$, and self-reported cash savings are $\$$ US 0.30 . Far and away the most common source of loans is family
and friends.

Subjective well-being. Reported life satisfaction - on a scale from one (very unsatisfied) to ten (very satisfied) - is 3.4, on average. For comparison, average life satisfaction scores of U.S. citizens are 7.7 (Diener, 2000). Other measures indicate that respondents suffer from high levels of depression and distress (see Table A1 for statistics on the full set of subjective well-being measures).

Community characteristics. The Lebanese government does not publish census data at the community level. We are thus unable to provide an exact figure of the number of Lebanese residents in each of our survey communities. In the community survey, we asked respondents to estimate the number of Lebanese residents and the number of Syrian refugees, which yields an average of 283 Lebanese and 58 Syrian refugee families. The self-reported ratio of Lebanese to Syrians (283/58=4.9) is comparable to country-level statistics: by the time of our survey Lebanon had experienced the influx of roughly a million refugees, while the country's population of Lebanese nationals prior to the outbreak of war in Syria is estimated at 4.5 million, which yields a ratio of Lebanese to Syrians of 4.5.

The majority of host communities have easy market access. $67 \%$ of communities have a market or shops where food and other products can be bought. The average time to drive from the respondent's home to closest market/shop is 17 minutes. The average number of shops is 24 . Each host community seems to constitute its own market (as opposed to several communities sharing one common market), because when asked if people from other communities come often here to buy things, or if people from the respondent's community go to other communities to buy things, respondents' modal response is "rarely".

Price levels in Lebanon are comparable to that of many US and European cities. One liter of milk costs $\$$ US 2, one kilogram of beef and chicken is $\$$ US 11 and $\$$ US 5, respectively. Bread, a staple of the Syrian diet, sells at \$US 1 per bag.

Respondents say that the main source of employment in their host community is as casual laborer in the agricultural and construction sector, followed by services such as quarrying, transportation, retail trade, burning coal, repair services, carpentry and joinery, selling fresh meals, raising and
selling livestock products, tailoring or weaving, and money lending.
Table A1：Descriptive statistics（control group，$n=727$ households）



| （iv．）consumption |
| :--- |
| food consumption（\＄US，past 30 days， |
| includes purchased and non－purchased food） |
| bread |
| vegetables |
| oils |
| meat |
| cooking fuel |
| milk |
| eggs |
| rice |
| fish |
| water |
| beans |
| sweets |
| potatoes |
| fruits |
| food expenditure（\＄US，past 30 days） |
| non－food expenditure（\＄US，past 30 days） |
| rent |
| health care（medicine，doctor visits，etc．） |
| hh cleaning products |
| electricity（including generator cost） |
| tobacco |
| public transport |
| telephone calls |
| personal hygiene items（shampoo，soap，etc．） |
| diapers |
| education（tuition，fees，stationary etc．） |
| visa／residence permit renewals |
| clothing |
| heating fuel |
| home repairs |
| private transport |
| （v．）savings and debt |
| oustanding loans（\＄US，cash and in－kind） |
| cash savings（\＄US） | （vi．）labor supply

days worked（HH total，past 4 weeks）
adults（age $\geq 18)$
children（age $<18)$
labor income（HH total，past 4 weeks，in $\$ \mathrm{US}$ ）
main occupation
 main occupation
casual labor（ag casual labor（agriculture，construction，etc．）
tailoring or weaving tailoring or weaving
selling fresh meals carpentry and joinery bakery
transpo
transport of other people repair service（e．g．bicycle，shoes，etc．） other
（vii．）assets
fraction of households with．．． car
moto motorbike
bicycle PC，laptop，tablet television ： satellite dish fridge䓌落芯
microwave washing machine
hot water boiler generator Qty of［item］pos mobile phones chairs
blankets
winter jackets winter pullover mattresses

no. of days
in past week

Panel II. community characteristics
(i.) demography
yrian household
Lebanese households
(ii.) geography
mobile phone reception (no. of bars on display) a truck can reach community (fraction) closest health clinic (minutes to drive) closest primary school (minutes to drive) closest secondary school (minutes to drive)
(iii.) top-five economic activities (\# of people engaged) casual agricultural labor
employee in company (e.g., a bank)
quarrying
retail trade
raising and selling livestock products

$$
\begin{aligned}
& \text { (iv.) market for goods and services } \\
& \text { community has a market (fraction) } \\
& \text { time to drive to closest market (minutes) } \\
& \text { no. of shops } \\
& \text { people from other communities come } \\
& \text { here to buy things } \\
& (1=\text { never, } 2=\text { rarely, } 3=\text { sometimes, } 4=\text { often) } \\
& \text { people from this community go } \\
& \text { often to other communities to buy things } \\
& (1=\text { never, } 2=\text { rarely, } 3=\text { sometimes, } 4=\text { often) } \\
& \text { (v.) prices }(\$ U S) \\
& \text { Travel to Beirut by public transport } \\
& 1 \text { bag of Arabic bread } \\
& 1 \text { liter of milk } \\
& 1 \mathrm{~kg} \text { of beef } \\
& 1 \mathrm{~kg} \text { of chicken }
\end{aligned}
$$

## A. 4 Internal Validity

In this section we discuss the internal validity of the regression discontinuity design. To preview the main conclusions of this subsection: (i.) attrition is around 25 percent (because many refugees moved back to Syria), but attrition is balanced between the treatment and control group; (ii.) we find no evidence for sorting into higher altitudes (manipulation of the forcing variable); (iii.) selfreported take-up is only around 65 percent (although this could be due to under-reporting), hence our estimates must be interpreted as intent-to-treat effects; (iv.) there is mild contamination of the control group, i.e., 10 of 1,000 households in the control group potentially received cash transfers for reasons we explain below; (v.) our main concern is pre-treatment balance, because we have no baseline survey, hence we cannot rule out that any difference in hostility between treatment and control group existed already before the program. In the following section we discuss each of these points in detail.

## A.4.1 Pre-treatment balance

Our treatment is assigned at the community level (only poor refugees in communities at or above 500 meters altitude are eligible). Our 1,358 respondents are distributed across only 64 communities, i.e., our sample is not necessarily large from that point of view, so a first concern is the 'as-if' random assignment by the 500 meters altitude cutoff did not generate two identical groups.

Unfortunately, we could not conduct a baseline survey because aid agencies contacted us to collect data (i.e., to conduct an impact evaluation) only two months after the start of the program. Through a data-sharing agreement with the UN refugee agency (UNHCR), we obtained the information that refugees provided when they registered with UNHCR. We complement this information with data from our own survey, six months after program-start, where we asked respondents a couple of questions related to plausibly exogenous (i.e., orthogonal to aid) household and community characteristics, e.g., education and age of the household head, which region in Syria they were fleeing from, etc.

We see only small (and statistically indistinguishable from zero) differences between treatment and control group for most of these variables (see Table A2), with the exception of two variables: First, we see imbalance in terms of where respondents are from in Syria, but only for 2 of Syria's 14 governorates: A household from Dara at the cutoff is 58 percentage points more likely to be in the treatment group than control, and a household from Homs at the cutoff is 43 percentage points less likely to be treated. Second, household heads in the treatment group are more educated ( $20 \%$ percent have secondary or higher education, compared to $9 \%$ in the control group).

The magnitude of the imbalance for the Syria origin and education of the household head is concerning. In theory, it is possible that Syria origin is correlated with (unobserved) ethnicity and that Lebanese host communities are hostile towards a certain ethnicity (e.g., due to racism); or that education is correlated with wealth hence capacity to appease host community members through transfers. In this case our treatment effects confound the effect aid with ethnicity or wealth.

We believe that this is not the case. First, we asked refugees for the reason they think they were aggressed by their host community, and only a negligible share of responses are related to the refugee's ethnicity or wealth. The vast majority of refugees think they were aggressed because they take away local jobs (see next section for detailed descriptive statistics on our hostility metrics). Second, our treatment effects for hostility change only very modestly when we control for Syria origin or education in the regression.

Nonetheless, given the small number of plausibly exogenous household and community characteristics, a concern that remains is that any difference in hostility between the treatment and control group existed already before the program due to other unbalanced yet unobserved characteristics.

Table A2: Balance tests

| Panel I. household characteristics |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (a) Our Survey (6 months after program start) |  |  | (b) UN records (1 month before program) |  |  |
|  | $\begin{gathered} \hat{\beta} \\ \text { (std. error) } \\ \hline \end{gathered}$ | control mean |  | $\begin{gathered} \hat{\beta} \\ \text { (std. error) } \\ \hline \end{gathered}$ | control mean |
| education of household head incomplete primary or no schooling | $\begin{gathered} -0.19 \\ (0.17) \end{gathered}$ | 0.28 | no. of members aged 0-4 | $\begin{gathered} 0.31 \\ (0.25) \end{gathered}$ | 1.5 |
| complete primary | $\begin{gathered} 0.05 \\ (0.13) \end{gathered}$ | 0.33 | no. of members aged 5-12 | $\begin{gathered} 0.32 \\ (0.43) \end{gathered}$ | 1.5 |
| complete middle school | $\begin{gathered} 0.03 \\ (0.24) \end{gathered}$ | 0.30 | no. of members aged 13-17 | $\begin{gathered} -0.05 \\ (0.29) \end{gathered}$ | 0.5 |
| secondary school or higher | $\begin{gathered} 0.11^{* *} \\ (0.05) \end{gathered}$ | 0.09 | no. of members aged 18-59 | $\begin{gathered} 0.01 \\ (0.15) \end{gathered}$ | 2.0 |
| age of household head | $\begin{gathered} -3.4 \\ (2.9) \end{gathered}$ | 37.8 | no. of members aged 60 plus | $\begin{gathered} -0.13^{* *} \\ (0.06) \end{gathered}$ | 0.1 |
| relatives in Lebanon before fleeing | $\begin{gathered} 0.3 \\ (1.5) \end{gathered}$ | 2.5 |  |  |  |
| friends in Lebanon before fleeing | $\begin{gathered} -0.6 \\ (0.6) \end{gathered}$ | 1.0 |  |  |  |
| no. of months in Lebanon | $\begin{gathered} 0.1 \\ (2.0) \end{gathered}$ | 18.3 |  |  |  |
| Origin residence in Syria |  |  |  |  |  |
| Dara | $\begin{gathered} 0.58^{* * *} \\ (0.13) \end{gathered}$ | 0.33 |  |  |  |
| Homs | $\begin{gathered} -0.43^{* * *} \\ (0.14) \end{gathered}$ | 0.05 |  |  |  |
| Idleb | $\begin{gathered} 0.11 \\ (0.14) \end{gathered}$ | 0.16 |  |  |  |
| Aleppo | $\begin{gathered} 0.01 \\ (0.11) \end{gathered}$ | 0.18 |  |  |  |
| Other | $\begin{gathered} -0.27 \\ (0.20) \end{gathered}$ | 0.28 |  |  |  |

Panel II. community characteristics

| (a) Our survey and Mourad's sect data |  |  | (b) UN records and weather |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \hat{\beta} \\ \text { (std. error) } \end{gathered}$ | control mean |  | $\begin{gathered} \hat{\beta} \\ \text { (std. error) } \end{gathered}$ | control mean |
| Can a truck drive to your village center? | $\begin{gathered} \hline-0.09 \\ (0.07) \end{gathered}$ | 0.94 | Latitude | $\begin{gathered} -0.5 \\ (0.3) \end{gathered}$ | 33.7 |
| Can a motorbike drive to your village center | $\begin{gathered} 0.17 \\ (0.19) \end{gathered}$ | 0.89 | Longitude | $\begin{aligned} & -0.2 \\ & (0.2) \end{aligned}$ | 35.6 |
| Time to drive to the closest primary school | $\begin{aligned} & -3.7 \\ & (6.7) \end{aligned}$ | 22.7 | Registered refugees (10/2013) (children, adults, elderly) | $\begin{gathered} 128.5 \\ (229.7) \end{gathered}$ | 264.1 |
| Time to drive to closest secondary school | $\begin{aligned} & 0.96 \\ & (9.8) \end{aligned}$ | 24.0 | Temperature (F) 10/2013 | $\begin{array}{r} 0.9 \\ (0.8) \end{array}$ | 68.2 |
| Time to drive to closest health clinic | $\begin{gathered} 3.8 \\ (8.3) \end{gathered}$ | 21.7 | Temperature (F) 11/2013 | $\begin{array}{r} 0.1 \\ (0.6) \end{array}$ | 65.6 |
| Time to drive to closest market | $\begin{gathered} 2.1 \\ (7.9) \end{gathered}$ | 16.5 | Temperature (F) 12/2013 | $\begin{array}{r} -0.1 \\ (0.7) \end{array}$ | 52.0 |
| Community has a market ( $\mathrm{yes}=1 ; \mathrm{no}=0)$ | $\begin{gathered} 0.12 \\ (0.21) \end{gathered}$ | 0.67 | Temperature (F) 01/2014 | $\begin{array}{r} -0.1 \\ (0.6) \end{array}$ | 54.7 |
| quality of mobile phone reception (no. of bars) | $\begin{gathered} 0.3 \\ (0.6) \end{gathered}$ | 2.9 | Temperature (F) 02/2014 | $\begin{gathered} 0.1 \\ (0.6) \end{gathered}$ | 54.9 |
| Major Lebanese sect=Shia | $\begin{gathered} 0.33 \\ (0.33) \end{gathered}$ | 0.34 | Temperature (F) 03/2014 | $\begin{gathered} 0.8 \\ (0.7) \end{gathered}$ | 59.7 |
| Major Lebanese sect=Christian | $\begin{gathered} -0.07 \\ (0.37) \end{gathered}$ | 0.31 | Temperature (F) 04/2014 | $\begin{gathered} 1.4 \\ (1.0) \end{gathered}$ | 65.7 |
| Major Lebanese sect=Sunni | $\begin{gathered} -0.52 \\ (0.31) \end{gathered}$ | 0.16 | Precipitation (mm) 10/2013 | $\begin{gathered} 2.7 \\ (3.1) \end{gathered}$ | 6.9 |
| Major Lebanese sect=Druze | $\begin{gathered} 0.17 \\ (0.17) \end{gathered}$ | 0.16 | Precipitation (mm) 11/2013 | $\begin{aligned} & 0.5^{*} \\ & (0.2) \end{aligned}$ | 0.3 |
| Major Lebanese sect=other | $\begin{gathered} 0.09 \\ (0.18) \end{gathered}$ | 0.03 | Precipitation (mm) 12/2013 | $\begin{aligned} & -25.0 \\ & (29.8) \end{aligned}$ | 91.7 |
|  |  |  | Precipitation (mm) 01/2014 | $\begin{gathered} 5.5 \\ (4.6) \end{gathered}$ | 14.7 |
|  |  |  | Precipitation (mm) 02/2013 | $\begin{gathered} -26.6 \\ (20.1) \end{gathered}$ | 27.0 |
|  |  |  | Precipitation (mm) 03/2013 | $\begin{gathered} -10.4 \\ (19.3) \end{gathered}$ | 66.5 |
|  |  |  | Precipitation (mm) 04/2013 | $\begin{gathered} 1.5 \\ (4.7) \end{gathered}$ | 5.3 |

Notes: Table reports OLS estimates of $\beta$ in equation (1). The dependent variable is the row name. Robust standard errors, clustered at the community level, are reported in parentheses $(*, * *, * * *$ denotes significance at ten, five, and one percent, respectively). The column "control mean" shows the mean of the dependent variable for observations between 450 and 499 meters altitude. We thank Lama Mourad for generously sharing her sect data with us (see Mourad, Lama. 2019. The Local Politics of Refugee Crises: Fragmentation and the Lebanese Response to the Syrian Refugee Crisis. Doctoral Dissertation. University of Toronto). The source of the temperature and precipitation data is darksky API.
Figure A2: Graphical Analysis of unbalanced variables





Notes: Graph shows parametric regressions using a quadratic polynomial (equation (1)) and non-parametric local linear regressions. Dots show the mean of the dependent variable by altitude bins of 10 meters. The size of each dot reflects the number of observations in that particular bin.

## A.4.2 Intent-to-treat analysis

We have UN records indicating which refugee households were assigned to the program. However, only $64 \%$ of respondents in the treatment group report having received the UNHCR debit card. It is difficult to say how much of this is due to underreporting. Respondents have incentives to lie in the (mistaken) belief they may receive another card if they had not received the card. Reasons for why households may not have received cash aid include losing a cell phone (or changing the number), given that the UN communicates information via text message. Or households may not have received the text message due to cellular network errors. It may also be the case that some households simply misunderstood the text message. ${ }^{9}$

Furthermore, $15 \%$ of respondents in the control group report to have received the debit card, and again it is difficult to say if that information is accurate. Part of the explanation is that, even after the program launched in November 2013, if a poor refugee household moved from below to above 500 meters altitude and informed UNHCR about it, the organization would include it in the program. Eleven households moved from $450-499 \mathrm{~m}$ altitude to above 500 m by the time of our survey in April 2014. These households potentially received cash aid at some point. Another explanation is that all refugees in our sample are eligible for food vouchers by the UN World Food Program (WFP), which are loaded on a plastic card that looks similar to the UNHCR debit card, hence it is possible that some respondents in the control group interpret our question as referring to the WFP voucher card. Ideally we would want bank records to see whether and how much money was withdrawn from each card. However, we were not able to obtain such data.

If indeed some households in the control group and not all households in the treatment group received cash aid, it would mean that our discontinuity is fuzzy rather than sharp, and that a fuzzy RD - where residing above 500 m altitude serves as an instrument for receiving cash aid - would provide us with an estimate of the local (i.e., at 500 m altitude) average treatment effect on the treated (ATT). Since we do not know for certain who received cash aid, we would have to use the self-reported receipt of cash aid, which would yield biased ATT estimates if self-reported and true

[^6]receipt differ. In particular, our concern is that refugees above 500 m underreport receipt in the belief they may receive another debit card, in which case our ATT estimates are biased towards zero.

We thus think it is more conservative to focus on the intent-to-treat (ITT) effect, i.e., to estimate a sharp regression continuity design as in equation (1). Also, in the context of humanitarian emergencies, many things can and do go wrong when it comes to aid delivery, hence the ITT estimates arguably provide more realistic information on the expected impacts of these programs.

## A.4.3 Manipulation of the forcing variable.

Was our running variable manipulated by selective migration to communities above 500 m ? In this subsection we provide a detailed discussion/analysis of this question, which suggests that the answer is no.

It is useful to distinguish between selective pre-treatment and post-treatment migration. The former would bias our treatment effects in unknown direction, the latter towards zero.

Bias arising from selective pre-treatment migration. For ease of exposition suppose that, in August 2013 (three months prior to the start of the program), 100 refugees reside in 450-499m (control group) and 100 refugees in $500-550 \mathrm{~m}$ altitude (treatment group). Now suppose that in September of the same year (two months prior to the start of the program), 50 of the 100 refugees in the control group decide to move to $500-550 \mathrm{~m}$ because they heard that UNHCR is going to deliver aid to refugees residing there in the near future (which in practice is unlikely because only senior UNHCR staff knew about the 500 m eligibility rule). These movers must inform UNHCR that they changed address (the address in UNHCR's records that determines eligibility). We now have a new treatment group and control group of 150 and 50 refugees, respectively. When we were offered the opportunity by UNHCR to collect data in April 2014, we asked them for a copy of their database as of October 2013 (one month prior to the start of the program), and extracted refugees residing between 450 and 550 m altitude. I.e., in our example, we would have collected data on 50 refugees residing in $450-499 \mathrm{~m}$ and 150 refugees in $500-550 \mathrm{~m}$. Comparing the former to the latter would yield biased treatment effects, for any difference in anti-refugee violence between the two groups could
be due to (observed and/or unobserved) characteristics of the movers rather than aid.
As this simple example shows, if the treatment effects we present in the paper are affected by this bias, then we should expect to observe (i.) differences in exogenous (e.g., baseline) refugee characteristics (unless moving is due to unobserved characteristics), and (ii.) fewer refugees per community above the 500 m altitude cut-off. Yet Table A2 shows that most differences between treatment and control group, including refugees per community, are statistically indistinguishable from zero (with the exception of two variables: Syria origin and education of the household head).

