BRIEF 3

Welfare in forcibly displaced populations: from measuring outcomes to building capabilities [1]

Leveraging Harmonized Data to Improve Welfare among Forcibly Displaced Populations and their Hosts: A Technical Brief Series

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Introduction

This is the third in a series of three technical briefs produced by the World Bank's Poverty and Equity Global Practice to share results of a multi-country data harmonization exercise concerning forcibly displaced populations (FDPs) and host communities. The work aims to inform policy and operational decisions in countries affected by forced population displacement. The data harmonization exercise incorporates survey findings from 10 countries across five regions that hosted FDPs in the period 2015 to 2020. The first brief in the series provided background on the data harmonization effort and discussed its methodology, then drew on the data to construct a multidimensional profile of FDPs and host communities across diverse contexts. The second brief leveraged the harmonized data to shed light on a critical policy question for countries hosting FDPs: whether and how legal restrictions on refugees affect key labor market and welfare outcomes. The analysis showed a positive association between more liberal refugee policy regimes and better socio-economic outcomes of refugees. This third brief makes the case for analyzing welfare among FDPs and hosts in terms of capabilities and explores the measurement and data issues involved. Comparing data from Cox's Bazar, Bangladesh, and Uganda, the brief finds evidence that more liberal refugee policy regimes may have advantages for nurturing key capabilities in FDP populations that can ultimately support productivity and integration. The brief then draws on the full harmonized database to develop a richer, multi-contextual picture of differences between FDPs and hosts, in particular with respect to capabilities. A suggestive finding is that greater similarities in employment and assets between hosts and refugees are observed in countries with relatively progressive refugee policies.

A broad concept of welfare is vital to support FDPs and hosts

The number of people worldwide belonging to forcibly displaced populations has risen by about 131 percent in the last decade, reaching a historic high of 89 million in 2021. With the war in Ukraine and further displacement elsewhere in 2022, total forced displacement currently exceeds 100 million people globally.[2] The number of refugees worldwide was 21.3 million at the end of 2021, more than double the figure from a decade ago. The number of Venezuelans displaced abroad was also estimated at 4.4 million in 2021.[3] Many FDPs have been living in refugee camps or outside their countries of origin for very long periods.[4] Devictor and Do (2016) estimate that people who were refugees at the end of 2015 had been in exile for an average duration of 10.3 years and a median duration of 4 years. They note that the average duration of exile has varied between 10 and 15 years since the late 1990s.

A broad understanding of welfare for FDPs is important to inform and prioritize policy responses, as the size and length of displacement worldwide is testing the limits of humanitarian aid and raising questions about sustainability. With needs largely exceeding resources allocated toward protection, inclusion policies allowing refugees to contribute to national economies are emerging as a necessary component of the long-term response to the global refugee crisis. Evidence, particularly from developed countries, shows that supporting forcibly displaced populations living abroad to achieve better lives requires providing opportunities to recover, work, and invest in their children's human capital (Devictor, 2016). Economic integration is key, as lack of work opportunities and limited agency can hamper social integration, leading to long-term discouragement and deepening fragility (World Bank, 2022). Inclusion policies need to consider that the integration of refugees is especially complex, as they have often experienced trauma, loss of assets, and long periods traveling or in temporary living arrangements (Brell, Dustmann, and Preston, 2020).

A capabilities approach to FDP welfare: benefits and measurement challenges

For a broad understanding of welfare, Sen's normative capability approach is useful, as it moves attention away from meeting specific basic needs to process aspects related to freedom and agency (Sen, 1997). Separating the concept of outcomes from the ability to achieve outcomes and functionings is important in all situations, but it is core to understand the challenges of displaced populations. The capability approach emphasizes independence of circumstances and diversity in preferences as key factors in how people make choices. A challenge, however, is how to measure capability. To do so requires identifying elements that can speak to people's capabilities and complement more traditional monetary and outcome-based measures.

The data infrastructure to quantify and monitor FDPs' opportunities and capabilities is still in early stages. This is especially relevant for developing countries, which host the largest share of these populations. Three-fourths of all refugees, refugee-like, and stateless populations are hosted in only 19 countries, 17 of which are developing countries. Increasing attention has been paid to monitoring outcomes such as monetary poverty or access to basic needs and to

including refugees in national household surveys across these countries. For example, extensive efforts have been made to estimate monetary poverty numbers for refugees and forcibly displaced populations as part of monitoring Sustainable Development Goal 1 (SDG 1) globally. Humanitarian monitoring systems have also invested in tracking basic needs such as access to water and sanitation, housing, schooling, or immunization, mostly in camp settings. Yet, particularly in cases where humanitarian aid is large, attaining certain predefined outcomes (e.g., low monetary poverty or adequate access to basic services) does not necessarily inform about specific constraints on the ability of displaced people to make decisions and reach desired outcomes.

