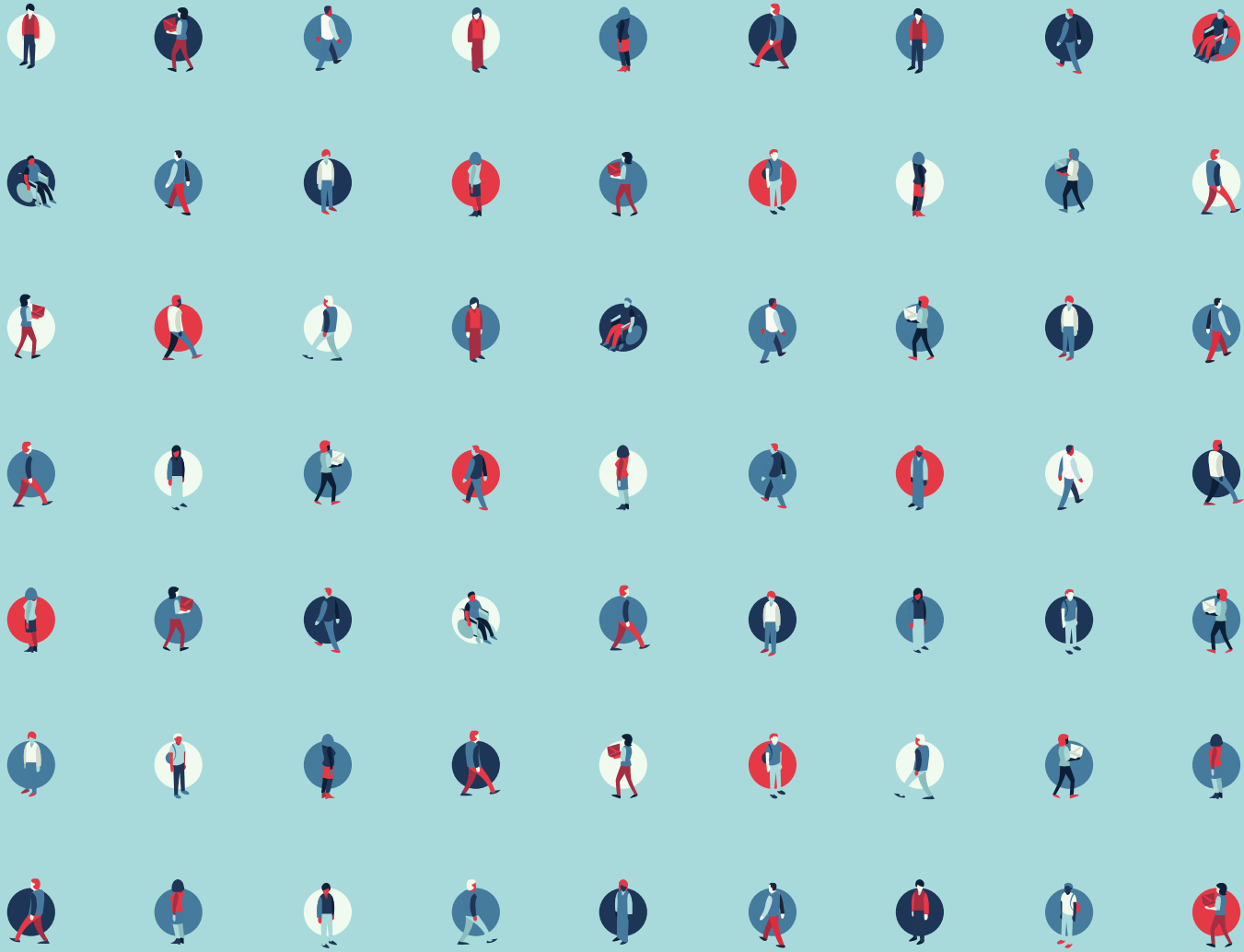


COMPOUNDING MISFORTUNES



Changes in Poverty since the onset of COVID-19 on Syrian Refugees and Host Communities in Jordan, the Kurdistan Region of Iraq and Lebanon



DECEMBER 2020

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List of abbreviations

| | |
|-----------------|---|
| COVID-19 | The novel Coronavirus disease 2019 |
| GDP | Gross Domestic Product |
| IDPs | Internally Displaced Persons |
| ILO | International Labor Organization |
| IQD | Iraqi Dinars |
| JOD | Jordanian Dinars |
| KRI | Kurdistan Region of Iraq |
| LBP | Lebanese Pounds |
| MENA | Middle East and North Africa |
| NGO | Non-Governmental Organization |
| PPP | Purchasing Power Parity |
| RNA | Rapid Needs Assessment |
| SMEB | Survival Minimum Expenditure Basket |
| SRHCS | Syrian Refugee and Host Community Survey |
| UNDP | United Nations Development Program |
| UNHCR | United Nations Refugee Agency |
| UNICEF | United Nations Children's Fund |
| VAF | Vulnerability Assessment Framework |
| VASyR | Vulnerability Assessment of Syrian Refugees |
| VAT | Vulnerability Assessment Tool |
| WFP | World Food Program |

Executive summary

COVID-19 has had an enormous impact on nearly every country in the world. However, Iraq, Jordan and Lebanon were already facing difficult to extreme circumstances even before the pandemic erupted, making them particularly vulnerable. This report looks at the impact of the pandemic, associated lockdowns and economic shocks and other misfortunes which have compounded the crisis, such as sharply lower oil revenues in Iraq and the Port of Beirut explosion in Lebanon, as well as political instability in both.

The report estimates that 4.4 million people in the host communities and 1.1 million refugees or IDPs were been driven into poverty in the immediate aftermath of the crisis, and while this considers all of Lebanon, it only includes three governorates in Jordan and the Kurdistan Region of Iraq, due to data limitations. A response commensurate with the magnitude of the shock is needed to prevent further misery.

The poverty impact of COVID-19 and the ensuing confinement policies and economic contractions have been felt throughout the world, not least by marginalized communities. However, COVID-19 has compounded existing vulnerabilities or crises in Jordan, the Kurdistan Region of Iraq (KRI) and Lebanon. Syrian refugees – most of whom have been displaced for up to nine years – are particularly exposed given their perilous pre-crisis situation. Host communities in these three countries, who have supported and accommodated such large numbers of refugees, have also been heavily affected; all three countries were in strained positions prior to COVID-19, ranging from economic stagnation and high public debt in Jordan, to a collapse in public revenues due to international oil price shocks in KRI, to complete political and economic crisis in Lebanon.

By March 2020, all three countries had witnessed their first cases of COVID-19 and introduced stringent containment policies ranging from partial closures of schools and shops to full curfew (Figure ES1). While these measures were initially largely successful in containing the spread of the pandemic, they also led to a decline in economic activity across most sectors, particularly in the informal market. In Jordan and Iraq, the losses are estimated at around 8.2 and 10.5 percent of 2019's GDP respectively. In Lebanon where the COVID-19 crisis is compounded by economic and political crises the losses are much higher, around 25 percent of GDP. Lebanon has experienced inflation of over 100 percent, largely due to its import dependence and currency depreciation. Unsurprisingly, given the magnitude of these shocks, recent rapid needs assessments and UNHCR administrative data show that refugees, who are highly concentrated in low-skilled jobs in the informal sector, have had to reduce food intake, incur additional debt and in some instances suffered eviction.

Acknowledgements

The World Bank Group in collaboration with the United Nations Refugee Agency (UNHCR), with funding from the Joint Data Centre on Forced Displacement, prepared this study on the impact of COVID-19 and ensuing lockdown policies on the welfare of refugees and host communities in Jordan, Kurdistan Region of Iraq (KRI) and Lebanon.

This document was written by Bilal Malaeb and Matthew Wai-Poi (World Bank Group's Poverty and Equity Global Practice – MENA). The team worked under the guidance of Saroj Kumar Jha, Regional Director of the Middle East Department (Iraq, Lebanon, Jordan, Iran and Syria) at World Bank, Johannes Hoogeveen, Practice Manager of the World Bank's Poverty and Equity Global Practice for the MENA region, Ayman Gharaibeh, Regional Director of the UNHCR Regional Bureau for the Middle East and North Africa, and Alexander Tyler, Senior External Engagement Coordinator; UNHCR Regional Bureau for MENA. We are grateful for Laura Rodriguez for helpful guidance and support in the data analysis phase, and to Nandini Krishnan and Maria Ana Lugo for a thorough peer review. The team also benefited from coordination and cooperation with colleagues from the UNHCR Regional Bureau for MENA and UNHCR country offices in Jordan, KRI, and Lebanon. Preliminary findings were reviewed through technical consultations in Jordan, KRI and Lebanon with government, United Nations and NGO stakeholders and through an internal review process at the World Bank.

These conditions exacerbated existing vulnerabilities and increased pressure on social cohesion with their host communities.

This joint UNHCR-World Bank study, funded by the Joint Data Center on Forced Displacement, estimates the change in poverty since the onset of COVID-19 among Syrian refugee and host communities in Jordan¹, KRI and Lebanon. The study employs a simulation exercise using macroeconomic projections on changes in the economy and translates these into shocks to household consumption and therefore poverty. Understanding the effects of COVID-19, and of other compounding crises in the case of KRI and Lebanon, is a crucial step in informing the policies that need to be adopted as the pandemic unfolds and during the recovery period. This study is part of a multi-phase collaboration between the World Bank and UNHCR. Phase I, presented in this report, estimates the impact of the crisis(es) on poverty among host and refugee communities; Phase II aims to calibrate these simulations with new phone survey data reflecting current circumstances on the ground and to delve more specifically into the cost of mitigation and policy options.

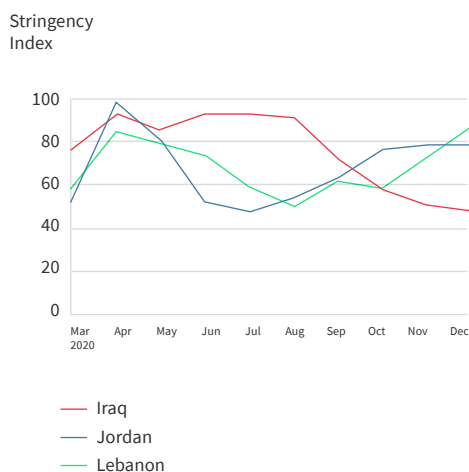
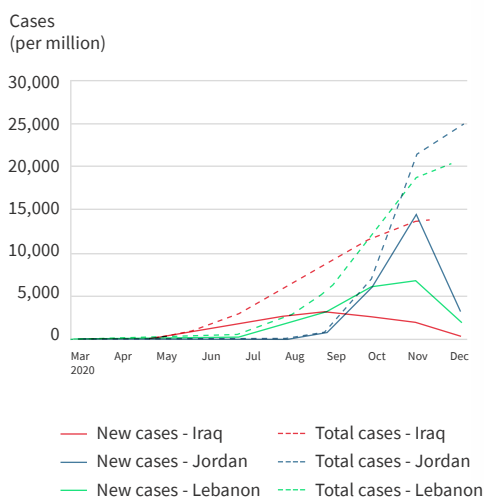
This study uses dynamic simulations to show changes in poverty on a monthly basis. The impact of COVID-19 is modeled using macroeconomic changes in various sectors of the economy, changes to earnings in formal and informal sectors, and changes in remittances (domestic and international) and inflation. The projections estimate changes in poverty among host and refugee communities and estimate the poverty-reducing effects of government and UNHCR and other international assistance. In this summary, the main results are highlighted at the Upper Middle-Income Country poverty line of \$5.50 per person per day for cross-country comparability. The full report provides technical details and sensitivity analyses

as well as estimates based on the national poverty lines for each of the three countries.

A key lesson of this study is that underdeveloped or inaccessible national statistical systems limit the ability to accurately estimate poverty and the impact of crises and policy shocks. In the absence of official and accessible data in two of these countries, the report necessarily relies on non-official data and provides estimates based on assumptions that come with inherent caveats. The report underlines the need for greater efforts to regularly collect, update and publish representative and reliable surveys, including on expenditure and welfare, to inform policy makers adequately. This study relies on the Syrian Refugees and Host Community Survey, undertaken by the World Bank in 2015-16, which uses a harmonized instrument across the three countries. The data are drawn from three governorates in Jordan with a high concentration of refugees (Amman, Mafraq, and Zarqa), and are representative of Lebanon and KRI. The study also uses the most recent projections on macroeconomic aggregates from World Bank country economists, remittances and information on changes in assistance as underlying drivers.

¹ For Jordan, results reflect data in three governorates with high concentrations of refugees only: Amman, Mafraq, and Zarqa

Figure ES1
Total and new cases of COVID-19 by month and the stringency of government response to the pandemic



Source:

Authors' calculation based on data from Our World In Data - Max Roser and Esteban Ortiz-Ospina (2020) - "Coronavirus Pandemic (COVID-19) - the data". Published online at OurWorldInData.org. Retrieved on 11 December 2020 from: <https://ourworldindata.org/coronavirus-data>

Note:

The Stringency Index is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest). If policies vary at the subnational level, the index is shown as the response level of the strictest sub-region. December data span until 10th of the Month only.

Key Findings

In Jordan, when the pandemic first strikes and the country and society lock down, poverty is estimated to have increased by 38 percentage points (p.p.) among Jordanians, and by 18 p.p. among Syrian refugees (Figure ES2); the lower increase for refugees reflects the fact that many refugees were already living beneath the poverty line so there were fewer to be drawn under by the crisis. The chart shows the percentage of the population which falls into poverty from the beginning of the crisis, beyond the pre-COVID-19 poverty rate. This means that at the start of the crisis more than 1.5 million Jordanians living in the three regions covered by this study became newly poor, as did more than 76,000 Syrian refugees². The impact of COVID-19 is projected to last for 12 months before returning to pre-COVID-19 poverty levels.

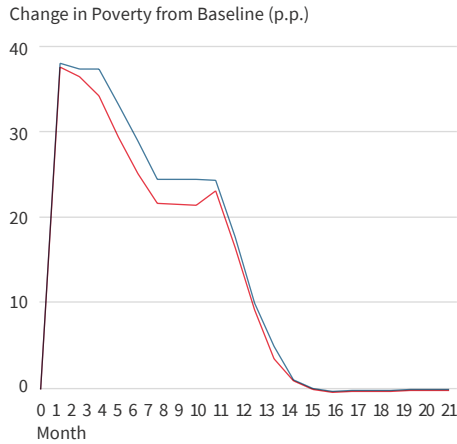
The cash transfers initiated by the government for Jordanians in the three governorates examined are estimated to have reduced the poverty impact by 12 percent (or 4 p.p.) by the fourth month of the crisis as a result of the expansion of the Takaful program, the introduction of a cash top-up for NAF and Takaful beneficiaries and temporary cash assistance to many eligible non-Takaful beneficiaries. The blue line in the charts shows projected poverty with no public response; the red line shows poverty after considering the impact of the shock but also the public response. For Syrian refugees, there is a 6 percent (2 p.p.) mitigation of poverty impacts in the second month of the crisis and 30 percent (6 p.p.) of the impact by the fifth month of the crisis, the months that had the largest expansions of UNHCR's COVID-19 cash assistance program. In this study (and in the graphs that follow), month 0 represents the pre-COVID-19 first quarter of 2020, and month 1 corresponds to April 2020, the first month of the crisis.

² Jordanian's population for Amman, Mafraq, and Zarqa only is 3,994,840, as estimated by the end of 2017 based on the official census. The Syrian refugee population is based on the refugees registered with UNHCR in these three governorates: 431,168.

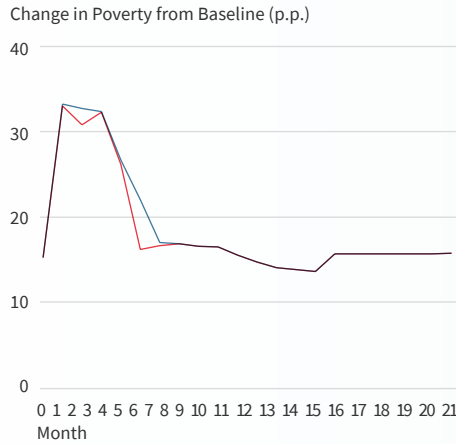
Figure ES2

Changes in Poverty using the International Poverty Line - JORDAN

JORDANIAN



SYRIAN



- international poverty line (5.5/day)
- mitigation - international poverty line (5.5/day)

Source:
Authors' calculations based on SRHCS (2015/16)

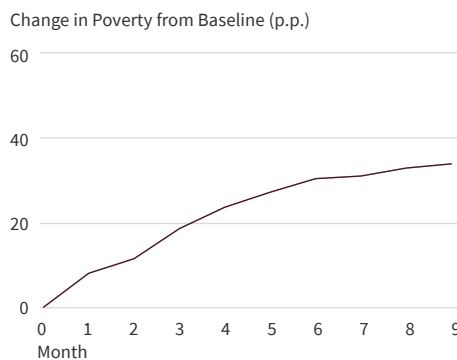
Lebanon has been the hardest hit of the three countries by COVID-19, where the pandemic arrived in a country already reeling from political and economic collapse, soaring inflation and declining GDP, and soon after the Port of Beirut explosion. One-third of Lebanese (33 p.p., or 1.7 million people) are expected to have fallen into poverty, and as many as 840,000 Syrian refugees (56 p.p.); many more Syrians were living just above the international poverty line when COVID-19 hit, making them much more vulnerable³. The results for Lebanon

have been projected only until December 2020, given the high uncertainty around the country's macroeconomic outlook (Figure ES3). Unlike Jordan and KRI, the increase in poverty is not expected to abate in 2021 as the macro-economic crisis continues; Phase II will explore this in more detail. For refugees in Lebanon, UNHCR assistance mitigated around 8 percent (3 p.p.) of the increase in poverty. Further analysis highlights that much of the potential reduction in poverty as a result of the mitigation policies is undone by inflation

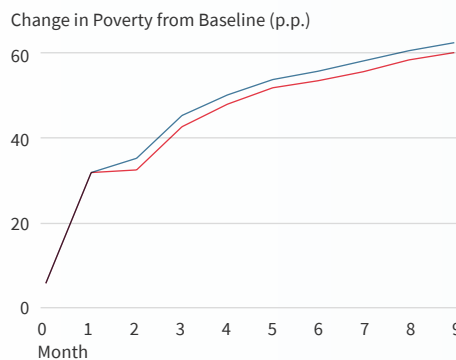
Figure ES3

Changes in Poverty using the International Poverty Line Actual CPI changes - LEBANON

LEBANESE



SYRIAN



- international poverty line (5.5/day)
- mitigation - international poverty line (5.5/day)

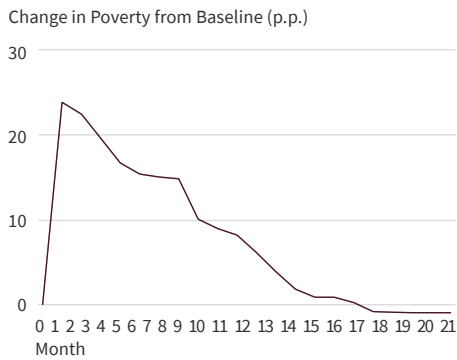
Source:
Authors' calculations based on SRHCS (2015/16)

³ These figures are calculated based on a population of 6,855,713, according to the UN population statistics, which includes an unofficial estimate of 1.5 million Syrian refugees.

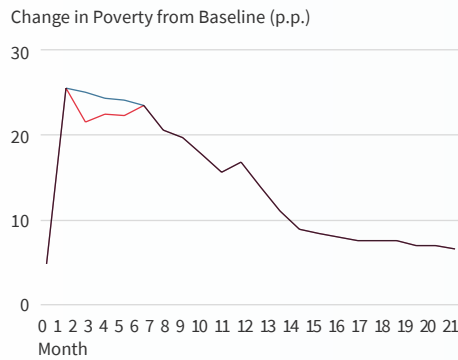
In KRI, hosts, refugees and IDPs faced similar initial poverty levels and experienced increases of 24 p.p., 21 p.p., and 28 p.p., respectively, when lockdown measures were most severe (Figure ES4). That means 1.2 million people in the host community will have fallen into poverty, as well as 49,000 Syrian refugees and more than 180,000 Iraqi IDPs⁴. As is the case for Jordan, after an initial rapid increase, poverty levels have likely declined, and are projected to return to pre-COVID levels some 12 to 14 months after the onset of the pandemic. The cash assistance provided to refugees and IDPs mitigated up to 17 percent (5.5 p.p.) of the increase in poverty when it was administered.

