Coping with the Influx

Service Delivery to Syrian Refugees and Hosts in Jordan, Lebanon, and Kurdistan, Iraq

Nandini Krishnan

Flavio Russo Riva

Dhiraj Sharma

Tara Vishwanath

WORLD BANK GROUP

Poverty and Equity Global Practice

July 2020

Abstract

The Syrian crisis has led to rapid and large-scale population displacement. This paper uses several sources of data, including the United Nations Higher Commissioner for Refugees' registration database and multi-country, multi-topic surveys collected in 2015–16, to characterize service

delivery in the context of a rapid influx of displaced populations. The study encompasses infrastructure services, such as electricity and garbage disposal, and social services, such as health and education, and considers both measures of access to services and their perceived quality.

This paper is a product of the Poverty and Equity Global Practice. It is part of a larger effort by the World Bank to provide open access to its research and make a contribution to development policy discussions around the world. Policy Research Working Papers are also posted on the Web at <http://www.worldbank.org/prwp>. The authors may be contacted at nkrishnan@worldbank.org, flaviorussoriva@gmail.com, dsharma5@worldbank.org, and tvishwanath@worldbank.org.

The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the views of the International Bank for Reconstruction and Development/World Bank and its affiliated organizations, or those of the Executive Directors of the World Bank or the governments they represent.

Coping with the Influx: Service Delivery to Syrian Refugees and Hosts in Jordan, Lebanon, and Kurdistan, Iraq

Nandini Krishnan¹, Flavio Russo Riva², Dhiraj Sharma¹, and Tara Vishwanath^{1 3}

JEL Classification: F22, O15

Keywords: Syrian refugees; Jordan; Lebanon; Iraq; Access to services

¹ Poverty and Equity Global Practice, World Bank.

² Fundação Getulio Vargas

³ Supported by Monica Biradavolu, Kevin Carey, Thomas Ginn, Jacob Goldston, Matthew Groh, Meghan Lucas, Daniel Masterson, Anna Newby, and Nethra Palaniswamy. The findings, interpretations and conclusions expressed herein are those of the authors and do not necessarily reflect the view of the World Bank Group, its Board of Directors or the governments they represent.

1. Introduction

The Syrian crisis has caused one of the largest episodes of forced displacement since World War II and some of the densest refugee-hosting situations in modern history. The Syrian Arab Republic's immediate neighbors host the bulk of Syrian refugees: Turkey, Lebanon, and Jordan rank in the top five countries globally for the number of refugees hosted. According to United Nations High Commissioner for Refugees (UNHCR) data, in 2018, Turkey hosted 3.5 million Syrian refugees, Lebanon 0.94 million, and Jordan 0.68 million.⁴

This paper characterizes service delivery in the context of a rapid influx of displaced populations in three different contexts: the arrival of Syrian refugees in Jordan and Iraq, and the influx of Syrian refugees and internally displaced Iraqis to the Kurdistan region of northern Iraq (KRI). In assessing service delivery, the paper includes measures both of access to services and perceived service quality. It encompasses infrastructure services, such as electricity and garbage disposal, and social services, such as health and education. The analysis is primarily based on quantitative data from the Syrian Refugees and Host Communities Survey (SRHCS), conducted in 2015–16. The SRHCS attempted a comparable and comparative analysis of forced displacement across countries with different policy regimes governing refugees (and internally displaced people). The goal was to evaluate the host countries' main concerns about hosting refugees, and different strategies adopted to address the refugee (and more broadly forcibly displaced) influx.

In the three contexts considered in this paper, host country service delivery systems have played a key role in addressing the needs of Syrian refugees, especially those living outside camps. Education has largely been made available through the public schooling system, often with innovations like double-shift instruction, while health services have been made available through primary health care centers run by ministries of health, as well as through non-governmental organizations. Infrastructure services – electricity, sanitation, water supply – are by and large publicly provided to refugees and host communities. There are three immediate implications of this model of service delivery. First, there is no doubt that the addition of hundreds of thousands of people in need has put these public service-delivery systems under tremendous strain. Second, the expansion of resources – both national and international – has mitigated the strain by allowing for a greater supply of services and expansion in personnel. And finally, the extent of direct local competition with host communities depends on the degree to which the latter were themselves relying on public services as opposed to privately provided services.