Purpose and structure of this brief

This brief illustrates the value of collecting a broad range of indicators for both displaced and hosts in the same survey and of going beyond comparing outcomes, particularly monetary poverty, to get a full picture of the constraints faced by FDPs. The analysis relies on a rich set of representative harmonized data on displaced and hosts populations across 10 countries. The brief first focuses on two specific settings characterized by quite different policy responses to FDPs: Cox's Bazar, Bangladesh, and Uganda. Focusing on these contexts allows us to compare consumption patterns and monetary poverty (in the case of Uganda) between refugees and hosts, in order then to analyze the relationship between caloric intake or poverty and markers of opportunities such sources of income and ownership of productive assets (e.g., land and livestock). We then use the full harmonized database to look at how similar refugees and hosts are across a range of settings in terms of household composition, education, assets, and employment and to identify key differentiating features between the two populations, notably with respect to capabilities.

The brief is structured as follows. The section immediately following this introduction describes the data sources. In subsequent portions, we analyze data from Cox's Bazar and Uganda, contrasting the situations of displaced people in these two settings with regard to opportunities and capabilities. An additional analysis then uses the harmonized dataset to explore differentiating factors between hosts and refugees across multiple settings, again with an eye to tracking differences in refugee policy regimes and seeing how these relate to what available evidence can tell us about capabilities. The brief's final section presents our conclusions.

Data sources

This successive sections of this brief draw on the following data sources: the 2019 Cox's Bazar Panel Survey, the 2018 Uganda Refugee and Host Communities Household Survey, and the harmonized database which contains data from these two surveys and others spanning a total of 10 jurisdictions that have received recent influxes of FDPs.

The Cox's Bazar Panel Survey

In late August 2017, many displaced Rohingya people arrived in the Cox's Bazar district of Bangladesh, fleeing violence in Myanmar. Within a period of four months, some 724,000[5] newly arrived persons joined other Rohingya who had fled earlier waves of violence. By the end of 2018, nearly 2,000 campsites in the Cox's Bazar sub-districts of Teknaf and Ukhia hosted around 912,000 Rohingya. The arrival of Rohingya increased the total population of the Cox's Bazar district by 32 percent.[6] The influx of displaced Rohingya into Cox's Bazar has created the densest known concentration of displaced people in the world, reaching 11.7 square meters per person in some local camp settings.[7] This significant population moved into areas that were already poor and vulnerable before the influx.[8]

The Cox's Bazar Panel Survey (CBPS) baseline was completed in August 2019. It is a representative survey of the post-2017 population of displaced Rohingya and households in host communities in Cox's Bazar.[9] The survey was designed to assess the implications of the 2017 Rohingya influx into Cox's Bazar for the living standards and welfare of the host population in a representative way. Three survey strata were defined: (i) Rohingya campsites, (ii) host communities with high exposure (i.e., living near the camps), and (iii) host communities with low exposure.[10] The CBPS was administered to 5,019 households evenly split between host communities and Rohingya campsites. Two randomly selected adults in each household were interviewed: 9,685 individuals completed the adult questionnaire. Response rates were very high, reaching 99.8 percent of the target sample of households. Adult response rates were 96.2 percent. The survey's questionnaire collected individual as well as household information. It covers aspects like education, nutrition, employment, access to basic services, and incidents of crime and conflict. Importantly for our purposes, the survey includes a household consumption module.

The Uganda Refugee and Host Communities Household Survey

Uganda is the country in Sub-Saharan Africa hosting the most refugees. Uganda is one of the largest refugee-hosting nations in the world, with about 1.5 million refugees and asylum-seekers, mainly from South Sudan (61 percent), the Democratic Republic of Congo (28 percent), Somalia (4 percent), Burundi (3 percent), and Rwanda (2 percent), along with smaller populations from other countries. The vast influx of refugees is linked to several factors in Uganda's neighboring countries, especially war and violence in South Sudan and the Democratic Republic of the Congo and associated economic strain and political instability in the region. The large bulk of the refugee influx took place between 2015 and 2017, when the number of refugees in the country almost doubled because of the crisis in South Sudan.