Figure ES4
Changes in Poverty using International Poverty Line
KURDISTAN REGION OF IRAQ

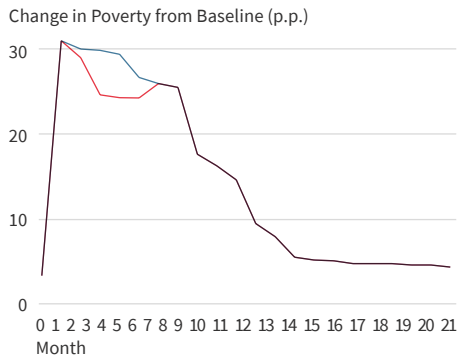
RESIDENT



REFUGEE



IDP



- international poverty line (5.5/day)
- mitigation - international poverty line (5.5/day)

Source:
 Authors' calculations
 based on SRHCS
 (2015/16)

⁴ The population of the host community of KRI (5,167,166) is based on the SWIFT 2017-18 estimates of population. Syrian refugee population (237,052) is based on UNHCR registration numbers in KRI, and the IDPs population size (643,251) is based on the IOM Displacement Tracking Matrix for KRI.

The report's findings should be interpreted with some caution. The magnitude of the changes in measured poverty since the onset of COVID-19 on refugees and host communities would be lower if households responded to inflation by substituting for cheaper goods. Yet while this would reduce the impact on measured poverty, such negative coping mechanisms do nonetheless incur welfare costs. Moreover, while UNHCR and government assistance are included in this study, other organizations have also provided support which has not been captured.

Conversely, poverty during the economic recovery path may have been underestimated. Some projections of the speed of recovery may be optimistic, for example, in light of the time it will likely take for a vaccine to be available to the majority of the population. The crisis may also have had more severe welfare repercussions given temporary employment or income losses can translate into permanent shocks if negative coping mechanisms are adopted, such as pulling children out of school, forgoing medical treatment or selling productive assets to meet the cost of living. As more data emerge from ongoing household phone surveys and the macroeconomic outlooks are updated, and a more complete mapping of assistance programs is conducted, the results presented in this study will be revised as part of the second phase of this World Bank – UNHCR collaboration.

Finally, mitigation strategies, if done at sufficient scale and duration, can help bridge the gap between the onset of the crisis and the economic recovery and lessen the impact of the pandemic on both refugees and host communities. This study has demonstrated how such strategies in Jordan and KRI managed to reduce the poverty impact of COVID-19 (new initiatives in Lebanon are expected and will be examined in the second phase) but were insufficient to prevent poverty rising considerably. Looking into 2021, additional responses from governments and the international community are clearly needed to prevent continued misery. The second phase of the report will seek to quantify how big such a response might need to be, but given the unprecedented magnitude of the poverty impacts the response will need to be commensurate.

Introduction

The poverty impact of COVID-19 and the ensuing confinement policies have been felt throughout the globe, not least by marginalized communities. In Jordan, KRI and Lebanon, COVID-19 compounded already existing vulnerabilities. Syrian refugees – many of whom have been displaced for nine years – are particularly exposed given their perilous pre-crisis situation. Host communities, especially those in Jordan, KRI and Lebanon, who have supported and accommodated such large numbers of refugees, have also been heavily affected.

This joint UNHCR-World Bank study, funded by the Joint Data Center on Forced Displacement, estimates the change in poverty since the onset of COVID-19 among Syrian refugee and host communities in Jordan¹, KRI and Lebanon. Understanding the magnitude of the impact of COVID-19, and of other crises in the case of Lebanon, has implications for the policies that governments and international organizations may need to adopt as the pandemic unfolds and during the recovery period. This study is the first phase of a two-phase collaboration between the World Bank and UNHCR. Phase I, presented in this report, is a diagnostic that simulates the effects of the crisis(es) on poverty among host and refugee communities; phase II aims to calibrate these simulations and to delve more concretely into the cost of mitigation and policy options.

In light of the difficulty, if not impossibility, of collecting face-to-face surveys and the limited ability of phone surveys to capture households' consumption and poverty levels, this study relies on microsimulations using pre-COVID-19 surveys with information on household income and consumption. It estimates the impact of COVID-19, as well as other confounding crises and economic contractions, on poverty by analyzing the baseline characteristics of host and refugee households and projecting the effects of the macro-economic trends and forecasts on these characteristics. To do so, a unique comparable survey has been used, combined with the latest macro-economic growth and inflation projections and related labor market characteristics of hosts and refugees.

Naturally, with the dearth of reliable data in this region, assumptions need to be made. As such, this report comes with caveats. First, this report does not make detailed sub-group decompositions of the effects as doing so would simply reflect the underlying assumptions on how the shocks are affecting households. As phone survey data come in from each country on how different sectors and households are being affected, the second phase report will use these to recalibrate the models and produce profiles of the new poor. Second, the macroeconomic shocks in KRI and Lebanon are applied homogeneously within economic sectors. Third, the projected path for recovery may be more optimistic than how it will pan out in practice as poverty changes are predicated on income losses rather than job losses. The report thus refrains from the consequences of scarring – because households accumulated debt for instance, or search costs which need to be incurred to find new jobs. The second phase report will incorporate information on job losses and introduce these and scarring into the model.

At this phase of the study, the report avoids providing policy suggestions such as whom to target or how to best provide assistance, as doing so requires more detailed data that is expected to become available during Phase II. One policy implication that can be drawn is the critical need for more and more recent official statistics. The preferred data for the kind of microsimulations presented in this study, official welfare surveys, are either too old or not accessible, or both. The last Household Budget Survey in Lebanon dates from 2011-2012; the comparator survey for Jordan is more recent, it dates from 2017-18 but is not publicly accessible. Only for KRI (and the rest of Iraq) are survey data both recent and available, although its sample does not cover refugee populations in sufficient numbers to be used for this study. Consequently, this study relies on micro-data from a joint survey implemented in 2016, not by National Statistical Agencies but by a collaboration between the World Bank and UNHCR. This survey is exploited to its fullest extent but comes with limitations that have required additional assumptions and caveats that would not have been needed had more

recent, and more representative, welfare data been available.

In many respects the countries in this study have experienced comparable dynamics, including tight fiscal space, receiving and supporting large numbers of Syrian refugees and have weathered the resulting pressures, including on public services. Syrian refugees registered with UNHCR in Jordan, KRI and Lebanon have at times exceeded a fifth of the host population. As of November 2020, UNHCR has registered 5.6 million Syrian refugees, of which 1.8 million are hosted by Jordan, KRI and Lebanon.² The total number of Syrians is even higher when including government estimates of those not registered with UNHCR. Jordan, KRI and Lebanon also differ in a number of ways: the general state of their economies, labor policies for refugees, lockdown policies and the prevalence and impact of COVID-19 on their societies.

In Lebanon, the total number of Syrians refugees is estimated at 1.5 million. Lebanon has been grappling with political instability, an economic crisis and, most recently, the aftermath of the Port of Beirut explosion. The economic crisis comes on multiple fronts: currency and banking crises, increasing unemployment and soaring levels of inflation. All these have had devastating effects on both Lebanese and refugee communities.

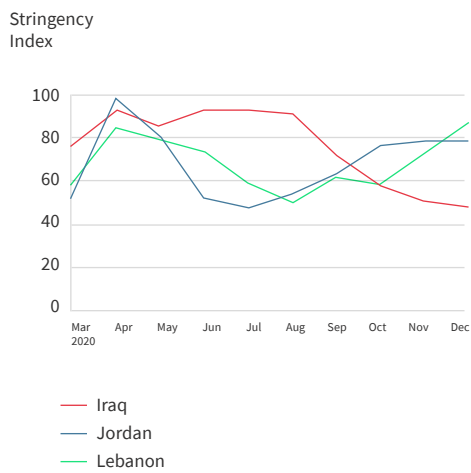
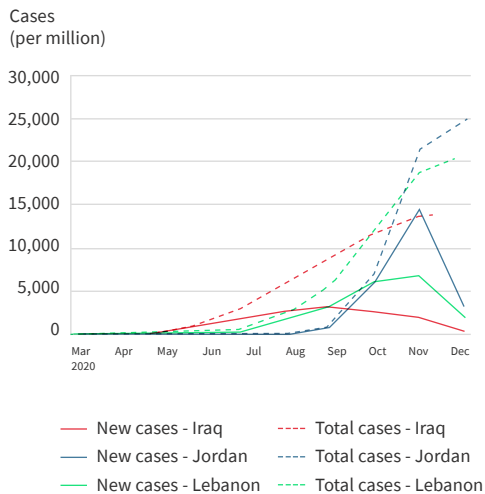
Jordan hosts 650,000 registered Syrian refugees in addition to Iraqi refugees and refugees of other nationalities. The government estimates that the total number of Syrians refugees could reach as many as 1.4 million.³ The country's fiscal position has been deteriorating since 2017 and coming into the COVID-19 crisis unemployment had been near 19 percent.

KRI hosts around 250,000 refugees – almost all the Syrian refugees in Iraq – and around half of the country's IDPs. While KRI has the lowest levels of poverty in Iraq, the country as whole continues to face macro-economic fluctuations and the economic effects of the pandemic. Iraq relies strongly on oil exports which constitute around 43 percent of GDP, which in turn affects the revenue transfers to KRI. As such, the country was vulnerable to the global drop in demand and prices of oil.

Iraq's GDP shrank by around 6.8 percent in the first half of 2020, following a two-year period of steady growth.

By March 2020, all three countries had witnessed their first cases of COVID-19 and introduced stringent containment policies ranging from partial closures of schools and shops to full curfew. These measures were initially largely successful in containing the spread of the pandemic (Figure 1), although their economic effects on households (along with the broader contraction in demand) are the subject of this report. The first COVID-19 case was confirmed in Jordan on 2nd March 2020. The country closed its borders on 19th March. Subsequently, the government of Jordan issued defense orders that banned non-essential movement nationwide and effectively closed all economic sectors. In early April, a comprehensive 24-hour curfew was introduced and a few weeks later the previous lockdown measures were reintroduced. In early May, restrictions on economic activity began to ease and businesses were permitted to reopen at full capacity (provided 75 percent of employees are Jordanians). Over the course of the subsequent months, intermittent curfew orders were put in place and self-isolation criteria were introduced. In KRI, the first cases appeared on 5th March. In response, the Kurdistan Regional Government (KRG) introduced curfew measures in the areas affected which later turned into a complete lockdown of the region in early April. In May, the more stringent restrictions were relaxed although many were re-imposed in June and July. In Lebanon, the first COVID-19 cases appeared early March. In response, the government introduced a general mobilization decree to fight the coronavirus in mid-March. This was relaxed and re-instated intermittently until May 2020, after which curfew and car movement restrictions were introduced. In August, following a surge in the number of COVID-19 cases, the government introduced a second lockdown. In November, new restrictions came into force.

Figure 1
Number of Cases of COVID-19 (per million individuals) and stringency of government response



Source:
 Authors' calculation based on data from Our World In Data - Max Roser and Esteban Ortiz-Ospina (2020) - "Coronavirus Pandemic (COVID-19) - the data".
 Published online at OurWorldInData.org. Retrieved on 11 December 2020 from: <https://ourworldindata.org/coronavirus-data>

Note:
 The Stringency Index is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest). If policies vary at the subnational level, the index is shown as the response level of the strictest sub-region.

December data span until 10th of the Month only.

Manar (4)
 Syrian Refugee

Four-year-old Syrian refugee, Manar, is photographed at home in Beirut



Photo: UNHCR / Diego Ibarra Sánchez / Lebanon

COVID-19's disruptive effects on economies have become apparent in recent months. It has wreaked havoc on markets, on the supply side by disrupting supply chains and on the demand side through reduced employment, income shocks, and through the uncertainty that surrounds the future economic outlook. The World Bank's 2020 Poverty and Shared Prosperity Report suggests that up to 150 million people will fall below the extreme poverty line by 2021, reversing years of progress towards poverty alleviation.⁴ For the MENA region, poverty is estimated to have increased by roughly 12 to 15 million people in 2020 alone, at the Upper Middle-Income Country poverty line of living on \$5.50 per day. This estimate could rise to upwards of 23 million by the end of 2021.

In MENA, economic losses are estimated at around 7.7 percent of the region's GDP in 2019, relative to a no-crisis counterfactual. Within this headline figure, there is also great variability. In Jordan and Iraq, the losses are at around 8.2 and 10.5 percent, respectively. In Lebanon, the losses are the highest at 25 percent of its 2019 GDP, with the COVID-19 crisis compounded by the economic and political crises mentioned above.

The impact of the pandemic on informal markets is also marked. Jordan, KRI and Lebanon have large informal markets, with poorer workers and precarious employment. Informal enterprises often have limited financial cushioning and would naturally resort to wage cuts and job cuts or suspensions in times of crisis.⁵ Where governmental regulation may offer support to workers, informal workers fall outside the remit of such benefits. In Jordan, ILO surveys found that as many 39 percent of vulnerable workers were not working anymore after the onset of the crisis; 31 percent of vulnerable Jordanians had been temporarily laid off, 17 percent permanently laid off, with 41 percent on paid leave.⁶ In addition, 50 percent report a notable increase in food prices, and 29 percent not having enough food in the past week mostly because they could not afford it.

Given its ubiquity, unemployment in the informal sector affects the most vulnerable – including refugees. While some refugees have benefited from expansions in UNHCR and WFP cash and food programs partially buffered its impact, refugees have been particularly affected, borrowing more and reducing consumption.

In Lebanon, according to the recently completed annual Vulnerability Assessment of Syrian Refugees (VASyR, 2020; see Box 2) 88 percent of the refugee population, cannot afford the Survival Minimum Expenditure Basket (SMEB)⁷, compared to 55 percent at the end of 2019.

In Jordan, 92 percent of refugees surveyed in May 2020 had less than 50 JOD of savings left. By June 2020, 40 percent of refugees had debts of more than 100 JOD per capita. More than 90 percent reported resorting to at least one negative coping strategy such as reducing meals or expenditure on health and education.⁸

In KRI, early in the onset of the pandemic, UNHCR protection monitoring in KRI found that 62 percent of households had reduced food consumption; 56 percent reported that they had restricted mobility, affecting livelihood opportunities for many of them; 55 percent reported entering further into debt to pay for basic necessities; while 30 percent had to seek support from friends and family. Overall, more than 60 percent reported loans as their primary source of income during the period August to October 2020. Refugees have reported an increase in child marriages (12 percent of households), child labor (2 percent), and selling household items (2 percent).

Movement restrictions and economic pressures have exacerbated pre-existing protection risks, and, in some countries, social cohesion. Refugees have experienced a growing number of incidents of discrimination, stigmatization or xenophobia. Tensions with local communities have been exacerbated as a result of an increasingly fierce competition over jobs and resources, particularly in Lebanon.⁹

Reduced educational opportunities because of limited access to distance or home learning have particularly affected the poorest in society, including refugee children.¹⁰ Reduced income has in some cases resulted in refugees being evicted from their homes or having to share overcrowded apartments. In Jordan, prior to the March lockdown, refugees seeking eviction-related legal assistance and mediation services from UNHCR comprised less than 1 percent of monthly referrals. After curfew measures eased again in the third quarter of 2020, eviction-related referrals rose to over 24 percent.

Syrian refugee women, already disadvantaged, have been particularly affected.¹¹ With limited access to basic services such as education, shelter, health care, mobile technology and the labor market, the existing challenges faced by women and girls have been exacerbated during the lockdowns.¹² An increase in cases of domestic violence against women has been reported, with mental health and psychosocial issues associated with COVID-19 lockdowns also affecting men, women, girls and boys.¹³

Strategies to mitigate the impact of COVID-19 have included the expansion of government social safety net and humanitarian cash assistance programs. In Jordan, for example, in response to the COVID-19 emergency, the government expanded its existing Takaful social safety net in terms of the number of households covered, providing a monetary top-up to those already included in the program and provided prompt support to 190,000 Jordanian households soon after the onset of the crisis. In Lebanon, the government is planning to expand its existing safety net from covering the poorest 8 percent to cover the poorest 24 percent. KRI is piloting a targeted cash transfer as well. UNHCR, WFP, other UN agencies and Non-Governmental Organizations (NGOs) have expanded their cash assistance programs in 2020. The existence of well-established registration and cash delivery systems prior to the COVID-19 crisis enabled many organizations to scale-up quickly in response.

Taken together, the impact of the COVID-19 crisis on poverty has been very serious. The welfare consequences can be transient, possibly recovering with the rebound in the general economy, or they may be longer term. For this reason, this study has applied a dynamic simulation model that shows the effects of the crisis on a monthly basis over 2020 and 2021. The mitigation strategies that governments or international organizations adopted in response to the pandemic are also modelled.

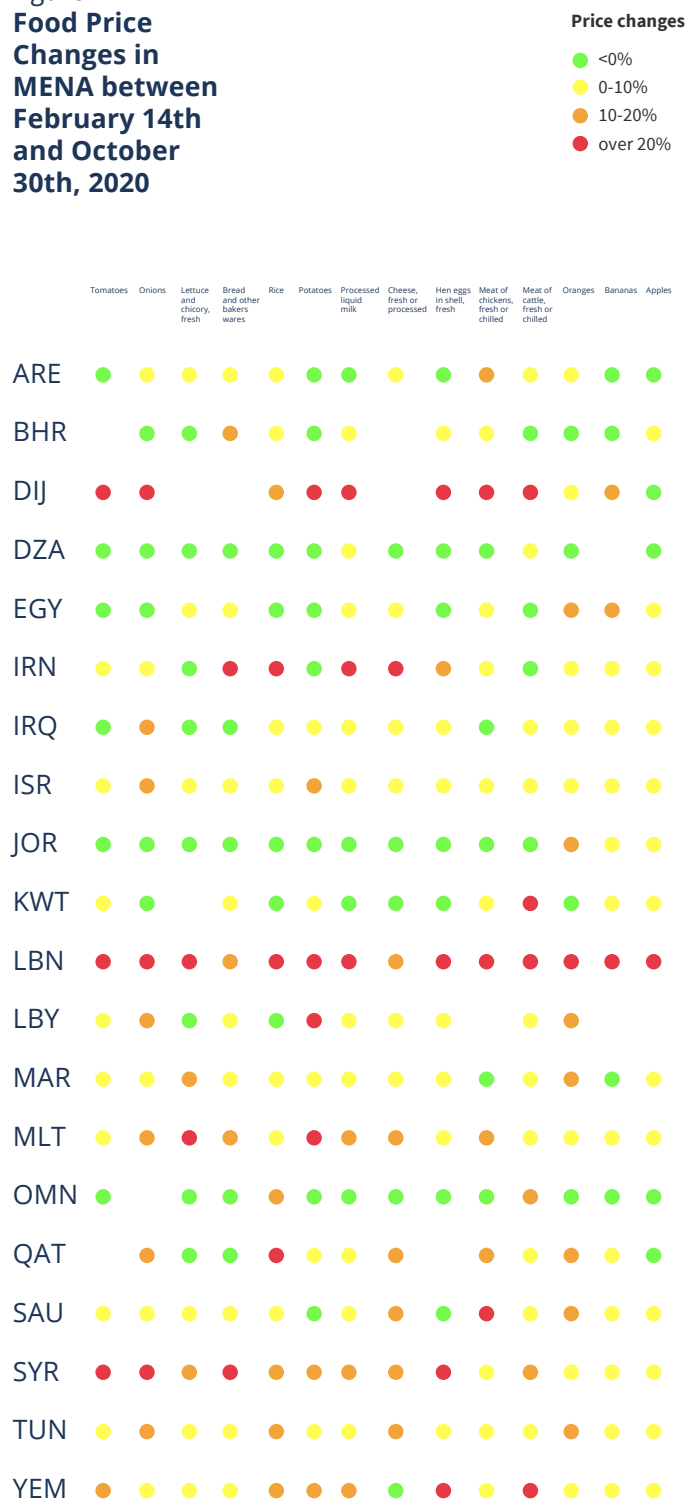
This study first outlines the potential channels of the impact of the pandemic on households and their welfare. Next, a description is provided of the data sources and baseline characteristics and vulnerabilities of these households, and of the macroeconomic assumptions that shape these microsimulations and the results. Finally, this study concludes with a preliminary discussion on policy implications.

Transmission channels

The COVID-19 crisis has affected household welfare in a number of ways. The impacts can be monetary and non-monetary, such as service disruptions in health, education and other sectors. This study focuses on the monetary impacts on consumption, the welfare aggregate used to measure poverty in the three countries. Perhaps the most direct impact is any reduction in labor income as a result of contracting the illness, but the more salient are the impacts on the economic sectors in which individuals are employed, causing earnings and employment shocks.