The formal test suggested by McCrary (2008), which compares the density of observations around the cut-off, rejects the null hypothesis of equal density of refugees around the cut-off. But this does not undermine the internal validity of our research design, for two reasons: first, as can be seen in Figures A4 and A5 below, the magnitude of the difference is very small; and, more importantly, Table A2 shows that there is no statistically significant difference in the number of refugees per community around the 500 m cut-off when there should be more refugees per community above the cut-off had there been selective migration (the point estimate is positive and large, but in Figure A3 we see that this is due to the quadratic polynomial, which provides a bad fit in this case because it extrapolates the $u$-shaped relationship between altitude and number of refugees; a linear or nonparametric specification, as can be seen in the same Figure, would fit the data better and yield a point estimate of close to zero).

Why does McCrary's density test reject the null of equal density of refugees around the cut-off, and why does the size of the scatter dot in Figures 1, 3, and A3 indicate that there are fewer observations just below the cut-off (more specifically, in 490-499m)? The explanation is provided by the first graph in Figure A1, a histogram of all towns and villages in Lebanon ( $\mathrm{n}=2736$ towns and villages), which shows that there are fewer villages in 490-499m (hence fewer potential host communities for refugees and thus fewer refugees in that particular altitude bin). This in turn is due to the very small bin size (10m) we chose for these graphs. In any RD (not just in ours), for a given $n$ (number of towns in our case), the smaller you make the bins the more the number of observations will differ across bins (e.g., imagine the limit case of the bin size approaching zero). One must keep in mind that our sample of refugees residing between 450 and 550 m is already extremely close to the 500 m cut-off (compared to entire range of the forcing variable, which stretches from sea level to
$2,209 \mathrm{~m}$ altitude). In the RD literature, the common practice to show graphs similar to Figures 1, 3, and A3, but for the entire range of the forcing variable and relatively large bins. Had we collected data on all refugees residing between sea level and 2,209 meters altitude and plotted Figure 1 with a larger bin size of say 50 meters (instead of 10 m ), then the size of the scatter dots would appear similar around the 500 meters altitude cut-off.

The fact that there are actually slightly more refugees below than above the cut-off ( 1,000 in $450-499 \mathrm{~m}$ vs. 851 in $500-550 \mathrm{~m}$ ) is perhaps suggestive that there was no selective migration to communities above 500 m , although we cannot exclude that without the program, there would be even fewer refugees living in above- 500 m communities.

Bias arising from selective post-treatment migration. Now suppose that, in the previous example, the 50 refugees move after the start of the program instead of before. If they communicate their new address to UNHCR, they become eligible for the aid program. In that case, our treatment effects are biased towards zero, because in our records (i.e., October 2013, one months prior to the start of the program), they are considered control group. In reality, only ten refugee households moved from $450-499 \mathrm{~m}$ altitude to above 500 m between October 2013 (program launch) and April 2014 (our household survey), and given this small number of movers, bias arising from selective post-treatment migration should be small. Indeed, Table A6 shows that there is no meaningful change in the point estimates when we exclude these possibly contaminated observations.

The absence of selective pre- and post-treatment migration is plausible. To sum up, we find no convincing evidence for selective migration to communities above 500 m , neither pre- nor post-treatment. The former is plausible because only senior UNHCR staff knew about the 500 m cut-off and they did not publicly announce or advertise the program.

The fact that we find no evidence for selective post-treatment migration suggests:
(a) that the entire kinship network of a refugee family resides the same community (otherwise we would expect that beneficiaries inform their kinship in other communities to join them in order to receive aid), which is plausible (for why should kinship reside in different locations); and/or
(b) that beneficiaries opt to keep their aid private to avoid demands from their kinship (recent research finds that individuals try to hide their income in order to avoid being 'taxed' by their kinship, see for example Jakiela and Ozier (2015), Beekman et al. (2015), or Boltz et al. (2018)). Keeping cash aid private is possible because (i.) the debit cards were not distributed publicly, i.e., eligible households received a text message from UNHCR informing them that they were chosen to receive aid and the place (usually a closed venue), date, and time to pick it up; and (ii.) the debit card (unlike some food parcel) is small hence can be easily hidden from the public eye; and/or
(c) that the (uncertain) prospect of receiving $\$$ US 100 per month in cash transfers does not exceed the cost of moving to a different host community. Even if refugees somehow learned that in certain communities some refugees are receiving cash transfers (recall that only refugees classified as 'poor' by UNHCR would receive cash transfers, and that this classification was based on a composite score whose variables and weights only senior UNHCR staff knew), it seems unlikely that they assumed that they would certainly receive cash transfers if they moved to these 'cash communities'. More likely is that they unconsciously assigned some probability to receiving cash transfers if they move there. E.g., if they judge the chance 50/50, then the expected cash transfer is only about $\$ \mathrm{US}$ 50 per month. It seems plausible that the costs of leaving their current host community (e.g., the pecuniary cost of moving and/or of leaving informal insurance networks (friends)) in order to move to the 'cash community' is larger than that.

The latter is further corroborated by the fact that attrition in our sample is balanced between treatment and control group. Balanced attrition suggests that a refugee (in our sample) who decided to leave cannot be swayed to stay by a monthly cash transfer of roughly $\$ \mathrm{US} 100$. This seems plausible after all, for a refugee who decides to leave his host community, with the associated perils and pecuniary costs of travel, is arguably seeking gains worth more than $\$ \mathrm{US} 100$ per month. This also suggests that refugees cannot be swayed to migrate to a different host community by the uncertain prospect of receiving $\$$ US 100 per month.

Notes: Graph shows parametric regressions using a quadratic polynomial (equation (1)) and non-parametric local linear regressions with $n=1,358$ households. Dots show
 size of each dot reflects the number of observations in that particular bin.

Notes: Graph shows McCrary (2008)'s test for manipulation of running variable: each circle displays the density of refugees in that altitude, and the black line is a non-parametric regression of density of refugees on altitude, separately estimated on both sides of the 500 meter altitude eligibility cutoff.


## A.4.4 Attrition

1,358 of the targeted 1,851 refugee households (i.e., $73 \%$ ) could be interviewed by the survey firm. The response rate was $74.1 \%$ between 450-499 and meters altitude, and $72.7 \%$ between 500 and 550 meters altitude. The difference is not statistically significant (Pearson's chi-squared test p value: 0.52). Apparently, the main reason for attrition is that many refugees moved back to Syria or moved on to other countries. ${ }^{10}$ The fact that attrition is balanced is interesting and policy relevant because, according to economic theory, refugees in the control group have more incentives to return to Syria or move on to other places (for they received no cash transfers hence have a lower opportunity cost of leaving Lebanon). Balanced attrition suggests that a refugee (in our sample) who decided to leave cannot be swayed to stay by a monthly cash transfer of roughly $\$$ US 100 . This seems plausible after all, for a refugee who decides to leave his host community, with the associated perils and pecuniary costs of travel, is arguably seeking gains worth more than $\$$ US 100.

[^7]
## A. 5 Correlates of hostility against refugees

Table A3: Correlates of hostility against refugees (control group)

|  | (1) | (2) |
| :---: | :---: | :---: |
|  | verbal assault | physical violence |
| Labor supply days worked (HH total, past 4 weeks) | $\begin{aligned} & 0.002^{* *} \\ & (0.0007) \end{aligned}$ | $\begin{gathered} 0.002^{* * *} \\ (0.0005) \end{gathered}$ |
| hh head is low-skill laborer (primary or less education) | $\begin{gathered} 0.004 \\ (0.035) \end{gathered}$ | $\begin{aligned} & -0.005 \\ & (0.008) \end{aligned}$ |
| Syria origin |  |  |
| Dara | $\begin{aligned} & -0.007 \\ & (0.025) \end{aligned}$ | $\begin{gathered} 0.022 \\ (0.017) \end{gathered}$ |
| Homs | $\begin{gathered} -0.051 \\ (0.047) \end{gathered}$ | $\begin{gathered} 0.031 \\ (0.049) \end{gathered}$ |
| Idleb | $\begin{gathered} -0.063^{* *} \\ (0.027) \end{gathered}$ | $\begin{gathered} -0.004 \\ (0.016) \end{gathered}$ |
| Aleppo | $\begin{gathered} -0.021 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.011 \\ (0.011) \end{gathered}$ |
| Consumption food expenditure (past 4 weeks) | $\begin{gathered} -0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} -0.000 \\ (0.000) \end{gathered}$ |
| non-food expenditure (past 4 weeks) | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} -0.000 \\ (0.000) \end{gathered}$ |
| Debt oustanding loans | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ |
| Transfers provide help to Lebanese | $\begin{gathered} 0.014 \\ (0.026) \\ \hline \end{gathered}$ | $\begin{gathered} 0.006 \\ (0.017) \\ \hline \end{gathered}$ |
| Observations | 723 | 722 |

## A. 6 Robustness

Table A4: Alternative coding of violence


[^8]Table A5: Adding control variables

|  |  | Linear dep.var. $=1$ if "son <br> (1) | odel mes" or "often" <br> (2) | Quadra dep.var. $=1$ if "som <br> (3) | model <br> mes" or "often" <br> (4) |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | physical violence | verbal assault | physical violence | verbal assault |
| Panel I. No controls |  |  |  |  |  |
|  | $\hat{\beta}$ | -0.027 | $-0.075^{* *}$ | -0.094* | -0.138* |
|  |  | (0.025) | (0.034) | (0.049) | (0.075) |
| Panel II. Controlling for unbalanced characteristics |  |  |  |  |  |
| (i.) $\hat{\beta}$ (controlling for Syria origin) |  | -0.021 | -0.068** | -0.099** | $-0.148^{* *}$ |
|  |  | (0.023) | (0.034) | (0.046) | (0.074) |
| (ii.) $\hat{\beta}$ (controlling for Syria origin and education) |  | -0.022 | -0.067* | -0.099** | $-0.153^{* *}$ |
|  |  | (0.023) | (0.035) | (0.045) | (0.071) |
| (iii.) $\hat{\beta}$ (controlling for Syria origin, education, and HH demography) |  | -0.022 | -0.071** | -0.099** | $-0.156^{* *}$ |
|  |  | (0.023) | (0.034) | (0.044) | (0.073) |
| Panel III. Drop outlier (obs. between 490-499m), with controls |  |  |  |  |  |
| $\hat{\beta}$ |  | -0.003 | -0.038 | $-0.068^{* * *}$ | -0.085 |
|  |  | (0.018) | (0.029) | (0.017) | (0.060) |

Table A6: Excl. possibly "contaminated" control households


Table A7: Bandwidth, polynomial, and control variables

|  | $\pm 50 \mathrm{~m}$ |  | $\pm 40 \mathrm{~m}$ |  | $\pm 30 \mathrm{~m}$ |  | $\pm 20 \mathrm{~m}$ |  | $\pm 10 \mathrm{~m}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Never |  |  |  |  |  |  |  |  |  |  |
| Panel I.A: Linear $\hat{\beta}$ | $\begin{gathered} 0.02 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.02 \\ (0.026) \end{gathered}$ | $\begin{gathered} 0.05 \\ (0.031) \end{gathered}$ | $\begin{gathered} 0.04^{*} \\ (0.025) \end{gathered}$ | $\begin{gathered} 0.06 \\ (0.037) \end{gathered}$ | $\begin{aligned} & 0.06^{* *} \\ & (0.028) \end{aligned}$ | $\begin{gathered} 0.12^{*} \\ (0.069) \end{gathered}$ | $\begin{aligned} & 0.09^{* *} \\ & (0.038) \end{aligned}$ | $\begin{gathered} 0.18 \\ (0.139) \end{gathered}$ | $\begin{gathered} 0.05 \\ (0.063) \end{gathered}$ |
| Panel I.B: Quadratic $\hat{\beta}$ | $\begin{gathered} 0.09^{*} \\ (0.047) \\ \hline \end{gathered}$ | $\begin{aligned} & 0.10^{* *} \\ & (0.042) \\ & \hline \end{aligned}$ | $\begin{gathered} 0.10 \\ (0.066) \\ \hline \end{gathered}$ | $\begin{gathered} 0.12^{*} \\ (0.060) \\ \hline \end{gathered}$ | $\begin{gathered} 0.16 \\ (0.010) \\ \hline \end{gathered}$ | $\begin{gathered} 0.15^{*} \\ (0.082) \\ \hline \end{gathered}$ | $\begin{gathered} 0.14 \\ (0.132) \\ \hline \end{gathered}$ | $\begin{gathered} 0.15^{*} \\ (0.086) \\ \hline \end{gathered}$ | $\begin{gathered} -0.12 \\ (0.087) \\ \hline \end{gathered}$ | $\begin{gathered} -0.01 \\ (0.072) \\ \hline \end{gathered}$ |
| Rarely <br> Panel II.A: Linear $\hat{\beta}$ | $\begin{gathered} 0.02 \\ (0.023) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.022) \end{gathered}$ | $\begin{gathered} 0.02 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.02 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.06 \\ (0.056) \end{gathered}$ | $\begin{gathered} 0.05 \\ (0.060) \end{gathered}$ | $\begin{gathered} 0.17^{*} \\ (0.091) \end{gathered}$ | $\begin{gathered} 0.13 \\ (0.086) \end{gathered}$ |
| Panel II.B: Quadratic $\hat{\beta}$ | $\begin{gathered} 0.05 \\ (0.040) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.040) \\ \hline \end{gathered}$ | $\begin{gathered} 0.05 \\ (0.046) \\ \hline \end{gathered}$ | $\begin{gathered} 0.02 \\ (0.050) \\ \hline \end{gathered}$ | $\begin{gathered} 0.06 \\ (0.064) \\ \hline \end{gathered}$ | $\begin{gathered} 0.04 \\ (0.067) \\ \hline \end{gathered}$ | $\begin{gathered} 0.04 \\ (0.062) \\ \hline \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.071) \\ \hline \end{gathered}$ | $\begin{gathered} 0.16 \\ (0.165) \\ \hline \end{gathered}$ | $\begin{gathered} 0.12 \\ (0.152) \\ \hline \end{gathered}$ |
| Sometimes <br> Panel III.A: Linear $\hat{\beta}$ | $\begin{gathered} -0.07^{*} \\ (0.037) \end{gathered}$ | $\begin{gathered} -0.07^{*} \\ (0.035) \end{gathered}$ | $\begin{aligned} & -0.09^{*} \\ & (0.047) \end{aligned}$ | $\begin{aligned} & -0.09^{*} \\ & (0.044) \end{aligned}$ | $\begin{aligned} & -0.12^{* *} \\ & (0.055) \end{aligned}$ | $\begin{gathered} -0.13^{* *} \\ (0.051) \end{gathered}$ | $\begin{aligned} & -0.25^{* *} \\ & (0.101) \end{aligned}$ | $\begin{gathered} -0.23^{* *} * \\ (0.082) \end{gathered}$ | $\begin{gathered} -0.39 \\ (0.226) \end{gathered}$ | $\begin{gathered} -0.31 \\ (0.190) \end{gathered}$ |
| Panel III.B: Quadratic $\hat{\beta}$ | $\begin{aligned} & -0.17^{* *} \\ & (0.073) \\ & \hline \end{aligned}$ | $\begin{aligned} & -0.16^{* *} \\ & (0.072) \end{aligned}$ | $\begin{gathered} -0.24^{* *} \\ (0.094) \\ \hline \end{gathered}$ | $\begin{aligned} & -0.24^{* *} \\ & (0.093) \\ & \hline \end{aligned}$ | $\begin{gathered} -0.34^{* *} \\ (0.148) \\ \hline \end{gathered}$ | $\begin{aligned} & -0.34^{* *} \\ & (0.139) \\ & \hline \end{aligned}$ | $\begin{gathered} -0.32 \\ (0.196) \\ \hline \end{gathered}$ | $\begin{gathered} -0.33^{*} \\ (0.171) \\ \hline \end{gathered}$ | $\begin{gathered} 0.14 \\ (0.163) \\ \hline \end{gathered}$ | $\begin{gathered} 0.07 \\ (0.161) \\ \hline \end{gathered}$ |
| Often <br> Panel IV.A: Linear $\hat{\beta}$ | $\begin{gathered} -0.01 \\ (0.015) \end{gathered}$ | $\begin{gathered} -0.01 \\ (0.012) \end{gathered}$ | $\begin{gathered} -0.00 \\ (0.013) \end{gathered}$ | $\begin{gathered} -0.01 \\ (0.012) \end{gathered}$ | $\begin{gathered} 0.03^{*} \\ (0.014) \end{gathered}$ | $\begin{gathered} 0.02 \\ (0.013) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.017) \end{gathered}$ | $\begin{gathered} -0.01 \\ (0.022) \end{gathered}$ | $\begin{gathered} 0.02 \\ (0.022) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.033) \end{gathered}$ |
| Panel IV.B: Quadratic $\hat{\beta}$ | $\begin{gathered} 0.03 \\ (0.019) \\ \hline \end{gathered}$ | $\begin{gathered} 0.01 \\ (0.017) \\ \hline \end{gathered}$ | $\begin{gathered} 0.06^{* * *} \\ (0.022) \\ \hline \end{gathered}$ | $\begin{gathered} 0.03^{*} \\ (0.019) \\ \hline \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.022) \\ \hline \end{gathered}$ | $\begin{gathered} -0.00 \\ (0.021) \\ \hline \end{gathered}$ | $\begin{gathered} 0.04^{*} \\ (0.023) \\ \hline \end{gathered}$ | $\begin{gathered} 0.04 \\ (0.031) \\ \hline \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.029) \\ \hline \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.054) \\ \hline \end{gathered}$ |
| Controls <br> Number of obs | $\begin{gathered} \text { No } \\ 1357 \end{gathered}$ | $\begin{gathered} \hline \text { Yes } \\ 1356 \end{gathered}$ | $\begin{gathered} \hline \text { No } \\ 1085 \end{gathered}$ | $\begin{gathered} \hline \text { Yes } \\ 1085 \end{gathered}$ | $\begin{gathered} \hline \text { No } \\ 728 \end{gathered}$ | $\begin{aligned} & \text { Yes } \\ & 728 \end{aligned}$ | $\begin{gathered} \hline \text { No } \\ 359 \end{gathered}$ | $\begin{gathered} \hline \text { Yes } \\ 359 \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \text { No } \\ & 127 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Yes } \\ & 127 \end{aligned}$ |

Notes: Table shows OLS estimates of $\beta$ in equation (1), using a linear and quadratic polynomial, with and without unbalanced control variables, for successively smaller bandwidths around the 500 meters altitude cut-off. In panel I (II, III, IV) the dependent variable is a $1 / 0$ dummy if Lebanese have been physically or verbally aggressive to the respondent or members of the household in the past six months "never" ("rarely", "sometimes", "often"). ${ }^{*}, * *,{ }^{* * *}$ significant at ten, five, and one percent.