The analysis in this brief is based on the 2018 Uganda Refugee and Host Communities Household Survey (URHS). The URHS was a collaborative effort between the Office of the Prime Minister (OPM), the Uganda Bureau of Statistics (UBOS), and the World Bank. The data were collected during the months of June and July 2018 by UBOS. The survey is representative of the refugee and host community populations of Uganda at the national level. It is also representative of the refugee and host populations in the regions of West Nile and Southwest and the city of Kampala. The host population is defined as the native population in districts where refugee settlements are situated. The survey questionnaire is comprehensive and closely follows the official national survey, the UNHS (Uganda National Household Survey), which the government of Uganda uses to monitor the wellbeing of the country's population and measure poverty. Moreover, the consumption and income modules are comparable to those in the UNHS, allowing us to estimate poverty figures that are comparable to official rates.

The harmonized database

The datasets included in the harmonization effort cover a range of key recent displacement contexts: the Venezuelan influx in Latin America's Andean states; the Syrian crisis in the Mashreq; the Rohingya displacement in Cox's Bazar; and forcible displacement in Sub-Saharan Africa (Sahel and East Africa). The harmonization exercise encompasses 10 different surveys. These include nationally representative surveys with a separate representative stratum for displaced populations; sub-national representative surveys covering displaced populations and their host communities; and surveys designed specifically to provide insights on displacement contexts. Most of the surveys were collected between 2015 and 2020.[11]

Findings

Cox's Bazar: Supporting basic needs is vital but not sufficient

The CBPS baseline shows that access to food in Rohingya camps was widespread at the time of the survey and that calories consumed were at adequate levels, on average, and similar between Rohingya and hosts.[12] Table 1 shows the calories consumed by displaced Rohingya and host populations. Both average and median calories are statistically the same for the displaced and hosts. Appendix Figure B.1 presents the distribution of calories per capita for Rohingya and hosts and suggests that, in terms of calories, the Rohingya may actually have been better off than their hosts at the time of the baseline survey. Displaced Rohingya households were 50 percent less likely than hosts in Cox's Bazar to consume below 2100 calories per person a day, controlling for other observed differences between the two groups, such as demographics, education, and employment (Appendix Table B.1). More than 6 in 10 calories consumed came from cereals, both in camps and outside them (Appendix Table B.2).

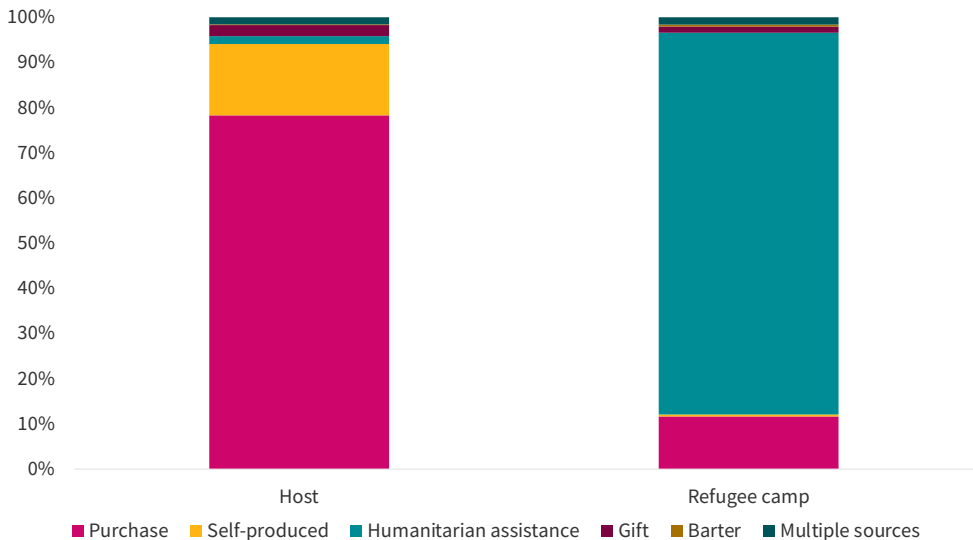**Table 1. Average and median calories consumed per day, Cox's Bazar**

Group	Median	Mean	95% confidence interval for mean		P-value difference with Rohingya displaced
Rohingya displaced	2,185	2,261	2,221	2,301	-
Hosts	2,082	2,283	2,239	2,326	0.23

Source: Authors' calculations using CBPS baseline.