Households also face negative effects on their non-labor income. For instance, households may face a decline in remittances as a result of the global economic slowdown. The disruptions in supply chains, employment, and changes in demand have also affected prices. The price changes vary among countries in MENA, but for some, staples' prices have increased by more than 20 percent from February to October 2020 (Figure 2). Lebanon in particular has experienced a large increase in price levels, largely due to its import dependence and currency devaluation, in addition to the effects of the COVID-19 crisis. Given that the share of food expenditures is higher among poorer households, the increase in food prices can have significant effects on their welfare.

Figure 2
Food Price
Changes in
MENA between
February 14th
and October
30th, 2020



Source:
 WB calculations MENA Chief Economist's Office

Data sources and baseline characteristics

This study relies on the Syrian Refugees and Host Communities Survey (SRHCS) undertaken by the World Bank in 2015/2016. The SRHCS collects information on households' sources of income and assistance, and provides information on labor market characteristics of randomly chosen individuals within these households, among other data gathered. The survey was designed to be comparable for Syrian refugees and host communities and used a unified survey module in KRI, Lebanon, and in three governorates in Jordan with a high refugee concentration: Amman, Mafraq, and Zarqa. For this study, SRHCS data is complemented with auxiliary macroeconomic data, as well as microdata for refugees provided by UNHCR and other agencies, such as the Vulnerability Assessment Framework (VAF) from Jordan, the Vulnerability Assessment of Syrian Refugees (VASyR) from Lebanon, and the Vulnerability Assessment Tool in KRI.

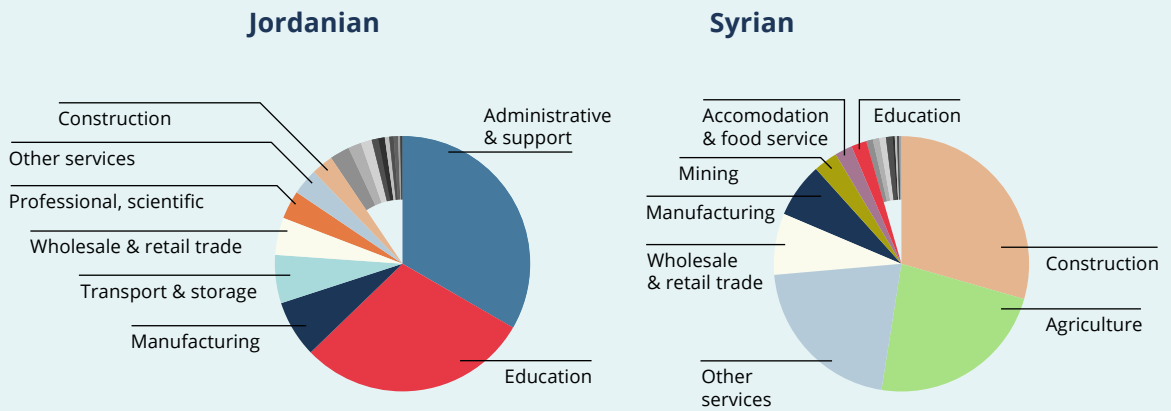
While the SRHCS survey design is common across the three countries, the sampling frames differed considerably, largely due to a lack of census and other data.¹⁴ In Jordan, due to limited access to the 2015 Census sampling frame, the data collected are representative of Zaatari and Azraq camps. These data were complemented by purposive samples of the Amman, Mafraq, and Zarqa governorates. As such, the results and conclusions drawn from Jordan are limited to these two camps, the neighboring areas of the camps, and the Amman governorate.¹⁵ In Lebanon, due to the lack of a recent and reliable sampling frame, the data were collected based on a frame that consists of the universe of enumeration areas in the country, with associated estimates of population. The survey was representative of host communities and Syrian refugee populations in KRI and Lebanon. In KRI, it is representative for refugees as well as IDPs, inside and outside of camps.¹⁶

Figure 3 shows the distribution of refugees and host communities, those in wage labor or working on their own account, across economic sectors in each of the three countries according to the SRHCS¹⁷. In Jordan, most refugees in wage labor work in agriculture, construction, and other service activities, and Jordanians in wage labor work predominantly in professional and scientific jobs and in education. Among those who work on their own account, both refugees and hosts are concentrated in wholesale and retail. In Lebanon, refugees are concentrated in agriculture, wholesale, and construction, and the Lebanese community in wholesale and retail. KRI has a slightly different labor market composition: there seems to be more similarity in sectors where both refugees/IDPs and host communities are concentrated, likely reflecting a combination of work permitting and more similar skill levels.

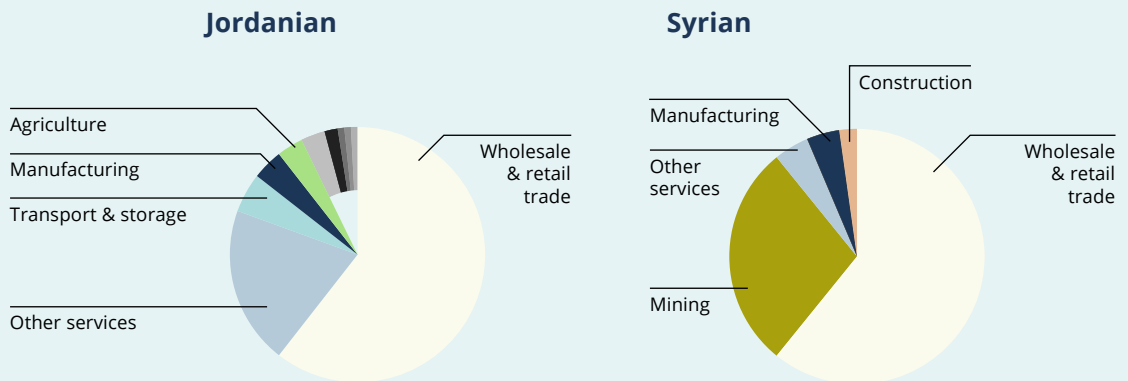
Figure 3
**Distribution
 Across Sectors
 of Work**

(wage labor and
 own account work)

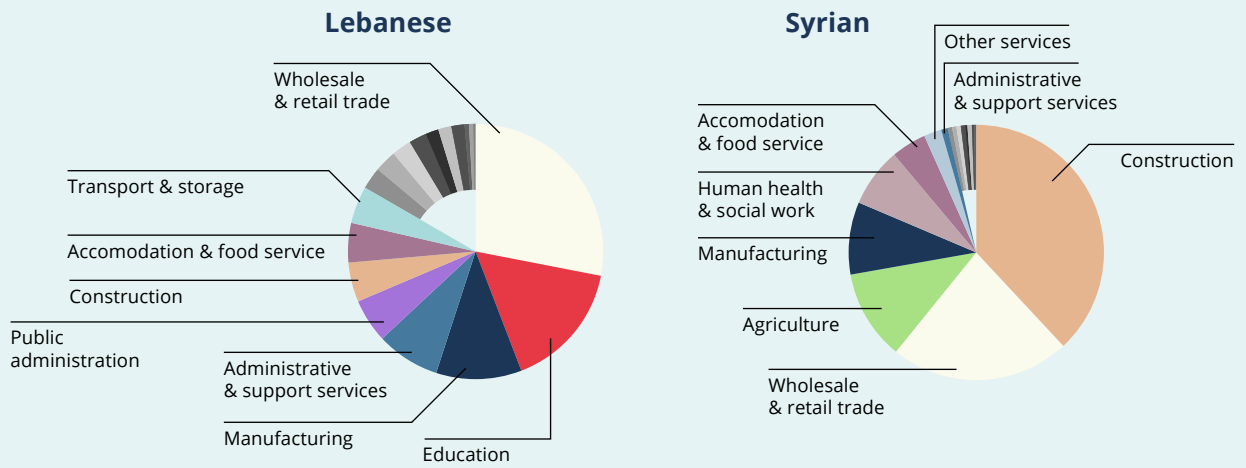
Sectors of work - Wage Labor - JORDAN



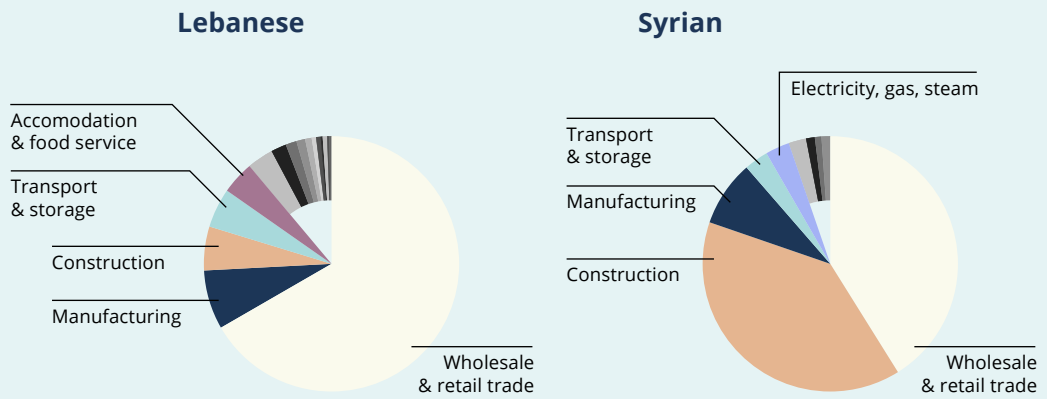
Sectors of work - Own Account - JORDAN



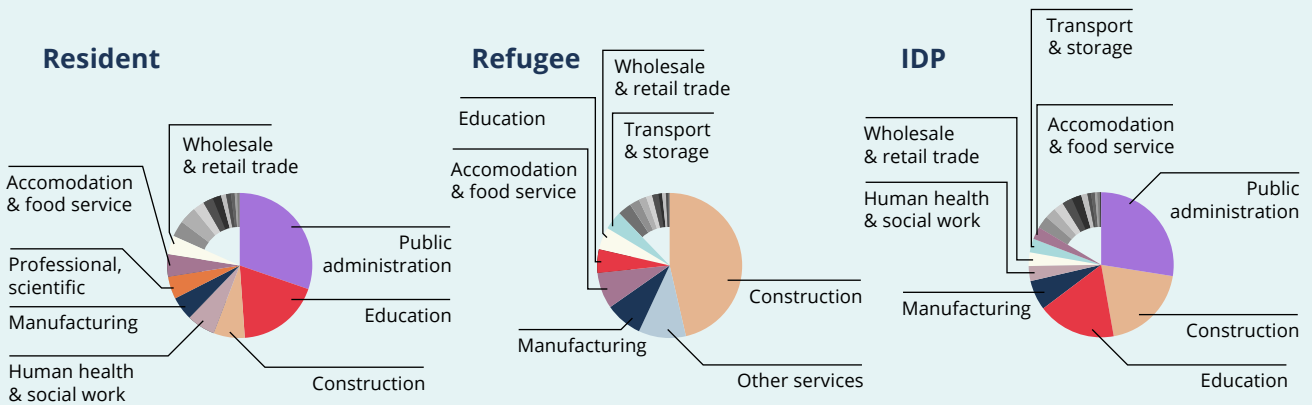
Sectors of work - Wage Labor - LEBANON



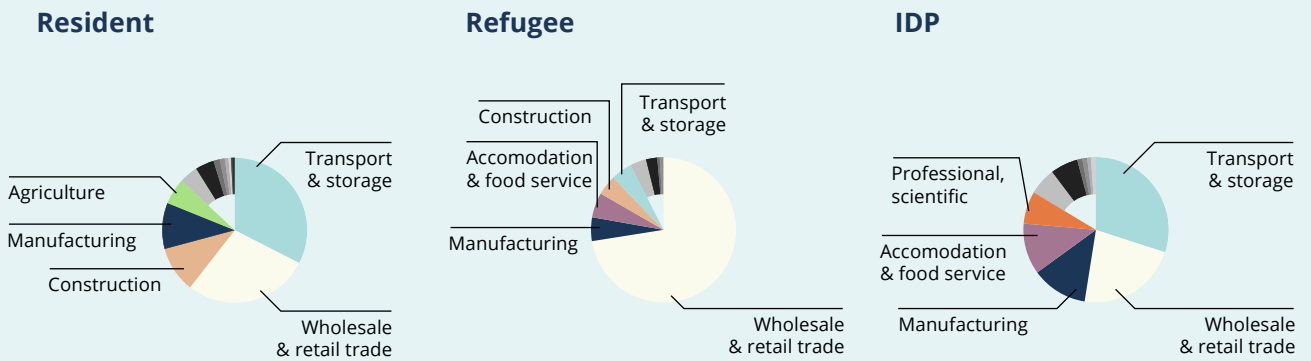
Sectors of work - Own account - LEBANON



Sectors of work - Wage Labor - KRI



Sectors of work - Own account - KRI



On the welfare side, there are observable differences between host communities and refugees. The consumption distribution¹⁸ is compared against the international poverty line for Upper Middle-Income Countries (\$5.5/day) for cross-country comparison as well as each country's national poverty line. These distributions reflect the household per capita expenditure distribution at the end of 2019, as they are nowcast based on growth and inflation from the year of the survey (see Box 1).

The analysis begins by examining the pre-COVID-19 “baseline” distributions across the three countries. Figures 4-6 show the density distribution of household per capita expenditure. The density graphs reflect the proportion of households under the poverty line, i.e. the area underneath the curve to the left of the poverty line is the fraction of households who are considered poor by that poverty line. For Jordan, the expenditure distribution of refugees is both more concentrated and much lower than that of Jordanians. Whereas the mode of the distribution for Jordanians lies around 150 JOD per capita per month, for refugees it is closer to 70 JOD per capita per month. The differences between host communities and refugees are larger in Jordan (for the Mafraq, Zarqa, and Amman governorates) than they are in KRI and in Lebanon. In Lebanon, the similarity of the distributions may be influenced by the deteriorating economic conditions from 2019. In both KRI and Lebanon, while the refugee (and IDPs in KRI) distribution still lies to the left of the host community's distribution, the modes are at similar levels. As a consequence, many refugees are under the poverty lines in Jordan, under the national poverty line in Lebanon, and more refugees are under the poverty lines than are the host communities in general. This higher rate of pre-COVID poverty among refugees in all three countries does mean that there are fewer non-poor refugees who can potentially fall into poverty, limiting the maximum poverty impacts of the crisis.

Figure 4
Baseline density of expenditure (per capita)
JORDAN

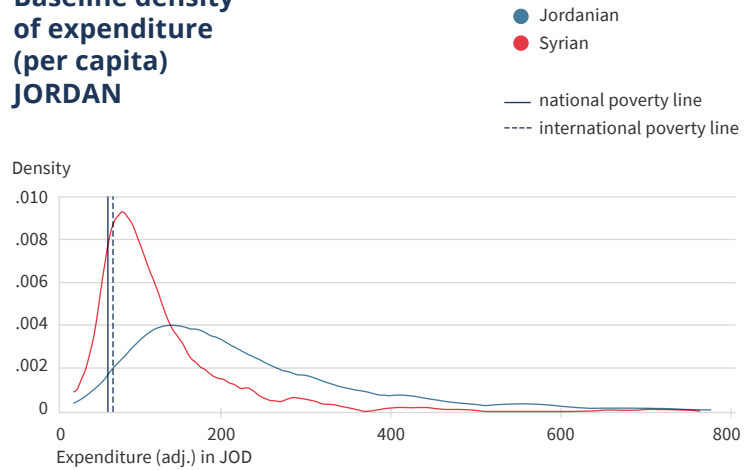


Figure 5
Baseline density of expenditure (per capita)
LEBANON

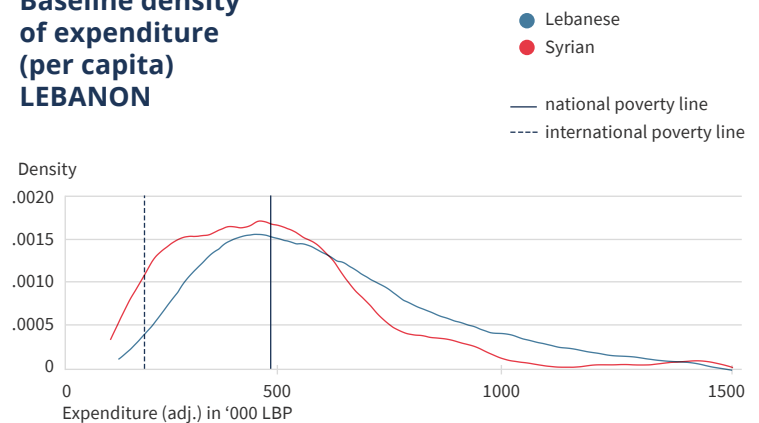
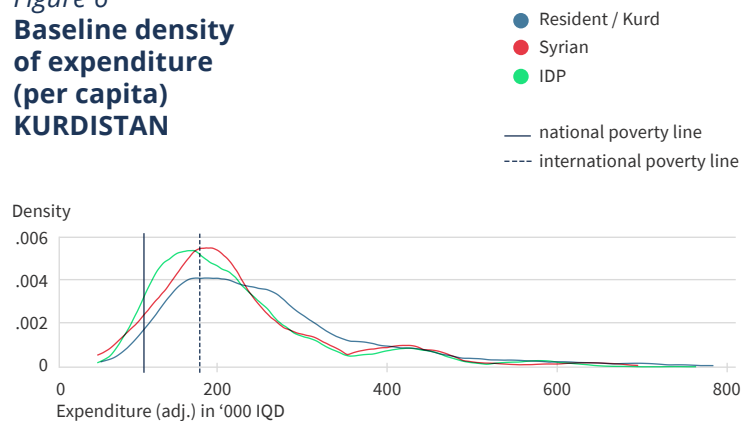


Figure 6
Baseline density of expenditure (per capita)
KURDISTAN



Source:
Authors' calculations based on SRHCS (2015/16)

Macroeconomic assumptions

This section presents the macroeconomic changes that underlie the microsimulation results. In particular, the changes relative to the pre-COVID-19 baseline at the sector level at various quarters of the year are transformed into monthly changes and then used as parameters for the analysis. For Jordan, the inputs of a computable general equilibrium (CGE) model are used to parameterize the macroeconomic changes by economic sector for the eight quarters of 2020 and 2021.¹⁹ A palpable initial shock to the economy is observed for the second quarter of 2020, after which the economy begins to recover throughout 2020 and returns in the first quarter of 2021 to pre-crisis levels.²⁰ In Table 1 those negative effects are felt throughout the various economic sectors, but the construction and education sectors are some of the worst hit by the pandemic. These two sectors have a large concentration of refugees and Jordanians, respectively, as shown in the previous section. In an extension, a second wave and lockdown measures is examined in Jordan, and the economy re-shocked with the Q2 2020 parameters.

Table 1: Macroeconomic Changes in Sectors of the Economy - JORDAN

| Economic Sector | Q1 2020 | Q2 2020 | Q3 2020 | Q4 2020 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|
| Agriculture, forestry and fishing | 0.5% | -30% | -6% | -6% | -4% | 0% | 0% | 0% |
| Mining and quarrying | 0.5% | -36% | 9% | 9% | 5% | 0% | 0% | 0% |
| All manufacturing | -2.7% | -19.6% | -26.5% | -26.5% | -9% | 0% | 0% | 0% |
| Electricity, gas, steam and air conditioning supply | 0.5% | -30% | 2% | 2% | 1% | 0% | 0% | 0% |
| Water supply; sewerage, waste management and remediation activities | 0.5% | -30% | -30% | -30% | -18% | 0% | 0% | 0% |
| Construction | 0.5% | -49% | -20% | -20% | -11% | 0% | 0% | 0% |
| Wholesale and retail trade; repair of motor vehicles and motor-cycles | 0.5% | -35% | -35% | -35% | -21% | 0% | 0% | 0% |
| Transportation and storage | 0.5% | -41% | -30% | -30% | -18% | 0% | 0% | 0% |
| Accommodation and food service activities | 0.5% | -43% | -43% | -43% | -25% | 0% | 0% | 0% |
| Information and communication | 0.5% | -31% | -25% | -25% | -15% | 0% | 0% | 0% |
| Financial and insurance activities | 0.5% | -31% | -15% | -15% | -9% | 0% | 0% | 0% |
| Real estate activities | 0.5% | -30% | -30% | -30% | -18% | 0% | 0% | 0% |
| Professional, scientific and technical activities | 0.5% | -47% | -47% | -47% | -27% | 0% | 0% | 0% |
| Public administration and defense; compulsory social security | 0.5% | -10% | -10% | -10% | 10% | 9% | 9% | 9% |
| Education | 0.5% | -50% | -30% | -30% | -18% | 0% | 0% | 0% |
| Human health and social work activities | 0.5% | -30% | -28% | -28% | -16% | 0% | 0% | 0% |
| Other service activities | 0.5% | -38% | -26% | -26% | -15% | 0% | 0% | 0% |

Source:

Refaqat, Rodriguez, Wai-Poi, Griffin and McCartney (2020)

Note:

The parameters shown in this table are those of the formal sector. We estimate that the informal sector observes a shock 20% more severe in all economic sectors.