Table A8: Bandwidth, polynomial, and control variables, excl. outlier

|  | $\pm 50 \mathrm{~m}$ |  | $\pm 40 \mathrm{~m}$ |  | $\pm 30 \mathrm{~m}$ |  | $\pm 20 \mathrm{~m}$ |  | $\pm 10 \mathrm{~m}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Never |  |  |  |  |  |  |  |  |  |
| Panel I.A: Linear |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{gathered} 0.00 \\ (0.025) \end{gathered}$ | $\begin{gathered} -0.00 \\ (0.026) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.021) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.022) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.025) \end{gathered}$ | $\begin{gathered} 0.05^{*} \\ (0.026) \end{gathered}$ | $\begin{gathered} 0.12^{* * *} \\ (0.019) \end{gathered}$ | $\begin{gathered} 0.09 * * * \\ (0.016) \end{gathered}$ |  |
| Panel I.B: Quadratic |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{gathered} 0.07^{* * *} \\ (0.024) \end{gathered}$ | $\begin{gathered} 0.09^{* * *} \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.06^{*} \\ (0.037) \end{gathered}$ | $\begin{aligned} & 0.09^{* *} \\ & (0.046) \end{aligned}$ | $\begin{gathered} 0.27^{* * *} \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.22^{* * *} \\ (0.061) \end{gathered}$ | $\begin{gathered} 0.86^{* * *} \\ (0.19) \end{gathered}$ | $\begin{aligned} & 1.09 * * \\ & (0.46) \end{aligned}$ |  |
| Rarely |  |  |  |  |  |  |  |  |  |
| Panel II.A: Linear |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{gathered} 0.03 \\ (0.021) \end{gathered}$ | $\begin{gathered} 0.04^{*} \\ (0.019) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.024) \end{gathered}$ | $\begin{gathered} 0.04^{*} \\ (0.023) \end{gathered}$ | $\begin{gathered} 0.05 \\ (0.028) \end{gathered}$ | $\begin{aligned} & 0.05^{*} * \\ & (0.026) \end{aligned}$ | $\begin{gathered} 0.12 \\ (0.088) \end{gathered}$ | $\begin{gathered} 0.16 \\ (0.101) \end{gathered}$ |  |
| Panel II.B: Quadratic |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{gathered} 0.06^{*} \\ (0.034) \\ \hline \end{gathered}$ | $\begin{gathered} 0.04 \\ (0.033) \\ \hline \end{gathered}$ | $\begin{aligned} & 0.08^{* *} \\ & (0.037) \\ & \hline \end{aligned}$ | $\begin{gathered} 0.05 \\ (0.044) \\ \hline \end{gathered}$ | $\begin{gathered} 0.14 \\ (0.180) \\ \hline \end{gathered}$ | $\begin{gathered} 0.20 \\ (0.200) \\ \hline \end{gathered}$ | $\begin{gathered} -0.74 \\ (0.482) \\ \hline \end{gathered}$ | $\begin{aligned} & -1.13^{*} \\ & (0.577) \\ & \hline \end{aligned}$ |  |
| Sometimes |  |  |  |  |  |  |  |  |  |
| Panel III.A: Linear |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{gathered} -0.03 \\ (0.030) \end{gathered}$ | $\begin{gathered} -0.03 \\ (0.027) \end{gathered}$ | $\begin{gathered} -0.04 \\ (0.042) \end{gathered}$ | $\begin{gathered} -0.04 \\ (0.040) \end{gathered}$ | $\begin{gathered} -0.07 \\ (0.039) \end{gathered}$ | $\begin{gathered} -0.07^{*} \\ (0.038) \end{gathered}$ | $\begin{gathered} -0.22^{* * *} \\ (0.031) \end{gathered}$ | $\begin{gathered} -0.19 * * * \\ (0.025) \end{gathered}$ |  |
| Panel III.B: Quadratic |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{aligned} & -0.09^{*} \\ & (0.051) \end{aligned}$ | $\begin{gathered} -0.08 \\ (0.056) \end{gathered}$ | $\begin{gathered} -0.17^{* * *} \\ (0.053) \\ \hline \end{gathered}$ | $\begin{gathered} -0.16^{* * *} \\ (0.059) \end{gathered}$ | $\begin{gathered} -0.47^{* * *} \\ (0.046) \\ \hline \end{gathered}$ | $\begin{gathered} -0.44^{* * *} \\ (0.055) \\ \hline \end{gathered}$ | $\begin{gathered} -1.45^{* * *} \\ (0.308) \\ \hline \end{gathered}$ | $\begin{gathered} -1.57^{* *} \\ (0.701) \end{gathered}$ |  |
| Often |  |  |  |  |  |  |  |  |  |
| Panel IV.A: Linear |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{gathered} -0.02 \\ (0.017) \end{gathered}$ | $\begin{gathered} -0.01 \\ (0.013) \end{gathered}$ | $\begin{gathered} -0.01 \\ (0.016) \end{gathered}$ | $\begin{gathered} -0.02 \\ (0.012) \end{gathered}$ | $\begin{gathered} 0.03 \\ (0.017) \end{gathered}$ | $\begin{gathered} 0.01 \\ (0.016) \end{gathered}$ | $\begin{gathered} -0.04^{* *} \\ (0.015) \end{gathered}$ | $\begin{gathered} -0.07^{* * *} \\ (0.022) \end{gathered}$ |  |
| Panel IV.B: Quadratic |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $0.03$ | $0.00$ | $0.10^{* * *}$ | $0.05^{*}$ | $-0.13^{* * *}$ | $-0.13^{* * *}$ | $-0.27^{* * *}$ | $-0.59^{* *}$ |  |
|  | $(0.022)$ | $(0.018)$ | $(0.034)$ | $(0.028)$ | $(0.021)$ | $(0.035)$ | $(0.065)$ | $(0.225)$ |  |
| Controls | No | Yes | No | Yes | No | Yes | No | Yes |  |
| Number of obs | 1336 | 1335 | 1064 | 1064 | 707 | 707 | 338 | 338 |  |

Notes: Table reports the same regressions as the previous table, but dropping observations between 490 and 499 meters altitude.
*,**,*** significant at ten, five, and one percent.

Table A9: (a) Characteristics of outliers compared to rest of sample (conditional correlations)

| (1) |  | (2) |  |
| :---: | :---: | :---: | :---: |
| household characteristics |  | community characteristics |  |
| education of household head |  | Can a truck drive to your village center? | $\begin{gathered} -0.14^{*} \\ (0.079) \end{gathered}$ |
| complete primary | $\begin{gathered} 0.00 \\ (0.007) \end{gathered}$ | can a motorbike drive to your village center | $\begin{gathered} 0.09 \\ (0.105) \end{gathered}$ |
| complete middle school | $\begin{gathered} -0.02 \\ (0.018) \end{gathered}$ | Time to drive to the closest primary school | $\begin{gathered} -0.01 \\ (0.004) \end{gathered}$ |
| secondary school or higher | $\begin{gathered} 0.00 \\ (0.008) \end{gathered}$ | Time to drive to closest secondary school | $\begin{gathered} 0.00 \\ (0.001) \end{gathered}$ |
| age of household head | $\begin{gathered} -0.00 \\ (0.000) \end{gathered}$ | Time to drive to closest health clinic | $\begin{gathered} 0.00 \\ (0.001) \end{gathered}$ |
| relatives in Lebanon before fleeing |  | Time to drive to closest market | $\begin{gathered} 0.00 \\ (0.003) \end{gathered}$ |
| friends in Lebanon before fleeing | -0.00 | Community has a market ( $\mathrm{yes}=1 ; \mathrm{no}=0$ ) | $\begin{gathered} 0.08 \\ (0.065) \end{gathered}$ |
|  | (0.001) | quality of mobile phone reception (no. of bars) | $-0.01$ |
| no. of months in Lebanon | -0.00 |  | (0.040) |
|  | (0.000) | Latitude | $\begin{gathered} 0.09 \\ (0.119) \end{gathered}$ |
| Origin residence in Syria Dara | $\begin{gathered} 0.01 \\ (0.009) \end{gathered}$ | Longitude | $\begin{gathered} -0.21 \\ (0.187) \end{gathered}$ |
| Homs | $\begin{gathered} -0.01 \\ (0.013) \end{gathered}$ | Registered refugees (1 month before program) | $\begin{gathered} 0.00 \\ (0.000) \end{gathered}$ |
| Idleb | $\begin{gathered} -0.02 \\ (0.020) \end{gathered}$ |  |  |
| Aleppo | $\begin{gathered} -0.01 \\ (0.017) \end{gathered}$ |  |  |
| no. of members aged 0-4 | $\begin{gathered} 0.00 \\ (0.005) \end{gathered}$ |  |  |
| no. of members aged 5-12 | $\begin{gathered} 0.00 \\ (0.002) \end{gathered}$ |  |  |
| no. of members aged 13-17 | $\begin{gathered} -0.00 \\ (0.004) \end{gathered}$ |  |  |
| no. of members aged 18-59 | $\begin{gathered} 0.00 \\ (0.004) \end{gathered}$ |  |  |
| no. of members aged 60plus | $\begin{gathered} 0.00 \\ (0.004) \end{gathered}$ |  |  |

$*_{, * *}^{* * *}$ significant at ten, five, and one percent, respectively

Table A9: (b) Characteristics of outliers compared to rest of sample (unconditional correlations)

| (1) |  | (2) |  |
| :---: | :---: | :---: | :---: |
| household characteristics |  | community characteristics |  |
| education of household head incomplete primary or no schooling | 0.00 | Can a truck drive to your village center? | $\begin{gathered} -0.08^{*} \\ (0.043) \end{gathered}$ |
|  | (0.009) | can a motorbike drive to your village center | $\begin{gathered} 0.018 \\ (0.042) \end{gathered}$ |
| complete primary | $\begin{gathered} 0.01 \\ (0.005) \end{gathered}$ | Time to drive to the closest primary school | $\begin{gathered} -0.00 \\ (0.002) \end{gathered}$ |
| complete middle school | $\begin{gathered} -0.02 \\ (0.012) \end{gathered}$ | Time to drive to closest secondary school | $\begin{gathered} 0.00 \\ (0.001) \end{gathered}$ |
| secondary school or higher | $\begin{gathered} 0.01 \\ (0.005) \end{gathered}$ | Time to drive to closest health clinic | $\begin{gathered} 0.00 \\ (0.001) \end{gathered}$ |
| age of household head | $\begin{gathered} -0.00 \\ (0.000) \end{gathered}$ | Time to drive to closest market | $\begin{gathered} 0.00 \\ (0.001) \end{gathered}$ |
| relatives in Lebanon before fleeing | $\begin{gathered} 0.00 \\ (0.000) \end{gathered}$ | Community has a market ( $\mathrm{yes}=1 ; \mathrm{no}=0$ ) | $\begin{array}{r} 0.096 \\ (0.062) \end{array}$ |
| friends in Lebanon before fleeing | $\begin{gathered} 0.00 \\ (0.000) \end{gathered}$ | quality of mobile phone reception (no. of bars) | $\begin{gathered} 0.01 \\ (0.013) \end{gathered}$ |
| no. of months in Lebanon | $\begin{gathered} -0.00 \\ (0.000) \end{gathered}$ | Latitude | $\begin{gathered} -0.02 \\ (0.019) \end{gathered}$ |
| Origin residence in Syria Dara | 0.02 | Longitude | $\begin{gathered} -0.01 \\ (0.022) \end{gathered}$ |
|  | $(0.011)$ | Registered refugees (1 month before program) | $\begin{gathered} 0.00 \\ (0.000) \end{gathered}$ |
| Homs | $\begin{gathered} -0.01 \\ (0.011) \end{gathered}$ |  |  |
| Idleb | $\begin{gathered} -0.02 \\ (0.018) \end{gathered}$ |  |  |
| Aleppo | $\begin{gathered} -0.00 \\ (0.016) \end{gathered}$ |  |  |
| Other | $\begin{gathered} 0.01 \\ (0.008) \end{gathered}$ |  |  |
| no. of members aged 0-4 | $\begin{gathered} 0.00 \\ (0.004) \end{gathered}$ |  |  |
| no. of members aged 5-12 | $\begin{gathered} -0.00 \\ (0.003) \end{gathered}$ |  |  |
| no. of members aged 13-17 | $\begin{gathered} -0.00 \\ (0.005) \end{gathered}$ |  |  |
| no. of members aged 18-59 | $\begin{gathered} -0.00 \\ (0.004) \end{gathered}$ |  |  |
| no. of members aged 60plus | $\begin{gathered} -0.00 \\ (0.005) \end{gathered}$ |  |  |

[^9]Table A10: Probit estimates

|  | Linear |  | Quadratic |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ |
| Panel I: never |  |  |  |  |
| $\hat{\beta}$ | 0.30 | 0.30 | $1.13^{* * *}$ | $1.64^{* * *}$ |
|  | $(0.432)$ | $(0.430)$ | $(0.404)$ | $(0.346)$ |
| Panel II: rarely |  |  |  |  |
| $\hat{\beta}$ | $0.55^{*}$ | 0.58 | 0.53 | 0.04 |
|  | $(0.303)$ | $(0.344)$ | $(0.532)$ | $(0.539)$ |
| Panel III: sometimes |  |  |  |  |
| $\hat{\beta}$ | $-0.68^{* *}$ | $-0.62^{* *}$ | $-1.35^{* * *}$ | $-1.29^{* * *}$ |
|  | $(0.331)$ | $(0.316)$ | $(0.462)$ | $(0.481)$ |
| Panel IV: often |  |  |  |  |
| $\hat{\beta}$ | -0.35 | -0.26 | 0.76 | 0.25 |
|  | $(0.407)$ | $(0.339)$ | $(0.480)$ | $(0.473)$ |
| Controls | No | Yes | No | Yes |

Notes: Table shows probit regression coefficients and standard errors (clustered at the community level) of $\beta$ in equation (1), with linear and quadratic polynomial, with and without unbalanced control variables. In panel I (II, III, IV) the dependent variable is a dummy ( $1 / 0$ ) if Lebanese have been polynomial, with and without unbalanced control variables. In panel I (II, III, IV) the dependent variable is a dummy ( ${ }^{\text {physically or verbally aggressive to the respondent or members of the household in the past six months "never" ("rarely", "sometimes", "often"). }}$
${ }^{*}, * *,{ }^{* * *}$ significant at ten, five, and one percent, respectively.

Table A11: Ordered Probit estimates

|  | Linear |  | Quadratic |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ |
| Panel I: never |  |  |  |  |
| $\hat{\beta}$ | $0.05^{* *}$ | $0.05^{*}$ | 0.04 | $0.08^{*}$ |
|  | $(0.025)$ | $(0.026)$ | $(0.041)$ | $(0.042)$ |
| Panel II: rarely |  |  |  |  |
| $\hat{\beta}$ | $-0.01^{* *}$ | $-0.01^{*}$ | -0.01 | -0.02 |
|  | $(0.005)$ | $(0.005)$ | $(0.009)$ | $(0.009)$ |
| Panel III: sometimes |  |  |  |  |
| $\hat{\beta}$ | $-0.02^{*}$ | $-0.02^{*}$ | -0.02 | $-0.03^{*}$ |
|  | $(0.011)$ | $(0.012)$ | $(0.018)$ | $(0.019)$ |
| Panel IV: often |  |  |  |  |
| $\hat{\beta}$ | $-0.02^{*}$ | $-0.02^{*}$ | -0.02 | $-0.03^{*}$ |
|  | $(0.009)$ | $(0.010)$ | $(0.014)$ | $(0.014)$ |
| Controls | No | Yes | No | Yes |

Notes: Table shows ordered probit marginal effects and standard errors (clustered at the community level) of $\beta$ in equation (1), with a linear and quadratic polynomial, with and without unbalanced control variables. The dependent variable is the respondent's answer to the question if Lebanese have been physically or verbally aggressive to the respondent or members of the household in the past six months "never", "rarely", "sometimes", "often". have been physically or verbally aggressive to the respondent or $m$
$*, * *,{ }^{* * *}$ significant at the ten, five, and one percent, respectively.

A small number (46 of 1,358 ) of respondent households moved to a different location in Lebanon between the start of the program (October 2013) and our survey (April 2014). In the main paper we cluster standard errors at the location where people lived at the time of our survey (in April 2014), i.e., when outcomes were measured. In Table A12 and Figure A6 we show that results are robust to clustering standard errors, instead, on where respondents lived at the beginning of the program (i.e., in October 2013). Across all four specifications, we see that the magnitude of changes is small and that the changes do not affect the interpretation of the results. As with the results presented in the main paper, confidence intervals rule out large positive effects.

Table A12: Aid and anti-refugee violence


Notes: Table reports OLS estimates of $\beta$ in equation (??) with a linear polynomial (columns 1 and 2) and quadratic polynomial (columns 3 and 4), and in parentheses are robust standard errors clustered at the community level ( $*,{ }^{* *},{ }^{* * *}$ denotes significance at ten, five, and one percent, respectively). In Panels I, II, III(i.), and III(ii.), columns 1 and 3 ( 2 and 4), the dependent variable is a $1 / 0$ dummy, 1 if Lebanese have "sometimes" or "often" been physically (verbally) aggressive to the respondent or members of the household in the past six months, and zero if "rarely" or "never". In panel III(iii.), columns 1 and 3 ( 2 and 4), the dependent variable is a $1 / 0$ dummy, 1 if Syrians in the community have "sometimes" or "often" been physically (verbally) aggressive to the respondent or members of the household in the past six months, and zero if "rarely" or "never".

Figure A6: Aid and anti-refugee violence: smaller bandwidth


Notes: The solid line shows OLS estimates of $\beta$ in equation (1), with a linear polynomial, for successively smaller bandwidths around the cut-off. Light (dark) gray areas indicate 95 (90) percent confidence intervals. The dependent variable in the left (right) graphs is a $1 / 0$ dummy, 1 if Lebanese have "sometimes" or "often" been verbally (physically) aggressive to the respondent or members of the household in the past six months, and zero if "rarely" or "never". The graphs present results for all bandwidths from 50 meters (our full data, from 450 to 550 meters altitude) to 20 meters (from 480 to 520 meters altitude). We exclude bandwidths smaller than 20 meters, which subset the data to fewer than 100 observations on either side of the cutoff.

## A. 7 RD treatment effects for other outcomes

Tables A13 to A16 report RD treatment effects for outcomes shown in Figure 3 of the main text.
In Table A13, we see a statistically significant effect on food consumption, in particular meat, eggs, rice, beans, potatoes, and water (the size and precision of these estimates is sensitive to the choice of the polynomial and the bandwidth, i.e., the estimate is smaller with the linear polynomial and imprecisely measured for smaller bandwidths, see table A14)

Furthermore, we see an increase private transport expenditure and a decrease in public transport
expenditure (see Tables A13 and A14), suggesting that cash recipients substitute the latter with the former. These two treatment effects appear to be quite robust across alternative specifications of the RD model (see Table A14).

Table A13 also shows a statistically significant (at the ten percent level) negative effect for health care expenditure (which would be in line with cash recipients being less sick due to, for example better nutrition) and the electricity bill (perhaps because cash recipients spend less time sick at home or go out more to buy food), but both treatment effects are not robust across alternative specifications (see Table A14).

Furthermore, we asked respondents if they provide help to Lebanese often, sometimes, rarely, or never. Table A13 shows statistically significant (at 1 percent) positive effect on the propensity to provide help. Table A15, which shows treatment effects for each of the four possible answers (often, sometimes, rarely, never), suggests that cash transfers cause a change from helping "never" or "rarely" to helping "sometimes" or "often".

We cannot reject the null hypothesis for debt repayment, and labor supply/income/wages of respondents, as well as for local prices, wages of low-skill labor, and employment in the communities they reside.