The similarity in food intake between displaced Rohingya and hosts reflects the large presence of humanitarian aid. Between 2017 and 2020, an average annual grant of US$634 million was allocated to the Rohingya crisis response.[13] The humanitarian effort was largely successful in delivering basic needs and food security to the displaced population, as shown above.[14] Figure 1 shows how Rohingya and hosts obtain calories. There is a clear contrast, with the camp populations obtaining about 84 percent of all food consumption from humanitarian aid, while 78 percent of hosts purchased their food. The main sources of calories (cereals and oils) are largely obtained from aid among the displaced Rohingya in camps. A later transition to e-vouchers allowed camp beneficiaries to access a variety of items using monthly entitlement top-ups on their cards. While the modality changed, the dependency on aid has remained.[15]

Both consumption patterns and purchase of items which have never been provided as assistance are still suggestive of the needs of Rohingya households for additional liquidity to increase the variety of food consumed. Despite aid being the main source of calories, Rohingya households acquired items not included in food aid baskets (e.g., meat and fruits), consistent with self-reported needs for more food diversity. This additional liquidity or top-up purchasing power comes from cash generated by members of Rohingya households, either through volunteer work, cash assistance, or by selling assistance items that they have received (a pattern widely seen in these camps). For instance, CBPS baseline data indicated that about 6 percent of Rohingya households consumed vegetables sourced from bartering. However, follow-up surveys collected on the CBPS sample show that consumption and purchase of non-assistance declined has for Rohingya since 2019. This reduction in purchasing power could be due to strengthened regulations introduced at the end of 2019 to limit cash-for-work programs and/or COVID-19-induced humanitarian operational contractions in camps in mid-2020.[16]

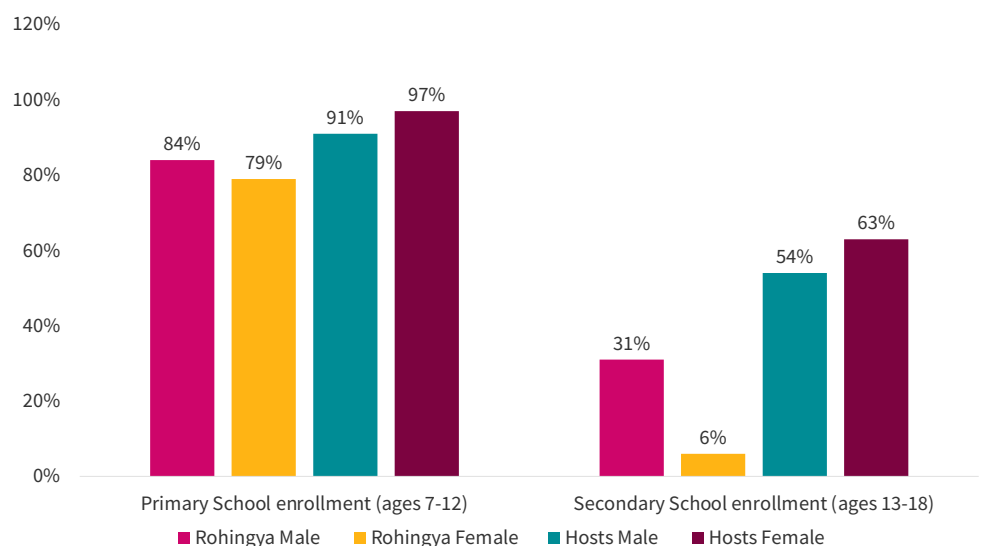**Figure 1.** How Rohingya and hosts obtain their food (% of total consumption by source)

Source: Authors' calculations using CBPS baseline.

