



Monthly Update of Forced Displacement Literature Review

April 2021

Table of Contents

Table of Contents.....	1
The globalization of refugee flows.....	2
A spatial model of internal displacement and forced migration.....	3
A gravity analysis of refugee mobility using mobile phone data	4
The global cost of inclusive refugee education.....	6
The effect of refugees on native adolescents' test scores: quasi-experimental evidence from PISA	8
Localising public health: Refugee-led organizations as first and last responders in COVID-19	9
Female employment and intimate partner violence: Evidence from Syrian Refugee inflows to Turkey	12
Give me your tired and your poor: Impact of a large-scale amnesty program for undocumented refugees	13
Local governance quality and the environmental cost of forced migration	15
Empowering refugees through cash and agriculture: A regression discontinuity design	17
Targeting humanitarian aid using administrative data: model design and validation .	19

The globalization of refugee flows

Xavier Devictor, Quy-Toan Do, and Andrei Levchenko

Journal of Development Economics, Volume 150 (2021)

<https://doi.org/10.1016/j.jdeveco.2020.102605>

This article **analyzes the spatial distribution of refugees over the period 1987-2017, in order to ascertain whether the burden of hosting refugees falls disproportionately on neighboring countries in the developing world.**

The empirical analysis is based on data on refugee stocks (including asylum-seekers) by source and destination country compiled by UNHCR. The authors construct four measures of refugee spatial distribution: (1) average distance refugees have traveled between their country of origin and their country of destination (controlling for source country fixed effects); (2) the probability that countries of origin and destination are contiguous; (3) the Herfindahl index of refugee shares by source country (a measure of refugee spatial dispersion); and (4) the share of refugees seeking protection in high-income OECD countries.

Main results:

- **The average distance traveled by refugees has increased substantially over time.** Between 2012 and 2017, the average distance traveled is about 40 percent larger than it was between 1987 and 1991.
- **The share of refugees fleeing to an adjacent country has fallen.** The share of refugees in a contiguous country falls by 16 percentage points after controlling for source country fixed effects.
- **Refugees for a given source country are now more dispersed across host countries.** The Herfindahl index of refugee shares decreased substantially over time.
- **High-income OECD countries host an increasing share of the refugee population.** In 1990, less than 5 percent of refugees lived in high-income OECD countries. This share grew to nearly 25 percent by the mid-2000s, before falling to 15 percent.

These results **highlight a more globalized and far-reaching refugee network and imply a more equal distribution of the responsibility of hosting refugees.** While countries neighboring a conflict do host a majority of refugees, nevertheless the share of refugees who move to more distant destinations, including OECD countries, has grown over time. The authors conclude that the **responsibility to provide asylum to those fleeing conflict and violence is increasingly being shared across countries.** The authors note, however, that current responsibility sharing remains deeply uneven.

A spatial model of internal displacement and forced migration

Jon Echevarria-Coco, and Javier Gardeazabal

Journal of Conflict Resolution, Volume 65, Issue 2-3 (2021), pages 591-618

<https://doi.org/10.1177/0022002720958470>

The authors **develop a spatial model of internal and external forced migration** due to conflict. Conflict is modeled as a shock in a particular location that causes the displacement of people—some of whom become refugees and others who become Internally Displaced Persons (IDPs). The model predicts how the total number of displaced people, number of refugees and number of IDPs, as a proportion of a country's population, varies with the intensity of armed conflict as well as three spatial factors: country area, terrain ruggedness (orography) and distance to neighboring countries. For a conflict of a given magnitude, the model predicts that:

- Displacement as a fraction of the total population tends to be larger in countries with a smaller geographical area.
- Displaced people will travel shorter distances in countries with a rougher orography, potentially generating fewer displaced people overall and fewer refugees.
- The more distant neighboring countries are, the lower the number of refugees, while total displacement should be independent of the distance.

The predictions of the model are tested against real data using a panel of 161 countries covering the period 1995-2016. Data includes the number of refugees and IDPs by country of origin (from UNHCR), total population (World Bank), conflict measures (UCDP-PRIO conflict database) and geographical measures (taken from Nunn and Puga (2012) and CEPII). Additional control variables include measures of civil liberties and political rights (Freedom House), GDP per capita (World Bank), colonial relationships, and the number of countries with which a source country shares an ethno-linguistic group in common with at least nine percent of the population. The authors also conduct robustness checks that control for conflict duration and type (extracted from UCDP-PRIO), the percentage of land area that is desert (from Nunn and Puga (2012)), the percentage of the land area within 100 km of an ice-free coast (also from Nunn and Puga (2012)), and whether the country is an island or part thereof.