Table A13: RD treatment effects for other outcomes

| Panel I. Household consumption (\$US, past 30 days) |  |  |  | $\begin{gathered} \hat{\beta} \\ \text { (std. error) } \end{gathered}$ | control mean |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \hat{\beta} \\ \text { (std. error) } \end{gathered}$ | control mean |  |  |  |
| Food | $\begin{aligned} & 70.8^{* *} \\ & (30.1) \end{aligned}$ | 320.4 | Non-food | $\begin{aligned} & \hline-67.5 \\ & (67.6) \end{aligned}$ | 457.4 |
| Bread | $\begin{aligned} & -1.4 \\ & (4.7) \end{aligned}$ | 63.7 | Rent | $\begin{aligned} & -41.5 \\ & (59.1) \end{aligned}$ | 208.2 |
| Vegetables | $\begin{gathered} -14.9^{* *} \\ (6.2) \end{gathered}$ | 51.7 | Health care (medicine, doctor visits, etc.) | $\begin{gathered} -18.5^{*} \\ (10.5) \end{gathered}$ | 45.9 |
| Oils | $\begin{aligned} & 11.7 \\ & (8.0) \end{aligned}$ | 34.2 | Cleaning products | $\begin{gathered} 4.2 \\ (3.1) \end{gathered}$ | 25.7 |
| Meat | $\begin{gathered} 17.5^{* *} \\ (7.6) \end{gathered}$ | 33.8 | Electricity (including generator cost) | $\begin{aligned} & -8.9^{*} \\ & (5.1) \end{aligned}$ | 23.4 |
| Cooking fuel | $\begin{gathered} 4.0 \\ (2.6) \end{gathered}$ | 21.5 | Tobacco | $\begin{gathered} 3.5 \\ (4.5) \end{gathered}$ | 23.1 |
| Milk | $\begin{gathered} 2.2 \\ (3.6) \end{gathered}$ | 21.0 | Public transport | $\begin{aligned} & -10.0 \\ & (6.7) \end{aligned}$ | 22.2 |
| Eggs | $\begin{aligned} & 6.2^{* *} \\ & (2.8) \end{aligned}$ | 15.8 | Telephone calls | $\begin{gathered} 2.1 \\ (3.1) \end{gathered}$ | 18.8 |
| Rice | $\begin{gathered} 8.4^{* * *} \\ (2.9) \end{gathered}$ | 15.4 | Hygiene (shampoo, soap, etc.) | $\begin{gathered} -3.0 \\ (2.4) \end{gathered}$ | 18.7 |
| Fish | $\begin{gathered} 6.0 \\ (6.0) \end{gathered}$ | 14.5 | Diapers | $\begin{gathered} 1.0 \\ (3.1) \end{gathered}$ | 17.0 |
| Water | $\begin{gathered} 14.3^{* *} \\ (7.0) \end{gathered}$ | 14.4 | Education (tuition, fees, stationary etc.) | $\begin{gathered} 0.9 \\ (5.5) \end{gathered}$ | 14.2 |
| Beans | $\begin{gathered} 8.7^{* * *} \\ (2.8) \end{gathered}$ | 12.6 | Visa/residence permit renewals | $\begin{gathered} 4.6 \\ (3.9) \end{gathered}$ | 13.5 |
| Sweets | $\begin{aligned} & -2.9 \\ & (3.3) \end{aligned}$ | 8.0 | Clothing | $\begin{gathered} 1.9 \\ (3.9) \end{gathered}$ | 9.9 |
| Potatoes | $\begin{aligned} & 4.2^{* *} \\ & (2.0) \end{aligned}$ | 7.8 | Heating fuel | $\begin{gathered} -9.1 \\ (8.6) \end{gathered}$ | 7.7 |
| Fruits | $\begin{gathered} -0.9 \\ (2.6) \end{gathered}$ | 5.5 | Home repairs | $\begin{gathered} 0.4 \\ (3.4) \end{gathered}$ | 4.4 |
| Beverages | $\begin{aligned} & -1.2 \\ & (1.2) \end{aligned}$ | 2.6 | Private transport | $\begin{aligned} & 5.9^{* *} \\ & (2.8) \end{aligned}$ | 2.9 |
| Panel II. Providing help, debt, and labor supply | $\begin{gathered} \hat{\beta} \\ \text { (std. error) } \end{gathered}$ | control mean | Panel III. Labor market and price level | $\begin{gathered} \hat{\beta} \\ \text { (std. error) } \end{gathered}$ | control mean |
| Helps Lebanese community members sometimes or often (1/0) | $\begin{aligned} & \hline 0.17^{* * *} \\ & (0.053) \end{aligned}$ | 0.17 | Price level ${ }^{\text {( }}$ (\$US) | $\begin{gathered} -0.001 \\ (0.46) \end{gathered}$ | 3.8 |
| Outstanding loans (cash + inkind, in \$ US) | $\begin{gathered} 14.3 \\ (148.8) \end{gathered}$ | 743.3 | Daily wage of casual agricultural labor (\$US) | $\begin{gathered} 0.6 \\ (1.9) \end{gathered}$ | 18.2 |
| Cash savings (\$US) | $\begin{gathered} 6.8 \\ (4.9) \end{gathered}$ | 0.3 | Top-five economic activities (\# of people engaged) ...casual agricultural labor | 3.3 | 110.6 |
| Days worked (past 4 weeks, all members) | 1.5 | 11.8 |  | (13.7) |  |
| Labor income (past 4 weeks, all members, in \$ ${ }^{\text {US }}$ ) | $\begin{aligned} & (1.7) \\ & 44.9 \end{aligned}$ | 181.8 | ...employee in company (e.g., bank) | $\begin{aligned} & -14.8 \\ & (11.2) \end{aligned}$ | 27.1 |
| Daily wage (labor income divided by days worked, in \$US) | $\begin{gathered} (30.2) \\ -0.6 \end{gathered}$ | 17.8 | ...quarrying | $\begin{gathered} -0.9 \\ (3.1) \end{gathered}$ | 25.9 |
|  | (2.7) |  | ...retail trade | $\begin{aligned} & -2.2 \\ & (2.4) \end{aligned}$ | 16.6 |
| Talks to Lebanese community members sometimes or often (1/0) | $\begin{gathered} 0.14 \\ (0.081) \\ \hline \end{gathered}$ | 0.53 | ...raising and selling livestock products | $\begin{gathered} 0.7 \\ (1.8) \\ \hline \hline \end{gathered}$ | 13.8 |

Notes: Table reports OLS estimates of $\beta$ in equation (1), using a linear polynomial. The dependent variable is the row name. Robust standard errors,
clustered at the community level, are reported in parentheses ( ${ }^{*},{ }^{* *},{ }^{* * *}$ denotes significance at ten, five, and one percent, respectively). The column
"control mean" shows the mean of the dependent variable for observations between 450 and 499 meters altitude.
$\dagger$ Price level is the mean of food and non-food prices (source: our survey)

Table A14: Robustness to bandwidth, polynomial, and control variables

|  | $\pm 50 \mathrm{~m}$ |  | $\pm 40 \mathrm{~m}$ |  | $\pm 30 \mathrm{~m}$ |  | $\pm 20 \mathrm{~m}$ |  | $\pm 10 \mathrm{~m}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Food consumption (\$US, past 30 days) |  |  |  |  |  |  |  |  |  |  |
| Panel I.A: Linear |  |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{gathered} 88.9^{* * *} \\ (32.2) \end{gathered}$ | $\begin{gathered} 70.8^{* *} \\ (30.1) \end{gathered}$ | $\begin{gathered} 83.0^{* *} \\ (40.8) \end{gathered}$ | $\begin{gathered} 65.2 \\ (41.0) \end{gathered}$ | $\begin{gathered} 68.8 \\ (47.5) \end{gathered}$ | $\begin{gathered} 32.1 \\ (47.3) \end{gathered}$ | $\begin{gathered} 84.3 \\ (59.3) \end{gathered}$ | $\begin{gathered} 99.3 \\ (63.3) \end{gathered}$ | $\begin{gathered} 50.7 \\ (86.4) \end{gathered}$ | $\begin{aligned} & 123.1 \\ & (99.9) \end{aligned}$ |
| Panel I.B: Quadratic |  |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{gathered} 48.5 \\ (59.7) \\ \hline \end{gathered}$ | $\begin{gathered} 34.9 \\ (58.1) \\ \hline \end{gathered}$ | $\begin{gathered} 32.4 \\ (63.3) \\ \hline \end{gathered}$ | $\begin{gathered} 9.4 \\ (64.9) \\ \hline \end{gathered}$ | $\begin{gathered} 66.6 \\ (62.7) \\ \hline \end{gathered}$ | $\begin{gathered} 64.6 \\ (70.3) \\ \hline \end{gathered}$ | $\begin{gathered} 16.9 \\ (64.4) \\ \hline \end{gathered}$ | $\begin{aligned} & 104.3 \\ & (81.0) \end{aligned}$ | $\begin{gathered} -71.3 \\ (132.5) \\ \hline \end{gathered}$ | $\begin{gathered} -56.9 \\ (57.5) \end{gathered}$ |
| Health expenditure (\$US, past 30 days) |  |  |  |  |  |  |  |  |  |  |
| Panel II.A: Linear |  |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{gathered} -13.9 \\ (9.9) \end{gathered}$ | $\begin{gathered} -18.5^{*} \\ (10.5) \end{gathered}$ | $\begin{gathered} -16.1 \\ (14.1) \end{gathered}$ | $\begin{aligned} & -21.0 \\ & (14.3) \end{aligned}$ | $\begin{gathered} -11.6 \\ (13.6) \end{gathered}$ | $\begin{gathered} -18.1 \\ (15.7) \end{gathered}$ | $\begin{aligned} & 48.7^{* *} \\ & (20.2) \end{aligned}$ | $\begin{gathered} 39.8^{* *} \\ (17.9) \end{gathered}$ | $\begin{gathered} 33.6^{*} \\ (16.6) \end{gathered}$ | $\begin{gathered} 32.9 \\ (23.8) \end{gathered}$ |
| Panel II.B: Quadratic |  |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{gathered} 0.7 \\ (15.1) \end{gathered}$ | $\begin{gathered} -5.7 \\ (15.9) \end{gathered}$ | $\begin{aligned} & 31.6^{*} \\ & (17.6) \end{aligned}$ | $\begin{gathered} 26.5 \\ (17.2) \\ \hline \end{gathered}$ | $\begin{gathered} 69.7^{* * *} \\ (24.7) \\ \hline \end{gathered}$ | $\begin{gathered} 62.4^{* *} \\ (23.6) \end{gathered}$ | $\begin{gathered} 27.4^{*} \\ (14.6) \end{gathered}$ | $\begin{gathered} 12.5 \\ (20.4) \end{gathered}$ | $\begin{array}{r} -11.3 \\ (28.0) \\ \hline \end{array}$ | $\begin{aligned} & -27.6 \\ & (29.4) \end{aligned}$ |
| Electricity bill (\$US, past 30 days) |  |  |  |  |  |  |  |  |  |  |
| Panel III.A: Linear |  |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{aligned} & -8.5 \\ & (5.4) \end{aligned}$ | $\begin{gathered} -8.9^{*} \\ (5.1) \end{gathered}$ | $\begin{aligned} & -6.5 \\ & (6.8) \end{aligned}$ | $\begin{gathered} -9.6 \\ (5.9) \end{gathered}$ | $\begin{aligned} & -3.8 \\ & (8.7) \end{aligned}$ | $\begin{gathered} -6.0 \\ (7.4) \end{gathered}$ | $\begin{gathered} -11.8 \\ (9.5) \end{gathered}$ | $\begin{gathered} -9.0 \\ (8.7) \end{gathered}$ | $\begin{gathered} -3.5 \\ (11.6) \end{gathered}$ | $\begin{gathered} 5.3 \\ (10.7) \end{gathered}$ |
| Panel III.B: Quadratic |  |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{aligned} & -5.5 \\ & (9.0) \end{aligned}$ | $\begin{aligned} & -9.9 \\ & (8.0) \end{aligned}$ | $\begin{aligned} & -0.3 \\ & (8.6) \end{aligned}$ | $\begin{array}{r} -5.6 \\ (7.3) \\ \hline \end{array}$ | $\begin{gathered} -11.6 \\ (9.9) \end{gathered}$ | $\begin{gathered} -13.9 \\ (9.4) \end{gathered}$ | $\begin{aligned} & 12.2 \\ & (7.9) \end{aligned}$ | $\begin{aligned} & 13.7 \\ & (8.6) \end{aligned}$ | $\begin{gathered} 20.1 \\ (20.6) \end{gathered}$ | $\begin{gathered} 23.9 \\ (20.8) \end{gathered}$ |
| Public transport (\$US, past 30 days) |  |  |  |  |  |  |  |  |  |  |
| Panel IV.A: Linear |  |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{aligned} & -6.1 \\ & (8.3) \end{aligned}$ | $\begin{gathered} -10.0 \\ (6.7) \end{gathered}$ | $\begin{gathered} -13.9^{* *} \\ (6.5) \end{gathered}$ | $\begin{gathered} -15.3^{* *} \\ (6.5) \end{gathered}$ | $\begin{gathered} -23.1^{* * *} \\ (5.9) \end{gathered}$ | $\begin{gathered} -24.8^{* * *} \\ (6.8) \end{gathered}$ | $\begin{gathered} -10.4 \\ (10.9) \end{gathered}$ | $\begin{gathered} -9.1 \\ (13.5) \end{gathered}$ | $\begin{gathered} -46.1^{* *} \\ (18.9) \end{gathered}$ | $\begin{aligned} & -53.4^{*} \\ & (25.3) \end{aligned}$ |
| Panel IV.B: Quadratic |  |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{gathered} -25.5^{* * *} \\ (8.0) \\ \hline \end{gathered}$ | $\begin{gathered} -24.2^{* * *} \\ (8.2) \\ \hline \end{gathered}$ | $\begin{gathered} -38.7^{* * *} \\ (10.6) \\ \hline \end{gathered}$ | $\begin{gathered} -36.8^{* * *} \\ (9.8) \\ \hline \end{gathered}$ | $\begin{gathered} -12.9 \\ (15.1) \\ \hline \end{gathered}$ | $\begin{gathered} -17.7 \\ (15.9) \\ \hline \end{gathered}$ | $\begin{aligned} & -43.5^{*} \\ & (16.0) \\ & \hline \end{aligned}$ | $\begin{gathered} -43.6^{* *} \\ (20.1) \\ \hline \end{gathered}$ | $\begin{gathered} -58.3^{* *} \\ (26.0) \\ \hline \end{gathered}$ | $\begin{gathered} -67.9^{* *} \\ (27.0) \\ \hline \end{gathered}$ |
| Private transport (\$US, past 30 days) |  |  |  |  |  |  |  |  |  |  |
| Panel V.A: Linear |  |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{aligned} & 7.7^{* *} \\ & (3.0) \end{aligned}$ | $\begin{gathered} 5.9^{* *} \\ (2.8) \end{gathered}$ | $\begin{gathered} 10.2^{* * *} \\ (3.1) \end{gathered}$ | $\begin{gathered} 8.6^{* * *} \\ (2.9) \end{gathered}$ | $\begin{aligned} & 8.0^{* *} \\ & (3.4) \end{aligned}$ | $\begin{gathered} 4.8 \\ (3.8) \end{gathered}$ | $\begin{gathered} 12.6^{* * *} \\ (2.9) \end{gathered}$ | $\begin{gathered} 9.8^{* * *} \\ (2.5) \end{gathered}$ | $\begin{gathered} 14.8^{* * *} \\ (3.6) \end{gathered}$ | $\begin{gathered} 14.0^{* * *} \\ (4.3) \end{gathered}$ |
| Panel V.B: Quadratic |  |  |  |  |  |  |  |  |  |  |
| $\hat{\beta}$ | $\begin{gathered} 12.5^{* * *} \\ (3.8) \\ \hline \end{gathered}$ | $\begin{gathered} 11.1^{* * *} \\ (3.6) \end{gathered}$ | $\begin{aligned} & 7.3^{*} \\ & (4.0) \\ & \hline \end{aligned}$ | $\begin{gathered} 3.9 \\ (5.0) \\ \hline \end{gathered}$ | $20.6^{* * *}$ <br> (7.3) | $\begin{gathered} 17.2^{* * *} \\ (6.2) \\ \hline \end{gathered}$ | $\begin{gathered} 11.5^{* * *} \\ (2.7) \\ \hline \end{gathered}$ | $\begin{gathered} 11.7^{* * *} \\ (3.8) \\ \hline \end{gathered}$ | $\begin{array}{r} -5.5 \\ (5.2) \\ \hline \end{array}$ | $\begin{gathered} 4.6 \\ (7.4) \\ \hline \end{gathered}$ |
| Controls | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes |
| Number of obs | 1358 | 1357 | 1085 | 1085 | 728 | 728 | 359 | 359 | 127 | 127 |

Notes: Table shows OLS coefficients and standard errors (clustered at the community level) of $\beta$ in equation (1), using a linear and quadratic polynomial, with and without unbalanced control variables, for successively smaller bandwidths around the 500 meters altitude cut-off.
*,**,*** significant at ten, five, and one percent.

Table A15: Helping Lebanese community members: bandwidth, polynomial, and control variables

|  | $\pm 50 \mathrm{~m}$ |  | $\pm 40 \mathrm{~m}$ |  | $\pm 30 \mathrm{~m}$ |  | $\pm 20 \mathrm{~m}$ |  | $\pm 10 \mathrm{~m}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Never |  |  |  |  |  |  |  |  |  |  |
| Panel I.A: Linear $\hat{\beta}$ | $\begin{gathered} -0.18^{* * *} \\ (0.07) \end{gathered}$ | $\begin{gathered} -0.16^{* *} \\ (0.06) \end{gathered}$ | $\begin{gathered} -0.12 \\ (0.09) \end{gathered}$ | $\begin{gathered} -0.12 \\ (0.09) \end{gathered}$ | $\begin{gathered} -0.07 \\ (0.08) \end{gathered}$ | $\begin{gathered} -0.08 \\ (0.08) \end{gathered}$ | $\begin{gathered} -0.05 \\ (0.14) \end{gathered}$ | $\begin{gathered} -0.01 \\ (0.13) \end{gathered}$ | $\begin{gathered} -0.07 \\ (0.33) \end{gathered}$ | $\begin{gathered} 0.17 \\ (0.34) \end{gathered}$ |
| Panel I.B: Quadratic $\hat{\beta}$ | $\begin{gathered} -0.03 \\ (0.10) \\ \hline \end{gathered}$ | $\begin{gathered} -0.03 \\ (0.11) \\ \hline \end{gathered}$ | $\begin{gathered} 0.12 \\ (0.17) \\ \hline \end{gathered}$ | $\begin{gathered} 0.11 \\ (0.16) \\ \hline \end{gathered}$ | $\begin{gathered} -0.03 \\ (0.19) \end{gathered}$ | $\begin{gathered} -0.00 \\ (0.18) \end{gathered}$ | $\begin{gathered} -0.03 \\ (0.25) \\ \hline \end{gathered}$ | $\begin{gathered} -0.02 \\ (0.25) \\ \hline \end{gathered}$ | $\begin{gathered} 0.88^{* * *} \\ (0.18) \\ \hline \end{gathered}$ | $\begin{gathered} 1.09^{* * *} \\ (0.25) \end{gathered}$ |
| Rarely <br> Panel II.A: Linear $\hat{\beta}$ | $\begin{gathered} 0.00 \\ (0.04) \end{gathered}$ | $\begin{gathered} -0.00 \\ (0.04) \end{gathered}$ | $\begin{gathered} -0.06 \\ (0.04) \end{gathered}$ | $\begin{gathered} -0.06 \\ (0.04) \end{gathered}$ | $\begin{gathered} -0.05 \\ (0.05) \end{gathered}$ | $\begin{gathered} -0.04 \\ (0.05) \end{gathered}$ | $\begin{gathered} -0.11 \\ (0.12) \end{gathered}$ | $\begin{gathered} -0.11 \\ (0.11) \end{gathered}$ | $\begin{gathered} -0.40 \\ (0.27) \end{gathered}$ | $\begin{gathered} -0.46^{*} \\ (0.25) \end{gathered}$ |
| Panel II.B: Quadratic $\hat{\beta}$ | $\begin{gathered} -0.11 \\ (0.08) \\ \hline \end{gathered}$ | $\begin{gathered} -0.11 \\ (0.08) \\ \hline \end{gathered}$ | $\begin{gathered} -0.13 \\ (0.11) \end{gathered}$ | $\begin{gathered} -0.13 \\ (0.11) \end{gathered}$ | $\begin{gathered} -0.17 \\ (0.19) \end{gathered}$ | $\begin{gathered} -0.19 \\ (0.18) \\ \hline \end{gathered}$ | $\begin{gathered} -0.19 \\ (0.27) \end{gathered}$ | $\begin{gathered} -0.20 \\ (0.25) \\ \hline \end{gathered}$ | $\begin{gathered} -1.26^{* * *} \\ (0.11) \\ \hline \end{gathered}$ | $\begin{gathered} -1.23^{* * *} \\ (0.13) \\ \hline \end{gathered}$ |
| Sometimes <br> Panel III.A: Linear $\hat{\beta}$ | $\begin{gathered} 0.14^{* *} \\ (0.05) \end{gathered}$ | $\begin{gathered} 0.13^{* *} \\ (0.05) \end{gathered}$ | $\begin{aligned} & 0.14^{*} \\ & (0.07) \end{aligned}$ | $\begin{gathered} 0.15^{* *} \\ (0.07) \end{gathered}$ | $\begin{gathered} 0.10 \\ (0.07) \end{gathered}$ | $\begin{gathered} 0.11 \\ (0.07) \end{gathered}$ | $\begin{gathered} 0.15 \\ (0.11) \end{gathered}$ | $\begin{gathered} 0.12 \\ (0.11) \end{gathered}$ | $\begin{gathered} 0.43^{* *} \\ (0.17) \end{gathered}$ | $\begin{aligned} & 0.29^{*} \\ & (0.14) \end{aligned}$ |
| Panel III.B: Quadratic $\hat{\beta}$ | $\begin{gathered} 0.12 \\ (0.09) \end{gathered}$ | $\begin{gathered} 0.11 \\ (0.10) \end{gathered}$ | $\begin{gathered} 0.01 \\ (0.12) \\ \hline \end{gathered}$ | $\begin{gathered} 0.04 \\ (0.12) \\ \hline \end{gathered}$ | $\begin{gathered} 0.17 \\ (0.13) \\ \hline \end{gathered}$ | $\begin{gathered} 0.18 \\ (0.13) \\ \hline \end{gathered}$ | $\begin{gathered} 0.16 \\ (0.14) \\ \hline \end{gathered}$ | $\begin{gathered} 0.17 \\ (0.17) \\ \hline \end{gathered}$ | $\begin{gathered} 0.30 \\ (0.23) \\ \hline \end{gathered}$ | $\begin{gathered} 0.15 \\ (0.28) \\ \hline \end{gathered}$ |


| Often |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel IV.A: Linear | $0.04^{* *}$ | $0.03^{* *}$ | $0.04^{* *}$ | $0.03^{*}$ | 0.02 | 0.00 | 0.02 | 0.01 | 0.04 | -0.01 |
| $\hat{\beta}$ | $(0.01)$ | $(0.01)$ | $(0.02)$ | $(0.02)$ | $(0.02)$ | $(0.02)$ | $(0.02)$ | $(0.03)$ | $(0.02)$ | $(0.04)$ |
|  |  |  |  |  |  |  |  |  |  |  |
| Panel IV.B: Quadratic | 0.03 | 0.03 | -0.00 | -0.01 | 0.03 | 0.01 | $0.06^{* *}$ | 0.05 | $0.07^{* *}$ | -0.00 |
| $\hat{\beta}$ | $(0.02)$ | $(0.02)$ | $(0.03)$ | $(0.02)$ | $(0.02)$ | $(0.03)$ | $(0.02)$ | $(0.03)$ | $(0.03)$ | $(0.05)$ |
| Controls | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes |
| Number of obs | 1357 | 1356 | 1085 | 1085 | 728 | 728 | 359 | 359 | 127 | 127 |

Notes: Table shows OLS regression coefficients and standard errors (clustered at the community level) of $\beta$ in equation (1), using a linear and quadratic polynomial, with and without unbalanced control variables, for successively smaller bandwidths around the 500 meters altitude cut-off. In panel I (II, III, IV) the dependent variable is a $1 / 0$ dummy if the respondent provides help to Lebanese "never" ("rarely", "sometimes", "often").
$*, * *,{ }^{* * *}$ significant at ten, five, and one percent.