Legend: Purchase | Self-produced | Humanitarian assistance | Gift | Barter | Multiple sources

Displaced Rohingya have low education, barely own productive assets, and experience a high burden of mental health conditions. According to the CBPS baseline, about 6 in 10 Rohingya adults never attended school, and an additional 22 percent who attended did not complete primary school. In contrast, 1 in 3 host adults never attended school. Only 23 percent of Rohingya adults can read, compared to 60 percent of hosts. Solar panels for energy and cook stoves are more common in camps and provide Rohingya households with access to energy and means of cooking. Cell phone ownership is lower in camps than for hosts, but still quite widespread (80 percent among Rohingya, compared to about 95 percent for hosts). Yet Rohingya in camps experienced large losses of productive assets during their displacement, as they could not carry those assets with them. CBPS data show that poultry is the only income-generating asset reported by a notable share of households (10 percent) (Appendix Table B.3). Available evidence also points to a severe burden of mental health conditions among displaced Rohingya, including children and youth. This could have long-term consequences for productivity and employment.[17]
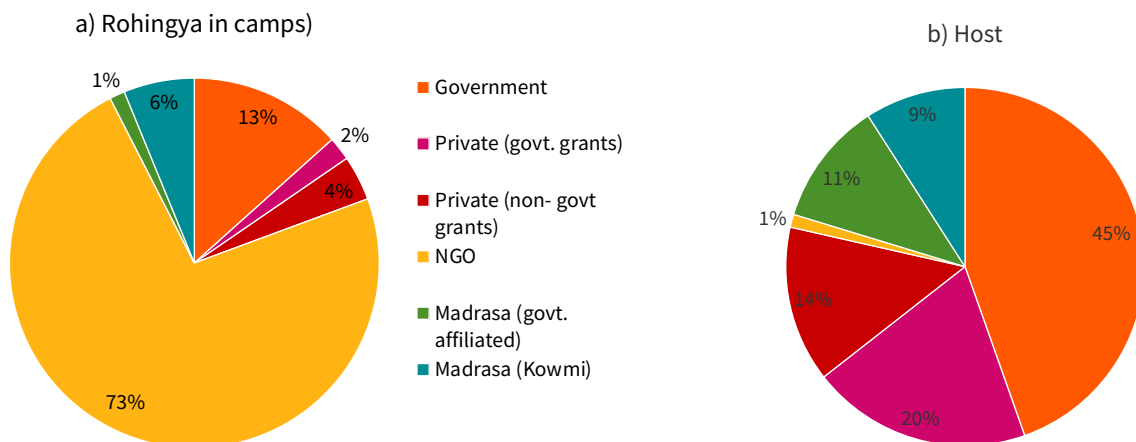
Access to standardized education for the largely young camp population highlights obstacles to longer-term integration. About 50 percent of the Rohingya were less than 15 years of age in 2019, compared to 38 percent of the host population. While 91 percent of host male children (ages 7-12) were in school, only 84 percent of Rohingya boys attended school (Figure 2). Gender gaps in enrollment are reversed between the two populations, with Rohingya girls having lower attendance overall, even lower than Rohingya boys. Secondary school attendance is lower for both populations, but strikingly so for Rohingya. Moreover, while 58 percent of school-age Rohingya children report being enrolled in an educational institution, the majority do not have access to regulated formal education. Rohingya children in campsites have very limited access to public or private schooling with standardized curriculum and instruction (Figure 3). More than 70 percent of these children go to schools run by various non-governmental organizations.

Figure 2. Enrollment rates for children in Cox's Bazar

Source: CBPS 2019.

Figure 3. Type of school attended by children ages 7-18

a) Rohingya in camps)

b) Host

Legend: Government; Private (govt. grants); Private (non- govt grants); NGO; Madrasa (govt. affiliated); Madrasa (Kowmi)

Source: CBPS 2019.

Efforts to improve the longer-term wellbeing of the Rohingya in camps and reduce their dependency on aid cannot be realized without tackling movement and work restrictions. Even six years into the crisis, work and movement restrictions remain a fundamental constraint that is fueling aid dependency in Cox's Bazar. Bangladesh is not a signatory to the 1951 Refugee Convention, and Rohingya are referred to as "Forcibly Displaced Myanmar Nationals." A focus on their eventual return to Myanmar has undermined incentives to support more permanent solutions. Formal employment in Bangladesh is illegal for Rohingya displaced, and strict movement restrictions limit access to informal work outside camps. According to the CBPS, only 1 in 3 displaced individuals were participating in the labor force (that is, were employed or actively seeking work in 2019). While 64 percent of working-age Rohingya men participated in the labor force, labor force participation among women was only 8 percent. Most employed Rohingya reported working for NGOs (83 percent of employed men and 61 percent of employed women).