The empirical evidence is mostly in line with the predictions of the model. Specifically:

- Both total displacement and the number of refugees relate positively to conflict intensity and negatively to land area and ruggedness, as predicted by the model.

- While the number of refugees is related positively to proximity, in line with the model's prediction, total displacement also responds positively to proximity, contrary to the nil effect predicted by the model.
- The partial effect of conflict intensity on IDPs is decreasing in proximity and significant for most of the range of proximity values in the sample. The partial effects of area and ruggedness on IDPs are increasing functions of proximity and significant for most of the range of proximity values in the sample. The partial effect of proximity on IDPs is an increasing function of ruggedness and is significant only for high values of ruggedness.

Overall, the evidence is in favor of the predictions of the model, with the only exception of the partial effect of proximity on total displacement, which turns out to be positive while the model predicts it should be nil.

A gravity analysis of refugee mobility using mobile phone data

Michel Beine, Luisito Bertinelli, Rana Comertpay, Anastasia Litina, and Jean-Francois Maystad

Journal of Development Economics, Volume 150 (2021)

<https://doi.org/10.1016/j.jdeveco.2020.102618>

This paper **examines patterns of refugee mobility across provinces in Turkey using mobile phone data**.

Based on measures of mobility calculated from phone data, the authors use a standard gravity model to estimate the determinants of refugee movements. Gravity models are used extensively in the voluntary migration literature to analyze the determinants of migration movements, taking into account differences in employment opportunities and income per capita between areas of origin and destination, as well as geographical and cultural distance as proxies for migration costs. In this paper, the authors derive a gravity equation that includes variables for: (a) differences in income per capita between areas of origin and destination; (b) distance between locations as a proxy for migration costs; (c) other factors shaping the attractiveness of the areas of origin and destination, specifically humanitarian aid and asylum grants; and (d) the occurrence of particular events such as outbreaks of violence or protests that could affect the perceived attractiveness of a location.

The analysis is based on call detail records from the Data for Refugees Turkey (D4R) Challenge, a non-profit initiative that aimed to expand research on the living conditions and social integration of Syrian refugees in Turkey. Data include the location of 100,000

randomly selected mobile phone transactions (involving 50,000 refugees and 50,000 non-refugees) recorded by cell towers across 26 regions in Turkey in 2017. For the levels of income at origin and destination, the authors use data on quarterly GDP per capita from the Turkish Statistical Institute.

Main results:

- **Refugees tend to move more often than non-refugees, but they move shorter distances.** Compared to non-refugees, refugees are less likely to travel longer distances, possibly due to the practical difficulties and costs associated with moving across regions.
- **Refugees respond to income differences between regions, but tend to respond to ‘pull’ and ‘push’ factors differently to non-refugees.** Compared to non-refugees, refugees are less likely to respond to income levels at destination, possibly because they don’t have access to the same information about the destination. Moreover, while refugees tend to leave relatively poor areas, non-refugees do not show any propensity to leave poor areas, possibly because of a stronger attachment to their current location.
- **The finding that refugees are motivated to move between regions for economic reasons is confirmed when alternative explanations of mobility are taken into account,** including the propensity of refugees to cross Turkey from East to West, their propensity to leave refugee camps, and the attraction to agricultural areas during the harvest season.
- **Refugees appear to be sensitive to humanitarian aid and asylum grants.** An increase in the provision of these services tends to decrease their probability of moving out of their current location. However, they are not systematically attracted to locations providing higher levels of these services.

In their conclusion, the authors note that the findings on refugees’ mobility can inform a more optimal provision of aid and support across refugee hosting regions. In addition, insights into how refugees respond to differentials in economic attractiveness across locations is important to better understand whether refugee movements contribute to a more efficient allocation of labor across space.

The global cost of inclusive refugee education

World Bank and UNHCR (2021)

<https://documents.worldbank.org/en/publication/documents-reports/documentdetail/159281614191477048/the-global-cost-of-inclusive-refugee-education>

An estimated 48 percent of school-age refugee children are out of school—an estimated 77 percent of refugee children attend primary school, 31 percent of refugee youth attend secondary education, and just 3 percent are able to access tertiary opportunities (compared to global access figures of 91 percent, 84 percent and 37 percent for primary, secondary and tertiary levels, respectively). UNHCR estimates that refugee children miss out on an average of three to four years of schooling due to forced displacement. Most refugee children are living in low- and middle-income countries where education services are already stretched to meet the needs of citizens and ‘learning poverty’ is high, which means being unable to read and understand a simple text by age ten.