In Lebanon, the effects of the pandemic are compounded by an economic crisis that pre-dates it, and by the subsequent Port of Beirut explosion of August 2020. The strongest driver of poverty changes in Lebanon in 2020 has been inflation. For the simulations, the output of a computable general equilibrium model is used to parameterize the income shocks for the months of 2020.²¹ The model assumes that the Lebanese economy continues in the same downward trend as 2019 in the first quarter of 2020. The impacts of COVID-19 in the second quarter are then added, together with the impact of the explosion in the third quarter. No recovery is assumed in the fourth quarter. Unlike Jordan and KRI, in Lebanon the changes in poverty in 2020 only are simulated, and not in 2021 due to the increasing uncertainty over the macroeconomic outlook in the country. This will be revisited in Phase II.

Table 2: Macroeconomic Changes in Sectors of the Economy – Lebanon

| Economic Sector | Q1 2020 | Q2 2020 | Q3 2020 | Q4 2020 |
|--|---------|---------|---------|---------|
| Agriculture, forestry and fishing | 0.5% | -0.5% | -0.2% | -0.2% |
| Mining and quarrying | -4.2% | -20.8% | 0.5% | 0.5% |
| All manufacturing | -2.7% | -19.6% | -26.5% | -26.5% |
| Electricity, gas, steam and air conditioning supply | -2.6% | -11.0% | -19.6% | -19.6% |
| Water supply; sewerage, waste management and remediation activities | -7.5% | -17.3% | -24.1% | -24.1% |
| Construction | -14.9% | -62.4% | -68.5% | -68.5% |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | -2.4% | -10.7% | -6.8% | -6.8% |
| Transportation and storage | -5.3% | 5.7% | 2.3% | 2.3% |
| Accommodation and food service activities | -17.0% | -38.8% | -88.8% | -88.8% |
| Information and communication | -4.4% | -8.6% | -6.5% | -6.5% |
| Financial and insurance activities | -0.6% | 20.0% | 35.3% | 35.3% |
| Real estate activities | -10.1% | -22.7% | -30.2% | -30.2% |
| Professional, scientific and technical activities | -1.3% | -4.1% | 0.3% | 0.3% |
| Public administration and defense; compulsory social security | 22.7% | -37.6% | -37.0% | -37.0% |
| Education | -0.3% | -16.1% | -24.3% | -24.3% |
| Human health and social work activities | -4.4% | -20.0% | -31.6% | -31.6% |
| Administrative and support services | 1.1% | 23.7% | 16.1% | 16.1% |
| Arts, entertainment and recreation | 1.1% | 23.7% | 16.1% | 16.1% |
| Other service activities | 1.1% | 23.7% | 16.1% | 16.1% |
| Activities of households, other goods and services | 1.1% | 23.7% | 16.1% | 16.1% |
| Extraterritorial organizations and bodies | 1.1% | 23.7% | 16.1% | 16.1% |

Source:
World Bank (2020), Beirut Rapid Damage and Needs Assessment, August 2020

Note:
assumptions are based on the inputs of a computable general equilibrium model. For Q1, we take the baseline value added growth in sectors in 2019, for Q2 we take the baseline estimates of 2020 including the impact of COVID-19 and the economic crisis, for Q3 we add to the baseline estimates the estimated impact of the Beirut blast of August 2020, and for Q4 we assume no recovery. Further, assume that the formal sector estimates at 10% higher than reported in this table, and the informal sector's 10% lower.

In KRI, the model relies on macroeconomic forecasts for 2020 and 2021 and then adjusts them to quarterly and monthly levels.²² There are two limitations in KRI. First, the forecasts are based on three sectors – Agriculture, Services, and Industry – which is why there is less variation between sectors as compared to the cases of Lebanon and Jordan. Second, the macroeconomic projections are for Iraq nationally and are not disaggregated to KRI. Nonetheless, a decline in economic activity in the second quarter of 2020 is observed. A recovery is forecasted starting from the third quarter.

It is important to highlight that these estimates are based on forecasts and that the COVID-19 situation continues to evolve, as such these estimates will be updated as further data is gathered.

The World Bank estimates an 8.5 percent decline in remittances to low- and middle-income MENA countries as a result of the pandemic in 2020 followed by fall of 7.7 percent in 2021.²³ Naturally, the rebound in remittances to pre-crisis levels will depend on the recovery in the global economy. In Jordan, KRI and Lebanon, remittances play an important role in household finances. Further, non-labor income may be affected, including private transfers as well as property, asset, and other business income. An initial 10 percent drop in international remittances is assumed, as well as a 50 percent drop in domestic remittances and a gradual recovery for all three countries. Given that the micro-data on the source of remittances, domestic or international, is not available, the models assumes an average remittances shock at each month.

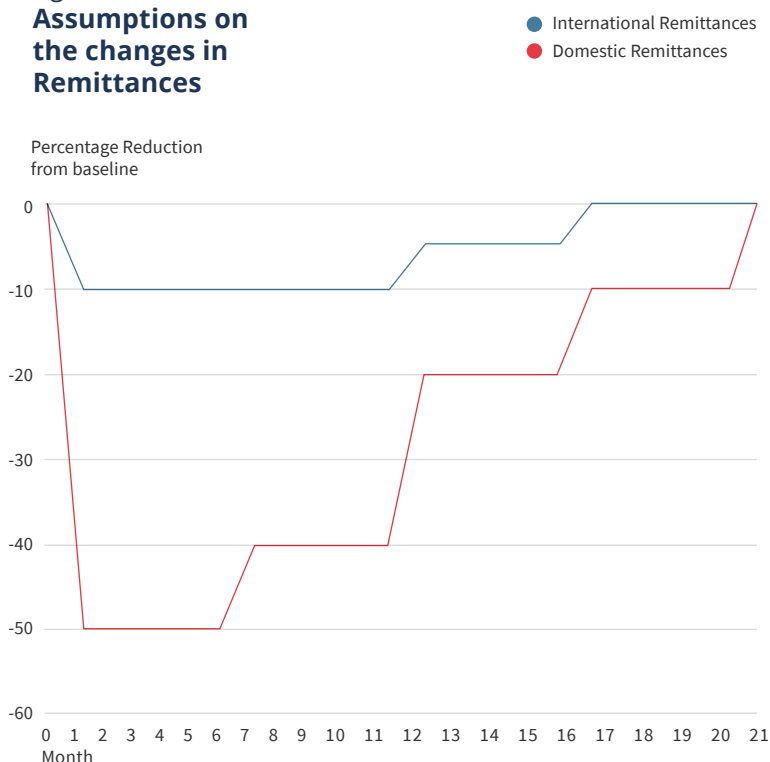
Table 3
Macroeconomic Changes in Sectors of the Economy – Kurdistan

| Economic Sector | Q1 2020 | Q2 2020 | Q3 2020 | Q4 2020 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Agriculture | 5.0% | -1.0% | 3.6% | 4.0% | 4.0% | 5.0% | 6.0% | 7.5% |
| Manufacturing | 4.3% | -4.8% | 0.5% | 1.0% | 1.0% | 1.4% | 2.0% | 3.0% |
| Services | 4.7% | -4% | 0.5% | 1.0% | 1.0% | 5.0% | 7.0% | 8.0% |

Source:
Macro Poverty Outlook – Iraq, World Bank (October 2020)

Note:
assumptions are based on the annual estimates and forecasts of the Macro Poverty Outlook of Iraq and spread over the quarters to obtain quarterly estimates. We assume that the formal sector estimates at 10% higher than reported in this table, and the informal sector's 10% lower.

Figure 7
Assumptions on the changes in Remittances



Results and discussion

The microsimulation model takes as parameters the macroeconomic changes in various sectors of work, formal and informal, the changes in remittances, and shocks households' various income sources accordingly on a month-by-month basis. The model assumes that there are no behavioral responses by households, a one-to-one transmission of the shock from income to consumption, that households do not adopt any consumption smoothing mechanisms via asset liquidation or savings depletion²⁴, and that there are no poverty traps. Notably, it models the changes in income and not employment, and assumes individuals return to their initial sector of work as the economy recovers. Further data from phone surveys as well as work permits may be required to recalibrate assumptions on return to employment. See Box 1 (and a technical annex) for further discussion on the modelling methodology and important limitations to the approach.

The SRHCS survey used includes income data by source: labor income (wages), own account income, remittances, asset earnings, pensions, assistance from government/ NGO/WFP /UNHCR (cash or in-kind), auto-consumption, and other income. The aggregate income measure was transformed to the national household consumption distributions used to measure poverty (see Box 1). The macroeconomic shocks on the sectors of the economy are then transformed onto the labor income and own account income, depending on the sector of work reported by the reporting individuals in the household. Remittances are adjusted according to the estimated drop in international and domestic remittances, and changes in government or international organizations assistance programs are factored in.

Two poverty lines are used: the international poverty line for upper middle-income countries (\$5.5/person/day) to allow comparability across the three contexts, and a national poverty line to offer a country specific benchmark. These poverty lines are adjusted for inflation on a monthly basis using CPI data.

In the analysis below, the change in poverty from the pre-COVID-19 baseline is modelled, i.e. this does not show the levels of poverty but rather the change from the initial level of poverty before the pandemic. As such, at baseline – month 0 – the change is set to zero, and the subsequent months are the increases, in percentage points, from the baseline level. In terms of the timeline of the analysis, month 0 corresponds to the projected level of poverty in the first quarter of 2020, and month 1 is April 2020, till month 21 which corresponds to December 2021. In Jordan, the results below show a hypothetical scenario of a second wave of the pandemic, while for Lebanon and KRI, show the first wave only.

It is acknowledged that some of the assumptions presented above may underestimate the extent of the crisis as it unfolds in various ways in different countries, as such, future phases of this work will refine the parameters of the model based on new (phone-survey and COVID) data.

Box 1
**Methodological
 Note on
 Surveys and
 Transformations**

The 2015/16 SRHCS has some limitations. It does not include a consumption module and has only relatively limited income data – from eight different sources. It also has a number of important advantages over using national socioeconomic surveys from each country. First, it is more recent than the 2012 HBS survey in Lebanon, which predates the Syrian refugee crisis and its subsequent impacts on the economy (see, for example, *The Fallout of War* (World Bank 2020)). Second, the income categories it does include, as well as detailed sector of employment of each respondent, are important for being able to transmit different types of shock to different households. Finally, it is comparable across all three countries as well as between host communities and refugees within each country in a manner that the available national surveys for each country are not.

The lack of a consumption module, however, is a serious impediment to producing poverty estimates. To address this, the per capita income distributions in the SRHCS are transformed for both host communities and refugees to the per capita consumption distribution from the national surveys (the 2012 HBS in Lebanon, the 2017-18 SWIFT in Iraq and the 2017-18 HEIS in Jordan, which are used to estimate the national poverty rate in each country). A common method for such a transformation is survey-to-survey imputation. For example, per capita consumption in SWIFT could be regressed upon common indicators of welfare in both SWIFT and SRHCS and resulting coefficients used to predict per capita consumption in SRHCS. One drawback with this approach is that the predicted distribution tends to be more compact than the true distribution, which in turn affects poverty estimates derived from the predicted distribution. As an alternative, a more mechanical transformation is applied, whereby a scaling factor is calculated for each percentile of the SRHCS income distribution to expand it to match the same percentile of the national survey consumption distribution. This process, while not analytically grounded, produces an accurate replication of the consumption distribution (see Technical Annex).

The application of household-specific shocks (based on mix of income sources and sector and formality of employment) to the transformed household per capita consumption then rests upon the assumption that while the SRHCS income distribution is far more compressed than the national survey consumption distribution, it provides a much more comparable rank ordering of households. Given the lack of savings in the poorer half of the distribution in the Jordan HEIS (and likely in Iraq and especially Lebanon pre-COVID-19 but post-economic crisis), this assumption seems defensible. This transformation is implemented separately for host communities and refugees in Jordan and Iraq (where data allow disaggregation); in Lebanon, the Lebanese distribution is transformed to the Lebanese subsample, and the refugees to the non-Lebanese subsample.

It is important to note that consumption is shocked only by changes to particular income sources. Social assistance for both host communities and refugees is modelled separately from labor market income and remittances, so those relying more on assistance are in fact less vulnerable to the economic contraction. Moreover, the expansion of the social safety net in Jordan since the survey was conducted has been modelled and included in the nowcasted incomes. Formal and informal incomes in each sector are treated differently under COVID, with informality defined as not having a contract of employment and no insurance, and treated as being affected 20% worse than the formal sector by the crisis.

Several cautionary words should be said about applying the largely standard macro-microsimulation approach in countries and communities with high rates of informality and reliance on assistance, such as refugees. Macroeconomic growth may not translate equally to formal and informal workers as it is assumed to here. Second, Jordan introduced a work permit scheme for refugees after the survey used here was conducted and around 150,000 permits have been issued, allowing refugees to work in the formal market. This means a minority but significant number of households in the survey may have their nowcasted income levels underestimated due to improved working opportunities since the survey was conducted. Third, due to lack of data, earnings shocks are assumed to all households' incomes and no unemployment is modelled. In reality, some households are likely to have lost all labor market income and some households relatively little. Moreover, household incomes are expected to recover in line with economic growth, but temporary income and job losses may become more permanent (a phenomenon known as “scarring”) or at least slower to recover due to negative coping mechanisms used during the shock, such as selling productive assets. All of these caveats will be further explored in Phase II using data collected from phone surveys (unemployment, income losses, characteristics of households most affected) and the work permit program.

Jordan

For Jordan, the 2011 national poverty line has been inflated to around 67 JOD per person per month for 2019, which is very close to the 2019 \$5.5/day international poverty line of 72.14 JOD, calculated at 2011 prices (PPP) and adjusted for inflation to 2019. Based on the assumptions presented in Table 1, Figure 8 and Figure 9 show the changes in poverty headcount, percentage points from the baseline poverty rate, at month 0 (March 2020). Since refugees were poorer than Jordanians before the crisis began, their baseline starting point reflects the difference in poverty levels between the two communities of approximately 33.3 percentage points, based on the international poverty line.

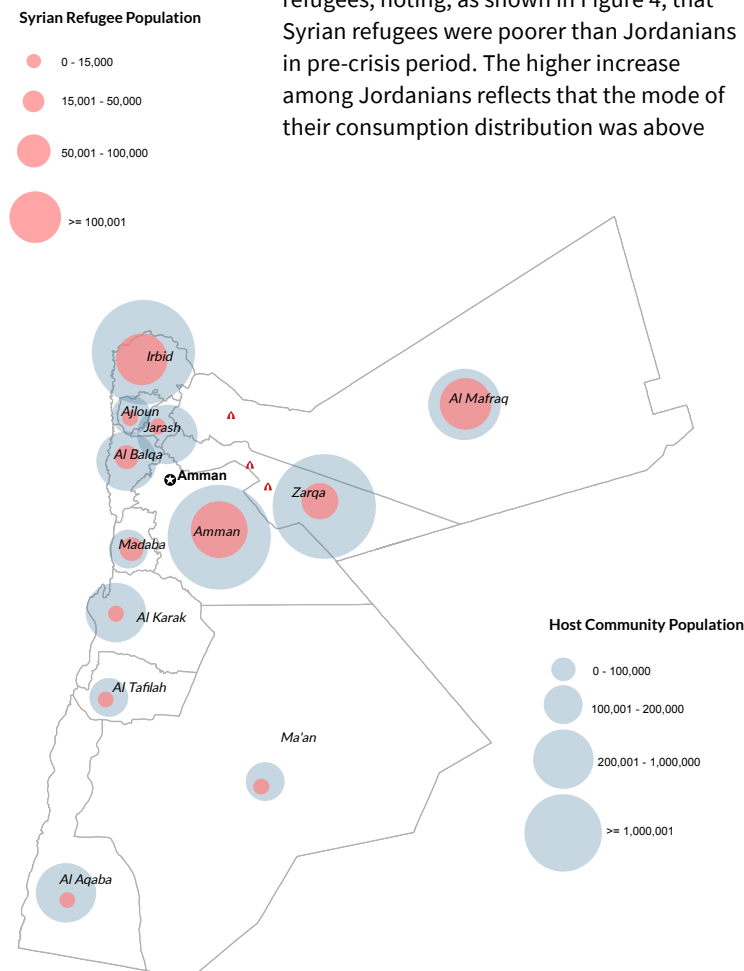
At the onset of the crisis, there is a 38 percentage point (p.p.) increase in poverty rates among Jordanians, and a 18 p.p. increase in poverty rates among Syrian refugees, noting, as shown in Figure 4, that Syrian refugees were poorer than Jordanians in pre-crisis period. The higher increase among Jordanians reflects that the mode of their consumption distribution was above

the poverty line prior to the crisis; in simple terms, many Syrians were already below the poverty line, limiting how many more could fall into poverty, while many Jordanians were above the poverty line, increasing the number who could fall below it. Under the assumptions of Table 1, these increases in poverty return back to their pre-crisis levels a year after the onset of the pandemic.

Another way of thinking about poverty is not by using a poverty headcount rate as in the last paragraph, but instead by considering the poverty gap. The gap measures how far below the line, on average, poor households are. For example, a poverty gap of 0.07 indicates that poor households are on average 7 percent below the poverty line. In Jordan, in the first month of the crisis, not only did the poverty headcount rate leap up for both groups, but the poverty gap did as well. As with the poverty rate, the increase in the gap was larger for Jordanians than Syrians, a fact driven by different factors. As previously noted, the rate went up more for Jordanians because so many Syrians already lived below the poverty line. The poverty gap increased less for Syrians because they were less reliant on labor market income and remittances and more reliant on UN and NGO support, insulating them to a greater degree.

Annex 3 presents full results for each country and sub-population at both international and national poverty lines, and also shows that the poverty gap is projected to recover faster for Jordanians as the economy and their incomes recover along with it, although the gap ends slightly higher for both groups by the end of the forecast period.

In addition to modelling the income shocks, mitigation strategies were also simulated. In Jordan, the Government had planned to expand its social safety net, Takaful, for Jordanian nationals in 2020 and 2021 prior to the pandemic, with an expectation of an additional 25,000 and 40,000 Jordanian households to receive Takaful assistance in 2020 and 2021, respectively. In response to the COVID-19 emergency, the Government added a further 10,000 households in 2020 (accelerated entry from the 2021 quota) and



provided a monetary top-up to those who are already in the program. In addition, the Government provided six months' temporary assistance to 190,000 Jordanian households at the onset of the crisis.

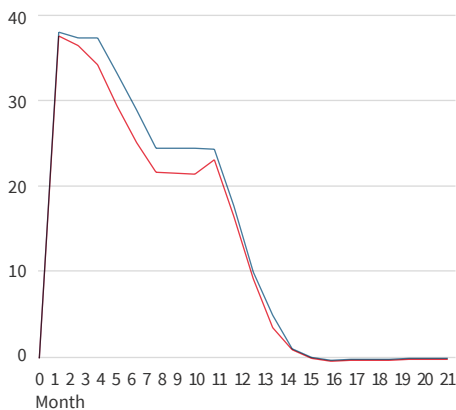
UNHCR also expanded its cash program in response to the COVID-19 crisis in Jordan. It provided COVID-19 emergency cash assistance to 47,046 non-camp vulnerable households who did not receive UNHCR's

regular cash assistance, for 2 months. The amount received varied based on household size, and whether they receive food assistance from WFP. In addition, 2,134 camp households who were outside the camp and remained out of camp due to the restrictions on movement were also provided with emergency cash assistance. Both UNHCR and the Government of Jordan's responses are included in the models that show mitigation strategies.

Figure 8
Changes in Poverty using the International Poverty Line - JORDAN

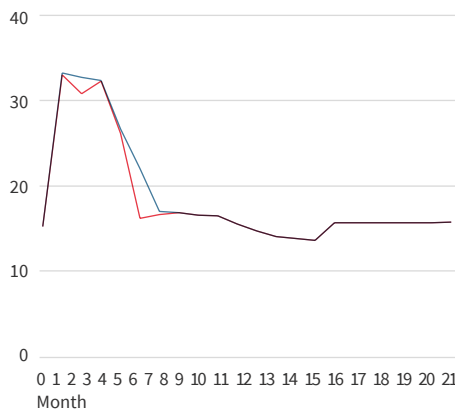
JORDANIAN

Change in Poverty from Baseline (p.p.)



SYRIAN

Change in Poverty from Baseline (p.p.)