The Cox's Bazar example underscores that simple comparisons of access to food or basic needs must be complemented with a broader understanding of capabilities and legal constraints to inform a development response. In this context, humanitarian assistance has been largely successful in meeting the basic needs of the displaced Rohingya. However, Rohingya continue to face challenges in terms of access to formal education for their children, livelihood and employment opportunities, and overall freedom of movement. In this protracted displacement situation, the data highlight the need to focus on tackling work and movement restrictions as a solution to aid dependency.

Uganda: A policy model that supports FDPs capabilities

Refugees living in Uganda are poorer than the host population in monetary terms. The Uganda Refugee and Host Communities Household Survey (URHS) allows us to compare household consumption and monetary poverty for refugees and hosts using a consistent methodology. The comparison reveals that refugees are 3.5 times more likely to be poor than hosts (Figure 4). Appendix Figure B.2 illustrates the same point by showing that refugees are more likely to belong to the poorest quintiles in terms of household per capita consumption. Refugees are more likely to live with more dependents, which increases their likelihood of being poor. Moreover, while refugees experience relatively small gaps, relative to hosts, in access to electricity or in terms of house ownership, they are less likely to own land, livestock, or a non-crop farming enterprise (Appendix Table B.4). Employment rates are also significantly lower for refugees compared to hosts. These factors matter for poverty. Controlling for these differences in demographics, education, employment, and assets, the odds of being poor for refugees compared to hosts fall from 3.5 to about 1.8 times higher (Figure 4 and Appendix Table B.5).

Figure 4. Odds of being poor for refugees compared to Ugandans
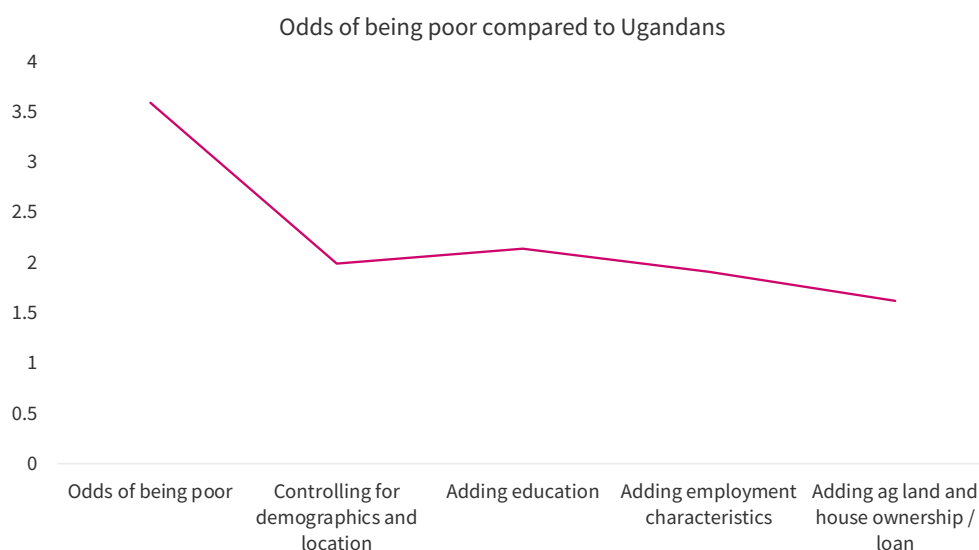
Source: Authors' calculations using URHS.

Despite higher monetary poverty rates among refugees in Uganda, other markers signal a progressive inclusion policy environment. Established in the 2006 Refugees Act and 2010 Refugees Regulations, Uganda's approach to refugee hosting has been recognized as progressive.[18] Refugees have the right to live in settlements rather than in refugee camps. Moreover, refugees are free to choose to live anywhere in the country. Compared to hosts, refugees have overall higher access to improved sanitation, water, and electricity. To increase refugees' chances to become self-reliant, the government of Uganda provides refugees with small plots of land so they can build their shelters and grow their crops. More than 9 in 10 refugees own their dwelling, with no significant difference by monetary poverty status (Appendix Table B.4). School attendance rates for boys are higher for refugees than non-refugees, though gaps remain for girls (World Bank, 2019). There are also positive signs of social integration between refugees and host communities. Around 60 percent of refugee households in the West Nile and Southwest regions report that their children have Ugandan friends with whom they share recreational spaces. About 8 in 10 refugees report feeling secure and welcomed in Uganda, evidence of the country's overall openness towards their presence (World Bank, 2019).