Refugee education has historically been addressed through separate or parallel systems as a temporary response to refugee emergencies. With support from the international community, refugee host governments are moving towards inclusive, integrated education systems. There is a growing consensus that integrating refugees into national education systems is the only way to ensure sustainability and to give refugees proper accreditation for their progress in education. Integration can also lead to improved education services for underserved local communities in host countries.

This paper **estimates the cost of education for refugees aged 5-17 years in their current host country, with a specific focus on low- and middle-income countries hosting 7,000 or more refugees** (representing a pre-COVID-19 baseline). Estimates are based on the assumption that refugee students receive an education on par with host country students in terms of teacher quality, school infrastructure, access to learning materials and other inputs.

The costing begins with the unit cost of delivering public education in each host country for each level of education (calculated as public expenditure on education divided by public enrollment). Unit costs are adjusted upwards to reflect the additional costs of integrating refugees into public education systems (for example, through accelerated learning programs, psychosocial support, support in the language of instruction, teacher training in refugee inclusiveness etc.) using ‘refugee education coefficients’ (20 percent for pre-primary

and primary education, 35 percent for secondary education). Additionally, unit costs for early childhood education (ECE) are increased by a further 30 percent to account for historical levels of low investment in pre-primary education. Finally, unit costs are inflation-adjusted to estimate costs over the education cycle.

This methodology takes into account the flow of students through 13 years of education, including one year of pre-primary education, six years of primary education and six years of secondary education. The analysis assumes that there are no additional influxes of refugees beyond UNHCR figures as of June 2020 and that refugees do not leave their present host countries.

The analysis relies on data from a number of sources including: (a) UNHCR data on refugees, asylum seekers and Venezuelans displaced abroad; (b) UNESCO Institute of Statistics (UIS) data on initial public expenditure by level of education (which is divided by total public enrollment at that level of education to calculate unit costs); (c) coefficients for the inclusion of marginalized children at pre-primary, primary and secondary education in the 2015 EFA Global Education Monitoring Report on global education costing.

Main estimates:

- **The cohort-average annual cost of providing education to all refugee students in low-income countries (LICs), lower middle-income-countries (LMICs) and upper middle-income countries (UMICs) is estimated at US\$4.85 billion** (in the range of US\$4.44 billion and US\$5.11 billion).
- **While LICs and LMICs account for half of school-age refugees, their share of the financing envelope is only 20 percent.**
- **The average unit cost for refugee education is US\$1,051.** There are large variations by country income categorization: the average unit cost for refugee education in LICs, LMICS and UMICs is US\$171, US\$663 and US\$2,085 respectively. The unit cost for refugee students in UMICs is almost 12 times higher on average than that for LICs and 3 times higher than that for LMICs. There are also large variations by level of education: average refugee unit costs globally are US\$1,156, US\$925 and US\$1,171 for pre-primary, primary and secondary education, respectively.
- **The cohort-average annual refugee education cost as a percentage of public expenditure on primary and secondary education in host countries is 3.8 percent on average.** It averages 4.7 percent, 2.1 percent and 4.3 percent in LICs, LMICs and UMICs, respectively. However, these averages mask large variations between countries.

The authors recognize that the cost of refugee-specific education programs will differ by country and might not match the global average coefficients assumed in their calculations. The authors call for improved data collection and reporting on refugee education, especially on demographics, the cost of refugee education programs and how these evolve over time as the initial emergency response becomes a protracted situation, and the unit cost of public education in host countries. Better data would lead to improvements in measuring the impact and contributions of host countries and would increase the accuracy of refugee education financing estimates. The authors also recognize that the provision of financial resources is a necessary, but not sufficient, condition for universal access and completion of education, and that improvements in quality and learning outcomes are also not directly correlated with greater education expenditure.

The effect of refugees on native adolescents' test scores: quasi-experimental evidence from PISA

Semih Tumen

Journal of Development Economics, Volume 150 (2021)

<https://doi.org/10.1016/j.jdeveco.2021.102633>

This paper **investigates the impact of Syrian refugees on the school performance of adolescent children in Turkey**. Earlier research suggests that immigration may affect native children's school performance through two main mechanisms that operate in opposite directions: (1) the *labor market mechanism* that improves the educational outcomes of natives and provides additional incentives to continue education due to increased competition for available jobs in the low-skilled segment of the labor market; and (2) the *educational experience mechanism* that negatively affects the educational outcomes of natives because the interaction between native and immigrant students in school environments has a negative effect on the quality of education (for example due to lower-quality peer interactions, language barriers, and looser teaching standards).