In this paper, we document rates of access to infrastructure and social services among hosts and displaced persons, and related perceptions of quality of service delivery, including changes in these perceptions, where the data permit. If displaced populations crowd out host communities in access to services, negative (positive) changes in perceptions about services will be more (less) frequent in areas that receive a larger (smaller) influx. Where the data allow, the analysis compares two similar individuals

⁴ Lebanon and Jordan ranked first and second in the world in 2018 in number of refugees received relative to national population. Lebanon counted 156 refugees per 1,000 national population and Jordan 72 refugees per 1,000 residents (UNHCR, 2018). These figures are based on official UNHCR registration numbers and do not reflect the unknown number of unregistered refugees.

living in slightly different localities in terms of the local density of forcibly displaced persons and looks for differences in their perceptions regarding service delivery.

Our evidence on perceptions about service provision is limited by data. We find that in both Lebanon and the Amman governorate sample in Jordan, a sizeable share of host community children attends private school (which is arguably unaffordable for many refugee children), and we find no relationship between changes in the perceptions of education quality and local Syrian refugee prevalence. In KRI – where almost all host community children attend public school – residents of districts with a higher local influx of the forcibly displaced are more likely to report that education quality has worsened.

These findings should not be interpreted as evidence of absence of strain on public service systems. Rather, local competition and dissatisfaction among the host community concerning refugees is mitigated by hosts' use of alternate systems and refugees' limited usage of facilities and services due to a range of constraints. Across the three territories, enrollment rates of school-age (ages 5-15 years) refugee children are low, ranging from two-thirds in the Jordan sample to slightly more than half in Lebanon. The most prominent reason is not lack of access to public schools but economic hardship, either because children need to work to support the family, or because the expenses associated with going to school are unaffordable. Similarly, out-of-pocket expenditures for non-preventive health care can be significant, and are associated with risky coping strategies.

The remainder of the paper is structured as follows. Section 2 describes the data and methodology used to measure the impact of the Syrian refugee influx on the delivery of public services and public perceptions. Sections 3, 4, and 5 present the results for infrastructure, health, and education services, respectively. Finally, section 6 concludes.

2. Data and Methodology

This report uses data from 2015-2016 household- and individual-level surveys. The principal data source is the Syrian Refugee and Host Community Surveys (SRHCS), implemented in Jordan, Lebanon, and the Kurdistan region, Iraq. Estimates from nationally representative surveys, where available, are also used to establish baseline or benchmark conditions. The surveys were designed to include detailed information on both displaced and host community households, to allow for within- and across-context comparisons.

There were several challenges associated with conducting a nationally representative survey of the host community population and the forcibly displaced. The first difficulty is the lack of a recent or reliable sample frame, especially for Lebanon, where the last official population census was conducted in 1932. In Jordan and KRI, available sampling frames were also considerably dated.⁵ In Lebanon, an additional difficulty was that there was no available cartographic division of the country into geographic areas small enough

⁵ Typically, such a sample frame consists of the universe of enumeration areas in a country, with associated estimates of population. We constructed our own sample frame by selecting a number of Small Area Units (SAUs) and then conducting a full listing operation by visiting every household within the selected SAUs and collecting basic demographic and contact information.

to be the subject of a full listing operation, which could then serve as a sampling frame.⁶ Finally, in all three countries, as in other developing countries, forcibly displaced populations are excluded from the available national census and sampling frames. Hence, we used UNHCR data on registered Syrian refugees, which had to be combined with host population estimates, typically at the sub-district level. For more details on the sampling strategy, please refer to (Aguilera, et al., 2019).

The sample was stratified into groups of interest, depending on the country context. In Lebanon, the survey is representative of the host community and the Syrian refugee population. In Kurdistan, the scope of the survey was expanded to include internally displaced persons (IDPs), so that the survey is representative of the host community, of Syrian refugees in camps and outside camps, and of IDPs in camps and outside camps. In Jordan, the original design could not be implemented because we could not access the new sample frame based on the 2015 Jordanian census. The design was then amended to include a representative sample of the Za'atari and Azraq camps (which account for the vast majority of the Syrian refugee camp population in Jordan). It was complemented by purposive samples of the surrounding governorates, Mafraq and Zarqa (where the sample included areas physically proximate to the camp, and other areas of high Syrian refugee prevalence). In the Amman governorate, a purposive sample was drawn, combining a geographically distributed sample with a sample of high prevalence Syrian refugee areas as indicated by the Jordanian Department of Statistics. In what follows, *Jordan sample* refers to the households surveyed in Za'atari and Azraq camps, areas surrounding the camps in Mafraq and Zarqaa governorates, and Amman governorate, except in regression analysis, where we only use the Amman sample.