Table A16: Talking to Lebanese community members: bandwidth, polynomial, and control variables

|  | $\pm 50 \mathrm{~m}$ |  | $\pm 40 \mathrm{~m}$ |  | $\pm 30 \mathrm{~m}$ |  | $\pm 20 \mathrm{~m}$ |  | $\pm 10 \mathrm{~m}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Never |  |  |  |  |  |  |  |  |  |  |
| Panel I.A: Linear $\hat{\beta}$ | $\begin{gathered} -0.04 \\ (0.07) \end{gathered}$ | $\begin{gathered} -0.04 \\ (0.06) \end{gathered}$ | $\begin{gathered} -0.04 \\ (0.09) \end{gathered}$ | $\begin{gathered} -0.06 \\ (0.08) \end{gathered}$ | $\begin{gathered} 0.04 \\ (0.09) \end{gathered}$ | $\begin{gathered} 0.05 \\ (0.10) \end{gathered}$ | $\begin{gathered} -0.03 \\ (0.18) \end{gathered}$ | $\begin{gathered} -0.01 \\ (0.21) \end{gathered}$ | $\begin{gathered} -0.02 \\ (0.27) \end{gathered}$ | $\begin{gathered} 0.06 \\ (0.38) \end{gathered}$ |
| Panel I.B: Quadratic $\hat{\beta}$ | $\begin{gathered} 0.03 \\ (0.12) \\ \hline \end{gathered}$ | $\begin{gathered} -0.02 \\ (0.13) \\ \hline \end{gathered}$ | $\begin{gathered} 0.16 \\ (0.18) \\ \hline \end{gathered}$ | $\begin{gathered} 0.14 \\ (0.19) \\ \hline \end{gathered}$ | $\begin{gathered} -0.14 \\ (0.22) \end{gathered}$ | $\begin{gathered} -0.16 \\ (0.23) \\ \hline \end{gathered}$ | $\begin{gathered} -0.23 \\ (0.26) \end{gathered}$ | $\begin{gathered} -0.18 \\ (0.33) \\ \hline \end{gathered}$ | $\begin{aligned} & 0.59^{*} \\ & (0.31) \end{aligned}$ | $\begin{gathered} 0.75^{* *} \\ (0.27) \\ \hline \end{gathered}$ |
| Rarely <br> Panel II.A: Linear $\hat{\beta}$ | $\begin{gathered} -0.11 \\ (0.09) \end{gathered}$ | $\begin{gathered} -0.10 \\ (0.09) \end{gathered}$ | $\begin{gathered} -0.13 \\ (0.11) \end{gathered}$ | $\begin{gathered} -0.14 \\ (0.12) \end{gathered}$ | $\begin{gathered} -0.09 \\ (0.14) \end{gathered}$ | $\begin{gathered} -0.13 \\ (0.14) \end{gathered}$ | $\begin{gathered} -0.03 \\ (0.17) \end{gathered}$ | $\begin{gathered} -0.02 \\ (0.14) \end{gathered}$ | $\begin{gathered} -0.10 \\ (0.29) \end{gathered}$ | $\begin{gathered} -0.16 \\ (0.25) \end{gathered}$ |
| Panel II.B: Quadratic $\hat{\beta}$ | $\begin{gathered} -0.09 \\ (0.17) \end{gathered}$ | $\begin{gathered} -0.12 \\ (0.17) \\ \hline \end{gathered}$ | $\begin{gathered} 0.02 \\ (0.17) \\ \hline \end{gathered}$ | $\begin{gathered} -0.05 \\ (0.18) \\ \hline \end{gathered}$ | $\begin{gathered} 0.07 \\ (0.22) \\ \hline \end{gathered}$ | $\begin{gathered} 0.09 \\ (0.22) \\ \hline \end{gathered}$ | $\begin{gathered} 0.35 \\ (0.33) \\ \hline \end{gathered}$ | $\begin{gathered} 0.25 \\ (0.32) \\ \hline \end{gathered}$ | $\begin{gathered} -0.98^{* * *} \\ (0.23) \\ \hline \end{gathered}$ | $\begin{gathered} -0.92^{* * *} \\ (0.23) \\ \hline \end{gathered}$ |
| Sometimes <br> Panel III.A: Linear $\hat{\beta}$ | $\begin{gathered} 0.10 \\ (0.12) \end{gathered}$ | $\begin{gathered} 0.10 \\ (0.12) \end{gathered}$ | $\begin{gathered} 0.20 \\ (0.13) \end{gathered}$ | $\begin{aligned} & 0.23^{*} \\ & (0.13) \end{aligned}$ | $\begin{gathered} 0.04 \\ (0.18) \end{gathered}$ | $\begin{gathered} 0.10 \\ (0.17) \end{gathered}$ | $\begin{gathered} -0.08 \\ (0.20) \end{gathered}$ | $\begin{gathered} -0.06 \\ (0.19) \end{gathered}$ | $\begin{gathered} -0.03 \\ (0.33) \end{gathered}$ | $\begin{gathered} -0.00 \\ (0.29) \end{gathered}$ |
| Panel III.B: Quadratic $\hat{\beta}$ | $\begin{gathered} 0.10 \\ (0.21) \\ \hline \end{gathered}$ | $\begin{gathered} 0.16 \\ (0.21) \\ \hline \end{gathered}$ | $\begin{gathered} -0.28 \\ (0.20) \\ \hline \end{gathered}$ | $\begin{gathered} -0.21 \\ (0.20) \\ \hline \end{gathered}$ | $\begin{gathered} -0.17 \\ (0.26) \\ \hline \end{gathered}$ | $\begin{gathered} -0.11 \\ (0.23) \end{gathered}$ | $\begin{gathered} -0.48 \\ (0.32) \\ \hline \end{gathered}$ | $\begin{gathered} -0.43 \\ (0.34) \\ \hline \end{gathered}$ | $\begin{gathered} 0.01 \\ (0.54) \end{gathered}$ | $\begin{gathered} -0.09 \\ (0.33) \\ \hline \end{gathered}$ |
| Often <br> Panel IV.A: Linear $\hat{\beta}$ | $\begin{gathered} 0.04 \\ (0.06) \end{gathered}$ | $\begin{gathered} 0.04 \\ (0.06) \end{gathered}$ | $\begin{gathered} -0.03 \\ (0.06) \end{gathered}$ | $\begin{gathered} -0.03 \\ (0.06) \end{gathered}$ | $\begin{gathered} 0.00 \\ (0.07) \end{gathered}$ | $\begin{gathered} -0.02 \\ (0.08) \end{gathered}$ | $\begin{gathered} 0.13 \\ (0.08) \end{gathered}$ | $\begin{gathered} 0.10 \\ (0.09) \end{gathered}$ | $\begin{aligned} & 0.15^{*} \\ & (0.08) \end{aligned}$ | $\begin{aligned} & 0.10^{*} \\ & (0.05) \end{aligned}$ |
| Panel IV.B: Quadratic $\hat{\beta}$ | $\begin{gathered} -0.04 \\ (0.09) \\ \hline \end{gathered}$ | $\begin{gathered} -0.01 \\ (0.10) \end{gathered}$ | $\begin{gathered} 0.11 \\ (0.07) \end{gathered}$ | $\begin{gathered} 0.12 \\ (0.08) \end{gathered}$ | $\begin{gathered} 0.24^{* * *} \\ (0.08) \\ \hline \end{gathered}$ | $\begin{gathered} 0.19^{* *} \\ (0.08) \end{gathered}$ | $\begin{gathered} 0.36^{* * *} \\ (0.08) \\ \hline \end{gathered}$ | $\begin{gathered} 0.36^{* * *} \\ (0.09) \end{gathered}$ | $\begin{gathered} 0.39 * * * \\ (0.06) \end{gathered}$ | $\begin{gathered} 0.26 \\ (0.15) \\ \hline \end{gathered}$ |
| Controls <br> Number of obs | $\begin{gathered} \hline \text { No } \\ 1357 \end{gathered}$ | $\begin{gathered} \hline \text { Yes } \\ 1356 \end{gathered}$ | $\begin{gathered} \hline \text { No } \\ 1085 \end{gathered}$ | $\begin{gathered} \hline \text { Yes } \\ 1085 \end{gathered}$ | $\begin{gathered} \hline \text { No } \\ 728 \end{gathered}$ | $\begin{aligned} & \text { Yes } \\ & 728 \end{aligned}$ | $\begin{gathered} \hline \text { No } \\ 359 \end{gathered}$ | $\begin{aligned} & \hline \text { Yes } \\ & 359 \end{aligned}$ | $\begin{aligned} & \hline \text { No } \\ & 127 \end{aligned}$ | $\begin{aligned} & \text { Yes } \\ & 127 \end{aligned}$ |

Notes: Table shows OLS regression coefficients and standard errors (clustered at the community level) of $\beta$ in equation (1), using a linear and quadratic polynomial, with and without unbalanced control variables, for successively smaller bandwidths around the 500 meters altitude cut-off. In panel I (II, III, IV) the dependent variable is a $1 / 0$ dummy if respondent talks to Lebanese "never" ("rarely", "sometimes", "often").
*,**, ${ }^{* * *}$ significant at ten, five, and one percent.

## A. 8 Heterogeneous treatment effects

Table A17: Aid and anti-refugee violence: heterogeneous effects

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| treat (i.e., $A_{i} \geq 500$ ) | $\begin{gathered} -0.069^{*} \\ (0.039) \end{gathered}$ | $\begin{gathered} -0.069^{*} \\ (0.041) \end{gathered}$ | $\begin{aligned} & -0.038 \\ & (0.030) \end{aligned}$ | $\begin{gathered} -0.079^{*} \\ (0.045) \end{gathered}$ | $\begin{gathered} -0.076^{* *} \\ (0.034) \end{gathered}$ | $\begin{gathered} -0.080^{* *} \\ (0.033) \end{gathered}$ | $\begin{gathered} -0.089^{* *} \\ (0.036) \end{gathered}$ | $\begin{gathered} -0.079^{* *} \\ (0.035) \end{gathered}$ | $\begin{gathered} -0.079^{* *} \\ (0.030) \end{gathered}$ | $\begin{gathered} -0.080^{* *} \\ (0.037) \end{gathered}$ | $\begin{gathered} -0.078^{* *} \\ (0.034) \end{gathered}$ | $\begin{gathered} -0.076^{* *} \\ (0.034) \end{gathered}$ |
| treat ${ }^{*}$ refugees in host community ( 1 month pre-program) | $\begin{aligned} & -0.000 \\ & (0.000) \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |
| treat*hh head is low-skill laborer (primary or less education) |  | $\begin{aligned} & -0.013 \\ & (0.027) \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |
| treat*no. of members aged 18-59 |  |  | $\begin{aligned} & -0.020^{*} \\ & (0.012) \end{aligned}$ |  |  |  |  |  |  |  |  |  |
| treat*age of household head |  |  |  | $\begin{gathered} 0.000 \\ (0.001) \end{gathered}$ |  |  |  |  |  |  |  |  |
| treat*relatives in Lebanon before fleeing |  |  |  |  | $\begin{gathered} 0.000 \\ (0.002) \end{gathered}$ |  |  |  |  |  |  |  |
| treat*friends in Lebanon before fleeing |  |  |  |  |  | $\begin{gathered} 0.003 \\ (0.003) \end{gathered}$ |  |  |  |  |  |  |
| treat*months in Lebanon |  |  |  |  |  |  | $\begin{gathered} 0.001 \\ (0.001) \end{gathered}$ |  |  |  |  |  |
| treat*Syria origin is Dara |  |  |  |  |  |  |  | $\begin{gathered} 0.030 \\ (0.046) \end{gathered}$ |  |  |  |  |
| treat*Syria origin is Homs |  |  |  |  |  |  |  |  | $\begin{gathered} -0.017 \\ (0.056) \end{gathered}$ |  |  |  |
| treat*Syria origin is Idleb |  |  |  |  |  |  |  |  |  | $\begin{gathered} 0.035 \\ (0.026) \end{gathered}$ |  |  |
| treat*Syria origin is Aleppo |  |  |  |  |  |  |  |  |  |  | $\begin{gathered} 0.009 \\ (0.030) \end{gathered}$ |  |
| treat*Syria origin is other |  |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & -0.019 \\ & (0.029) \end{aligned}$ |

[^10]
## A. 9 Detailed description of data collection

Involved actors. We conducted this research in partnership with International Rescue Committee (IRC), a leading international humanitarian organization, that coordinates the aid program's implementation on behalf of The UN Refugee Agency (UNHCR). Funding for the survey was provided by the Department for International Development (DFID) of the UK government. ${ }^{11}$ We hired the Lebanese survey firm Information International for data collection. One of us was in Lebanon through the entire period to supervise the data collection. Research design and survey instrument were approved by Yale University's IRB under protocol 1404013714.

Household and community questionnaire. The survey firm administered a household questionnaire consisting of 226 questions to the head of the household (the person who is mainly responsible for deciding how the household spends its money). Most of the survey's questions were borrowed from Most of the survey's questions were borrowed from Blattman et al. (2016). The questionnaire contains measures of (a) demographic characteristics; (b) consumption and subjective well-being (including received aid, supply, income, assets, debt and savings, inter-household transfers); and (c) anti-refugee violence. An interview took about one hour per household.

A random sub-sample of four respondents in each community was asked 81 additional questions on community characteristics (prices, labor market, and geographic characteristics).

Translation, pretesting, and enumerator training. Translation of the survey into Arabic was done in a three-step procedure. First, the survey questionnaire was translated from English to Arabic by the Survey Firm. Second, this Arabic-language version was then translated back into English by IRC staff who had not seen the initial English version of the survey. Finally, we compared the back-translated English version to the original, and sent the questionnaire back to the survey firm for revision if there were discrepancies. This three-step process was repeated until there there were no more discrepancies.

[^11]We pretested the survey in several communities outside 450-to-550 meters altitude in order to remove any remaining ambiguities.

One of us and a manager from the Survey Firm conducted two working days of training with the enumerators (enumerators were Survey Firm employees). Training stressed consistency in the application of the questionnaire across enumerators in order to ensure precise measurement. In order to mitigate the issue of under- or over-reporting, enumerators were also trained to emphasize that the survey is not a household-level needs assessment for aid. The enumerators read text both in the consent script at the beginning of the survey and again in the middle of the survey that went, "The following survey is not being used to re-assess your household's need for aid. Your answers will not be used to re-determine your household's amount of aid."

Survey logistics. The survey was administered in April and May 2014, i.e., about six months after the start of the program. The survey firm contacted most households via phone to schedule a time and location for the interview. Some 322 of 1,851 households could not be contacted via phone. The Survey Firm asked for these individuals upon arriving in the community using the household's address information provided by UNHCR. Enumerators worked in teams of two, with one person conversing and reading and the second writing. On average, each survey team of two enumerators conducted five interviews per day.

Interview environment. Interviews were conducted in respondents' homes or sometimes right outside their home. Generally, many other people were present in interviews - usually friends, family, and neighbors. It was usually infeasible to request to interview the respondent alone (first, most living spaces are small with only one area to sit - often on the beds; second, it is generally acceptable for friends and neighbors to enter friends' houses and sit down.)

Auditors We hired auditors to confirm data quality. They called a random sample of 371 households after the survey firm's enumerators had visited these households. First, the auditor confirmed that enumerators had visited the household and conducted the survey. Second, auditors asked a number of questions that could then be compared to the enumerator's data. In general, this exercise suggests that enumerators accurately followed the data collection protocol. Twenty-two of
the 371 phone respondents told auditors that they were not interviewed. But when we investigated the matter we found that the auditor had either not spoken with the original survey respondent, or that the respondent was confused about which survey the auditor had asked about (e.g., the auditor asked whether someone from the survey information international had interviewed him, but the respondent had remembered the enumerators as coming on behalf of the International Rescue Committee (IRC) or the UN).

## A. 10 Map of treatment and control communities

Figure A7: Map of treatment and control communities

Notes: Map showing host communities located between 450 and 499 meters altitude (rectangles), and between 500 and 550 meters altitude (triangles).

## A. 11 Survey questionnaires

## Questionnaire

## Introduction

I would like to speak with the person in the household who is mainly responsible for how the household spends its money. By "household" I mean all the people who sleep here most nights and share the same pot as you. This may be the head of household or someone else. Is he or she here?

## Consent script

I am from the survey firm Information International and we are working for the organization International Rescue Committee and scientific researchers from American and Brazilian universities. We would like to ask you some questions about members of your household with the aim of having a better understanding of your living conditions and social attitudes and the effectiveness of the UN's assistance program.

Your household has been selected because you are received aid in the past few months from WFP or UNHCR. Your help is very important for understanding to living conditions of Syrians in Lebanon.

## The following survey is not being used to re-assess your household's need for aid.

Your answers will not be used to re-determine your household's amount of aid. Any information that you provide will be kept strictly confidential. Your participation is completely voluntary. You may skip questions you do not wish to answer and you may stop at any time. It will be impossible for anyone to know your answers and there is no risk to you.

The survey takes about 50 minutes to complete, but it depends on how much you have to say. I thank you in advance for your participation in the study. If you have any questions about this research, please ask me now. If you have questions at a later time, you can call our survey hotline at (the numbers in the attached sheet). This hotline is for issues relating to this survey and is not a contact line for referrals or services. The hotline will be open from $2: 30-6 \mathrm{pm}$ on Mondays, Wednesdays, and Fridays. If you give a missed call during those hours, someone at the hotline will call you back.