The analysis is based on the OECD's Programme for International Student Assessment (PISA) microdata, which captures standardized test scores for 15-year-old students. The author uses 2009 and 2012 data (prior to the refugee influx) together with 2015 and 2018 data (after the refugee influx). The author isolates the impact of the labor market mechanism from the educational experience mechanism by separately estimating effects using 2015 data (when Syrian refugees were excluded from secondary education, and consequently the education experience mechanism did not operate) and 2018 data (when both the labor

market and education experience mechanisms jointly operated and together affected the test scores of native adolescents).

The paper accounts for the common “endogeneity issue”, i.e., the likelihood that the location choices of refugees are not random, by using standard econometric techniques, such as a difference-in-differences approach (based on province-year variation in refugee intensity) and an instrumental variable strategy.

Key findings:

- **Math, Science, and Reading scores of Turkish native adolescents increased following the Syrian refugee influx**, conditional on parental education (a proxy for unobserved ability).
- The increase in test scores mostly comes from the lower half of the test score distribution, and from students with lower maternal education (mothers with less than a high school education). This suggests that the refugee influx has reduced the test score inequality among natives.
- There is suggestive evidence that the PISA scores of male adolescents increased more than those of females.
- As the presence of refugee adolescents increases in the Turkish education system (2018 data), the education experience mechanism starts eroding the test scores gains that are initially obtained through the labor market mechanism.

The author argues that the labor market forces that emerged in the aftermath of the Syrian refugee crisis have led native adolescents, who would normally perform worse in school, to invest in their human capital more intensively, i.e. **the increase in refugee concentration generates pressures in the low-skill labor market and those pressures provide incentives for increased school achievement.**

Localising public health: Refugee-led organizations as first and last responders in COVID-19

Alexander Betts, Evan Easton-Calabria, Kate Pincock

World Development, Volume 139 (2021)

<https://doi.org/10.1016/j.worlddev.2020.105311>

Organizations created and led by refugees themselves ('refugee-led organizations', RLOs) play an important role in meeting community needs. In particular, refugee-led social protection (activities designed to reduce poverty, vulnerability, or risk), provided by organizations or networks created by refugees, are frequently perceived to be among the most important sources of assistance by refugee communities. During the COVID-19 pandemic, RLOs have frequently found themselves as default providers of assistance and mutual aid, but usually without additional or effective support from international organizations and NGOs.

This short paper draws on the authors' completed pre-pandemic **research covering around 80 RLOs in cities and camps in Uganda (Nakivale and Kampala) and Kenya (Kakuma and Nairobi)**, using a mixture of semi-structured interviews, focus groups, and participant observation undertaken with RLO staff and beneficiaries, and covering a range of social protection and other activities. The paper also draws on initial findings from a series of follow-up studies, with a particular focus on RLO-led public health and livelihoods activities in the context of the pandemic; the initial work includes interviews and focus groups with key staff at 15 RLOs involved in the original study that are actively involved in providing COVID-19-related support services.

Some RLOs in Uganda and Kenya quickly mobilized in response to the COVID-19 pandemic. Their activities highlight areas in which RLOs could be key 'first responders' in the context of the pandemic, including:

- **RLOs can play a crucial role in ensuring the most marginalized refugees are included in health messaging, and receive accurate information about COVID-19.** 10 out of the 15 contacted organizations are spreading awareness about COVID-19 and how to prevent infection through mass texts, posters, and YouTube videos shared on social media.
- **RLOs play a significant role in 'bridging' gaps in healthcare and assistance.** Equally crucial is conducting advocacy to alert agencies of needs and gaps in capacity and other responses.
- **Community health workers can be rapidly trained, affordably equipped, and play a range of roles from public information to tracking, as well as providing basic preventive, promotional, and rehabilitative support.** Some refugees are also formally trained doctors, nurses, and other medical professionals, though many face restrictions on their ability to practice in their host countries. Equipping refugee community health workers with the knowledge and skills to raise awareness about preventing transmission of COVID-19 and its symptoms may be an opportunity to limit the spread of the virus.