The survey instrument was administered across Lebanon, Jordan, and KRI, with slight modifications depending on the structure of refugee living conditions. The survey includes detailed questions on demographics, employment, access to public services, health, migration, and perceptions. The results offer comparisons between a) the refugees before and after displacement, b) host communities before and after the influx, and c) the host communities and the displaced. These comparisons enable us to ascertain past and current outcomes to benchmark the host communities prior to the influx, determine whether the displaced differ systematically from the broader population of origin, identify the immediate effect of displacement on the forcibly displaced, and explore how the local influx of the forcibly displaced has shaped host community outcomes.

There are several empirical challenges in assessing the impact of a population influx on the host populations. Although they can potentially be addressed if appropriate data are available, they cannot be addressed with a single survey, however carefully designed. In the (empirically) ideal setting, which rarely materializes, the forcibly displaced population is distributed randomly across the host country or distributed in a manner that is exogenous to any outcomes of interest. In this setting, before-after comparisons of host community outcomes yield valid causal estimates of the impact of the influx. In practice, the forcibly displaced either self-select into areas based on observable and unobservable characteristics or are located in certain areas as a result of host government policy. In this context, it becomes important to account for pre-existing trends in local characteristics that could in themselves explain the observed outcomes. In the absence of such data, one would conflate the effect of the influx with the influence of these trends.

⁶ The finest level of disaggregation available was at the level of the *Circonscriptions Foncières (CF)*, which were generally too large to be listed (as some have populations of over 100,000).

Depending on available data, we attempt to address these challenges with varying degrees of success. First, we account for location characteristics that are correlated with refugee (and IDP) location choice, such as population. Second, we explore alternate specifications for the density variable (defined as the share of Syrian refugees—and IDPs in KRI—relative to the host community), at the enumeration area, sub-district, and district level. Third, where possible, we also include variables that measure pre-existing economic conditions in the local area.

The results discussed below are based on three alternative models relating outcomes to the size of the influx of forced migrants into local markets for services. In one of the specifications, levels of outcomes in 2015 are regressed on levels of outcomes in 2010, density measures at various geographical units that are taken as definitions of local markets, and interactions between both:

$$y_{i,u,2015} = \beta_0 + \beta_1 y_{i,u,2010} + \beta_2 d_u + \beta_3 y_{i,u,2010} d_u + \gamma X_{i,u,2015}^T + \vartheta_g + \varepsilon_{i,u,2015} \quad (1)$$

where $y_{i,u,t}$ denotes the outcome in $t \in \{2010, 2015\}$ for host-community individual i living in locality u in 2010, d_u is the regional measure of refugee inflow, $X_{i,u,2015}^T$ is the vector of exogenous variables at the individual or regional level, ϑ_g are governorate fixed effects and $\varepsilon_{i,u,2015}$ is an unobservable error term. For Lebanon, d_u is a scalar with the density of Syrian refugees, and for Kurdistan, it is a vector including the density of IDPs in a given locality.⁷ In (1), β_2 captures the partial effect of an increase of 100 percentage points in the density measure for a host-community individual i such that $y_{i,u,2010} = 0$, and β_3 is the incremental difference for the sub-population that satisfies $y_{i,u,2010} = 1$.⁸ Since the absolute effect on the latter group is also an interesting parameter, all tables that present estimates from this specification also depict p-values from a test with the null hypothesis that $\beta_2 + \beta_3 = 0$. To explore heterogeneity with respect to forcibly displaced in and outside camps in Kurdistan, the density variables are broken down into a sum of non-camp and camp density defined analogously.

For continuous dependent variables observed in 2010 (changes in perceptions about health and education services, for instance) it is less meaningful to capture effects on the group satisfying $y_{i,u,2010} = 0$, and the following model is estimated:

$$\Delta y_{i,u,2015-2010} = \beta_0 + \beta_1 d_u + \gamma X_{i,u,2015}^T + \vartheta_g + \Delta \varepsilon_{i,u,2015-2010} \quad (2)$$

where $\Delta y_{i,u,2015-2010}$ is the change in the relevant outcome between 2010 and 2015 and all the other variables follow the same notation as model (1).

Also, when past information on the outcome is not provided by the survey, the following model is estimated using contemporary outcomes:

⁷ Since SR and IDPs sorted into different regions in KRI, all specifications allow the partial effects to be different for both populations. For the same reason, density measures are orthogonal and including both in the same regression yields coefficients that are very similar to the ones obtained in models that include each of them separately.

⁸ For example, in the regressions where $y_{i,u,2015}$ equals 1 if host-community individual i is employed and 0 otherwise, it is an estimate of the effect on the sub-population of being unemployed in 2010.

$$y_{i,u,2015} = \beta_0 + \beta_1 d_u + \gamma X_{i,u,2015}^T + \vartheta_g + \varepsilon_{i,u,2015} \quad (3)$$

following the notation introduced for model (1).