With time, there is significant improvement in the poverty and employment status of refugees. A simple comparison of poverty rate by tenure in the country shows that refugees who have spent between 2 and 5 years in Uganda have a poverty rate that is half that estimated for those living in the country for less than 2 years. Furthermore, while employment rates are lower for refugees (Figure 5a), length of stay in Uganda is also positively correlated with higher employment (Figure 5b). While these correlations may also capture differences across refugee cohorts or policies over time, there appear to be encouraging signs of integration, and conditions do improve with length of stay.

While aid dependency is significant, there is also a negative association between receipt of aid and time in the country. Aid dependence among refugees is high, with about 54 percent reporting aid as the main source of income (Figure 6). Yet, aid reliance goes down with time in the country, falling to 37 percent for refugees who arrived more than 5 years ago (World Bank, 2019). The importance of aid highlights the need to enhance the income-generating ability of refugees. Wage income is limited among refugees, and a key income source that distinguishes poor and non-poor refugees is the receipt of remittances. While agriculture is the main source of income for hosts, this source of income is very limited for refugees, and those engaged in agricultural production suffer from lack of access to irrigation and other critical inputs.

The analysis for Uganda highlights a very different set of constraints for improving the welfare of refugees, compared to Cox's Bazar. While poverty is higher for refugees in Uganda, the enabling environment is much more conducive to integration than the context of Cox's Bazar, where poverty levels are probably similar between displaced Rohingya and hosts, due to the strong role of aid in providing food in camps. The analysis shows that a large part of the higher likelihood of being poor for refugees compared to hosts in Uganda is determined by observed differences in demographics, education, employment, and assets. In addition, the data from Uganda allow us to look at how time in the country improves refugee outcomes to shed light on potential progress in refugees' integration. While aid dependency is still high in Uganda, it falls with time in the country.

While Uganda's policies have been progressive, available evidence points to further steps that are needed for refugees to build their productive assets and generate more income. Refugees in Uganda still struggle to find jobs and long-term economic opportunities. Using the same database cited here, World Bank (2019) finds that ensuring access to high-quality agricultural inputs, accompanied by extension services, can help increase incomes from agricultural production among refugees with access to land (mostly through rights). Similarly, investment in water management not only enhances people's income, but also reduces their vulnerability to weather shocks. For more recently arrived refugees with lower access to land, programs geared towards skills training may yield higher wage returns. Most refugees in Uganda live in rural settlements far from urban areas. Loiacono and Vargas (2019) find that refugees living in settlements are more likely to be depressed and are less active on the job market compared to urban refugees. These researchers' analysis shows that the Ugandan policy does help refugees who cannot sustain themselves in a city but may come at the cost of lower reported quality of life. The authors also find evidence of discrimination by small and medium enterprises (SMEs) in major urban areas; incomplete or wrong information around the legal status of refugees in the country; discrepancies between what refugees typically do when looking for jobs and what firms ask from job seekers; and a generally low level of trust towards locals.

Figure 5. Employment rates and relationship with length of stay in Uganda
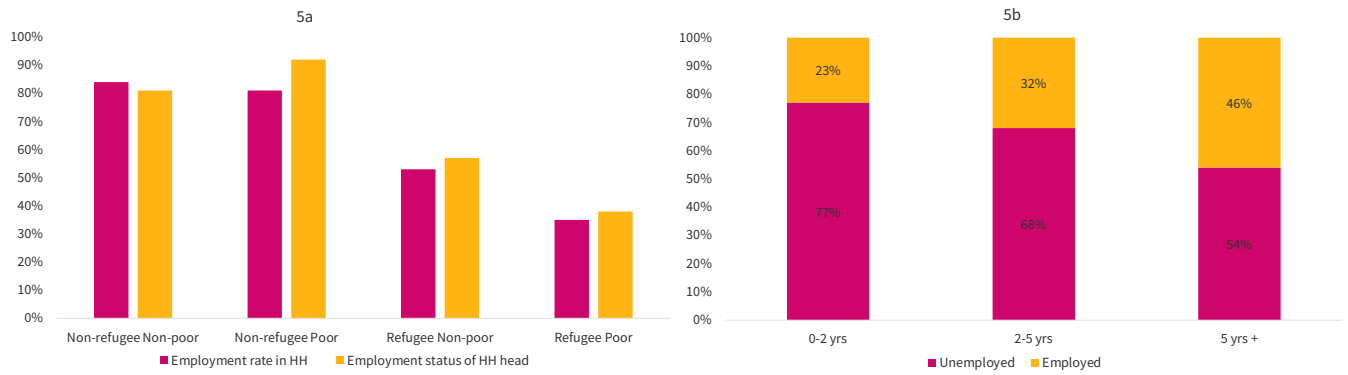
Source: Authors' calculations using URHS.
Note: HH = household.