You can keep this page for your records.
May we proceed with the interview?
FOR ENUMERATOR: give the phone number sheet to the respondent.

FOR ENUMERATOR: non-response codes
-96= Do not know
-97=Refuse to answer
-98=Does not apply

| 1. Date of Interview: DD/MM/YYYY: \| | DD/MM/YYYY: \|__|_-|/I__|_-|/_-_|_-_| |
| :---: | :---: |
| 2. Start Time of Interview: HH:MM: \| | : HH:MM: \|__|__|:|__| |
| 3. Participant ID Code: \|__|__|__| |  |
| 4. Enumerator names: ___ | 5. Team leader name: |



| I would like to start by asking you to list all current members of your household. By "household member" I mean the people who sleep under the same roof most nights and share the same pot as you. They do not need to be members of your immediate family. (ENUMERATOR: If there are more than ten people record on the back of the page.) Do NOT list: (a) people who have moved and are not expected to return; (b) people who have moved to start new households, (c) short-term guests |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 9a. What is the year of birth? <br> FOR ENUMERATOR: If unknown, write the best guess | 9b. Sex $\begin{aligned} & 1=\text { female } \\ & 2=\text { male } \end{aligned}$ | 9c. What is the relationship to the Person with primary responsibility for spending? <br> 1=Person with primary responsibility for spending 2=husband/wife; 3=daughter; 4=son; <br> 5=sister; <br> 6=brother; <br> 7=mother; <br> 8=father; <br> 9=mother in law; <br> 10=father in law; <br> 11=sister in law; <br> 12=brother in law; <br> 13=grand-mother; <br> 14=grand-father; <br> 15=refugee guest; <br> 16=other, specify | 10. What is the nationality? $\begin{aligned} & \text { 1=Syrian; } \\ & \text { 2=Lebanese } \\ & \text { 3=Palestinian; } \\ & \text { 4=Iraqi; } \\ & \text { 5=Other (specify) } \end{aligned}$ | 11. When did the household member arrive to Lebanon? <br> FOR ENUMERATOR: Write month/year ( $M M / Y Y Y Y$ ) <br> Put 999 if this household member moved to Lebanon before March 2011 | 12. Education completed <br> $0=$ Never studied <br> 1=incomplete primary school <br> 2= finished primary school <br> $3=$ finished middle school <br> $4=$ finished secondary school <br> $5=$ Technical school <br> 6=University <br> $7=$ non of the above (e.g. currently attending primary school) | 12a.Is [Name] currently attending school or university? $\begin{aligned} & 0=N o \\ & 1=Y e s \end{aligned}$ | 13. Can [Name] walk for 30 minutes easily, with slight difficulty, with great difficulty or not at all? $\begin{aligned} & \text { 1=Easily } \\ & \text { 2=With slight } \\ & \text { difficulty } \\ & \text { 3=With great } \\ & \text { difficulty } \\ & \text { 4=Not at all } \end{aligned}$ |
| Person \#1 | \|__|__|__|__| | I__\| | \|_-1_| | I_I | 1 | I__\| | I__\| | I__I |
| Person \#2 | \|__|__|__|__| | I__I | \|__|__| | I_I | -_I___ | I__\| | I__\| | I__\| |
| Person \#3 | \|__|__|__|__| | I__I | \|__|__| | I__\| | _-_ | I__I | I__\| | I__\| |
| Person \#4 | \|__|__|__|__| | I__\| | \|__|__| | I__\| | _ | I__\| | I__\| | I__\| |
| Person \#5 | \|__|__|__|__| | I__\| | \|__|__| | I__\| | -1___ | I__\| | I__\| | I__\| |
| Person \#6 | \|__|__|__|__| | I__\| | \|__|__| | I_I | -1___ | I__\| | I__\| | I__\| |
| Person \#7 | \|__|__|__|__| | I__I | I__\|__| | I__\| | - 1 | I__\| | I__\| | I__\| |
| Person \#8 | \|__|__|__|__| | I__\| | I__\|__| | I__\| | _-_1___ | I__\| | I__\| | I__\| |


|  | 14. During the past 4 weeks, how many days was this person sick? <br> FOR ENUMERATOR: if never sick, write 0 . If always sick, write 28 | 15. During the past 4 weeks, how many days did this person work to make money? <br> FOR ENUMERATOR: <br> if zero $\rightarrow$ skip to Q19 | 16. On the days that this person worked during the past 4 weeks, what was his/her main occupation? <br> 1=Working on somebody else's farm <br> 2=work as an employee in a company <br> 3=Quarrying <br> 4=Purchasing items for resale <br> 5=Moneylending <br> 6=Making coal <br> 7=Repair service <br> 8=Carpentry and joinery <br> 9=Tailoring or Weaving <br> 10=Transport of other people <br> 11=Selling fresh meals <br> 12=Raising and selling livestock products <br> 13=Asking strangers for money <br> 14=Construction <br> 15=Other (specify) | 17. On the days that this person worked during the past 4 weeks, how many hours did this person usually work per day? | 18. During the past 4 weeks, how much money did this person make? | 19.Yesterday, how many hours did this person spend outside the household doing work that was not for money, (for example shopping or completing tasks)? | 20.Yesterday, how many hours did this person spend working inside the house (cooking, washing cloth, cleaning, etc.)? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Person \#1 | \|__|__| | \|__|__| | \|__|__| | I__\|__| | \|__|__|__|__|__| | I__\|__| | I__\|__| |
| Person \#2 | \|__|__| | I__\|__| | I__\|__| | I__\|__| | I__\|__|__|__|__| | I__\|__| | I__\|__| |
| Person \#3 | \|__|__| | \|__|__| | I__\|__| | \|__|__| | I__\|__|__|__|_-| | I__\|__| | I__\|__| |
| Person \#4 | \|__|__| | I__\|__| | \|__|__| | I__\|__| | I__\|__|__|__|__| | \|__|__| | I__\|__| |
| Person \#5 | \|__|__| | I__\|__| | I__\|__| | I__\|__| | I__\|__|__|__|__| | I__\|__| | I__\|__| |
| Person \#6 | \|__|__| | \|__|__| | \|__|__| | \|__|__| | \|__|__|__|__|__| | I__\|__| | I__I__\| |
| Person \#7 | \|__|__| | \|__|__| | I__\|__| | I__\|__| | \|__|__|__|__|_-_ | \|__|__| | I__\|__| |
| Person \#8 | \|__|__| | \|__|__| | \|__|__| | I__\|__| | \|__|__|__|__|__| | I__\|__| | \|__|__| |


| 21. Since November last year, has anyone in your household operated any businesses here in Lebanon? This could include opening a shop, making a good and selling it, receiving payment for services, using your personal car to work as a driver, and anything else that is independent from a existing business owned by someone else. |  |  | $\begin{aligned} & 0=\text { No } \rightarrow \text { skip to } Q \# 27 \\ & 1=\mathrm{Yes} \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| 22. When did your household start this (these) first business(es) in Lebanon | 23. If yes, what type of business? <br> 1=Purchasing items for resale <br> 2=Opening a small shop to sell small goods <br> 3=Moneylending <br> 4=Burning coal <br> 5=Repair service <br> 6=Carpentry and joinery <br> 7=Tailoring or Weaving <br> 8=Transport of other people <br> 9=Selling fresh meals <br> 10=Raising and selling livestock products <br> 11=Other (specify) | 24. Is this business currently operational? <br> $0=$ No $\rightarrow$ skip to next business $1=Y e s$ | 25. How much cash did your household earn in the past 4 weeks with this business? (Total income) | 26. What were your household's profits from with this business in the past 4 weeks? (Income minus costs) |
| $\begin{gathered} 1^{\text {st }} \text { Business: } \\ \text { \|_________\| (YYYY) } \end{gathered}$ | \|__|__| | \|__|__| | \|__|__|__|___|__| | \|__|__|__|__|__| |
| $\begin{gathered} 2^{\text {nd }} \text { Business: } \\ \text { ।_________\| (YYYY) } \end{gathered}$ | \|__|__| | \|__|__| | \|__|__|__|___|__| | \|__|__|__|__|__| |
| $\begin{gathered} \text { 3rd Business: } \\ \text { \|__I__\|____l (YYYY) } \end{gathered}$ | \|__|__| | \|__|__| | \|__|__|__|__|__| | \|__|__|__|__|__| |


| 27. Since November, has anybody in this household received an ATM card from a humanitarian organization? Just to clarify, I do not mean a card that can be only used to buy from certain shops. I mean a card with which you can go to the ATM and withdraw money. | $\begin{aligned} & 0=\text { No } \rightarrow \text { skip to } Q \# 37 \\ & 1=\text { Yes } \end{aligned}$ |
| :---: | :---: |
| 28. How many ATM cards did your household receive in total? | \|__| |
| 29. When did you receive each card? |  |
| 30. Since November, how much money did your household withdraw using each ATM card? |  |
| 31. If zero for any card, why didn't you withdraw anything? | 1=No money on the card <br> 2=Could not get to ATM <br> 3=Did not know how to use the ATM <br> 4=Did not need the money <br> $5=$ other (specify) |
| 32. Has the amount of money you received been sufficient to keep members of your household warm over the winter? | $0=$ No $1=$ Yes $\rightarrow$ skip to $Q \# 35$ |
| 33. If no, what amount of money would have been sufficient to keep members of your household warm over the winter? | \|_-|__|_-|_|__| |
| 34. What winter products would you have mainly bought with the additional money? (circle all that apply) | 34_1. Food $0=$ No $1=$ Yes <br> 34_2. Clothing $0=$ No $1=$ Yes <br> 34_3. Heating supplies $0=$ No $1=$ Yes <br> 34_4. Bedding $0=$ No $1=$ Yes |
| 35. Do you think you the ATM card money arrived in time for you to buy things needed to keep household members warm over the winter? | $0=$ No $1=Y e s$ |


| 36. How long does it take to drive to the ATM where you usually withdraw money? Even if you walk, how long would it take to drive? | \|__|_| |
| :---: | :---: |
| 37. Since last November, has your household helped other Syrians in Lebanon by giving them money, shelter, or food? | $\begin{aligned} & 0=\text { No } \\ & 1=\mathrm{Yes} \end{aligned}$ |
| 38. Since November, did any household member receive any money from any kind of organization and which did not come on an ATM card? | $0=$ No $\rightarrow$ Write zero for the next question and move to question 40 $1=Y e s$ |
| 39. If yes, how much | \|__|__|__|__| |
| 40. Since November, has anybody in this household received food cards from a humanitarian organization? We are talking about a card that you can use to buy food such as electronic cards such as from WFP | $0=$ No $\rightarrow$ Write zero for the next question $1=Y e s$ |
| 41. If yes, how many cards did you receive? | \|__| |
| 42. How much money did you receive on these cards? ENUMERATOR: If none, write 0 | \|__|_|__|_|_| |
| 43. Since November, has anybody in this household received food parcels from a humanitarian organization? We are asking about actual food, not e-vouchers, electronic cards from WFP. | $0=$ No $\rightarrow$ Write zero for the next question $1=\text { Yes }$ |
| 44. If yes, how many times? | \|__|_-| |
| 45. If you had to buy the exact amount of food that your household has received, how much would it cost? FOR ENUMERATOR: If none, write 0 | \|__|_|__|__| |


| 46. Since November, did any household member receive any other assistance from any kind of organization? |  |  |  | $0=$ No $\rightarrow$ write " $n o$ " and " 0 " for all items in the below list |
| :---: | :---: | :---: | :---: | :---: |
| Item | Did you r | eive this | s item? | If you had to buy the exact amount of the item, how much would it cost? |
| Stove | 47_1_1. | $0=$ no | 1=yes | 47_1_2. \| - | _ | - | _ | - | |
| Tent | 47_2_1. | $0=$ no | 1=yes | 47_2_2. \| - | _ | _ | _ | _ | |
| Petrol | 47_3_1. | $0=$ no | 1=yes | 47_3_2. \|-_|_-| $\mid$-_ $\mid$ - $\mid$ |
| Cooking oil | 47_4_1. | $0=$ no | 1=yes | 47_4_2. \| - | _ | _ | _ | _ | |
| Mattresses | 47_5_1. | $0=$ no | 1=yes | 47_5_2. \| - | _ | _ | _ | _ | |
| Blankets | 47_6_1. | $0=$ no | $1=y e s$ | 47_6_2. \| - | _ | _ | _ | _ | |
| Other | 47_7_1. | $0=$ no | $1=y e s$ | 47_7_2. \| - | _ | _ | _ | _ | |


| 48. What is your preferred way of receiving assistance? | $1=\text { only cash } \rightarrow \text { skip to } Q \# 50$ <br> $2=$ only in-kind (i.e. some humanitarian org <br> $3=$ both cash and in-kind | on buy | you) |
| :---: | :---: | :---: | :---: |
| 49. Which goods would you prefer to receive in-kind? | Q49_1. Food | $0=n o$ | $1=y e s$ |
|  | Q49_2. Water | $0=n o$ | 1 =yes |
|  | Q49_3. Home heating equipment | $0=n o$ | 1=yes |
|  | Q49_4. Fuel for heating | $0=n o$ | 1=yes |
|  | Q49_5. Blankets | $0=n o$ | 1=yes |
|  | Q49_6. Mattresses | $0=n o$ | 1 =yes |
|  | Q49_7. Medical supplies | $0=n o$ | 1=yes |
|  | Q49_8. Education supplies | $0=n o$ | 1=yes |
|  | Q49_9. Plastic sheeting for housing | $0=n o$ | 1=yes |
|  | Q49_10. A permanent structure for housing | $0=n o$ | 1=yes |
|  | Q49_11. Clothing | $0=n o$ | 1 =yes |
|  | Q49_12. Hygiene items | $0=n o$ | $1=y e s$ |
|  | Q49_13. Other (specify) | $0=n o$ | 1=yes |


| 50. Since November, did you, or any member of <br> your household receive any money (that does <br> not need to be paid back) from a family <br> member, neighbor, or friend who does not live <br> in your household? | $0=$ No -> write "0" for the next question. |
| :--- | :--- |
| 51. How much money did your household <br> receive in total from since November? |  |
| 51.1 Since November, how much money did <br> your household receive from family members, <br> neighbors, or friends in Syria? |  |


| 52. Since November, did you, or any member of <br> your household send any money (that does not <br> need to be paid back) to a family member, <br> neighbor, or friend who does not live in your <br> household? | $0=\mathrm{No}->$ write " 0 " for the next two <br> questions. <br> $1=\mathrm{Yes}$ |
| :--- | :--- |
| 53. How much money did your household give <br> in total to family members, neighbors, or friends <br> who do not live in your household since <br> November? |  |
| 54. How much of this money did your household <br> send to family members, neighbors, or friends in <br> Syria? |  |

\begin{tabular}{|c|c|}

\hline | 55. Which governorate in Syria did you come from? |
| :--- |
| 1=Damascus |
| 2=Reef Damascus |
| 3=Qonaitara |
| 4=Dar`a |
| 5=Suweida |
| 6=Homs |
| 7=Tartous |
| 8=Laziqiyya |
| 9=Hama |
| 10=Idleb |
| 11=Aleppo |
| 12=Raqa |
| 13=Deir el Zoor |
| 14=Hasaki | \& |_-|_-| <br>

\hline 56. In this governorate, were you from the country or the city? \& $$
\begin{aligned}
& 1=\text { country } \\
& 2=\text { city }
\end{aligned}
$$ <br>

\hline 57. Did you or any household member have relatives in Lebanon before you came? \& $$
\begin{aligned}
& 0=\text { No } \rightarrow \text { Skip to } Q \# 59 \\
& 1=\text { Yes }
\end{aligned}
$$ <br>

\hline 58. How many? \& |__|__| <br>

\hline 59. Did you or any household member have friends in Lebanon before you came? \& $$
\begin{aligned}
& 0=\text { No } \rightarrow \text { Skip to } Q \# 61 \\
& 1=\mathrm{Yes}
\end{aligned}
$$ <br>

\hline 60. How many? \& |__|__| <br>

\hline 61. What is the main reason you chose this village to live in? Even if there were multiple reasons, pick the biggest reason. \& | 1= You feel safe here |
| :--- |
| $2=$ Economic Opportunities (e.g. good possibilities to make money) |
| 3=Friends/Family came here before |
| 4=Rent is cheap |
| 5=0ther (specify) | <br>

\hline
\end{tabular}

| 62. Are all members of your immediate family living <br> in this village? |  |  |
| :--- | :--- | :--- | :--- | :--- |
| 63. How many never left Syria? |  |  |
| 63.1 FOR ENUMERATOR: If more than 0 : <br> What are the ages and genders of these individuals? <br> FOR ENUMERATOR: use the back of the sheet if <br> necessary for space. |  |  |
| 64. How many went back to Syria? |  |  |


| 67. FOR ENUMERATOR: DO NOT READ, just look around: Type of housing | $\begin{array}{\|l} \hline 1=\text { Villa } \\ 2=\text { House } \\ 3=\text { Apartment } \\ \text { 4=Collective shelter } \\ 5=\text { Factory/Warehouse } \\ 6=\text { Garage/Magasin } \\ 7=\text { Worksite } \\ 8=\text { Unfinished shelter } \\ 9=\text { Tent } \\ 10=\text { Street } \\ \hline \end{array}$ |
| :---: | :---: |
| 68. FOR ENUMERATOR: DO NOT READ, just look around: What is the floor of the house made of? If there is a floor cover, try to identify what is beneath it. Only ask if necessary. | ```1=Floor tiles 2=Stone 3=Cement 4=Mud \(5=\) Natural soil/ sand 6=Wood or wood product 7=Linoleum \(8=\) Wall-to-wall carpet or rug (cannot see what's beneath)``` |
| FOR ENUMERATOR: For the following questions in this section, do not read the answer options. Instead, ask the question and select the correct answer from the respondent's open-ended answer. |  |
| 69. What is the main source of drinking water for members of your household? | 1=Water tank at the household <br> $2=$ Water tank away from the household <br> $3=$ Well near the house <br> $4=$ Well far from the house <br> 5=Public pump or public well <br> 6=Jugs of water <br> 7=Covered pond <br> 8=Open pond <br> 9=River, stream, or spring <br> 10=0ther |
| 70. What is the main source of electricity for lighting in your household? | ```1=Electricity from public network 2=Electricity from private network 3=House generator 4=Neighbor's generator 5=Battery 6=Kerosene/ 7=Gas lamp 8=Candle 9=None 10=0ther(specify)``` |
| 71. What is the main source of energy used for cooking in your household? | $\begin{aligned} & \text { 1=Bottled gas } \\ & \text { 2=Kerosene } \\ & 3=\text { Coal/Charcoal } \\ & \text { 4=Wood } \\ & 5=\text { Garbage } \\ & 6=\text { Animal dung } \\ & 7=\text { Other(specify) } \end{aligned}$ |


|  |  |
| :--- | :--- |


| In the last 7 days, how many days has your household had to employ one of the following strategies to cope with a lack of food or money to buy it? | 78. Relied on less preferred, less expensive food | \|__| |
| :---: | :---: | :---: |
|  | 79. Borrowed food or relied on help from friends or relatives | \|__| |
|  | 80. Reduced the number of meals eaten per day | \|__| |
| For each of these questions, we want to know how about the last seven days, even if the last seven days were different from normal for any reason. <br> FOR ENUMERATOR: read each option out loud and get an answer one by one | 81. Spent days without eating | \|__| |
|  | 82. Restrict consumption by adults in order for young children to eat | __\| |
|  | 83. Sent household members to eat elsewhere | \| |
|  | 84. Reduced portion size of meals | \|__| |


| During the last month, did your household have to do any of the following things because there was not enough money to buy essentials for living? For these questions we want to know about the last 30 days. | 85. Reduced health expenditures | $\begin{aligned} & 0=\text { No } \\ & 1=\text { Yes } \end{aligned}$ |
| :---: | :---: | :---: |
|  | 86. Spent savings | $\begin{aligned} & 0=\text { No } \\ & 1=\text { Yes } \end{aligned}$ |
|  | 87. Withdrawn children from school | $\begin{aligned} & 0=\text { No } \\ & 1=\text { Yes } \end{aligned}$ |
|  | 88. Have children below 18 involved in income generation or family business | $\begin{aligned} & 0=\text { No } \\ & 1=\text { Yes } \end{aligned}$ |
|  | 89. Accepted undertaking risky activities that you would not do if you had enough money | $\begin{aligned} & 0=\text { No } \\ & 1=\text { Yes } \end{aligned}$ |
|  | 90. Sent any member of your household to live in another town or city in order to find work. | $\begin{aligned} & 0=\text { No } \\ & 1=\text { Yes } \end{aligned}$ |
|  | 90.1 Sold productive assets/transport means (sewing machine, livestock, bicycle, car, etc.) | $\begin{aligned} & 0=\text { No } \\ & 1=\mathrm{Yes} \end{aligned}$ |
|  | 90.2 Marriage of children under 18 | $\begin{aligned} & 0=\text { No } \\ & 1=\text { Yes } \end{aligned}$ |
|  | 91. Asked for help (e.g. money, food) from strangers | $\begin{aligned} & 0=\text { No } \\ & 1=\text { Yes } \end{aligned}$ |


| 91A. 1 Since November, have any members of the household gone back to Syria to earn money? | $0=$ No $\rightarrow$ Skip to Q \#92 1=Yes |
| :---: | :---: |
| 91A. 2 What type of work are they doing? | 1=Education <br> 2=Agriculture <br> 3=Factory work <br> 4=Small business <br> 5=Large business <br> 6=Humanitarian work <br> 7=Driver <br> $8=0$ il or mineral industry <br> 9=Professional work (i.e. clinician, lawyer, engineer, nurse) <br> $10=0$ ther (specify) |
| 91.A. 3 Are these household members living in a part of Syria that is under siege or where there is currently fighting? | $0=$ No $\quad 1=Y e s$ |