Typically, all regressions include controls for governorate fixed effects, which implies that we are measuring the correlation between refugee prevalence and the specified outcome *within* governorates. Moreover, governorate fixed effects also absorb systematic differences across governorates that influence outcomes, and control for the unknown true prevalence of refugees at the governorate level, while exploring the role of differences in local prevalence on outcomes. Other outcomes used are reported in the bottom part of the regression tables. Since the relevant variation to identify the parameters of interest comes from regional variables, inference and interpretation rely on standard errors clustered at the relevant geographical unit variable.

In essence, our empirical approach attempts to compare outcomes in localities exposed to a larger refugee (forcibly displaced) influx with outcomes in other localities with lower influx as a data-driven counterfactual. Given the data limitations, a reasonable framework for exploring impacts is to test if the occurrence of changes in relevant outcomes for host community members is more frequent or larger in magnitude in localities that received larger refugee influxes. Our preferred specification examines how outcomes are influenced by district-level estimates of Syrian refugee density (and IDP density in KRI) while accounting for time-invariant governorate (or province) characteristics, individual characteristics, and location characteristics.

3. Infrastructure Services

As one may expect, access to infrastructure services is more limited for forcibly displaced persons than for the host community (Figure 1). Given their increasing urbanization, refugees often use public infrastructure provided by host governments, at least for electricity and garbage disposal. In Jordan, KRI, and Lebanon, refugees—and IDPs in KRI—receive fewer hours of electricity per day than host communities. Where this gap is wider, for example in Jordan, this is because host communities have electricity 24 hours a day, rather than because refugees have particularly low access to electricity. Host communities in Lebanon have electricity for 13 hours a day, on average, and hosts in KRI 18 hours a day. In KRI and Lebanon, almost all respondents reported using the public grid as their main power source; the same is true of out-of-camp refugees in Jordan, while in-camp refugees reported relying on the camp network and solar chargers. In all three countries, refugees and IDPs rely on the same modalities of garbage collection as the host community (government pickup in KRI and dumpster disposal in Jordan and Lebanon).

Camps theoretically should be able to deliver infrastructure services such as water, electricity, and sanitation for a large number of refugees without straining existing host country systems. However, services are worse for refugees inside camps than for refugees outside camps. Forcibly displaced persons in camps have access to fewer hours of electricity and enjoy less access to improved sanitation facilities than forcibly displaced persons outside camps. For example, in Jordan, refugees who live inside camps get about 9 hours of electricity each day, whereas refugees who live outside camps in Amman,

Mafraq, and Zarqa enjoy 24-hour access to electricity.⁹ In Kurdistan, both IDPs and Syrian refugees who live inside camps get 11 hours of electricity per day, while those who live outside camps get between 17 and 20 hours of electricity every day.

Nearly all refugees living outside camps in the three sample governorates have access to improved sanitation facilities; the proportion with access is much lower inside camps (Figure 2).¹⁰ IDPs in camps in Kurdistan reported particularly low access to improved sanitation facilities. In Lebanon, Syrians who live in standard housing (apartments or independent homes) have slightly better access to improved sanitation facilities than those who live in substandard housing. Consistent with these observations, refugees and IDPs in camps reported lower satisfaction with access to services (compared with their situation in 2010, before they were displaced) than those outside camps. Although service provision in high-refugee-influx areas has not deteriorated more since 2010, a substantial share of the host populations reported that access to services has worsened. In all three settings, there is no significant association between the local density of refugees (and IDPs in KRI) and the proportion of host community households who reported deteriorating access to services since 2010. Nevertheless, this does not preclude the need to upgrade service infrastructure in the host countries, as a nonnegligible share of the host population reported a decline in access to services in the preceding five years. For instance, in all three areas, 30 percent of the host community population reported worse access to services in 2015 than in 2010.

4. Health Services

In all three samples, both refugees (and IDPs in KRI) and the host community rely on public and private service providers for health care. Unlike camp residents, refugees outside camps rely predominantly on the prevailing health systems in the host country (both public and private). In Lebanon, both groups rely primarily on private sources, whereas in our Amman sample, reliance on public sources is relatively heavy (figure 3). In KRI, Syrian refugees rely more on public health care providers, while IDPs and the host community rely more on private providers.

Almost all refugee households in Lebanon said they had visited a hospital, health clinic, doctor, or pharmacist for an illness or injury of a family member within the previous 12 months. These visits were distributed evenly between hospitals, health clinics, and doctors in private clinics. Two-thirds of these visits involved out-of-pocket payments for consultation and diagnostics, costing, on average, LL 97,700 (Lebanese pounds).