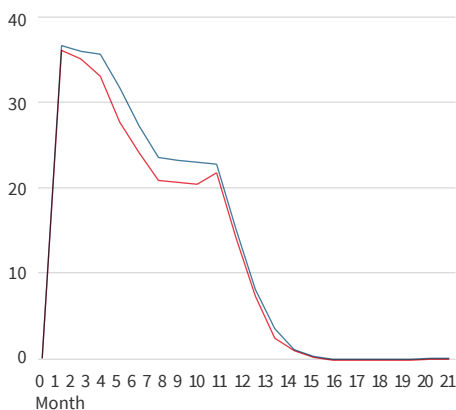
- international poverty line (5.5/day)
- mitigation - international poverty line (5.5/day)

Source:
Authors' calculations based on SRHCS (2015/16)

Figure 9
Changes in Poverty using the National Poverty Line - JORDAN

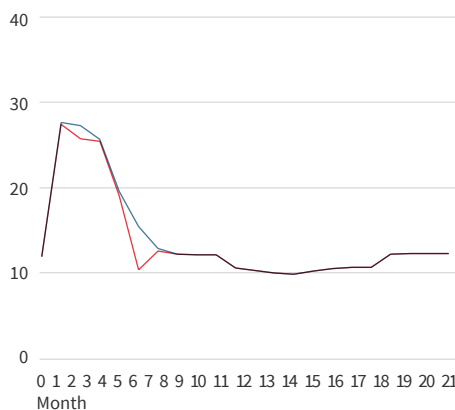
JORDANIAN

Change in Poverty from Baseline (p.p.)



SYRIAN

Change in Poverty from Baseline (p.p.)



- national poverty line
- mitigation - national poverty line

Source:
Authors' calculations based on SRHCS (2015/16)

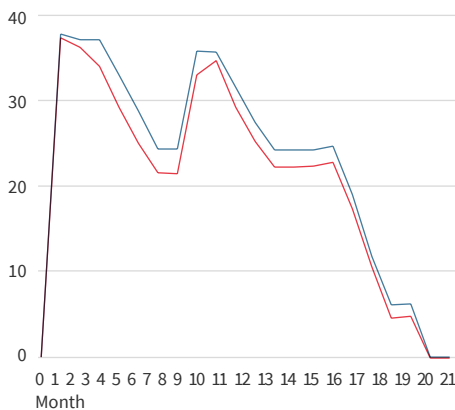
In terms of mitigation among Jordanians in the three governorates analyzed, there is a mitigation of 4 p.p. (around 12 percent) of the increase in poverty by the fourth month of the crisis, as a result of the expansion of the Takaful program, the introduction of the cash top-up, and the cash assistance to eligible non-Takaful beneficiaries. For Syrian refugees, there is a 2 p.p. (6 percent) mitigation in the second month of the crisis and 6 p.p. (30 percent) at the fifth month of the crisis - the months that had the largest expansions of UNHCR's COVID cash assistance program.

The same microsimulations are then modelled but including a potential second lockdown in Jordan that delays recovery. The simulation re-introduces the COVID-19 shock in the eighth month of the crisis. Under this more severe scenario, poverty rates take substantially longer to return to pre-crisis as shown in Figure 10 and Figure 11, showing recovery 20 months later for both refugees and host communities to pre-pandemic levels. In terms of mitigation, a new mitigation response is not assumed given that this might not be fiscally feasible. Instead it is assumed that the longer-term Takaful program continues to expand as originally planned.

Figure 10
Changes in Poverty using the International Poverty Line - Severe Scenario - JORDAN

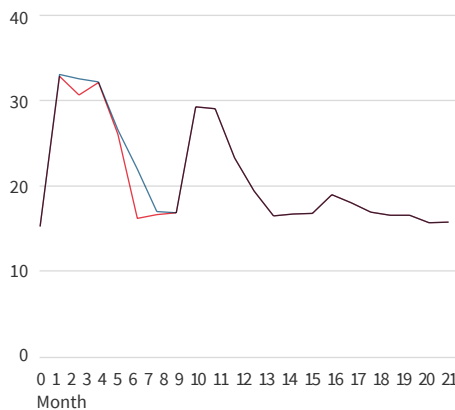
JORDANIAN

Change in Poverty from Baseline (p.p.)



SYRIAN

Change in Poverty from Baseline (p.p.)



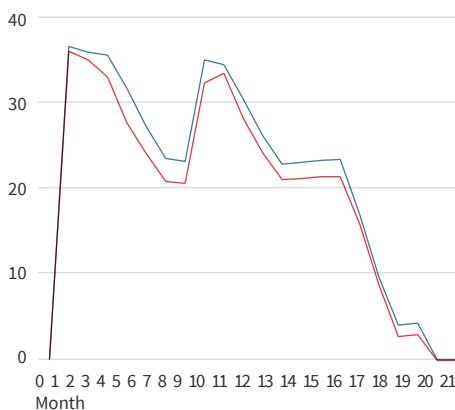
- international poverty line (5.5/day)
- mitigation - international poverty line (5.5/day)

Source:
Authors' calculations based on SRHCS (2015/16)

Figure 11
Changes in Poverty using the National Poverty Line - Severe Scenario - Jordan

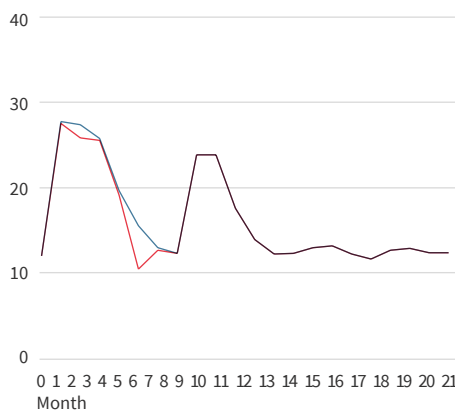
JORDANIAN

Change in Poverty from Baseline (p.p.)



SYRIAN

Change in Poverty from Baseline (p.p.)



- national poverty line
- mitigation - national poverty line

Source:
Authors' calculations based on SRHCS (2015/16)

Lebanon

Similar to Jordan, two poverty lines are applied: the international poverty line for upper middle-income countries (\$5.5/ person/day) as well as a national poverty line. The national poverty line is nowcast in 2019 at around 457,520 LBP per person/ month and the international poverty line at around 171,944 LBP per person/month (at 2011 PPP levels and nowcast to 2019). Crucial in the case of Lebanon is that the poverty lines are adjusted for inflation on a monthly basis, given the soaring levels of inflation the country experienced in 2020 (Figure 12).

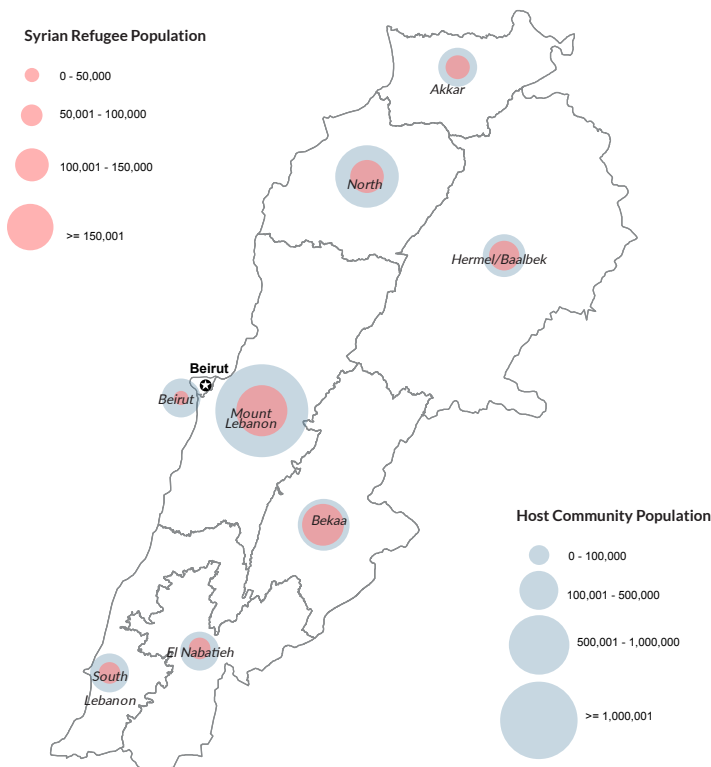
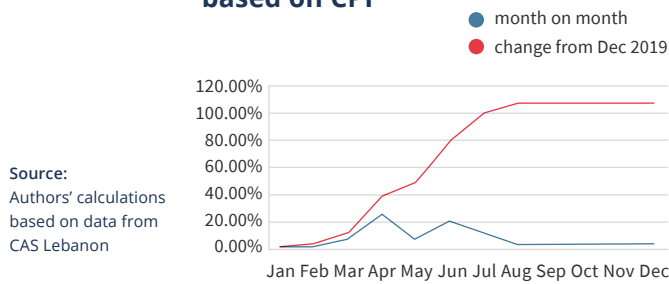
Given the rate of inflation²⁵, the impact of price changes on household consumption is ambiguous. For instance, households may choose to substitute imported products with locally produced products at lower prices and quality than captured in the Consumer Price Index. Additionally, households may adjust their consumption basket and eliminate some goods and services from it due to the surge in prices.

As such, various scenarios are presented below with different levels of pass-through of inflation. Figure 13 shows the changes in poverty rates from baseline according to the macroeconomic shocks, as well as the actual monthly changes in CPI. Figure 15 assumes that only 50 percent of inflation reduces real spending power due to substitution. Figure 17 provides the counterfactual of the changes in poverty due to the sectoral macroeconomic shocks without any inflation.

The results show a higher baseline poverty rate among refugees²⁶ than host communities. It is around 10 p.p. higher at the international poverty line and 20 percentage points higher at the national poverty line. In Figure 13, based on macroeconomic shocks and the CPI changes, there is a 33 p.p. increase in poverty among the Lebanese and 56 p.p. among the Syrian refugees by the end of 2020 at the international poverty line, and an increase by 55 p.p. and 42 p.p. respectively at the national poverty line (Figure 15). As discussed, this may not reflect poverty if it were to be measured, as it does not capture any behavioral responses. However, it does reflect true household welfare impacts. Substituting to cheaper but poorer quality goods and services reduces utility even if it means a higher consumption can be maintained.

In Lebanon, the poverty gap was low at baseline for both Lebanese and Syrians (Annex 3). However, it not only leaps considerably higher for Syrians in the first month of the shock, but the gap continues to grow and remains considerably higher at the end of the first year. This likely reflects the much higher reliance on wage work (88 percent of refugee households compared to 56 percent of Lebanese households)

Figure 12
Inflation rates in Lebanon based on CPI



and refugee worker concentration in construction and manufacturing which were particularly affected.

The mitigation policies adopted by UNHCR in Lebanon to assist the refugees in response to the COVID-19 crisis are also modelled²⁷, in particular, two interventions. The first is a COVID-19 cash assistance program which targeted 11,500 households in May 2020 with 320,000 LBP for three months, and 12,000 households in August 2020 with 400,000 LBP for three months. Additionally, UNHCR Lebanon expanded their existing multi-purpose cash assistance by approximately 16,000 households in June and by another 6,000 households in August.

While the assistance to Syrian refugees mitigates around 3 p.p. of their increase in poverty (8 percent) in the second month but mitigates around 2 p.p. (4 percent) over the months following the crisis, when measured at the international poverty line (Figure 13), it does not show a noticeable reduction using the national poverty line (Figure 14). The reason is that much of the reduction in poverty as a result of the mitigation policies is offset by inflation over time. Indeed, Figure 15 to Figure 18 show scenarios with lower levels of inflation where the effect of the mitigation strategies become more noticeable.

Figure 13
Changes in Poverty using the International Poverty Line
Actual CPI changes - LEBANON

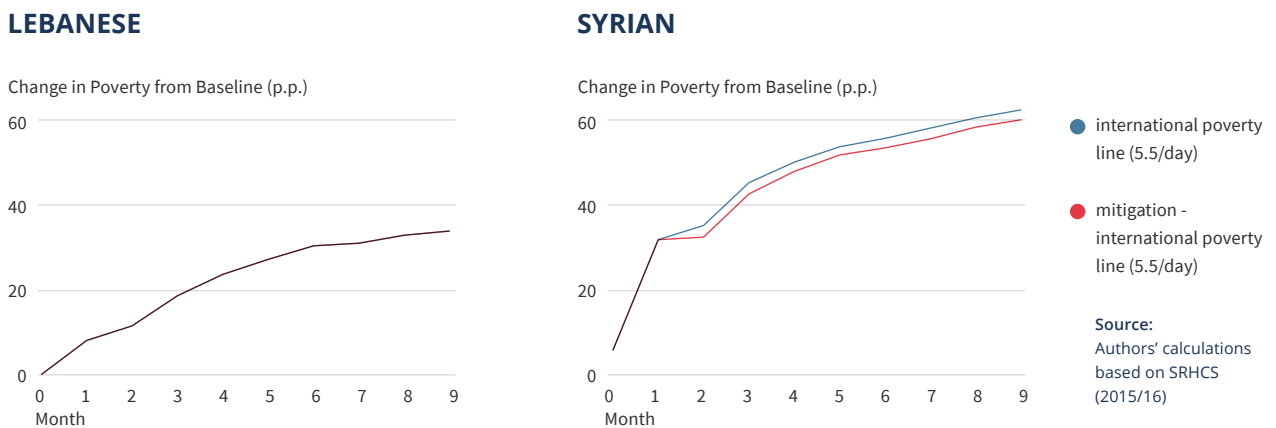


Figure 14
Changes in Poverty using the National Poverty Line
Actual CPI changes - LEBANON

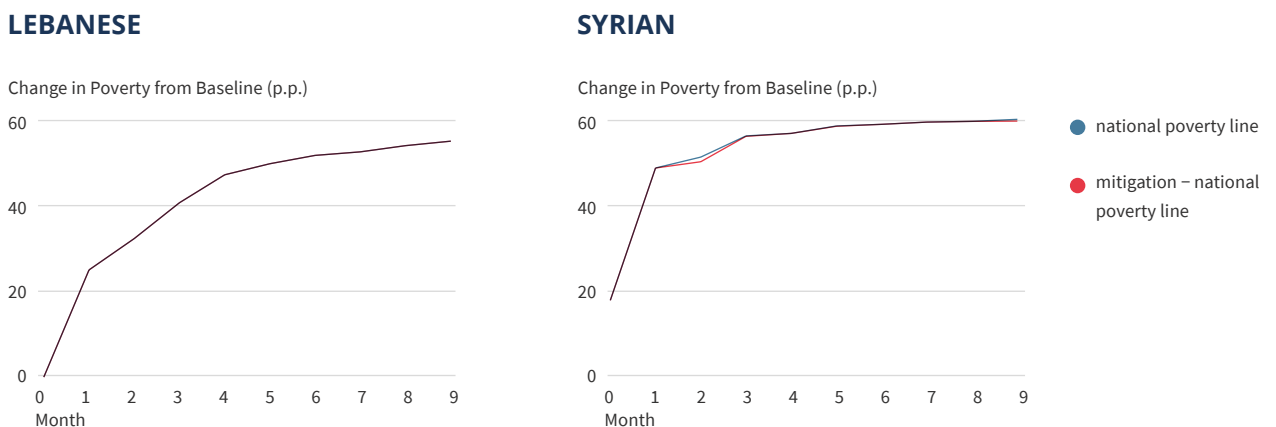


Figure 15 and Figure 16 show a scenario with a 50 percent inflation pass-through to consumption, reflecting likely substitution, and resulting in a slightly lower increase in poverty. For the host community, the crises result in a near 39 p.p. increase in 2020 at the national poverty line, and a 16 p.p. increase at the international poverty line.

Refugees, however, experience a 47 p.p. increase at the national poverty line and a 38 p.p. increase at the international poverty line. In this scenario, the mitigation strategies mitigate around 4 p.p. (14 percent) of the increase in poverty among refugees at the onset of the crisis, to 1 p.p. (3 percent) at the end of 2020, at the international poverty line, but with minimal reduction when measured at the national poverty line. These changes also seem to be reflected by other measures of welfare, such as the survival and minimum expenditure basket (SMEB) approach by UNHCR, WFP and UNICEF in the VASyR 2020 (see Box 2).

Figure 15
Changes in Poverty using International Poverty Line
50% inflation pass-through - LEBANON

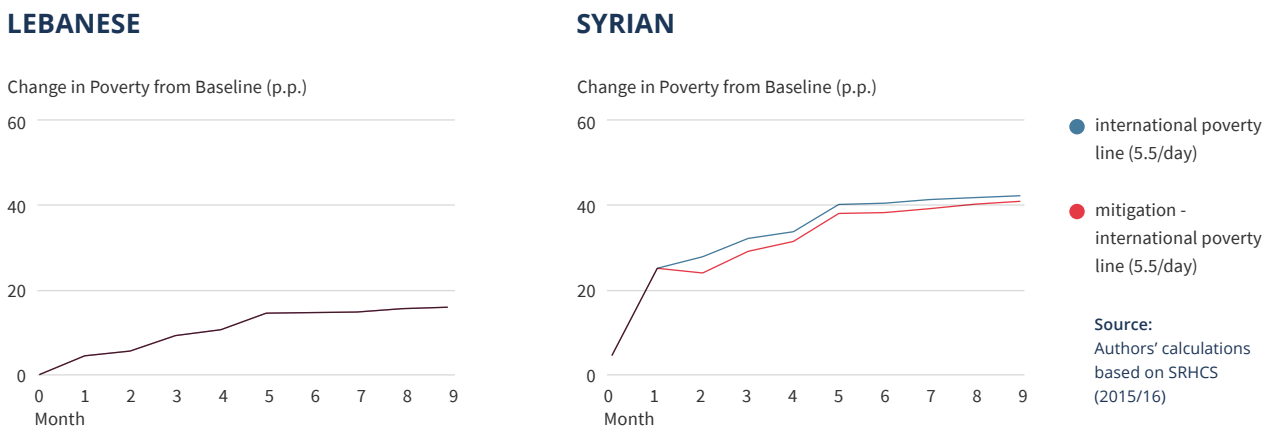
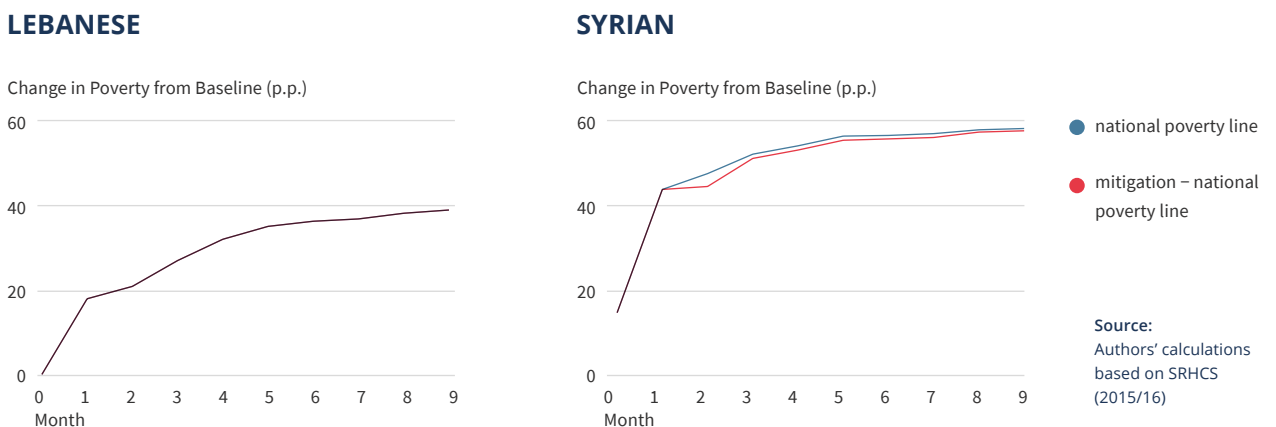


Figure 16
Changes in Poverty using National Poverty Line
50% inflation pass-through - LEBANON



Under the assumption of no inflation, in Figure 17 and Figure 18, the impact of COVID-19 crisis (month 1) and the Beirut port explosion (month 5) are more clearly discerned, despite both being obscured by the effects of the economic crisis. Clearly, the impact on refugees is more marked than it is for host communities. This is primarily because refugees are more likely to be employed in the informal sector which experiences more severe shocks. The mitigation strategies also become more evident, as is the role of inflation in offsetting the effects of the assistance

that refugees received. Indeed, in this scenario the UNHCR assistance to refugees mitigates about 3 p.p. (17 percent) of the increase in poverty at the onset of the crisis and remains around 3 p.p. (11 percent) in the last month of 2020, when measured at the international poverty line.

As such, given the levels of inflation in the country, any assistance must be scaled up significantly in size and in reach to mitigate the effects of the compounded crises.