FOR ENUMERATOR: Read "Just to reiterate, this survey is not being used to re-assess your household's need for aid."

|  | Does anyone in your household have the following transportation vehicles? | How many? <br> FOR ENUMERATOR: Write "zero" if none |
| :---: | :---: | :---: |
| 92. | Car/van/pick-up | \|__|__| |
| 93. | Motorbike/Scooter | \|__|__| |
| 94. | Bicycle | \|_-|_| |
|  | Do you have the following in your home? | \|_-|_| |
| 95. | Fridge | \|_-|_-| |
| 96. | Freezer | \|_-|__| |
| 97. | Gas/ Electric Oven for cooking | \|_-|__| |
| 98. | Microwave | \|_-|__| |
| 99. | Washing Machine | \|__|__| |
| 100. | Computer/laptop/Tablet PC (for example iPad) | \|_-|_| |
| 101. | Blanket | \|__|__| |
| 102. | Winter Jacket | \|_-|__| |
| 103. | Pair of winter gloves | \|_-|_-| |
| 104. | Winter hat | \|_-|__| |
| 105. | Winter pullover | \|_-|__| |
| 106. | Heater | \|__|__| |
| 107. | Hot Water Boiler | \|__|__| |
| 108. | Mobile Phone | \|__|__| |
| 109. | Television | \|_-|__| |
| 110. | Mattresses | \|_-|_| |
| 111. | radio or cassette recorder | \|_-|__| |
| 112. | electrical generator | \|_-|__| |
| 113. | kerosene lamp | \|_-|__| |
| 114. | gas lamp | \|_-|__| |
| 115. | satellite dish | \|_-|__| |
| 116. | chairs | \|_-|__| |
| 117. | Batteries for electricity | \|_-|_-| |

118. Generally, how much money does your household spend per week?
```
|__|__|__|_____|
```

How much did your household spend on the following in the past calendar month (either with cash or on credit)? Some items you may not spend money on. For these items you can answer zero.

| 119. | Rent (total rent for all dwelling <br> spaces in the household) | Electricity (including generator <br> cost) |
| :--- | :--- | :--- |
| 120. | Education expenses (tuition, fees, <br> stationary etc.) |  |
| For the following item, how much have you spent this in since November? |  |  |
| 121. | Health care (insurance, medicine, <br> doctor visits, hospital, etc.) |  |
| 122. | Visa/residence permit renewals | Civil documentation (e.g. Birth <br> registration) |
| 124. | Home repairs (e.g., putting up a <br> wall, repair broken walls, <br> windows, or screens) |  |
| 125. |  |  |

If any money was spent on home repairs, how much did you spend on the following items?

| 126. | Windows |  |
| :---: | :---: | :---: |
|  |  | \|_-|_-_|_-_|_-| |
| 127. | Exterior walls |  |
|  |  | \|_-|_-_|_-__|_-| |
| 128. | Interior walls | \|_-|__|__|__|_-| |
|  |  |  |
| 129. | Toilet | \| |
|  |  |  |
| 130. | Screens | \|_-|__|__|__|__| |
|  |  |  |
| 131. | Door | \|__|__|__|__|_-| |
|  |  |  |
| 132. | Roof | \|_-|__|__|__|_-| |
|  |  |  |
| 133. | Furniture | \|_-|__|_-|__|__| |
|  |  |  |
| 134. | Kitchen | \|_-|__|__|__|_-| |
|  |  |  |
| 135. | Floor | \|__|__|__|__|__| |
|  |  |  |

For the following items, please tell us how much your household spent in the past 30-day period. Even if the amount spent in the last 30 days was different from normal for any reason, please tell us about the last 30 days only.

|  |  | How much? <br> FOR ENUMERATOR: Enter 0 if household did not use [item] in the last 30 days | How many minutes would I (enumerator) need to drive to reach the place where you buy the majority of [item]? <br> FOR ENUMERATOR: If the item was delivered, enter how long it would take to drive to the business that delivers. Enter -98 if the household didn't buy this item in the last 30 days. |
| :---: | :---: | :---: | :---: |
| 136. | Non-drinking water (for washing, showering, etc.) | \|__|__|__|__| $\mid$ | \|_-___|__| |
| 137. | Household cleaning products | \|__|__|__|__| | \|_-__-|_| |
| 138. | Cooking fuel | \|_-|__|__|__| | \|-_|_-|__| |
| 139. | Heating fuel | \|_-|_-|__|_-_| | \|__|__|__| |
| 140. | Fuel for transport | \|__|__|__|__| $\mid$ | \|-_|_-|__| |
| 141. | Public transportation | \|__|__|__|__| $\mid$ | \|-_|_-|__| |
| 142. | Personal hygiene items (shampoo, soap, shaving, cologne, toothpaste etc.) | \|__|__|__|__| $\mid$ | \|__|__|__| |
| 143. | Diapers | \|__|_-|__|__|__| | \|-_|_-|_-| |
| 144. | Clothing | \|__|_-|__|__| $\mid$ | \|-_|_-|__| |
| 145. | Tobacco | \|__|__|__|__| $\mid$ | \|_-|__|_-| |
| 146. | Drinking Water | \|__|__|__|__| $\mid$ | \|_-|__|_-| |
| 147. | Food | \|__|__|_-|__| $\mid$ | \|_-|__|__| |


| FOR ENUMERATOR: For all the following items, they can be canned or fresh. (For example, canned hot dogs or fresh beef are both in the category "meat." Sardines and fresh fish are both in the category "fish.") |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | In the days, member househ eat/dri | st 7 of the [item] | How many days did the household consume [item] in the past 7 days? | If you had to buy the exact amount of [item] consumed by your household in the past 7 days, how much would it cost? |
| 148. Rice | $0=$ No | $1=Y e s$ | \|__|__|_-|_-_| | \|__|__|_-|_-|__| |
| 149. Bread | $0=$ No | $1=Y e s$ | \|__|__|__|_-|_-| | \|__|__|_-|_-|__| |
| 151. Bulgur | $0=$ No | 1=Yes | \|__|__|__|_-|_| | \|__|__|_-|_-|__| |
| 152. Potatoes \& sweet potatoes | $0=$ No | 1=Yes | \|__|__|__|_-|_-| | \|__|__|_-|_-|_-| |
| 153. Milk and Dairy products | $0=$ No | 1=Yes | \|__|_|_-|_-_| | \|__|_C|_-|_-|_-| |
| 154. Chicken and Meat | $0=$ No | 1=Yes | \|__|_-|_|_-|_| | \|__|_-|_-|_-_-| |
| 155. Fish (Fresh/Canned) | $0=$ No | $1=Y \mathrm{es}$ | \|__|__|__|_-|_-| | \|__|__|_-|_-|__| |
| 156. Eggs | $0=$ No | 1=Yes | \|__|__|_-|_-_| | \|__|__|_-|_-|_-| |
| 157. Beans, peas, chickpeas, lentils) | $0=$ No | 1=Yes | \|__|_C|_|_-_| | \|__|_-|_-|_-|_-| |
| 158. Vegetables | $0=$ No | $1=\mathrm{Yes}$ | \|__|_-|_-_|_-| | \|__|__|_-|_-|__| |
| 159. Fruits | $0=$ No | 1=Yes | \|__|__|_-|_-|_-| | \|__|_-|_-|_-_-| |
| 160. Total Oils and fats (butter, vegetable oil, margarine, olive oil) | $0=$ No | 1=Yes | \|__|__|__|__|_-| | \|__|__|_-|_-|__| |
| 161. Sweets and chips (Chocolate/ Candies/ Desserts / Biscuits/ Icecream) | $0=$ No | $1=Y e s$ | \|__|__|_-|_-|_| | \|__|__|_-|_-|__| |
| 162. Beverages (Juice / Sodas/ Bottled Beverages) | $0=$ No | 1=Yes | \|__|_-|_|_-|_-| | \|__|__|_-|_-|__| |
| 163. Nuts (walnuts, almonds, peanuts) | 0=No | 1=Yes | \|__|_C|_-_|_-| | \|__|_-|_-|_-|_-| |
| 164. Other (add other local foods here, e.g. wild herbs) | $0=$ No | 1=Yes | \|__|__|_-|_-_| | \|__|_-|_-|_-|__| |


| 165. | Do shop owners charge you higher prices than Lebanese? $\quad \left\lvert\, \begin{aligned} & 0=\text { ne } \\ & 1=\text { rar } \\ & 2=\text { som } \\ & 3=\mathrm{oft}\end{aligned}\right.$ | imes |
| :---: | :---: | :---: |
| How much did your household spend on the following in the past calendar month (either with cash or on credit)? Some items you may not spend money on. For these items you can answer zero. |  |  |
| 166. | Telephone calls? <br> FOR ENUMERATOR: prompt, how often top up, what sized voucher is usually bought, how does that add up? | \|__|__|__|__| $\mid$ |
| 167. | Internet? | \|__|__|__|__| $\mid$ |
| 168. | TV subscription? <br> FOR ENUMERATOR: if TV and Internet are the same bill, write INTERNET in place of the amount for this question | \|__|__|__|__| $\mid$ |
| 169. | Were there times where you could not buy heating supplies even though you wanted to buy and had the money, for example because you could not find a seller, or the seller was too far away, or the seller was out of stock? | $\begin{aligned} & 0=\text { Never } \\ & 1=\text { Rarely } \\ & 2=\text { Sometimes } \\ & 3=\text { Often } \end{aligned}$ |
| 170. | During the past winter, how often did you feel like you didn't have enough heating supplies, blankets, or clothes to keep warm? | $\begin{aligned} & 0=\text { Never } \\ & 1=\text { Rarely } \\ & 2=\text { Sometimes } \\ & 3=\text { Often } \end{aligned}$ |


| Now I'd like to ask you about finding loans and other sources of funds. First let's discuss money that you borrowed, also known as loans. We define loans as money you received that you have to repay. Loans can come from a formal source such as a bank or microfinance institution, or from an informal source such as a friend, relative or local savings group. |  |  |  |
| :---: | :---: | :---: | :---: |
| 173. What is the total value of all currently outstanding cash loans that your household has not yet repaid? <br> FOR ENUMERATOR: If none, write 0 and skip to Q \#175 | \|_-|_-|__|__|__| |  |  |
| Name all of the sources of these currently outstanding cash loans. | 174.1_Family member or friend | $0=n o$ | $1=y e s$ |
|  | 174_2. Commercial Bank | $0=$ no | 1 =yes |
|  | 174_3. Savings group/cash exchange box/collective | $0=n o$ | $1=y$ es |
|  | 174_4. Microfinance agency | $0=n o$ | $1=y e s$ |
|  | 174_5. Moneylender | $0=$ no | $1=y$ es |
|  | 174_6. Religious institution | $0=n o$ | $1=$ yes |
|  | 174_7. Other | $0=$ no | 1 =yes |
| 175. Has your household purchased or received goods on credit that you have not yet repaid, for example, any good that you must pay for in the future? These in-kind loans may be from a shop or from individuals. | $0=\mathrm{No} \rightarrow$ write 0 in next question$1=\mathrm{Yes}$ |  |  |
| 176. If your household had to repay these loans in cash right now, how much would you have to pay including any interest or fees? | \|-_|_-|_-|__|__| |  |  |


| 177. Is there a source where you could obtain a loan of 150,000 LBP in the next month? | $\begin{aligned} & 0=\text { No } \square \text { skip to } Q \# 179 \\ & 1=\mathrm{Yes} \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: |
| 178. If yes, from where do you think you could obtain such a loan? | 178_1. Family member or friend | $0=n o$ | $1=y$ es |
|  | 178_2. Commercial Bank | $0=$ no | 1=yes |
|  | 178_3. Savings group/ cash exchange box / collective | $0=$ no | 1 =yes |
|  | 178_4. Microfinance agency | $0=$ no | $1=y$ es |
|  | 178_5. Moneylender | $0=$ no | 1=yes |
|  | 178_6. Religious institution | $0=$ no | $1=y$ es |
|  | 178_7. Other | $0=$ no | $1=y \mathrm{es}$ |
| 179. If you suddenly needed $50,000 \mathrm{LBP}$, is there a local commercial money lender (not a household member or a friend or a relative) that you could turn to who would be willing to provide this money? | $\begin{aligned} & 0=\text { No } \rightarrow \text { Skip to } Q \# 181 \\ & 1=\text { Yes } \end{aligned}$ |  |  |
| 180. If yes, how much would you need to repay in total including interest or fees? <br> FOR ENUMERATOR: if they would not need to pay any fees or interest, write 50,000 | \|__|__|_-|_-|__| |  |  |

Now I'd like to ask you some questions about your savings.
181. Does your household currently have any savings in a bank account? If yes, how much?


FOR ENUMERATOR: If 0, skip to Q \#183

1= Daily
2=Weekly
3=Monthly
$4=$ A few times a year
5=Annually
6=Only once
183. Does your household currently participate in a savings group or community savings organization? If yes, how much do members of your household have saved with this group?

FOR ENUMERATOR: If 0, skip to Q \#185
184. How often do you make contributions to this savings group?

1=Daily
2=Weekly
3=Monthly
4=A few times a year
5=Annually
6=Only once
185. How much money do you have saved in any other locations? Just to clarify, savings do not have to be deposited in an account or formal institution, and they may or may not gain interest. For example, they can be somewhere at home, hidden in a $\qquad$ safe place, or with a friend or family member.

FOR ENUMERATOR: If 0, skip to Q \#187
186. How often do you put away savings in these other places?

1=Daily
2=Weekly
3=Monthly
4=A few times a year
5=Annually
6=Only once

|  | Since November, have you or members of your household been asked for money by a member of [local group]? | How much money did your household you give? | Was the demand made against your will? |
| :---: | :---: | :---: | :---: |
| 187. Religious Institutions (mosque/church) | 187_1. 0=No 1=Yes | 187_2. \| -_|_-|_-_| | 187_3. $0=$ No 1=Yes |
| 188. Other religious groups that are not a mosque or church | 188_1. $0=$ No $1=Y e s$ | 188_2. \| -_|_-_-_| | 188_3. $0=$ No 1=Yes |
| 189. Social organizations (e.g., WFP or UN) | 189_1. $0=$ No $1=Y e s$ | 189_2. \| -_|_-|_-_| | 189_3. 0=No 1=Yes |
| 190. Lebanese politicians | 190_1. $0=$ No $1=Y e s$ | 190_2. \| - | _ | _ | _ | - | | 190_3. $0=$ No $1=$ Yes |
| $\begin{aligned} & \text { 191. } \\ & \text { Army/Military/Police } \end{aligned}$ | 191_1. $0=$ No 1=Yes | 191_2. \| -_|_-|_-_| | 191_3. 0=No 1=Yes |
| 192. Non- <br> governmental armed groups | 192_1. $0=$ No $1=Y e s$ | 192_2. \| -_|_-|_-_| | 193_3. $0=$ No 1=Yes |
| 193. A local government official (not a politician) | 193_1. $0=$ No 1=Yes | 193_2. \| -_|_-|_-_| | 193_3. 0=No 1=Yes |
| 194. Security guard or doorman | 194_1. $0=$ No $1=Y e s$ | 194_2. \| -_|_-|_-_| | 194_3. 0=No 1=Yes |


| 194.1 Since November, how many times has |  |
| :--- | :--- |
| your household been robbed? |  |
| FOR ENUMERATOR: if never, write 0. |  |

Now I would just like to ask you some questions about your relationships with your neighbors, friends, and other community members, specifically those who are Syrian.

FOR ENUMERATOR: Even if the answer depends on the circumstances and the people involved, we are interested in an answer about the frequency.
195. How many Syrians living in this community do members of your household know well? Don't include your household members.
196. Do members of your household talk to Syrians living in this community often, sometimes, rarely, or never?

|  |  |
| :--- | :--- |
| or | $1=$ Often <br> $2=$ Sometimes <br> $3=$ Rarely <br> $4=$ Never |
| $1=$ Often <br> $2=$ Sometimes <br> $3=$ Rarely <br> $4=$ Never |  | sometimes, rarely, or never?

199. Have any Syrians said things to insult members $1=$ Often of your household (without being physically $\quad 2=$ Sometime
aggressive) often, sometimes, rarely, or never?

3=Rarely
4=Never
200. Have any Syrians been physically aggressive with members of your household without provocation often, sometimes, rarely, or never?

FOR ENUMERATOR: If often, sometimes, or rarely to 199 or 200 or both, ask
"What do you view as the reasons for the verbal or physical attack?"