- **RLOs may also play a role in shaping social norms that limit transmission of COVID-19.** Refugee-led organizations and initiatives are aware of community needs and appropriate responses because they are part of these communities; the trust they have built with communities is usually a function of close, regular contact rather than one-off interventions, suggesting that guidance provided by them on COVID-19 may be more effectively received and adhered to.
- **RLOs have the potential to assist with virus tracking and contact tracing.** RLOs are capable of interfacing with both communities and formal authorities to share information anonymously while retaining trust. However, this role has risks that must be carefully mediated.

The growing focus of RLOs in public health-related activities demonstrates the significant and neglected potential of RLOs to complement international public health and wider humanitarian responses to the pandemic. Maximizing the potential contribution of RLOs will depend on creating new mechanisms to rapidly identify, fund, and build capacity among RLOs.

Female employment and intimate partner violence: Evidence from Syrian Refugee inflows to Turkey

Bilge Erten and Pinar Keskin

Journal of Development Economics, Volume 150 (2021)

<https://doi.org/10.1016/j.jdeveco.2020.102607>

This paper **investigates the causal effect of female's economic empowerment—specifically an increase in female employment—on the probability of experiencing domestic violence in Turkey**. In particular, the authors exploit the differential inflow of refugees after the outbreak of the Syrian civil war in March 2011 across Turkish provinces as an exogenous supply shock to female employment.

The analysis is based on: (a) province-level data on registered refugees in 2014 from the Turkish migration authority; and (b) individual-level data on domestic violence and other socioeconomic outcomes from Turkey's National Survey of Domestic Violence against Women conducted in 2008 and 2014. The survey captures data on whether a woman had ever experienced different forms of physical, sexual, or psychological violence from her intimate partner.

Main results:

- **Syrian refugee inflows negatively affected the labor market outcomes of Turkish women.** Syrian refugees primarily displaced female workers, with stronger effects in the private sector driven by displacement within agricultural and service sector employment. There is no evidence that Syrian refugee inflows significantly affected male labor market outcomes. Syrian refugees in Turkey have been predominantly employed in the informal sector because they were not permitted to apply for work permits until January 2016. Consequently, Syrian refugees who found work in the informal sector were more likely to displace Turkish women, who have tended to be employed in industries with high degrees of informality, such as agriculture and domestic services.
- **There is a significant decline in intimate partner violence in the provinces that received a higher share of Syrian refugees.** Inflows of Syrian refugees, and consequent reduction in local female employment, had a negative impact on Turkish women's experience of physical, sexual, and psychological violence from their husbands.

- There is some **suggestive evidence that changes related to both employment and domestic violence are concentrated among women with lower levels of educational attainment**, who were more likely to be displaced by the Syrian refugees.
- Changes in partner characteristics, gender attitudes, cohabitation patterns, or the division of labor within the household do not explain these results.

The disproportionate reduction in women's employment and income induced by the Syrian refugee inflow shock may result in a decline in men's incentives to use violence as a means of extracting resources from women. Similarly, the reduction in employment of women may relieve potential tensions in the household stemming from men having a preference against women's work outside of home. As a result, **women's exposure to intimate partner violence declined**.

These results are consistent with instrumental theories of violence, whereby a decline in a woman's earning opportunities reduces the incentives of her male partners to use violence as a means of rent extraction or gaining control over household decision-making. They are also consistent with men having a preference against their partner's employment, which implies that men reduce their violent behaviors once women comply with men's preferences.

Give me your tired and your poor: Impact of a large-scale amnesty program for undocumented refugees

Dany Bahar, Ana Maria Ibanez, and Sandra V. Rozo

Journal of Development Economics, Volume 151 (2021)

<https://doi.org/10.1016/j.jdeveco.2021.102652>

This article **examines the labor market impacts of the *Permiso Especial de Permanencia* (PEP) granted to nearly half a million undocumented Venezuelans in Colombia in August 2018**. PEP is a resident visa (renewable every two years) that permits the holder to work and to access basic public services (health, education and, if they qualify, anti-poverty social programs). Initially, PEP was targeted to Venezuelan immigrants who had valid documentation; 182,000 permits were granted to documented Venezuelans in two waves in January 2017 and February 2018. Following a nationwide census of undocumented Venezuelan immigrants living in Colombia conducted between April and June 2018, the *Registro Administrativo de Migrantes Venezolanos* (RAMV), the government

extended the PEP program to undocumented Venezuelan immigrants who had registered in the RAMV and had valid Venezuelan citizenship documents.