Figure 17
Changes in Poverty using International Poverty Line
 No inflation counterfactual - LEBANON

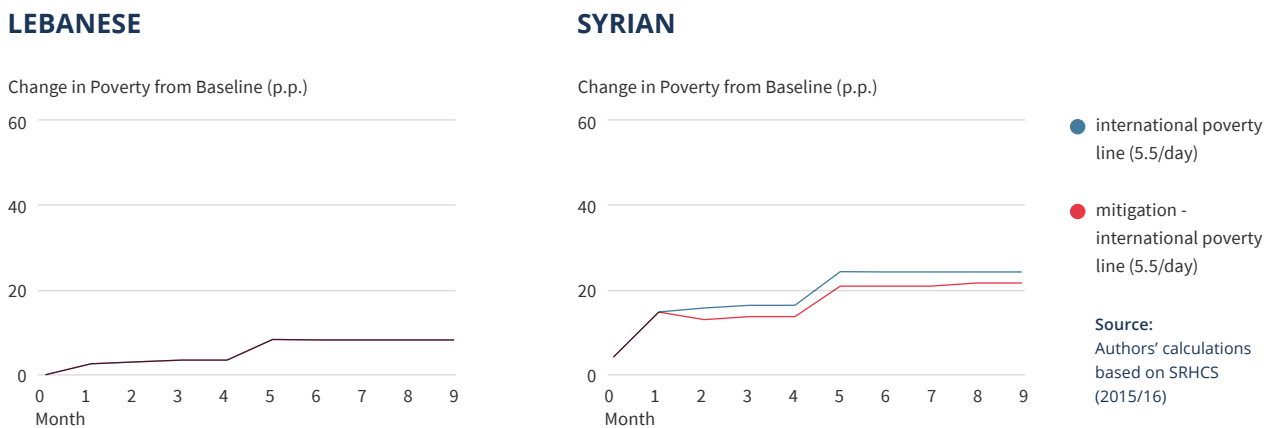
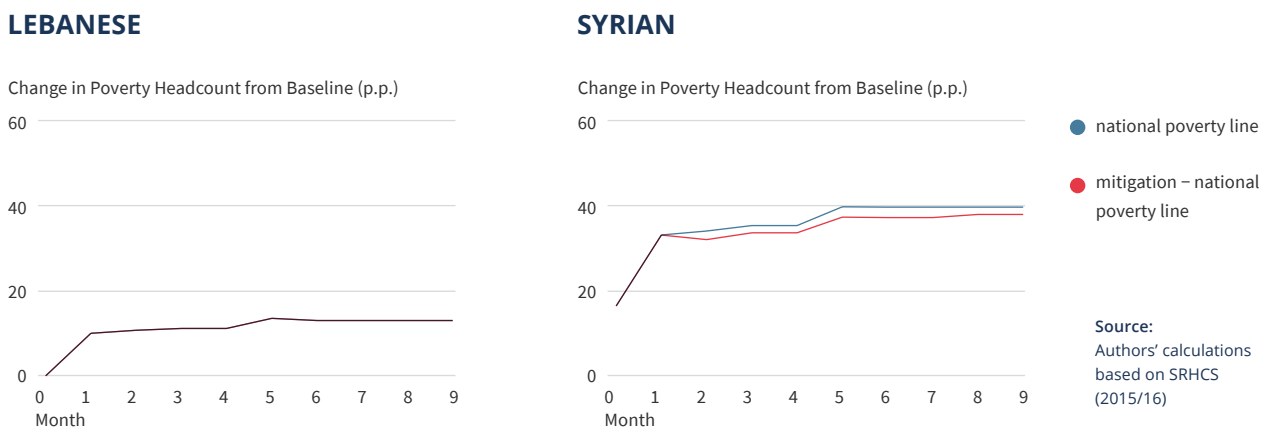


Figure 18
Changes in Poverty using National Poverty Line
 No inflation counterfactual - LEBANON



Box 2
Findings from the Vulnerability Assessment of Syrian Refugees in Lebanon (VASyR) 2020

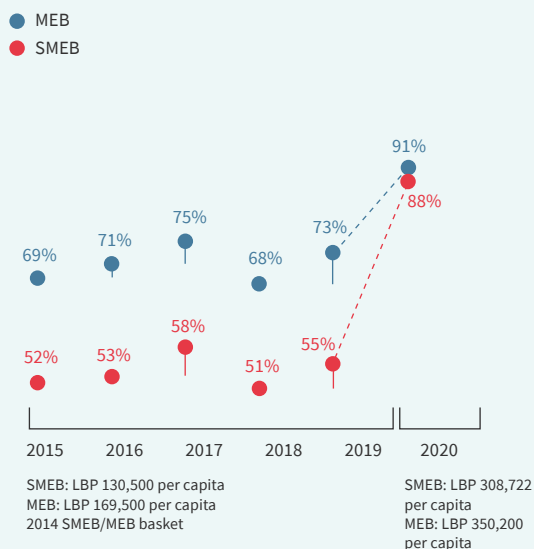
The Vulnerability Assessment of Syrian Refugees in Lebanon (VASyR) is conducted jointly by WFP, UNHCR and UNICEF. 2020 is the eighth annual survey assessing the situation of a representative sample of refugee households to identify situational changes and trends. It covers all sectors and is the cornerstone of the Lebanon Crisis Response Plan and programming for many (I) NGO, UN and development actors. Between August and September 2020, survey teams visited 4,563 randomly selected Syrian refugee households, covering all districts across Lebanon.

The 2020 round of the VASyR provides further insight on the welfare impact of the political and economic crisis that hit Lebanon in late 2019, which was then followed by a more severe shutdown of the economy in March 2020 resulting from the COVID-19 outbreak.

Main findings

- Only 31 percent of HHs have at least one member with legal residency. 69 percent of households have no members with legal residency. Refugees under the age of 30 are less likely to hold legal residency than those 30 years and above: and 20 percent of individuals above 15 years old have legal residency. Having legal residency has a positive impact on the physical and emotional health of displaced Syrians and their families.
- Between March and September of 2020, when asked about how they were coping with the COVID-19 outbreak, around 70 percent of displaced Syrian households reported going further into debt to pay for basic necessities, 70 percent and 20 percent asking for support from extended family or relatives. Some 70 percent also reported a reduction in food consumption.
- When asked about the top priority needs for their family in relation to the COVID-19 outbreak, around 50 percent of displaced Syrian households report need for assistance to cover food costs and 40 percent to cover rent.
- Families with limited finances are downgrading their residential shelter conditions or are moving from residential shelters into informal settlements or into structures not originally built for human habitation (non-residential shelters). Almost half of displaced Syrian households (48 percent) are living in shelters that are either below humanitarian standards, overcrowded or in danger of collapse.
- The overlapping crises are exacerbating economic vulnerabilities, with the share of displaced Syrians spending less than the Minimum Expenditure Basket (MEB) or the Survival Minimum Expenditure Basket (SMEB) increasing in 2020 compared to 2019. As a result of the economic and COVID-19 crisis, almost the entire refugee population have been pushed below the SMEB of 87 USD. Preliminary estimates show that 88 percent had expenditures below the SMEB.

Percentage of households under the MEB and SMEB



Kurdistan Region of Iraq

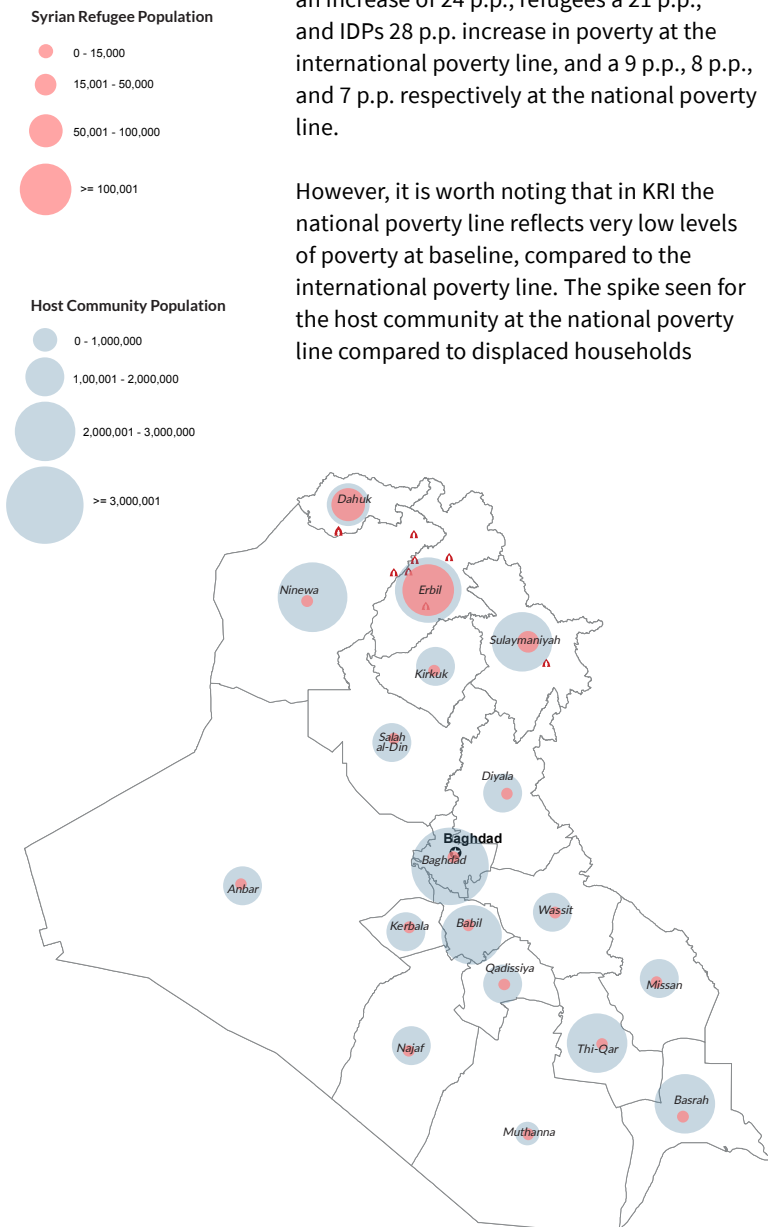
For KRI, it is possible to identify Iraq Internally Displaced Persons (IDPs) as well as Syrian refugees which allows for a comparison between residents i.e., host communities, refugees, and IDPs. As shown in Figure 19 and Figure 20, the displaced population experiences a similar poverty rate to that of the host community at baseline. When measured at the international poverty line, there is a higher spike in the refugees and IDPs' poverty rates at the onset of the pandemic, while at the national poverty line there is the opposite pattern. Indeed, at the onset of the crisis, hosts experience an increase of 24 p.p., refugees a 21 p.p., and IDPs 28 p.p. increase in poverty at the international poverty line, and a 9 p.p., 8 p.p., and 7 p.p. respectively at the national poverty line.

reflects that more households in the host community who are near the national poverty line engage in informal labor, and experience a more severe shock compared to formal labor.

Based on the assumptions presented in Table 3, the poverty rate among the host community recovers to pre-crisis levels around 12 months after the onset of the pandemic, while for refugees and IDPs a slower recovery is observed and poverty remains higher even at 21 months. This slower recovery for refugees can be attributed to the larger proportion of refugee and IDP communities who rely on remittances, domestic and international, that are assumed to take longer to recover.

In KRI, where poverty rates are more similar between IDPs, hosts and refugees, the baseline poverty gap is higher for both displaced populations (8 percent for refugees, 9 percent for IDPs compared to 5 percent for non-IDPs; see Annex Three). When the shock hits, the increase is also projected to be similar for all groups, with an initial leap of 9-11 percentage points. The recovery path is similar for all three groups, and all remain above their baseline rate by the end of the forecast period, albeit refugees by a greater degree than both IDPs and non-IDPs.

In terms of mitigation strategies, UNHCR provided a one-off COVID-19 emergency cash assistance for the value of 200 USD to all camp-based refugees and IDPs at the start of the pandemic, and the same amount to vulnerable refugees and IDPs outside camps in June 2020. For modelling purposes these one-off assistance programs are assumed to be spread out over three months. When both programs are in place at the second month, they mitigate approximately 3.5 p.p. for refugees (14 percent) and 1p.p. for IDPs (3 percent) of the increase in poverty when measured at the international poverty line, and around 1 p.p. (6 percent) and 0.4 p.p. (5 percent) respectively at the national poverty line. Around the third and fourth months, there is a higher mitigation for IDPs (5 p.p. or 17 percent of the increase in poverty at the international poverty line, and 0.2 p.p. or 3 percent at the national poverty line).

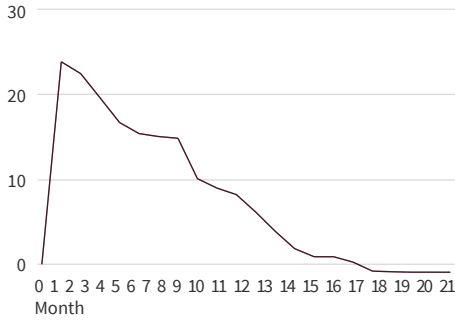


However, it is worth noting that in KRI the national poverty line reflects very low levels of poverty at baseline, compared to the international poverty line. The spike seen for the host community at the national poverty line compared to displaced households

Figure 19
Changes in Poverty using International Poverty Line
KURDISTAN REGION OF IRAQ

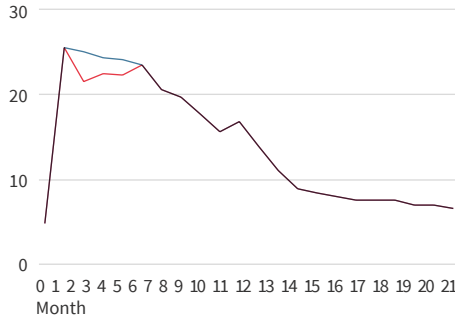
RESIDENT

Change in Poverty from Baseline (p.p.)



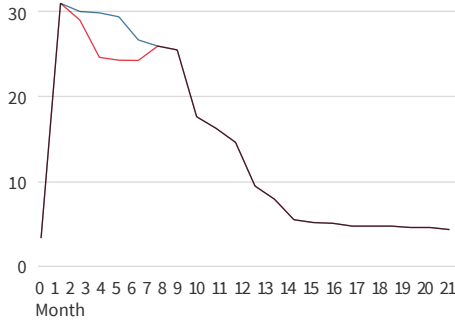
REFUGEE

Change in Poverty from Baseline (p.p.)



IDP

Change in Poverty from Baseline (p.p.)



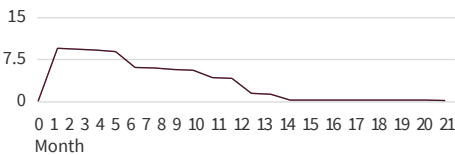
- international poverty line (5.5/day)
- mitigation - international poverty line (5.5/day)

Source:
 Authors' calculations based on SRHCS (2015/16)

Figure 20
Changes in Poverty using National Poverty Line
KURDISTAN REGION OF IRAQ

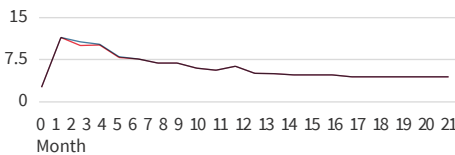
RESIDENT

Change in Poverty from Baseline (p.p.)



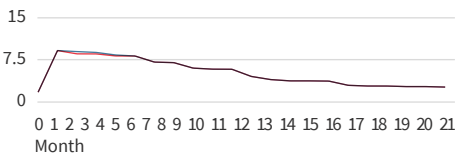
REFUGEE

Change in Poverty from Baseline (p.p.)



IDP

Change in Poverty from Baseline (p.p.)



- national poverty line
- mitigation - national poverty line

Source:
 Authors' calculations based on SRHCS (2015/16)

Sensitivity analysis

In the analysis thus far, it has been assumed that the macroeconomic shock (e.g. negative sectoral GDP growth) is fully transmitted into the households' incomes and therefore consumption. While this is a reasonable assumption given the strict lockdown restrictions and limited household savings, it is possible that the transmission is less than 100 percent. Some households may resort to coping strategies such as borrowing, selling assets, using child labor, or shifting their consumption towards cheaper items. While a 100 percent transmission does reflect the loss in welfare due to the lower utility derived from a reduced or less balanced diet, or from the necessity to make children work, it is possible, in terms of modelled consumption and hence poverty, that the impact is higher than it would be compared to a situation where consumption had been measured directly.

It is also possible, indeed likely, that the reduction in income is varied across the distribution – some lower skilled and poorer households may have lost 100 percent of their income, while other types of households may have lost little or nothing at all.²⁸

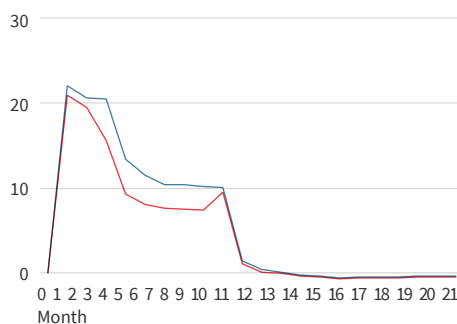
To allow for these possibilities a simple sensitivity analysis can be conducted – particularly for Jordan and KRI. Lebanon is excluded from this analysis because in the previous section the sensitivity to inflation pass-through, which is the main driver of poverty in Lebanon, was already presented. It is assumed that the shock is transmitted to households' consumption at 75 percent pass-through – e.g. a 50 percent reduction in GDP at a particular sector, only reduces the household's consumption by 37.5 percent. This allows a lower bound estimate of the poverty increase. For consistency, the analysis also assumes a 75 percent pass-through during the recovery as well.

For Jordan, comparing Figure 8 and 10 with Figure 21 and 23, respectively, there is a lower spike in poverty under the lower pass-through rate, which naturally leads to a faster recovery back to baseline levels, for both the national and international poverty lines. For KRI, the same pattern is observed in Figure 23 and 25, compared to Figure 19 and 21, respectively, albeit with lower magnitudes.

Figure 21
**Changes in Poverty Headcount using International Poverty Line
 75% growth pass-through - JORDAN**

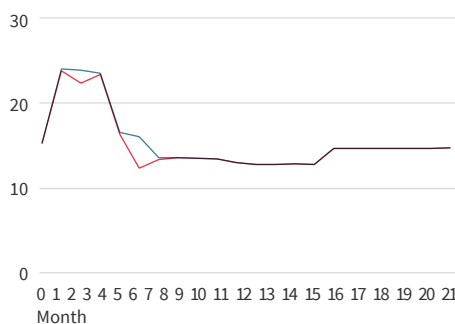
JORDANIAN

Change in Poverty from Baseline (p.p.)



SYRIAN

Change in Poverty from Baseline (p.p.)



- international poverty line (5.5/day)
- mitigation - international poverty line (5.5/day)

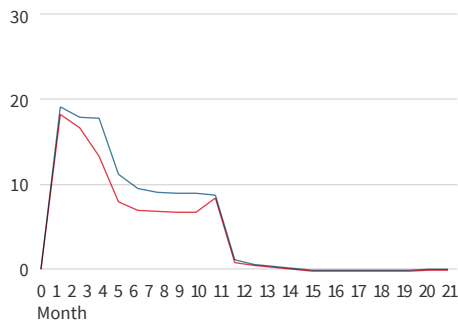
Source:
 Authors' calculations based on SRHCS (2015/16)

Figure 22

**Changes in Poverty Headcount using National Poverty Line
75% growth pass-through - JORDAN**

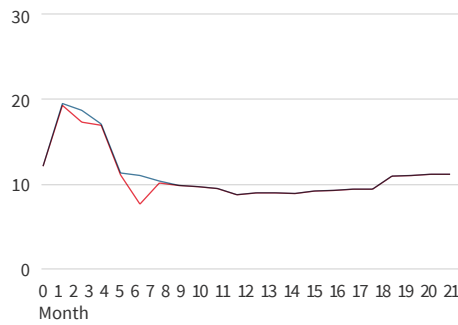
JORDANIAN

Change in Poverty from Baseline (p.p.)



SYRIAN

Change in Poverty from Baseline (p.p.)



● poverty line
● mitigation - poverty line

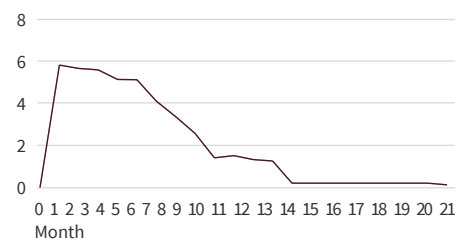
Source:
Authors' calculations
based on SRHCS
(2015/16)

Figure 23

**Changes in Poverty Headcount using International Poverty Line
75% growth pass-through - KRI**

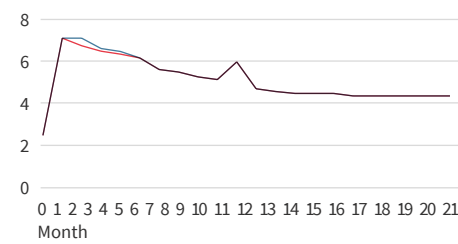
RESIDENT

Change in Poverty from Baseline (p.p.)