In KRI, given the high mobility of refugees, the public and United Nations (UN)–provided health care is accessed roughly equally by refugees and IDPs living inside and outside camps. A vast majority of refugee and IDP households reported having made a health-related visit in the last year. Both IDPs and Syrian refugees living outside camps are more likely than refugees living in camps to use private facilities. Roughly half of the refugees in camps said they have not had any out-of-pocket costs, but for those who have,

⁹ Residents of Za'atari get an average of 10.6 hours of electricity daily, overwhelmingly through the camp network. In contrast, a vast majority of Azraq residents get electricity from solar lights for an average of 4.2 hours per day.

¹⁰ Improved sanitation facilities include pit latrine, pour flush with soakage pit, pour flush with septic tank, and pour flush to sewage.

costs were slightly higher than those paid by refugees outside camps. A similar pattern is evident for IDPs, as well. Almost all of their visits are to government-run hospitals or doctors in private clinics (which are outside camps), suggesting that camp residents incur significant costs to treat more serious health issues, but not for preventive care.¹¹

More than 97 percent of Syrian refugee households in the Jordan sample reported that a family member had visited a health facility or provider in the last year. Among camp households, more than 80 percent of the most recent visits were to hospitals, whereas outside camps, refugee households sought care in hospitals (40 percent), primary health clinics, and private clinics. In the Jordan sample, refugees outside camps reported using public (41 percent) and private (39 percent) health care providers. In contrast, inside camps in Jordan, refugees said that they mostly use health care facilities provided by the UN or a nongovernmental organization (NGO). Out-of-pocket costs (doctor's fees, diagnostics, and other expenses) related to the last visit varied greatly: almost all camp respondents reported having incurred no costs, whereas three-fourths of out-of-camp respondents reported paying, on average, JD 60 (Jordanian dinars), and one-fourth reported incurring no out-of-pocket costs. Camp residents were also more likely to report receiving assistance from someone outside their household to cover the costs of the visit, with two-thirds reporting receiving help, primarily from the UN and NGOs, compared with only one-third of out-of-camp residents.

Our survey included questions about perceived changes in service provision, asking respondents to compare the overall quality of services in 2010 and 2015. The analysis compares two similar individuals living in slightly different localities in terms of density and describes whether those living in areas relatively more affected by the influx are more likely to say that health services have worsened. One concern is that Syrian refugees or IDPs might choose a location based on the quality of service provision, sorting into localities that would have experienced relative improvements even without the influx. If this were the case, estimates would be biased toward zero, even if the influx has negatively affected the provision of services. All specifications account for differences in population size, in an attempt to proxy for characteristics that would be associated with the different trends. In Kurdistan, it is also possible to account for differences in the structure of service provision, including information on the use of public health services in 2012. Despite the large overlap in the use of private and public health providers, we find no evidence that the influx negatively affected perceptions about health services in 2015 compared to 2010 (tables 1-3).

5. Education Services

Overall enrollment rates among Syrian children aged 5-15 are highest in our Jordan sample (figure 4). In Jordan, roughly two-thirds of all school-age refugee children are enrolled in schools.¹² In Kurdistan, a similar share of refugee children living in camps is enrolled, while enrollments are much lower among the out-of-camp population. Among IDPs, girls attend school at lower rates than boys, both in camp and non-camp settings.

¹¹ Irregular payment of salaries to public sector health workers has also affected the delivery of health services in Kurdistan.

¹² Our survey coincided with the announcement in August 2016 that all children in Jordan under age 18 are allowed to enroll in school. This rescinded a provision barring any child who was out of school for three years from returning to school.

In comparison to the non-camp settings in Jordan and Kurdistan, male refugee children in Lebanon have the highest school enrollment rate, with 63 percent of boys in school. Refugee children living inside camps primarily attend schools run by the UN, NGOs, or charitable groups, whereas refugee children living outside camps attend mostly public or private schools. Almost 90 percent of out-of-camp children in Jordan attend public schools. Likewise, as a result of the “second-shift” policy in Lebanon, which teaches Syrian children in an afternoon shift, about 60 percent of school-going children attend public schools.

Syrian refugees spend less on children’s education than host communities, but the difference is owing to the difference in the type of school and area of settlement. For instance, 43 percent of host community children in Lebanon attend private schools compared with less than 4 percent of Syrian refugee children. After accounting for the type of school and the district of settlement, there is no significant difference in education expenditure between the two groups.