1= Often
2=Sometimes
3=Rarely
4=Never

| 202_1. (s)he/they think that my household <br> takes away his/her/their jobs | $0=$ No <br> $1=$ Yes |
| :--- | :--- |
| 202_2. (s)he/they think that my household's <br> presence has increased prices | $0=$ No <br> $1=$ Yes |
| 202_3. (s)he/they think that my household's <br> presence has increased crime | $0=$ No <br> $1=$ Yes |
| 202_4. (s)he/they do not like the way I and/or <br> members of my household dress | $0=$ No <br> $1=$ Yes |
| 202_5. (s)he/they think that I and/or <br> members of my household are lazy | $0=$ No <br> $1=$ Yes |
| 202_6. My household receives assistance (e.g. <br> food or money) from organizations. | $0=$ No <br> $1=$ Yes |
| 202_7. My household produces too much trash | $0=$ No |
|  | $1=$ Yes |
| 202_8. (s)he/they think that my household <br> has reduces his/her/their income | $0=$ No <br> $1=$ Yes |
| 202_9. other (specify) | $0=$ No |
|  | $1=$ Yes |


| 203. How many Lebanese living in this community do members of your household know well? Don't include your household members. | \|_-_| |  |
| :---: | :---: | :---: |
| 204. Do members of your household talk to Lebanese living in this community often, sometimes, rarely, or never? | $\begin{aligned} & 1=\text { Often } \\ & 2=\text { Sometimes } \\ & 3=\text { Rarely } \\ & 4=\text { Never } \end{aligned}$ |  |
| 205. Do members of your household receive help from Lebanese living in this community such as help looking after your children, help when you are sick, help with housework, or money often, sometimes, rarely, or never? | $\begin{aligned} & 1=\text { Often } \\ & 2=\text { Sometimes } \\ & 3=\text { Rarely } \\ & 4=\text { Never } \end{aligned}$ |  |
| 206. Do members of your household provide help to Lebanese living in this community such as help looking after their children, help when they are sick, help with housework, or giving money often, sometimes, rarely, or never? | $\begin{aligned} & 1=\text { Often } \\ & 2=\text { Sometimes } \\ & 3=\text { Rarely } \\ & 4=\text { Never } \end{aligned}$ |  |
| 207. In the last six months, have Lebanese living in this community said things to insult or hurt members of your household often, sometimes, rarely, or never? | $\begin{aligned} & \text { 1= Often } \\ & 2=\text { Sometimes } \\ & \text { 3=Rarely } \\ & \text { 4=Never } \end{aligned}$ |  |
| 208. In the last six months, have Lebanese living in this community been physically aggressive with members of your household without provocation often, sometimes, rarely, or never? | $\begin{aligned} & \text { 1= Often } \\ & 2=\text { Sometimes } \\ & 3=\text { Rarely } \\ & 4=\text { Never } \end{aligned}$ |  |
| FOR ENUMERATOR: if often, sometimes, or rarely; not never to 207 or 208 or both, ask <br> What do you view as the reasons for the verbal or physical attack? | 209_1. (s)he/they think that my household takes away his/her/their jobs | $\begin{aligned} & 0=\text { No } \\ & 1=\text { Yes } \end{aligned}$ |
|  | 209_2. (s)he/they think that my household's presence has increased prices | $\begin{aligned} & 0=\text { No } \\ & 1=\text { Yes } \end{aligned}$ |
|  | 209_3. (s)he/they think that my household's presence has increased crime | $\begin{aligned} & 0=\text { No } \\ & 1=\mathrm{Yes} \end{aligned}$ |
|  | 209_4. (s)he/they do not like the way I and/or members of my household dress | $\begin{aligned} & 0=\text { No } \\ & 1=\mathrm{Yes} \end{aligned}$ |
|  | 209_5. (s)he/they think that I and/or members of my household are lazy | $\begin{aligned} & 0=\mathrm{No} \\ & 1=\mathrm{Yes} \end{aligned}$ |
|  | 209_6. My household receives assistance (e.g. food or money) from organizations. | $\begin{aligned} & 0=\mathrm{No} \\ & 1=\mathrm{Yes} \end{aligned}$ |
|  | 209_7. My household produces too much trash | $\begin{aligned} & 0=\mathrm{No} \\ & 1=\mathrm{Yes} \end{aligned}$ |
|  | 209_8. My household makes too much noise | $\begin{aligned} & 0=\text { No } \\ & 1=\mathrm{Yes} \end{aligned}$ |
|  | 209_9. (s)he/they think that my household has reduces his/her/their income | $\begin{aligned} & 0=\mathrm{No} \\ & 1=\mathrm{Yes} \end{aligned}$ |
|  | 209_10. other (specify) | $\begin{aligned} & 0=\mathrm{No} \\ & 1=\mathrm{Yes} \end{aligned}$ |


| Now I would like to ask you some questions about your participation in community affairs, and your attitude towards different aspects of community life. |  |  |
| :---: | :---: | :---: |
| 210. In general, are you or any other member of your household someone who mobilizes the community for meetings? | $\begin{aligned} & 0=\text { No } \\ & 1=\mathrm{Yes} \end{aligned}$ |  |
| 211. Is it very easy, somewhat easy, somewhat difficult, or very difficult for people in this community to work together as a group on community projects (for example, where people work together to improve the quality of life in town)? | $\begin{aligned} & 1=\text { Very easy } \\ & 2=\text { Somewhat easy } \\ & 3=\text { Somewhat difficult } \\ & 4=\text { Very difficult } \end{aligned}$ |  |
| 212. Is there a local leader you or any other member of your household can go to if someone steals from you or threatens you? | 212_1. No | $0=$ No $1=$ Yes |
|  | 212_2. Militia leader | $0=$ No $1=$ Yes |
|  | 212_3. Government official | $0=$ No $1=$ Yes |
|  | 212_4. Religious leader | $0=$ No 1=Yes |
|  | 212_5. Women's group leader | $0=$ No 1=Yes |
|  | 212_6. Other leader in the community | $0=$ No 1=Yes |
|  | 212_7. NGO | $0=$ No 1=Yes |
|  | 212_8. Other | $0=$ No $1=$ Yes |
| 213. Since November, have you or any other household member participated in collective activity to improve the welfare of your community? This involves working with other people outside of your household to improve life for everyone in your community. | $\begin{aligned} & 0=\mathrm{No} \\ & 1=\mathrm{Yes} \end{aligned}$ |  |
| 214. What about from January 2013 to October 2013? Did you engage in collective action to improve community welfare? | $\begin{aligned} & 0=\mathrm{No} \\ & 1=\mathrm{Yes} \end{aligned}$ |  |
| 215. Do you or any other household member attend mosque/church? | $\begin{aligned} & 0=\mathrm{No} \\ & 1=\mathrm{Yes} \end{aligned}$ |  |


| 216. Do you agree that a wife has a right to express her opinion when she disagrees with what her husband is saying? | 1=Strongly agree <br> 2=Agree <br> 3=Disagree <br> 4=Strongly disagree |
| :---: | :---: |
| 217. Do you agree that a wife has a right to buy things in the market without asking the permission of her husband? | $\begin{aligned} & 1=\text { Strongly agree } \\ & 2=\text { Agree } \\ & 3=\text { Disagree } \\ & 4=\text { Strongly disagree } \end{aligned}$ |
| 218. Do you disagree with what your partner is saying or doing often, sometimes, rarely, or never? | 1=Often <br> 2=Sometimes <br> 3=Rarely <br> 4=Never <br> $-98=$ The respondent does not have a partner |
| 219. Do you think your partner treats you well often, sometimes, rarely, or never? | 1=Often <br> 2=Sometimes <br> 3=Rarely <br> 4=Never <br> $-98=$ The respondent does not have a partner |
| 220. Were there any disputes between adult household members during the past 7 days? | $\begin{aligned} & 0=\text { No } \\ & 1=\text { Yes } \\ & -98=\text { There are not multiple adults among the household's } \\ & \text { residents } \end{aligned}$ |
| 220_1. If yes, how many? | \|__|__| |



| 171. Suppose you had the choice between <br> the following options: |
| :--- | :--- |
| Option 1: Starting a small business which for |
| sure yields 200,000LBP in a month |
| Option 2: Starting a small business where you |
| might earn 300,000LBP in a month or if you |
| are unlucky only 100,000 LBP. |
| Which option would you choose? |$\quad$| Option |
| :--- |


| FOR ENUMERATOR: Which person (people) in the household roster is the primary survey respondent? Write the "Person \#" from the household table on at the beginning of the survey. If more than one more is actively answering questions, write the other "Person \#'s") |  |
| :---: | :---: |

Community Characteristics and Price Survey

| 1. | In the past month, about how many new Syrian have arrived in this village? | $\qquad$ |  |
| :---: | :---: | :---: | :---: |
| 2. | In good weather conditions, can a truck drive to your village center? | YESé é é é é é é é é é é é é é é .... 1 <br> NO $\qquad$ 0 <br> (no is marked as 2 in Arabic version, but changed in data entry to zero) |  |
| 3. | In good weather conditions, can a motorbike drive to your village center? | YESé é é é é é é é é é é é é é é é .... 1 <br> NO $\qquad$ (no is marked as 2 in Arabic version, but changed in data entry to zero) |  |
| 4. | How much time does it take to drive to the closest primary school, even if you normally walk? | TIME IN MINUTES .....\begin{tabular}{\|l|l|l|l|}
\hline
\end{tabular} |  |
| 5. | How much time does it take to drive to this closest secondary school, even if you normally walk? | TIME IN MINUTES ..... |  |
| 6. | In most times and in most places in this community, what is the quality of the mobile phone reception that you can get on the best network? | NO COVERAGE ......................................... 1 HARD TO MAKE/RECEIVE CALLSé é . 2 EASY TO MAKE/RECEIVE CALLSé é .. 3 DONôT KNOWé é é é é é é é é é -96 |  |
| 7. | What is the best reception that you can get in this community on the best network (even if the reception is inconsistent)? | 0 BARSé é é é é é é é é é é é é é .. 0 1 BARé é é é é é é é é é é é é é é. 1 2 BARSé é é é é é é é é é é é é é .. 2 3 BARSé é é é é é é é é é é é é é .. 3 4 OR MORE BARSé é é é é é é é é .. 4 DONôT KNOWé é é é é é é é é é -96 |  |
| 8. | What is the name of the closest primary health clinic, doctor $\hat{O}$ office, or hospital? How long does it take to drive there? | NAME: $\qquad$ <br> TIME IN MINUTESé $\square$ |  |
| 9. | Does this community have a commercial location where you can buy all the goods you need for a regular week (in the community)? | YES ............................................................................................................................... NO ........ IF NO SKIP TO Q \#11 |  |
| 10. | What is the name of the closest commercial location where you can buy all the goods you | NAME: $\qquad$ (SPECIFY) |  |



About how many people are living in this community?
13. Syrians:
14. Lebanese:
15. Other nationalities:

READ: I am going to list several types of income generating activities. Please estimate the number of people in your community who do each activity.

| Working on somebody elseô farm | Number of people engaged in acti | people |
| :---: | :---: | :---: |
| 17. work as an employee in a company | Number of people engaged in activit | people |
| 18. Quarrying | Number of people engaged in acti | eople |
| 19. Purchasing items for resale | Number of people engaged in activity | eople |
| 20. Moneylending | Number of people engaged in activity: | people |
| 21. Burning coal | Number of people engaged in activity: | eople |
| 22. Repair service (e.g. bicycle, sho | Number of people engaged in activit | eople |
| 23. Carpentry and joinery | Number of people engaged in activity: | poople |
| 24. Tailoring or Weaving | Number of people engaged in activity: | people |
| 25. Transport of other people | Number of people engaged in activity: | people |
| 26. Selling fresh meals (either in restaurant or in the street) No. of people engaged in activity: $\qquad$ people <br> 27. Raising and selling livestock products (e.g. milk of your cow, eggs of your chickens) Number of people: |  |  |
|  |  |  |
| 28. Begging (for money or food) | Number of people engaged in activity: | people |
| 29. Other ___ (specify) | Number of people engaged in activity: | people |


| 30. | How many shops are there in this community? | NUMBER OF SHOPS |  |
| :---: | :---: | :---: | :---: |
| 31. | How often do people from other communities come here to buy goods or services? | OFTENé é é é é é é é é é é é é é . 3 SOMETIMESé é é é é é é é é é é ... 2 RARELYé é é é é é é é é é é é é .. 1 NEVERé é é é é é é é é é é é é é . 0 |  |
| 31.A | How often do people from this community go to other communities to buy goods or services? | OFTENé é é é é é é é é é é é é é é 3 SOMETIMESé é é é é é é é é é é ... 2 RARELYé é é é é é é é é é é é é .. 1 NEVERé é é é é é é é é é é é é é . 0 |  |

Price Survey
READ: Iôm going to ask you some questions about the prices of goods that you usually buy. In the case that you donâ buy the good, please give your best estimate for its price. Even if a good has a range of prices, please give the best guess or average for the price of the version of this good that you usually buy.

| 32. At the beginning of the New Year, how much did a blanket cost in this community? | Amount: | Currency: |
| :---: | :---: | :---: |
| 33. At the beginning of the New Year, how much did a mattress cost in this community? | Amount: | Currency: ___ |
| 34. At the beginning of the New Year, how much did a heater (Sobia) cost this community? | Amount: | Currency: |
| 35. At the beginning of the New Year, how much did a pair of winter gloves cost in this community? | Amount: | Currency: |
| 36. At the beginning of the New Year, how much does 1 kilo of coal cost in this community? | Amount: | Currency: |
| 37. At the beginning of the New Year, how much does 1 liter of oil (mazoot) cost in this community? | Amount: | Currency: |
| 38 . Right now, how much does 1 kg of beef cost in this community? | Amount: | Currency: |
| 39. Right now, how much does 1 kg of chicken cost in this community? | Amount: | Currency: |
| 40. Right now, how much does 1 kg of regular white fish cost in this community? | Amount: | Currency: |
| 41. Right now, how much does 1 bag of Arabic bread cost in this community? | Amount: | Currency: |
| 42. Right now, how much does 1 kg of flour cost in this community? | Amount: | Currency: |
| 43. Right now, how much does 1 kg of rice cost in this community? | Amount: | Currency: |
| 44. Right now, how much does 1 kg of beans cost in this community? | Amount: | Currency: |
| 45. Right now, how much does 1 kg of lentils cost in this community? | Amount: | Currency: |
| 46. Right now, how much does 1 kg of peas cost in this community? | Amount: | Currency: |
| 47. Right now, how much does 1 kg of potato cost in this community? | Amount: | Currency: |
| 48. Right now, how much does 1 kg of bulgur cost in this community? | Amount: | Currency: |

3

| 49. Right now, how much does 1 kg of chickpeas cost in this community? | Amount: _____ | Currency: _____ |
| :---: | :---: | :---: |
| 50 . Right now, how much does 1 kg of oat cost in this community? | Amount: | Currency: ___ |
| 51. Right now, how much does 1 liter of milk cost in this community? | Amount: | Currency: ___ |
| 52. Right now, how much does a 500 g pack of butter cost in this community? | Amount: | Currency: ___ |
| 53. Right now, how much does a regular chocolate bar cost in this community? | Amount: | Currency: |
| 54. Right now, how much does a regular pack of biscuits cost in this community? | Amount: ___ | Currency: |
| 55. Right now, how much does a 1.25 bottle of Pepsi cost in this community? | Amount: | Currency: |
| 56. Right now, how much does 1 kg of oranges cost in this community? | Amount: | Currency: |
| 57. Right now, how much does 1 kg of apples cost in this community? | Amount: | Currency: ___ |
| 58. Right now, how much does 1 kg of tomato cost in this community? | Amount: | Currency: |
| 59. Right now, how much does 2-liter bottle of drinking water cost in this community? | Amount: | Currency: |
| 60. Right now, how much does one dozen chicken eggs cost in this community? | Amount: | Currency: |
| 61. Right now, how much does one 1 kg of peanuts cost in this community? | Amount: | Currency: |
| 62. Right now, how much does one large glass container of Nescafe coffee cost in this community? | Amount: | Currency: |
| 63. Right now, how much does one small box of tea leaves cost in this community? | Amount: | Currency: |
| 64. Right now, how much does one pack of Marlboro cigarettes cost in this community? | Amount: | Currency: |
| 65. Right now, how much does 1 liter of cooking oil cost in this community? | Amount: | Currency: |
| 66. Right now, how much does a 10- or 12-kilo gas canister (jarat ghaz) for cooking cost in this community. | Amount: | Currency: |
| 67. Right now, how much does one simple pair of shoes cost in this community? | Amount: | Currency: |
| 68. Right now, how much does one simple T-shirt cost in this community? | Amount: ___ | Currency: |
| 69. Right now, how much does an electrical battery cost in this community? | Amount: ___ | Currency: |
| 70. Right now, how much does one soap bar cost in this community? | Amount: | Currency: |
| 71. Right now, how much does one tube of toothpaste cost in this community? | Amount: | Currency: |
| 72. Right now, how much does one bottle of detergent (for cleaning surfaces) cost in this community? | Amount: ___ | Currency: |
| 73. Right now, how much does one pack of diapers cost in this community? | Amount: ___ | Currency: ___ |
| 74. Right now, how much does it cost to fill up a water tank (khazana) with non-drinking water (for washing, showering)? | Amount: ___ | Currency: ___ |


| 76. Right now, how much does one pack of aspirin cost in this community? | Amount: | Currency: |
| :---: | :---: | :---: |
| 77. Right now, how much does one liter of benzene cost in this community? | Amount: | Currency: |
| 78. Right now, how much does one liter of diesel cost in this community? | Amount: | Currency: |
| 79. Right now, how much does it costs to travel to Beirut by public transport? | Amount: | Currency: |
| 80. If somebody wanted to move to this community and wanted to rent a simple room for him/her to live in, what rent would he/her need to pay per month for that room? | Amount: | Currency: |
| 81. Right now, how much can a person earn for working one day on somebody elsê̂ farm? | Amount: | Currency: ___ |

## References

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McCrary, J. (2008). Manipulation of the running variable in the regression discontinuity design: A density test. Journal of Econometrics 142(2), 698-714.


[^0]:    ${ }^{1}$ For an example of Lebanese organized labor's negative statements about Syrian refugees, see http://www.almanshour.org/node/4142 (Arabic). Accessed March 12, 2018.
    ${ }^{2}$ Andreoni (1989, 1990) offer warm glow as an explanation for charitable giving and inter-generational family transfers. Fehr and Gachter (2000) and Bowles and Gintis (2011) show theoretically and empirically that people behave altruistically even when there are no future benefits from doing so. Perceived or real decreases in host consumption (for the benefit of refugees) can be interpreted as a contribution by hosts to refugees.

[^1]:    ${ }^{3}$ In all of Asia, only the island nations of the Maldives, Bahrain, Singapore, Hong Kong, and Brunei are smaller than Lebanon.

[^2]:    ${ }^{4}$ A reader might be mistakenly concerned about whether Syrian refugees own cell phones. In our data, $92.5 \%$ of households reported owning at least one cell phone. According to UNHCR a vast majority of Syrian refugees own cell phones and $100 \%$ live in areas of Lebanon with at least 3G coverage.
    ${ }^{5}$ By control group we mean households classified as 'poor' by the UN but residing slightly below 500 meters altitude. The next section describes our research design in detail.

[^3]:    ${ }^{6}$ We had to collect our own outcomes data because, apart from the pre-program data that UNHCR used to calculate the poverty score, there was no other household level data available.

[^4]:    ${ }^{7}$ The poverty score RDD compares compares program-eligible and ineligible refugees, including those who live in the same community, rather than eligible and ineligible host communities as the altitude RDD. Given that we only had sufficient funding to collect data for one RDD, the poverty score RDD has two important drawbacks compared to the altitude RDD. First, the poverty score RDD cannot identify community level impacts, because the sample would include no pure control communities, i.e., households in communities below 500 meters altitude. Second, the poverty-score RDD is more likely to suffer from a contaminated control group (violation of the Stable Unit Treatment Value assumption) - i.e., from program-ineligible refugees being affected by the program - because it compares program-eligible and ineligible refugees, including those who live in the same community. The altitude RDD also compares program-eligible and ineligible refugees, but in this case ineligible refugees live exclusively in communities below 500 meters altitude who did not receive the program (i.e., communities with no eligible refugees) and are thus less likely to be affected by the program. For one example of why this difference matters, consider Angelucci and De Giorgi (2009), showing that a social assistance program in rural Mexico increases consumption of program-ineligible households who live in the same village as eligible households, because beneficiaries share the assistance they receive with other people in the village (e.g, the extended family), which includes program-ineligible households.

[^5]:    ${ }^{8}$ First, most living spaces are small with only one area to sit - often on the beds. Second, it is generally acceptable for friends and neighbors to enter friends' houses and sit down.

[^6]:    ${ }^{9}$ As an example, this text message was sent (in Arabic) by one of the UN's local implementing partners, Secours Islamique France, to households selected for the program: "Receive financial assistance/vouchers from the village printing shop on Sunday, December 8 at 8:30am. Bring the family (UN) file and identification".

[^7]:    ${ }^{10}$ When refugees register with UNHCR (registration is a necessary but not sufficient condition to receive any form of assistance from the organization), the UN Refugee Agency asks them to provide their address in Lebanon and a telephone number. That information served as starting point for our survey firm, which tried to call refugees in advance to schedule data/time/location for the survey. 322 of 1,851 households could not be contacted via phone. The survey firm asked neighbors and shopkeepers for these individuals upon arriving in the community using the household's address information provided by UNHCR. The survey firm's inquiries suggested that many refugees who were supposed to be part of the survey had moved back to Syria or moved on to other countries.

[^8]:    
     and 4$)$, the dependent variable is a $1 / 0$
    the past six months, and zero if "never".

[^9]:    Notes: Table shows simple (i.e., unconditional) correlations between an outlier dummy (1 if respondent resides between $490-499 \mathrm{~m}$ altitude, zero otherwise) and 'row name'.
    ${ }^{*}, * *,{ }^{* * *}$ significant at ten, five, and one percent, respectively.

[^10]:    

[^11]:    ${ }^{11}$ DFID grant agreement number 204007-111.