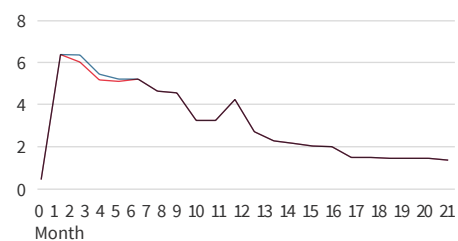
REFUGEE

Change in Poverty from Baseline (p.p.)



IDP

Change in Poverty from Baseline (p.p.)



● national poverty line
● mitigation - national poverty line

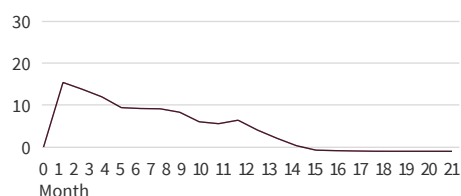
Source:
Authors' calculations
based on SRHCS
(2015/16)

Figure 24

**Changes in Poverty Headcount using National Poverty Line
75% growth pass-through - KRI**

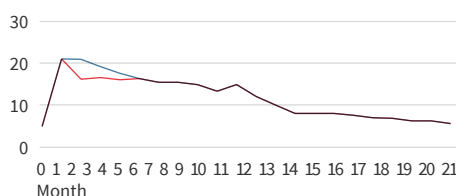
RESIDENT

Change in Poverty from Baseline (p.p.)



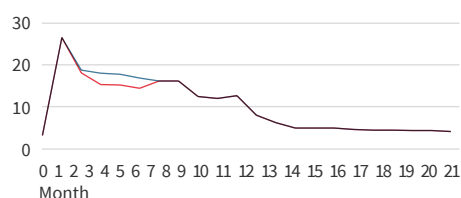
REFUGEE

Change in Poverty from Baseline (p.p.)



IDP

Change in Poverty from Baseline (p.p.)



- international poverty line (5.5/day)
- mitigation - international poverty line (5.5/day)

Source: Authors' calculations based on SRHCS (2015/16)

A brief review of international responses to COVID-19

As discussed in the introduction, the second phase of this work will incorporate phone survey data from each country to recalibrate the models and characterize which households have become newly poor due to the crisis, taking into account characteristics such as gender, education, sector of employment and so forth. This will inform the design and targeting of government and INGP responses in each country. Although this country-specific guidance will come in the next phase, there are still lessons which can be learned from a review of how other countries have responded. Gentilini et al. (2020, version 13) have compiled a global summary across 212 countries including what types of programs are being used and how much is being spent. The responses around the world can generally be classified into three types: social assistance, social insurance, and labor market interventions. There are a range of different interventions which can fall within each of these three categories as listed in Table 4.

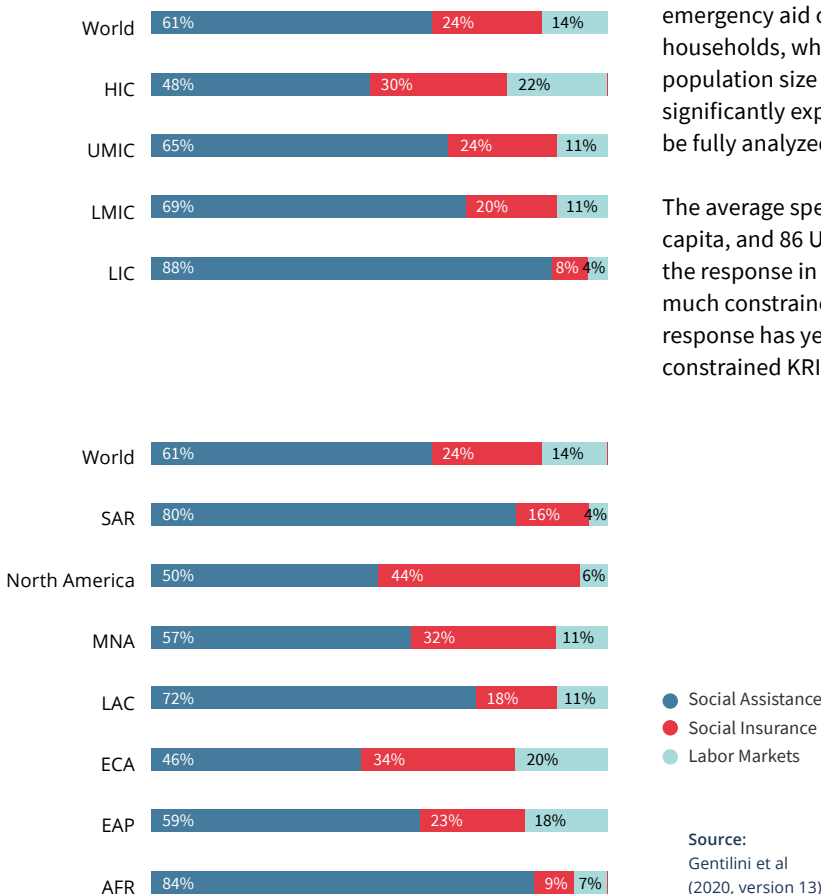
Table 4
Types of interventions used around the world to respond to COVID-19

| Social Assistance | Social Insurance | Labor Market Interventions |
|--|---|--------------------------------|
| Cash transfers (conditional, unconditional and social pensions) | Paid sick leave support | Wage subsidies |
| In-kind food / voucher schemes | Healthcare insurance support | Activation (training) measures |
| School feeding | Pensions | Labor regulation adjustment |
| Utility and financial obligation support (waiver / postponement) | Social security contribution waiver / subsidy | Shorter work time benefits |
| Cash for work | Unemployment benefits | |

Source: Adapted from Gentilini et al (2020, version 13).

In upper middle-income countries (UMIC) such as Iraq, Jordan and Lebanon, social protection responses constituted of 65 percent social assistance, 24 percent social insurance and 11 percent labor market interventions; in MENA, the composition was 57 percent, 32 percent and 11 percent respectively. Social assistance is the most common category of response in all countries except for high income ones (Figure 25) and within social assistance, cash transfers are by the far the most common. Out of 724 total social assistance measures across 188 countries, cash transfers represented 340 measures in 156 countries. Food or food voucher schemes (133 measures in 93 countries) and utility or financial obligation waivers or postponements (174 measures in 101 countries) are also very popular.

Figure 25
Composition of social protection COVID-19 responses by region and income level



Jordan, KRI, and Lebanon entered the COVID crisis in a fiscally constrained position, as such, they had little space to provide social protection. In Jordan, the government expanded the social assistance programs (Takaful/NAF), including with a temporary top-up payment for COVID-19, made temporary cash payments to 190,000 informal workers who were not existing SP beneficiaries, provided in-kind support in terms of food distribution, and the Ministry of Labor provided a two-week paid leave for public sector workers and allowed private companies to reduce their social security contributions. The average spending in Jordan is estimated at 24 USD per capita.

In KRI, there is not an active social assistance program, but a pilot of a new cash transfer program for a duration of 12 months is being planned and led by the Ministry of Labor and Social Affairs. It includes 100,000 – 225,000 Iraqi Dinars, depending on the size of the household, and the gender of its head. The average spending in KRI is thus currently 0 USD per capita, but expected to rise to increase.

In Lebanon, in response to COVID-19, the government launched a “National Social Solidarity Program” (NSSP), aimed at assisting households impacted by the lockdown restrictions. The program aims to provide temporary emergency aid of LBP400,000 to approximately 200,000 households, which is around 4 USD per capita (for a 5.9M population size and LBP3500 to the dollar). However, a significantly expanded response is planned in 2021 and will be fully analyzed in the Phase II report.

The average spending per capita in UMICs is 57 USD per capita, and 86 USD per capita in MENA, meaning the size of the response in Jordan is lower than for peers, albeit from much constrained fiscal positions, while a host community response has yet to significantly materialize in similarly constrained KRI.

Source:
 Gentilini et al
 (2020, version 13)

Conclusion

The COVID-19 crisis has impacted all. In Jordan, Lebanon and KRI its impact has been disproportionate as it has compounded pre-existing vulnerabilities. Those living on the economic margins of society, with few assets, more debt, and a dependence on informal sources of income, have been particularly affected. Existing vulnerabilities have left poorer Jordanian, Lebanese, Iraqi and Syrian refugees with few coping mechanisms, resulting in difficult choices. Families have been unable to pay for basic household needs, risking eviction for non-payment of rent. Both refugee and host community children have faced further challenges in accessing education – limited by distance and home-schooling opportunities and the digital divide. Reports of domestic violence linked to the lockdowns have increased. Specific risks for women and girls have been exacerbated. Social tensions are rising as resources and jobs become even more scarce.

Understanding the effects of COVID-19 on host and refugee communities has important implications on the policies that need to be adopted as the pandemic unfolds and during the recovery period. This report analyzes the changes in poverty rates among refugees and host communities as a result of the COVID-19 crisis and the ensuing lockdown policies that have impacted people's livelihoods both in terms of their labor and non-labor income.

Prior to the pandemic, poverty incidence among refugees was considerably higher than among host communities particularly in Jordan and Lebanon, although less so in KRI. By carrying out microsimulation models based on macroeconomic assumptions, poverty is found to have increased rapidly and substantially among both communities, with the impact being most pronounced for refugees in Lebanon and Jordan. The situation in KRI is noteworthy because pre-COVID poverty among refugees and IDPs was close to that among hosts, and during COVID refugees appear affected in similarly ways as host communities.

Recovery largely depends on the health of the economy at large, the differences between host communities and refugees' poverty rates at baseline, and the mitigation responses to the crisis. Generally, two years after the onset of COVID, poverty levels could be expected to have returned to pre-COVID levels.

Mitigation strategies, if done at scale and for a sufficient length of time, can bridge the gap between the onset of the crisis and the recovery of the economy to lessen the impact of the pandemic on both refugees and host communities. Other complementary programs such as enabling self-reliance could potentially ensure more sustainable support at the household level, the effectiveness and impact of which will require further research. The second phase of this report will seek to quantify the size of the response needed from governments and the international community. Needless to say, it will have to be commensurate to the magnitude of the impact of the crises on households estimated in this report.

Key findings JORDAN

- In Jordan, at the onset of the crisis, there is a 38 percentage point increase in poverty rates among Jordanians, and a 18 percentage point increase in poverty rates among Syrian refugees (who started off with higher rates of poverty than Jordanians pre-crisis).
- At the height of its impact, the number of poor Jordanians in the three governorates increased by more than 1.5 million Jordanians; the number of Syrian refugees²⁹ who became poor is 76,000.
- Under the current assumptions, poverty returns to its pre-crisis levels a year after the onset of the pandemic. Given the possibility of a second wave and the likely timeline for a vaccine this may be optimistic.
- Among Jordanians in the three governorates analyzed, social policies mitigated 4 p.p. (around 12 percent) of the increase in poverty by the fourth month of the crisis; for refugees there is a 2 p.p. (6 percent) mitigation in the second month of the crisis and 6 p.p. (30 percent) at the fifth month of the crisis.

**Key findings
LEBANON**

- In Lebanon, inflation is the main driver of poverty, with the impact of the COVID crisis in country compounded by other crises: economic and political, and the effects of the Beirut blast.
- There is a 33 p.p. increase in poverty among the Lebanese and 56 p.p. among the Syrian refugees at the international poverty line, and an increase by 55 p.p. and 42 p.p. respectively at the national poverty line.
- Expressed in absolute numbers, the projected increase in the number of poor persons is around 1.7 million Lebanese and 840,000 refugees³⁰ at the international poverty line, and 2.9 million Lebanese and 630,000 refugee at the national poverty line³¹.
- As the increase in poverty is mostly driven by inflationary pressures –with no sign of abating, and unlike Jordan and KRI there is no projected return to pre-COVID levels of poverty in 2021 for Lebanon.
- Mitigation strategies for refugees in Lebanon, while potentially having positive short-term effects, from a welfare perspective are largely negated over time by the increasing levels of inflation, especially if households had not adopted consumption behavioral strategies.

**Key findings
KRI**

- In KRI at the onset of the crisis, hosts experience an increase in poverty of 24 p.p., refugees a 21 p.p. increase, and IDPs 28 p.p. increase in poverty at the international poverty line, and a 9 p.p., 8 p.p., and 7 p.p. respectively at the national poverty line.
- Using the international poverty line and at the height of the crisis, the number of poor persons increased by 1.2 million persons in host communities, 49,000 among Syrian refugees and more than 180,000 IDPs; at the national poverty line the equivalent increase in poor people is close to 500,000 among host communities, 21,000 among refugees and 48,000 among IDPs³².
- UNHCR assistance in KRI mitigates between 14 and 17 percent of the increase in poverty at the international poverty line for the displaced community, and 3 percent to 5 percent at the national poverty line.

A lack of recent and good quality data constituted the biggest challenge for this report which was prepared in the absence of recent household survey data and informed by relatively crude macro estimates. It is possible that the estimates are too optimistic. As the crisis unfolds it is not implausible that the length of recovery will be significantly longer than what has been modelled. It is equally possible that the results are too pessimistic: households may have been able to cope better with the crisis at hand than expected. This points to the importance of better and more frequent data collection. Or as noted in the World Bank's Shared Prosperity report 2020:

“For poverty to be measured effectively, it is crucial that the current crisis not prompt governments to reduce their investment in surveys and other forms of data collection. Under crisis conditions, reliable poverty data are even more important for guiding response and recovery policies that will not leave vulnerable groups behind.”

Fortunately, some of the most glaring data gaps are currently being addressed: phone surveys have been launched in KRI and Jordan; in Lebanon a new household survey is being prepared. As more data becomes available, the results of this report will be updated in future revisions.

Annex

This Annex describes some of the technical approaches and assumptions used when preparing the report. This Annex discusses the following aspects:

1. Transforming the income distribution to a consumption distribution
2. Imputations: sectors of work and assistance
3. Poverty Gap
4. Quarterly estimates

1. Transforming the income distribution to a consumption distribution

As discussed in the main text, the SRHCS is a dataset highly suitable for this exercise, primarily because it is comparable across the three countries and comparable between the refugees and their host communities. As such, for a cross-country report that compares these two communities, it provides clear advantages over other datasets which may either be older than the SRHCS or capture only one of the two communities, or sacrifice representativity of the underlying population. In addition, the data includes an income module that captures eight different income sources: wage income, business earnings, pensions, asset earnings, government/UN/NGO assistance, remittances, auto-consumption, and other income sources.

One drawback in relation to this analysis and in the effort to producing credible poverty estimates, is that the SRHCS lacks a consumption module. To address this impediment, the income distributions in the SRHCS were transformed to reflect relevant consumption distributions obtained from respectively the 2017-18 HEIS in Jordan, the 2017-2018 SWIFT in Iraq, and the 2012 HBS in Lebanon. One option is to transform the distributions using survey-to-survey imputation techniques. For example, per capita consumption in the 2017-18 SWIFT in Iraq could be regressed upon common indicators of welfare in both SWIFT and SRHCS and the result coefficients would then be used to predict the per capita consumption in SRHCS. One drawback with this approach is that the predicted distributions tend to be more compact than the true distribution, which in turn affect the poverty estimates derived from the predicted distribution.

As an alternative, a more mechanical transformation was applied, whereby a scaling factor is calculated for each percentile of the SRHCS income distribution to expand it to match the same percentile of the national survey consumption distribution. The scaling factor can be defined as follows:

$$S_p = \frac{\text{mean_cons}_p^{\text{NatSurvey}}}{\text{mean_income}_p^{\text{SRHCS}}}$$

Where s is the scaling factor, p is the percentile subscript, mean_cons and mean_income are the mean consumption and income in that percentile, respectively. This process, while not analytically grounded, produces an accurate replication of the consumption distribution and preserves the rank order of the income distribution. The application of household-specific shocks (based on a mix of income sources and sector and formality of employment) to the transformed household per capita consumption then rests upon the assumption that while the SRHCS income distribution is far more compressed than the national survey consumption distribution, it provides a much more comparable rank ordering of the households. Given the lack of savings in the poorer half of the distribution in the Jordan HEIS (and likely in Iraq and especially in Lebanon pre-COVID-19 but post-economic crisis), this assumption seems defensible. This transformation is implemented separately for host communities and refugees in Jordan and KRI, and in Lebanon, the refugees' distribution is mapped onto the non-Lebanese distribution of HBS 2012.

As shown in Figure 26, Figure 27, and Figure 28, the income distribution in SRHCS is very narrow and concentrated. In all cases, the income distribution is consistently lower than the consumption distribution. In addition, the technique used to transform the distribution results replicates the original consumption distribution.

For the analysis of the report, under the assumption of 1:1 income to consumption pass-through, it is assumed that the percentage contribution of the various income sources (wages, business earnings, remittances etc.) represent the same percentage contribution of the adjusted expenditure distribution.

Figure 26
Income Distribution Transformation - JORDAN

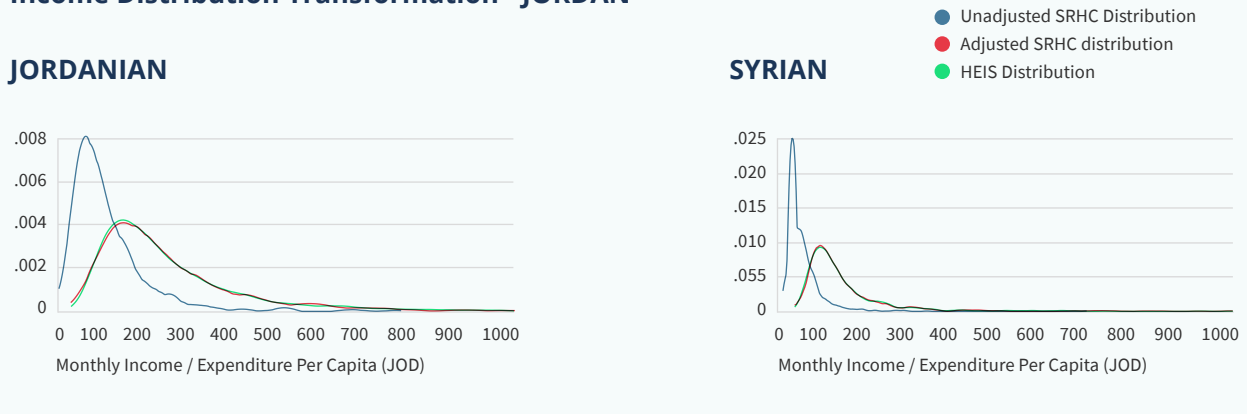


Figure 27
Income Distribution Transformation - LEBANON

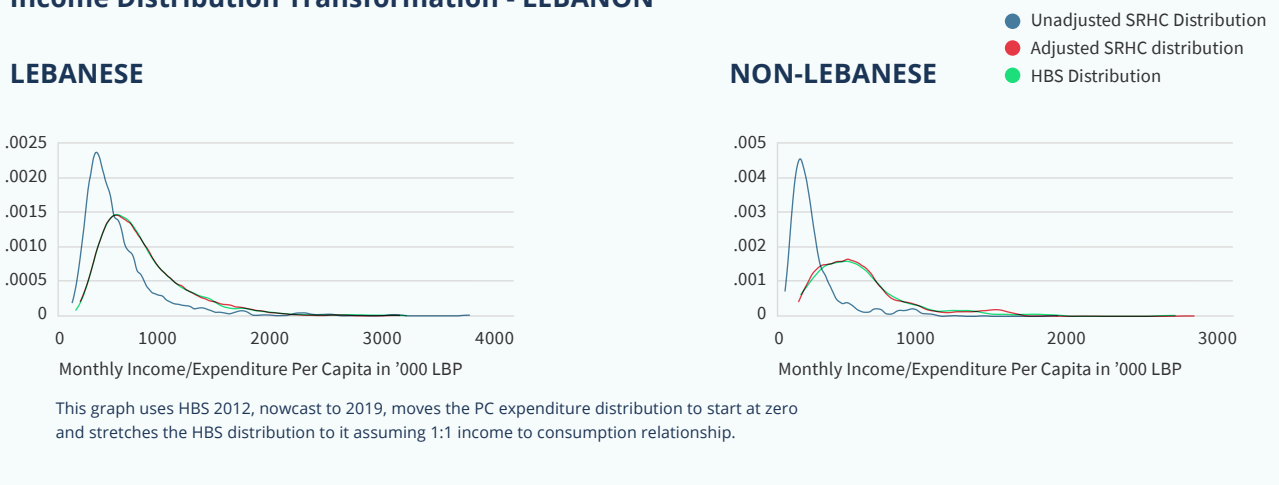
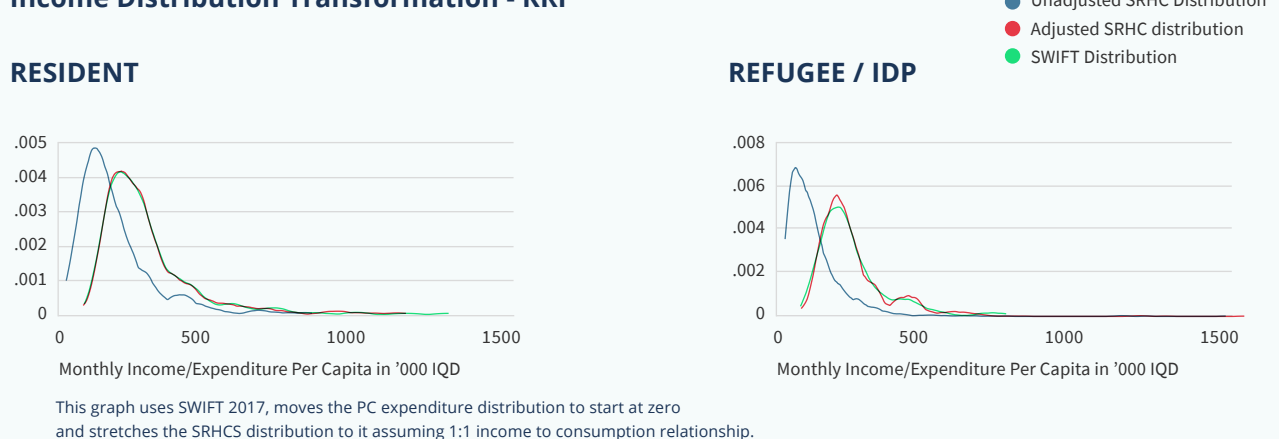


Figure 28
Income Distribution Transformation - KRI



2. Imputations: Sectors of work and assistance

The SRHCS dataset includes information about the households' sources of income including wage income and income from own-account work. As the micro simulation models are based on the macro-sectoral shocks, it is necessary to make assumptions on households' main sector of work to determine the level of macroeconomic shock that they face.