RAMV respondents were presumably more vulnerable than legal migrants. RAMV data reveal that: there is large variation in the educational attainment of undocumented Venezuelan migrants (although the majority have completed secondary education); undocumented Venezuelan migrants face tight labor market conditions (they have higher unemployment rates than the average Venezuelan migrant in Colombia, and their educational qualifications and professional experience are generally not recognized); the largest proportion (36 percent) work in services and sales; they have low access to education and health services; they want to stay in Colombia even though the majority still have many household members in Venezuela; nearly half have access to networks in Colombia; and the majority (73 percent) are of working age.

Sixty-four percent of undocumented migrants who registered in the RAMV actually received a PEP. Compared to those who did not receive a PEP, PEP holders tended to: be more educated, and more likely to have their degrees and experience officially recognized; more integrated into the labor market, especially the informal labor market; have weaker social networks in Colombia; and have more children and less access to health care.

The authors examine the impact of the PEP program on weekly hours worked, monthly wages, employment, and labor force participation in both the formal and informal sectors for three samples of workers: (a) Colombian natives; (b) Venezuelan migrants; and (c) Colombian workers who returned to Colombia over the past five years. The analysis uses confidential RAMV administrative data on the number of undocumented immigrants who obtained PEP status, linked to department-level (state-level) labor market outcomes—based on monthly household and labor-force surveys administered between January 2017 and February 2020.

The authors employ a difference-in-differences method that compares departments with different treatment intensity (i.e. the share of Venezuelans receiving the PEP visa in each department) before and after the beginning of the PEP program for undocumented Venezuelan immigrants in August 2018. To address the possibility that Venezuelans select settlement locations based on location-specific preferences, the authors employ an instrumental variable approach (using three different instrumental variables).

Main results:

- **The authors do not find any significant effects of the PEP program for undocumented Venezuelan immigrants on hours worked, wages, or labor force participation of Colombian workers in the formal or informal sectors. Neither are there any significant effects of the program on the employment rate of Colombian workers in the informal sector.**
- **The PEP program for undocumented Venezuelan immigrants is found to have a negative effect on the employment rate of Colombian workers in the formal sector, but this effect is negligible.** The impact on formal employment rates is concentrated among highly educated and female workers. The disproportionate effects of the PEP program on educated workers may be explained by the fact that Venezuelan workers are, on average, more educated than Colombian workers.
- **There is a positive effect of the PEP program on the formal employment rate of Venezuelan workers, however the effect is small.**

The authors suggest several explanations for these results:

- The main motive of undocumented Venezuelan immigrants for applying for the PEP program was to access public services, and not to switch jobs from the informal to the formal sector where they would be required to pay taxes (they may not be aware of the wage premium in the formal sector).
- PEP holders may be unable to secure employment in the formal sector due to the reluctance of potential employers to hire Venezuelan migrants (even with knowledge of PEP).
- The increase in labor supply of immigrants in the formal sector creates other general equilibrium effects (e.g. increase in aggregate demand, or skill complementary with natives) that have a positive effect on the labor market outcomes of Colombian workers that cancel out any negative effects due to increased competition in the formal labor market.
- The time horizon (14 months) may be too short to observe any large impact of the program.

Local governance quality and the environmental cost of forced migration

Cevat Giray Aksoy and Semih Tumen

Journal of Development Economics, Volume 149 (2021)

<https://doi.org/10.1016/j.jdeveco.2020.102603>

This paper **examines whether high-quality local governance can alleviate the environmental impact of large-scale refugee migration to Turkey**. In the absence of additional investments in infrastructure and other waste management facilities, a greater population density is likely to have a negative impact on environmental quality, with consequent effects on the health and wellbeing of host communities.

Using an instrumental variable approach, the authors estimate the causal impact of the influx of Syrian refugees on core environmental municipal services, specifically: (1) daily per capita waste water, net of recycling; (2) per capita distributed fresh water from natural resources; and (3) per capita solid waste, net of recycling. The authors also compare results for municipalities with high-quality local governance, versus those with low-quality local governance.

The analysis is based on data extracted from Turkish Court of Accounts (TCA) auditors' reports from 2013 to 2016 for each province. The reports contain findings of independent audits of annual activities and financial records for each provincial government. Following the World Bank's Local Governance Performance Index, the authors construct four qualitative indicators (corruption, transparency, governance effectiveness, accountability) and two quantitative indicators (the ratio of interest payments to total expenditures as a measure of financial prudence, and the ratio of labor cost to total expenditures) that capture various dimensions of local governance quality. The six local governance indicators are brought together to form an aggregate Local Governance Quality Index (LGQI).