The quantitative survey shows that many school-age children are currently out of school in the three host countries, and one of the most common reasons for refugee children to be out of school is economic hardship: they need to work to support the family, or school expenses are not affordable. This is also consistent with significantly higher school enrollment rates for school-age children before leaving Syria in all three regions. In KRI, roughly half of the Syrian refugee and IDP children who are not in school cited economic hardship. Lack of financial means prevents 40 percent of refugee children from attending school in Lebanon, and unaffordability is the most commonly stated reason why children are not in school in Jordan, as well. In Jordan, 50 percent of both Syrian and host community children who are out of school are not interested in going to school.

Even though rates of enrollment among refugee and IDP children are uniformly lower than enrollment rates in the host community (which are more than 85 percent in all localities), the influx likely has placed a pronounced burden on the preexisting stock of inputs in schools. UN agencies—as well as NGOs and civil society organizations—seem to have absorbed a significant part of the increase in demand for educational services, especially in KRI and Lebanon (figure 6). While very few Syrian refugee children attend private schools in Lebanon—signaling considerable segmentation since almost half of the households pay for education—a large share end up in public schools. Nevertheless, we find no evidence that perceptions about education services among hosts have worsened in 2015 compared to 2010 (tables 4, 5, and 6).

Another possible adjustment cost for host community households observing a large influx of forcibly displaced children into the public school system is the transition to private schools, fearing a decrease in quality. It is possible to test this dimension of adjustment by evaluating whether the probability of being enrolled in a public school varies with the size of the shock experienced by a locality. If refugees select places where the public system has more coverage, the association would be positive even if the refugee influx was causing a transition from public to private schools. The regression analysis in Kurdistan confirms this positive association, accounting for initial levels of enrollment in public schools, but the results are not significant or sizable (table 7).

6. Conclusion

In this paper, we explore rates of access to infrastructure and social services among hosts and displaced persons, and related perceptions of quality of service delivery in Jordan, Lebanon, and KRI. The extent of competition with host communities depends on the extent to which the hosts relied on publicly provided services. But the addition of hundreds of thousands of people in a short time has unquestionably strained the public service delivery systems of host countries, and there is a need for more investment to expand the supply of services and delivery personnel.

The data used in the analysis stem from varied sources, including UNHCR's registration database, publicly available casualty data, and primary data collected in the three host countries. Similar efforts to collect representative data on refugees in national household surveys are underway in many countries. Such efforts are critical to generating the evidence for the transition from short-term humanitarian response to long-term development response in countries affected by protracted conflict and displacement crises.

References

Aguilera, A., Krishnan, N., Muñoz, J., Riva, F. R., Sharma, D., & Vishwanath, T. (2019). Sampling for Representative Surveys of Displaced Populations. Em J. Hoogeveen, & U. Pape, *Data Collection in Fragile States: Innovations from Africa and Beyond* (pp. 129-152). Washington DC: Palgrave Macmillan.

UNHCR. (2018). *Global Trends: Forced Displacement in 2018*. Geneva: UNHCR.

Figures

FIGURE 1: ACCESS TO INFRASTRUCTURE SERVICES OF SYRIAN REFUGEES, INTERNALLY DISPLACED PERSONS, AND THE HOST COMMUNITY IN JORDAN, KURDISTAN (IRAQ), AND LEBANON, 2015–16

Source: Calculations based on the Syrian Refugees and Host Communities Surveys

FIGURE 2: SHARE OF REFUGEE AND IDP HOUSEHOLDS WITH ACCESS TO IMPROVED SANITATION FACILITIES INSIDE AND OUTSIDE OF CAMPS IN JORDAN, KURDISTAN (IRAQ), AND LEBANON, 2015–16

Source: Calculations based on the Syrian Refugees and Host Communities Surveys

FIGURE 3: TYPE OF HEALTH CARE RECEIVED BY SYRIAN REFUGEES, INTERNALLY DISPLACED PERSONS, AND THE HOST COMMUNITY IN AMMAN (JORDAN), KURDISTAN (IRAQ), AND LEBANON, BY TYPE OF SERVICE PROVIDER, 2015–16

Source: Calculations based on the Syrian Refugees and Host Communities Surveys

FIGURE 4: SCHOOL ENROLLMENT RATE OF SCHOOL-AGE SYRIAN REFUGEE CHILDREN INSIDE AND OUTSIDE OF CAMP IN JORDAN, KURDISTAN (IRAQ), AND LEBANON, BY GENDER, 2015–16

Note: School age is defined as age 5-15; *Source:* Calculations based on the Syrian Refugees and Host Communities Surveys