The survey also includes two modules (for wage work and own-account workers) collected for two randomly selected adults within the household where they are asked about their current employment status and the sector in which they work. For most households, only one of the two randomly selected adults report working. As such, the household is assigned the sector of that individual. Where two of the individuals report their employment, and they differ on sector, one of the two individuals' sector were randomly selected. For some households, none of

the two individuals report working, and the household is reported to have wage income or own-account income, their sector of work is imputed based on observable characteristics (age, sex, nationality and education of the randomly selected adults who do report on sector) using a multinomial logit model. The same logic is followed for determining informality of the household, where informality is defined as having a contract or having insurance.

Similarly, because it is not possible to match the assistance programs to individual households in the dataset, benefits are randomly assigned to beneficiaries according to the conditions of the program and by relying on secondary data. For instance, Takaful program is randomly assigned to a percentage within each decile of the consumption distribution based on the HEIS data, and the UNHCR assistance similarly using VASyR 2019 for Lebanon, VAF 2019 for Jordan, and VAT 2019 for KRI. Where blanket assistance is given to certain group (e.g. camp residents in KRI), this is assigned to each household that satisfies its criteria.

3. Poverty gap

The Poverty Gap measures how far below the line on average poor households are. For example, a Poverty Gap of 0.07 indicates that poor households are on average 7 percent below the poverty line. The table below presents the Poverty Gap each month during the crisis. In Jordan at the pre-COVID-19 baseline, poor Jordanian households were on average only 1 percent below the International Poverty Line (IPL or \$5.50) while poor Syrians were 4 percent below. In the first month of the crisis, not only did the poverty headcount rate leap for both groups, but the poverty gap did as well. As with the poverty rate, the increase in the gap was larger for Jordanians than Syrians. This is driven by different factors. The rate went up more for Jordanians because so many Syrians already lived below the line; there were less Syrians to be driven below the line by the crisis than there were Jordanians (Figure 4). However, the poverty gap increased less for Syrians because they were less reliant on labor market income and remittances and more on INGO support, insulating them to a greater degree. The table also shows that the poverty gap is projected to recover faster for Jordanians as the economy and their incomes recover along with it, although the gap ends slightly higher for both groups by the end of the forecast period. The story is similar if instead the National Poverty Line (NPL) is used.

In KRI, where poverty rates are more similar between IDPs, non-IDPs and refugees, the baseline poverty gap is higher for both displaced populations (8 percent for refugees, 9 percent for IDPs compared to 5 percent for non-IDPs). When the shock hits, the increase is also projected to be similar for all groups, with an initial leap of 9-11 percentage points. The recovery path is similar for all three groups, and all remain above their baseline rate by the end of the forecast period, albeit refugees by a greater degree than both IDPs and non-IDPs. Again, the story is similar if the NPL is used instead.

In Lebanon, the poverty gap was low at baseline for both Lebanese and Syrians. However, it not only leaps considerably higher for Syrians in the first month of the shock, the gap continues to grow and remains considerably higher at the end of the first year. This likely reflects the much higher reliance on wage work (88 percent of refugee households compared to 56 percent of Lebanese households) and refugee worker concentration in construction and manufacturing which were particularly affected.

Poverty Gap at the National and International Poverty Lines

JORDAN

| Month | Jordanian (IPL) | Syrian (IPL) | Jordanian (NLP) | Syrian (NPL) |
|--------------|-----------------|--------------|-----------------|--------------|
| 0 | 0.01 | 0.04 | 0.01 | 0.03 |
| 1 | 0.24 | 0.13 | 0.22 | 0.11 |
| 2 | 0.23 | 0.12 | 0.22 | 0.11 |
| 3 | 0.23 | 0.12 | 0.22 | 0.11 |
| 4 | 0.18 | 0.08 | 0.17 | 0.07 |
| 5 | 0.16 | 0.07 | 0.14 | 0.06 |
| 6 | 0.14 | 0.06 | 0.13 | 0.05 |
| 7 | 0.14 | 0.06 | 0.13 | 0.05 |
| 8 | 0.14 | 0.06 | 0.13 | 0.05 |
| 9 | 0.14 | 0.06 | 0.13 | 0.05 |
| 10 | 0.07 | 0.05 | 0.06 | 0.04 |
| 11 | 0.04 | 0.05 | 0.03 | 0.04 |
| 12 | 0.03 | 0.05 | 0.02 | 0.04 |
| 13 | 0.02 | 0.05 | 0.02 | 0.04 |
| 14 | 0.02 | 0.05 | 0.02 | 0.04 |
| 15 | 0.02 | 0.05 | 0.02 | 0.04 |
| 16 | 0.02 | 0.05 | 0.02 | 0.04 |
| 17 | 0.02 | 0.05 | 0.02 | 0.04 |
| 18 | 0.02 | 0.05 | 0.02 | 0.04 |
| 19 | 0.02 | 0.05 | 0.02 | 0.04 |
| 20 | 0.02 | 0.05 | 0.02 | 0.04 |
| 21 | 0.02 | 0.05 | 0.02 | 0.04 |
| 2020 average | 0.16 | 0.08 | 0.15 | 0.07 |
| 2021 average | 0.02 | 0.05 | 0.02 | 0.04 |

LEBANON

| Month | Lebanese (IPL) | Syrian (IPL) | Lebanese (NPL) | Syrian (NPL) |
|--------------|----------------|--------------|----------------|--------------|
| 0 | 0.00 | 0.01 | 0.13 | 0.21 |
| 1 | 0.04 | 0.12 | 0.28 | 0.46 |
| 2 | 0.05 | 0.15 | 0.31 | 0.50 |
| 3 | 0.08 | 0.20 | 0.39 | 0.58 |
| 4 | 0.10 | 0.24 | 0.43 | 0.62 |
| 5 | 0.13 | 0.30 | 0.46 | 0.65 |
| 6 | 0.14 | 0.31 | 0.48 | 0.66 |
| 7 | 0.15 | 0.32 | 0.49 | 0.67 |
| 8 | 0.15 | 0.33 | 0.50 | 0.68 |
| 9 | 0.16 | 0.34 | 0.52 | 0.69 |
| 2020 average | 0.10 | 0.23 | 0.40 | 0.57 |

COMPOUNDING MISFORTUNES

Changes in Poverty since the onset of Covid-19 on Syrian Refugees and Host Communities in Jordan, the Kurdistan Region of Iraq and Lebanon

KRI

| Month | Resident (IPL) | Syr Refugee (IPL) | IDP (IPL) | Resident (NPL) | Syr Refugee (NPL) | IDP (NPL) |
|--------------|----------------|-------------------|-----------|----------------|-------------------|-----------|
| 0 | 0.05 | 0.08 | 0.09 | 0.01 | 0.02 | 0.01 |
| 1 | 0.14 | 0.19 | 0.18 | 0.04 | 0.08 | 0.05 |
| 2 | 0.13 | 0.19 | 0.17 | 0.04 | 0.08 | 0.05 |
| 3 | 0.13 | 0.18 | 0.17 | 0.04 | 0.08 | 0.04 |
| 4 | 0.12 | 0.18 | 0.17 | 0.03 | 0.08 | 0.04 |
| 5 | 0.12 | 0.17 | 0.16 | 0.03 | 0.08 | 0.04 |
| 6 | 0.12 | 0.17 | 0.16 | 0.03 | 0.08 | 0.04 |
| 7 | 0.11 | 0.17 | 0.15 | 0.03 | 0.08 | 0.04 |
| 8 | 0.10 | 0.16 | 0.15 | 0.03 | 0.07 | 0.04 |
| 9 | 0.10 | 0.15 | 0.14 | 0.03 | 0.07 | 0.04 |
| 10 | 0.09 | 0.15 | 0.14 | 0.03 | 0.07 | 0.04 |
| 11 | 0.08 | 0.14 | 0.13 | 0.03 | 0.07 | 0.03 |
| 12 | 0.08 | 0.13 | 0.12 | 0.03 | 0.07 | 0.03 |
| 13 | 0.07 | 0.13 | 0.11 | 0.02 | 0.07 | 0.03 |
| 14 | 0.07 | 0.13 | 0.11 | 0.02 | 0.07 | 0.03 |
| 15 | 0.07 | 0.12 | 0.11 | 0.02 | 0.07 | 0.03 |
| 16 | 0.07 | 0.12 | 0.11 | 0.02 | 0.07 | 0.03 |
| 17 | 0.07 | 0.12 | 0.11 | 0.02 | 0.07 | 0.03 |
| 18 | 0.07 | 0.12 | 0.11 | 0.02 | 0.07 | 0.03 |
| 19 | 0.06 | 0.12 | 0.11 | 0.02 | 0.07 | 0.03 |
| 20 | 0.06 | 0.12 | 0.11 | 0.02 | 0.07 | 0.03 |
| 21 | 0.06 | 0.12 | 0.10 | 0.02 | 0.07 | 0.03 |
| 2020 average | 0.11 | 0.16 | 0.15 | 0.03 | 0.07 | 0.04 |
| 2021 average | 0.07 | 0.13 | 0.11 | 0.02 | 0.07 | 0.03 |

4. Quarterly estimates

In this section, estimates of the poverty changes at the quarterly level are also provided. In Q2 of 2020, Jordanians face a 37 p.p. increase at the international poverty line and a 36 p.p. at the national poverty line, while Syrian refugees face a 18 p.p. and 15 respectively, and both groups recover by Q2 of 2021. In Lebanon, by Q4 of 2020, Lebanese experience a 32 p.p. increase at the international poverty line and a 54 p.p. at the national poverty line, and the Syrian refugees experience 54 p.p. and 42 p.p. increase, respectively. In KRI, in Q2 of 2020, the host community experiences a 22 p.p. and 9 p.p. increase in poverty, and the refugees a 20 p.p. and 9 p.p., and the IDPs a 27 p.p. and 8 p.p. at the international poverty line and national poverty line respectively.

Estimated Quarterly Changes in Poverty at the National and International Poverty Lines

| | International Poverty Line | | National Poverty Line | |
|---------|----------------------------|---------|-----------------------|---------|
| | Jordanian | Refugee | Jordanian | Refugee |
| Q1 2020 | 0 | 15 | 0 | 12 |
| Q2 2020 | 37 | 33 | 36 | 27 |
| Q3 2020 | 29 | 22 | 27 | 16 |
| Q4 2020 | 24 | 17 | 23 | 12 |
| Q1 2021 | 11 | 15 | 9 | 10 |
| Q2 2021 | 0 | 14 | 0 | 10 |
| Q3 2021 | 0 | 16 | 0 | 11 |
| Q4 2021 | 0 | 16 | 0 | 12 |

| | International Poverty Line | | National Poverty Line | |
|---------|----------------------------|---------|-----------------------|---------|
| | Lebanese | Refugee | Lebanese | Refugee |
| Q1 2020 | 0 | 6 | 0 | 18 |
| Q2 2020 | 13 | 37 | 33 | 52 |
| Q3 2020 | 27 | 53 | 50 | 58 |
| Q4 2020 | 32 | 60 | 54 | 60 |

| | International Poverty Line | | | National Poverty Line | | |
|---------|----------------------------|---------|-----|-----------------------|---------|-----|
| | Resident | Refugee | IDP | Resident | Refugee | IDP |
| Q1 2020 | 0 | 5 | 3 | 0 | 2 | 0 |
| Q2 2020 | 22 | 25 | 30 | 9 | 11 | 8 |
| Q3 2020 | 16 | 23 | 27 | 7 | 7 | 7 |
| Q4 2020 | 11 | 18 | 20 | 5 | 6 | 5 |
| Q1 2021 | 6 | 14 | 11 | 2 | 5 | 4 |
| Q2 2021 | 1 | 8 | 5 | 0 | 5 | 2 |
| Q3 2021 | 0 | 8 | 5 | 0 | 4 | 2 |
| Q4 2021 | -1 | 7 | 5 | 0 | 4 | 1 |

Links and sources

- ¹ For Jordan, results reflect data in three governorates only: Amman, Mafraq, and Zarqa.
- ² <http://data2.unhcr.org/en/situations/syria>; World Bank. 2020. The Fallout of War : The Regional Consequences of the Conflict in Syria. Washington, DC: World Bank. © World Bank. <https://openknowledge.worldbank.org/handle/10986/33936> License: CC BY 3.0 IGO
- ³ The Hashemite Kingdom of Jordan, Ministry of Planning and International Cooperation, Jordan Response Plan 2020-2022, <http://www.jrp.gov.jo/Files/JRP%202020-2022%20web.pdf>
- ⁴ World Bank. 2020. Poverty and Shared Prosperity 2020: Reversals of Fortune. Washington, DC: World Bank. doi: 10.1596/978-1-4648-1602-4. License: Creative Commons Attribution CC BY 3.0 IGO, <https://openknowledge.worldbank.org/bitstream/handle/10986/34496/9781464816024.pdf>
- ⁵ International Labour Organization, COVID-19 crisis and the informal economy Immediate responses and policy challenges, May 2020, https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/briefingnote/wcms_743623.pdf
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- ⁷ WFP Lebanon, Minimum expenditure basket for Syrian refugees in Lebanon: Rights-based versus expenditure-based approaches (March 2020), <https://reliefweb.int/report/lebanon/minimum-expenditure-basket-syrian-refugees-lebanon-rights-based-versus-expenditure>
- ⁸ UNICEF, WFP, UNHCR, Multi-Sectoral Rapid Needs Assessment: COVID-19 – Jordan: Exploring the impact of COVID-19 on families in Jordan' <https://www.unicef.org/jordan/reports/multi-sectoral-rapid-needs-assessment-covid-19-jordan> <https://reliefweb.int/report/jordan/covid-19-impact-households-jordan-rapid-assessment-may-2020-enar>
- ⁹ ARK/UNDP Lebanon Perception Survey (Wave 8) July 2020: both Lebanese (67 percent) and Syrians (44 percent) consider competition for low-skilled jobs as the main source of inter-community tensions.
- ¹⁰ UNHCR, MENA COVID-19 Emergency Education Response Update, November 19 2020, <https://data2.unhcr.org/fr/documents/details/83123>
- ¹¹ UN Women, 2018, Unpacking Gendered Realities in Displacement - Syrian Refugees (Lebanon, Jordan, Iraq); UN, March 2019: <http://arabstates.unwomen.org/en/digital-library/publications/2018/12/unpacking-gendered-realities-in-displacement>
- ¹² Ibid
- ¹³ UNHCR, Mental Health and Psychosocial Response during COVID-19 Outbreak, June 2020, available at <https://reporting.unhcr.org/sites/default/files/UNHCR%20MENA%20Mental%20Health%20and%20Psychological%20support%20during%20COVID-19%20-%20June%202020.pdf>
- ¹⁴ Krishnan et al, Coping with the Influx Service Delivery to Syrian Refugees and Hosts in Jordan, Lebanon, and Kurdistan, Iraq, 2016 <https://openknowledge.worldbank.org/bitstream/handle/10986/34172/Coping-with-the-Influx-Service-Delivery-to-Syrian-Refugees-and-Hosts-in-Jordan-Lebanon-and-Kurdistan-Iraq.pdf?sequence=4&isAllowed=y>
- ¹⁵ For analysis of the impact of COVID-19 on Jordanians nationally, see Refaat, Rodriguez, Wai-Poi, Griffin and McCartney (2020).
- ¹⁶ See Krishnan et al., 2016, for detailed information of the survey design.
- ¹⁷ A household's sector is based on the sector reported by randomly chosen individuals within the household. Where this information is not available despite a household reporting wage labor or own-account income, it has been imputed based on observable characteristics.
- ¹⁸ The SRHCS survey does not include a consumption module but does include an income module. The resulting income distributions have been transformed to national consumption distributions as described in a following section.
- ¹⁹ Refaat et al, World Bank, Jordan Economic Monitor: Weathering the Storm: Spring 2020 <https://www.worldbank.org/en/country/jordan/publication/jordan-economic-monitor-june-2020>
- ²⁰ It is acknowledged that these assumptions are constantly changing as the crisis unfolds and the pandemic takes its course. As more data emerge, these assumptions and ensuing results will be revised.
- ²¹ See World Bank (2020), Beirut Rapid Damage and Needs Assessment, August 2020.
- ²² These projections come from the October 2020 World Bank Macroeconomic and Poverty Outlook for Iraq.
- ²³ World Bank, Migration and Development Brief 33, October 2020.
- ²⁴ Survey data in Jordan on debt and savings suggest this is not a strong assumption for the bottom half of the distribution, while the months long economic crisis in Lebanon preceding the COVID-19 crisis means many households likely have depleted savings (or cannot access them due to banking restrictions).
- ²⁵ These figures are based on the Central Administration of Statistics of Lebanon <http://www.cas.gov.lb/index.php/economic-statistics-en/cpi-en> - other estimates exist (e.g. TradingEconomics and WFP estimates) that can be used for further analysis.
- ²⁶ Similar to Jordan, the baseline poverty rate is assumed at the poverty of the host community, which is why the graph starts at 0 for the Lebanese graph.
- ²⁷ The planned response by the Government of Lebanon for Lebanese citizens discussed earlier will be modelled and included in a later version of this paper. Simulations have found that it would reduce the impact of COVID-19 significantly (perhaps by around half), although the underlying data and methodology differ from this three-country report and are not comparable and not reported here (see World Bank (forthcoming) Project Appraisal Document for Lebanon Emergency Crisis and Covid-19 Response Social Safety Net).
- ²⁸ To ensure consistency with the macro-economic assumptions there is not variation in the shock within the sector in which households work in. Doing so is an extension to be implemented as soon as new phone survey data emerge which would then allow a better assessment of the distributional impact of the shock.
- ²⁹ Jordanian's population for Amman, Mafraq, and Zarqa only is 3,994,840, as estimated by the end of 2017 based on the official census. The Syrian refugee population is based on the refugees registered with UNHCR in these three governorates: 431,168.
- ³⁰ Calculated in relation to the total estimated number of refugees in Lebanon, at 1.5million
- ³¹ These figures are calculated based on a population size of 6855713, according to the UN population statistics, of which an unofficial estimate of 1500000 Syrian refugee.
- ³² The population of the host community of KRI (5,167,166) is based on the SWIFT 2017-18 estimates of population. Syrian refugee population (237,052) is based on UNHCR registration numbers in KRI, and the IDPs population size (643,251) is based on the IOM Displacement Tracking Matrix for KRI.