Main results:

- Well-governed and badly governed municipalities are not statistically different from each other in terms of their population and economic activities.
- **Higher refugee concentration is associated with worse environmental outcomes.** On average, the Syrian refugee influx has increased per capita levels of solid waste, wastewater, and distributed clean water in Turkey.
- **Per capita expenditures on waste management and water supply services have not changed.** Revenues allocated by the central government typically account for the majority of municipal revenues. These transfers are based on municipal population and land area, which are often estimated with a lag and so would not account for the sudden population growth due to refugee inflows. The findings imply a substantial increase in the production of

waste, with potentially negative implications for the health of residents in the communities hosting refugees, and for refugees themselves.

- **The deterioration in environmental outcomes in response to refugee inflows is almost entirely driven by municipalities with low local governance quality, while there is no change in those variables in municipalities with high local governance quality.**

Additional investment in waste treatment plants in well-governed municipalities may explain these results.

- **The three most important qualitative sub-components are, in the order of importance: corruption, transparency, and accountability.** Environmental outcomes suffered more in municipalities with higher corruption (for example where contracts, permits or licenses were granted without due process), lower transparency (for example where bidding procedures were rigged) and lower accountability (for example where municipal spending was not registered in conformity with the legal framework). In addition, the ratio of labor cost to total expenditure seems to play an important role.

The authors conclude that **well-governed municipalities were better at tackling the challenges from rapidly increasing population density and investing in infrastructure to keep pace with population growth.** In particular, Turkish municipalities with low corruption, high transparency and accountability are more successful in addressing the environmental and municipal service challenges posed by increased refugee concentrations. **The results imply that the pressures generated by increased refugee concentration can be mitigated by local governments through improved local governance practices.**

Empowering refugees through cash and agriculture: A regression discontinuity design

Claire MacPherson and Olivier Sterck

Journal of Development Economics, Volume 149 (2021)

<https://doi.org/10.1016/j.jdeveco.2020.102614>

This article **assesses the impact of the development approach promoted in the Kalobeyei refugee settlement in Turkana County in Northwest Kenya.** Opened in 2016 just 3.5 kilometers from the Kakuma refugee camp, the Kalobeyei refugee settlement was envisaged as a model for a development-oriented approach to refugee assistance, with programs to foster self-reliance and integration. For example, in-kind food assistance has been almost entirely replaced by mobile-money transfers (known as Bamba Chakula) and

rain-fed agriculture is widely promoted as a way of supplementing and diversifying refugee diets. As of February 28, 2021, Kalobeyei hosted 41,000 refugees and Kakuma refugee camp hosted over 165,000 refugees. Most refugees in Turkana County are from South Sudan and Somalia, with smaller numbers from DRC, Burundi, Ethiopia and Sudan.

The authors take advantage of the fact that from one specific day (May 14, 2016) refugee households were settled in Kalobeyei settlement instead of Kakuma camp. This enables the authors to compare the socioeconomic outcomes of refugees who arrived shortly before and after the cutoff date, and interpret any discontinuity in average outcomes as resulting from the differing programs between the two sites. The authors also study 24 possible mechanisms driving these results grouped into four categories: (a) involvement in productive activities; (b) mobility and household composition; (c) human and physical capital; and (d) access to services. They also study the differences in prices and in the modalities of food assistance.

The analysis is based on data from a representative household survey of refugees living in Kakuma camp and Kalobeyei settlement in September and October 2017, focusing on households that registered 15 months before and after the opening of Kalobeyei settlement. The sample includes 1,874 South-Sudanese refugees (960 in Kakuma and 914 in Kalobeyei) in 1,126 households.

Main results:

- **Refugees in the Kalobeyei settlement have better diets than refugees in the Kakuma camp.** Their diets are more diverse (including more vegetable and fish), they eat more food (measured in calories and monetary terms), and they are less food insecure (even though food insecurity rates remain high in both sites).
- **There isn't any evidence that refugees in Kalobeyei accumulate more assets or increase spending on non-food items.** Asset holding is very low, especially for recent arrivals. Less than half of households reported non-food expenditures, consistent with extremely high levels of poverty in Kakuma and Kalobeyei.
- **There is some evidence of a positive effect on subjective wellbeing.** There is suggestive evidence that refugees living in Kalobeyei feel happier and more independent from aid than refugees in Kakuma.
- **Overall, the "Kalobeyei effect" encompasses improvements in dietary diversity, calorie intake, food consumption value, food security, subjective wellbeing, and perception of independence from aid.**