FIGURE 5: SCHOOL ENROLLMENT BEFORE DISPLACEMENT OF SYRIAN REFUGEES AND INTERNALLY DISPLACED PERSONS IN JORDAN, KURDISTAN (IRAQ), AND LEBANON, BY GENDER, 2015–16

Source: Calculations based on the Syrian Refugees and Host Communities Surveys

FIGURE 6: EDUCATION OF SYRIAN REFUGEES, INTERNALLY DISPLACED PERSONS, AND THE HOST COMMUNITY IN AMMAN (JORDAN), KURDISTAN (IRAQ), AND LEBANON, BY TYPE OF SERVICE PROVIDER, 2015–16

Tables

TABLE 1: SHIFTS IN PERCEPTIONS ABOUT HEALTH CARE QUALITY AND DISTRICT DENSITY OF FORCIBLY DISPLACED, KURDISTAN

<i>Dep. Var:</i>	Health care worsened when compared to 2010 (==1)				Health care improved when compared to 2010 (==1)			
SR density (district)	3.62 (2.37)	0.69 (1.45)	2.8 (2.54)	0.75 (1.37)	-1.09 (0.96)	-0.73 (0.71)	-1.28 (1.11)	-0.9 (0.74)
IDP density (district)	-0.54 (0.73)	-0.88 (0.55)	-0.43 (0.72)	-0.9 (0.54)	0.15 (0.23)	0.19 (0.20)	0.17 (0.26)	0.26 (0.25)
Constant	0.46*** (0.12)	0.34*** (0.08)	0.35** (0.15)	0.35*** (0.12)	0.24*** (0.06)	0.26*** (0.08)	0.21* (0.11)	0.21* (0.11)
Governorate FE	X	X	X	X	X	X	X	X
Population (district, 2012)		X		X		X		X
Share of population using the public health system (district, 2012)			X	X			X	X
Observations	658	658	658	658	668	668	668	668
R-squared	0.1	0.19	0.11	0.19	0.03	0.03	0.03	0.03

Notes: Each column displays the coefficient of regressions based on model (2). Sample of main respondents in SRHCS-Kurdistan. Robust standard errors clustered at the district level in parentheses. Significance levels are denoted by *** if $p < 0.01$, ** if $p < 0.05$, * if $p < 0.1$.

TABLE 2: SHIFTS IN PERCEPTIONS ABOUT HEALTH CARE QUALITY AND DISTRICT DENSITY OF FORCIBLY DISPLACED, LEBANON

<i>Dep. Var:</i>	Health care worsened when compared to 2010 (==1)		Health care improved when compared to 2010 (==1)	
SR density (district)	-1.25*** (0.34)	-1.25*** (0.33)	-0.05 (0.22)	-0.05 (0.09)
Constant	0.55*** (0.07)	0.58*** (0.08)	0.12** (0.05)	0.04 (0.03)
Governorate FE	X	X	X	X
Total Population (district, 2015)		X		X
Observations	1,625	1,625	1,629	1,629
R-squared	0.17	0.17	0.07	0.08

Notes: Each column displays the coefficient of regressions based on model (2). Sample of main respondents in SRHCS-Lebanon. Robust standard errors clustered at the district level in parentheses. Significance levels are denoted by *** if $p < 0.01$, ** if $p < 0.05$, * if $p < 0.1$.

TABLE 3: SHIFTS IN PERCEPTIONS ABOUT HEALTH CARE QUALITY AND DISTRICT DENSITY OF FORCIBLY DISPLACED, AMMAN

<i>Dep. Var:</i>	Health care worsened when compared to 2010 (=1)		Health care improved when compared to 2010 (=1)	
SR density (district)	0.66 (0.43)	-0.2 (0.57)	-0.49 (0.60)	-0.75 (0.65)
Constant	0.17*** (0.05)	0.37*** (0.08)	0.23*** (0.06)	0.29*** (0.09)
Population (district, 2004)		X		X
Observations	398	398	400	400
R-squared	0	0.03	0	0

Notes: Each column displays the coefficient of regressions based on model (2). Sample of main respondents in SRHCS-Jordan living in Amman in both 2010 and 2015. Robust standard errors clustered at the district level in parentheses. Significance levels are denoted by *** if $p < 0.01$, ** if $p < 0.05$, * if $p < 0.1$.