- **The “Kalobeyei effect” is not driven by differences in employment, differences in accumulation of human or physical capital, nor access to finance or remittances.** Employment is dramatically low in both camps: only 7 percent of South-Sudanese recent arrivals have an income-generating activity. Employment levels are particularly low for very recent arrivals.
- **Kitchen-garden agriculture appears to improve refugee diets and food security, but do not increase calorie intake.** 71 percent of households who arrived less than a month after the cutoff date had a kitchen garden at the time of the survey—this percentage is only 33 percent for those who arrived less than one month before the cutoff date. There is suggestive evidence that improvements in dietary variety and food security in Kalobeyei are partly due to kitchen gardens. However, there is no significant difference in calorie intake between refugees who grow their own food and those that do not. A possible explanation is that the types of food grown are dense in nutrients but not in calories.
- **Most of the “Kalobeyei effect” can be attributed to different modes of food assistance offered in Kakuma and Kalobeyei.** In Kakuma, refugees receive in-kind food assistance (13 kg of a mix of cereals, pulses, and oil) and frequently resell some of their food rations at a low price in order to purchase preferred food types or non-food items. In contrast, refugees in Kalobeyei receive mobile money transfers that allow them to buy the food they prefer without additional transaction costs.

The results suggest that **the development approach to refugee assistance promoted in Kalobeyei is having positive effects, possibly due to the wider promotion of cash assistance and kitchen gardens.** The authors argue that cash assistance is not only associated with better nutritional outcomes for refugees, it is also more cost efficient than in-kind transfers. In 2017, the World Food Program (WFP) estimated that the total cost of delivering US\$1 to beneficiaries was US\$1.18 for Bamba Chakula transfers compared to US\$1.94 for in-kind food assistance. The authors calculate that WFP could save US\$17 million if it were to replace in-kind assistance with Bamba Chakula transfers in Kakuma and Dadaab camps. In addition, there would be positive spillovers to local communities.

Targeting humanitarian aid using administrative data: model design and validation

Onur Altindag, Stephen D. O’Connell, Aytug Sasmaz, Zeynep Balcioglu, Paola Cadoni, Matilda Jerneck, and Aimee Kunze Foong

Journal of Development Economics, Volume 148 (2021)

<https://doi.org/10.1016/j.jdeveco.2020.102564>

This paper **presents the design and validation of an econometric model that uses routinely collected administrative data to target unconditional cash and in-kind assistance to Syrian refugees in Lebanon.** The authors compare the prediction accuracy of the proposed model to a traditional Proxy Means Test (PMT) approach. A traditional PMT approach draws on national household survey data to identify the household characteristics that best predict household poverty. These characteristics are used to develop criteria for program eligibility as well as a short-form survey (or ‘scorecard’) that is administered to the entire target population to identify eligible households.

The analysis relies on: (1) nationally representative survey data from the 2018 Vulnerability Assessment of Syrian Refugees in Lebanon (VASyR), which includes detailed information on households and expenditure patterns; (2) UNHCR administrative data as of June 2018; and (3) data as of June 2018 from the Refugee Assistance Information System (RAIS), which includes information on all refugee families who were receiving assistance in Lebanon from any of the major international organizations or their partners. The authors use VASyR data to calculate expenditure per capita for each household, which is then linked (using unique household and individual identifiers) to household demographic data drawn from UNHCR administrative data.

Key findings:

- Overall, households that are predicted to be poor tend to be larger, have a higher share of disabled members, are substantially more likely to be female-headed, are less likely to have a working-age male, and have a higher share of dependents. Additionally, the model is more likely to identify eligible households with lower education and with a larger share of members who had no previous occupation before their arrival in Lebanon.
- **The use of basic demographic information from typical administrative records held by aid organizations and governments is approximately as accurate in targeting the poor compared to traditional PMT approach.** There is no substantive difference in the capacity of administrative data—which does not include any information on assets—to predict poverty, relative to traditional survey-based methods. The survey-based approach decreases the likelihood of inclusion and exclusion errors by about two percentage points, but these differences are not statistically significant.
- **A small number of fields in the survey data provide additional predictive power.** A small number of basic household furniture questions provide modest improvements.

Consequently, adding a housing question to the administrative database would improve targeting accuracy by around two percentage points in overall error.

The authors conclude that routinely collected administrative data on refugees can potentially offer an equally reliable and less costly alternative to existing PMT approaches to targeting social or aid programs. The proposed model also avoids several problems associated with the PMT approach, in particular: the fact that some of the targeted households cannot be reached or do not respond to the short-form survey; or they do not provide accurate answers on important survey questions, such as the household structure or the availability of assets.