TABLE 4: SHIFTS IN PERCEPTIONS ABOUT EDUCATION QUALITY AND DENSITY OF FORCIBLY DISPLACED, KURDISTAN

<i>Dep. Var:</i>	Education worsened when compared to 2010 (=1)				Education improved when compared to 2010 (=1)			
SR density (district)	5.64** (2.27)	5.60* (3.01)	5.52 (3.59)	5.53 (3.65)	-3.37** (1.28)	-3.35* (1.63)	-2.86 (1.92)	-2.99 (1.99)
IDP density (district)	-1.62 (0.93)	-1.61 (0.93)	-1.62 (0.93)	-1.62 (0.94)	1.14*** (0.20)	1.14*** (0.20)	1.14*** (0.19)	1.14*** (0.19)
Constant	0.71*** (0.14)	0.71*** (0.14)	1.11 (9.77)	1.16 (11.10)	0.13*** (0.03)	0.13*** (0.04)	-1.51 (4.65)	-2.01 (4.83)
Governorate FE	X	X	X	X	X	X	X	X
Population (district, 2012)		X		X		X		X
Share of population using the public educational system (district, 2012)			X	X			X	X
Observations	172	172	172	172	182	182	182	182
R-squared	0.28	0.28	0.28	0.28	0.25	0.25	0.25	0.25

Notes: Each column displays the coefficient of regressions based on model (2). Sample of child respondents in SRHCS-Kurdistan, conditional on living in a household where a child was studying when the survey was conducted and in the 2010-11 school year. Robust standard errors clustered at the district level in parentheses. Significance levels are denoted by *** if $p < 0.01$, ** if $p < 0.05$, * if $p < 0.1$.

TABLE 5: SHIFTS IN PERCEPTIONS ABOUT EDUCATION QUALITY AND DISTRICT DENSITY OF FORCIBLY DISPLACED, LEBANON

<i>Dep. Var:</i>	Education worsened when compared to 2010 (==1)		Education improved when compared to 2010 (==1)	
SR density (district)	-1.62 (1.08)	-1.50* (0.77)	0.78 (0.62)	0.74 (0.56)
Constant	0.55** (0.25)	0.71*** (0.22)	0.12 (0.14)	0.06 (0.14)
Governorate FE	X	X	X	X
Total Population (district, 2015)		X		X
Observations	699	699	699	699
R-squared	0.13	0.17	0.21	0.21

Notes: Each column displays the coefficient of regressions based on model (2). Sample of child respondents in SRHCS-Lebanon, conditional on living in a household where a child was studying when the survey was conducted and in the 2010-11 school year. Robust standard errors clustered at the district level in parentheses. Significance levels are denoted by *** if $p < 0.01$, ** if $p < 0.05$, * if $p < 0.1$.

TABLE 6: SHIFTS IN PERCEPTIONS ABOUT EDUCATION QUALITY AND DISTRICT DENSITY OF FORCIBLY DISPLACED, AMMAN

<i>Dep. Var:</i>	Education worsened when compared to 2010 (==1)		Education improved when compared to 2010 (==1)	
SR density (district)	1.43 (0.80)	0.92 (0.86)	1.83*** (0.30)	2.19*** (0.34)
Constant	0.08 (0.07)	0.19 (0.11)	0.12*** (0.03)	0.04 (0.06)
Population (district, 2004)		X		X
Observations	118	118	119	119
R-squared	0.01	0.02	0.02	0.02

Notes: Each column displays the coefficient of regressions based on model (2). Sample of child respondents in SRHCS-Jordan living in Amman both in 2010 and 2015, conditional on living in a household where a child was studying when the survey was conducted and in the 2010-11 school year. Robust standard errors clustered at the district level in parentheses. Significance levels are denoted by *** if $p < 0.01$, ** if $p < 0.05$, * if $p < 0.1$.

TABLE 7: PRIVATE SCHOOL AND DISTRICT DENSITY OF FORCIBLY DISPLACED, KURDISTAN

<i>Dep. Var: School used run by private institution</i>				
SR density (district)	0.19 (0.14)	0.06 (0.08)	0.01 (0.03)	0.01 (0.02)
IDP density (district)	0 (0.02)	-0.01 (0.01)	-0.02 (0.01)	-0.02 (0.01)
Constant	0.01 0.00	0 (0.01)	1.23*** (0.16)	1.22*** (0.21)
Governorate FE	X	X	X	X
Population (district, 2012)		X		X
Share of population using the public educational system (district, 2012)			X	X
Observations	378	378	378	378
R-squared	0.02	0.03	0.03	0.03
Notes: Each column displays the coefficient of regressions based on model (2). Sample of child respondents in SRHCS-Kurdistan, enrolled in school. Robust standard errors clustered at the district level in parentheses. Significance levels are denoted by *** if $p < 0.01$, ** if $p < 0.05$, * if $p < 0.1$.				