Figure 6. Main sources of income for refugees and hosts
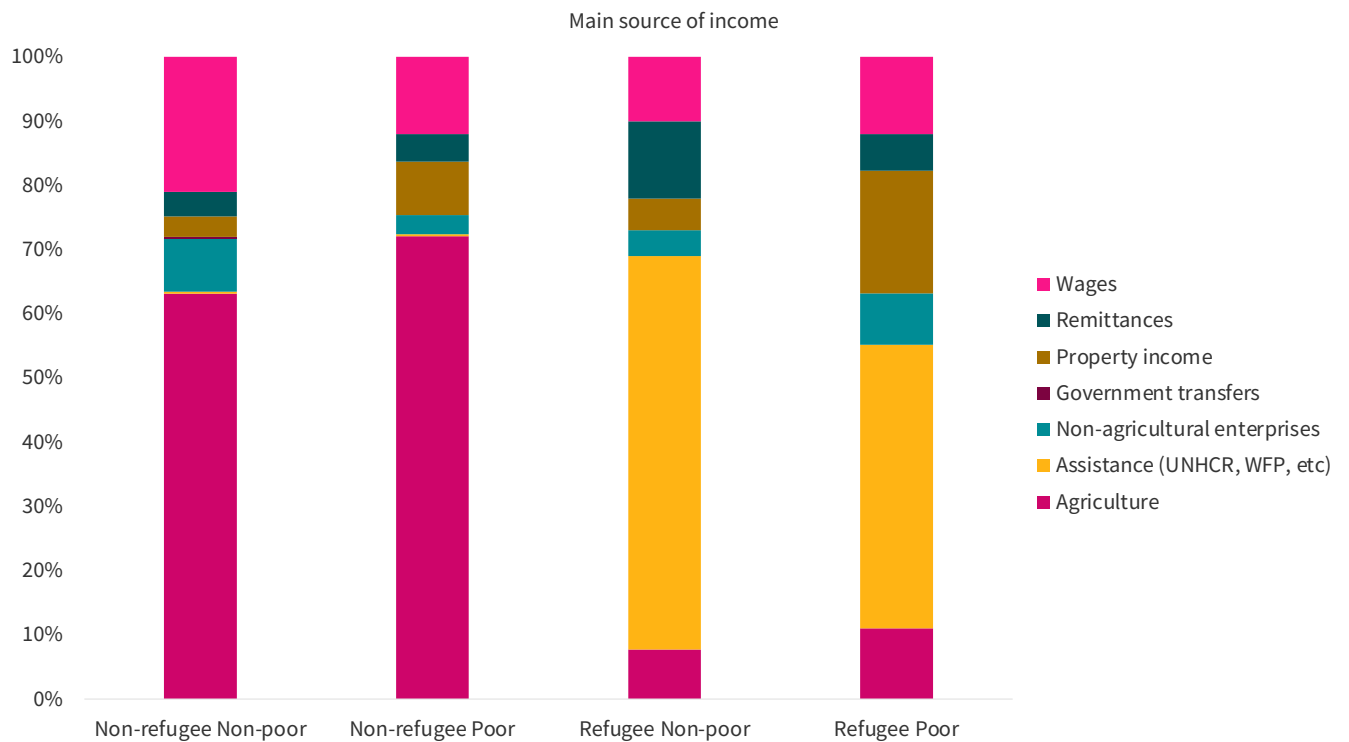
Source: Authors' calculations using URHS.

Factors that differentiate hosts and refugees using the harmonized data

The examples of Cox's Bazar and Uganda show that monetary poverty information is not sufficient to inform about underlying gaps in endowments and opportunities for any population, but in particular those forcibly displaced. As shown for Uganda, with a more liberal legal environment, the poverty gap between hosts and refugees partly reflects differences in households' composition, levels of education, and the skills that adult refugees acquired before displacement and bring with them. These factors may facilitate or hinder their participation in the labor market, vis a vis hosts. Differences in poverty may also reflect variation in opportunities provided in the host country to build productive assets and access markets, along with less frequently measured factors such as discrimination and exclusion, among others.
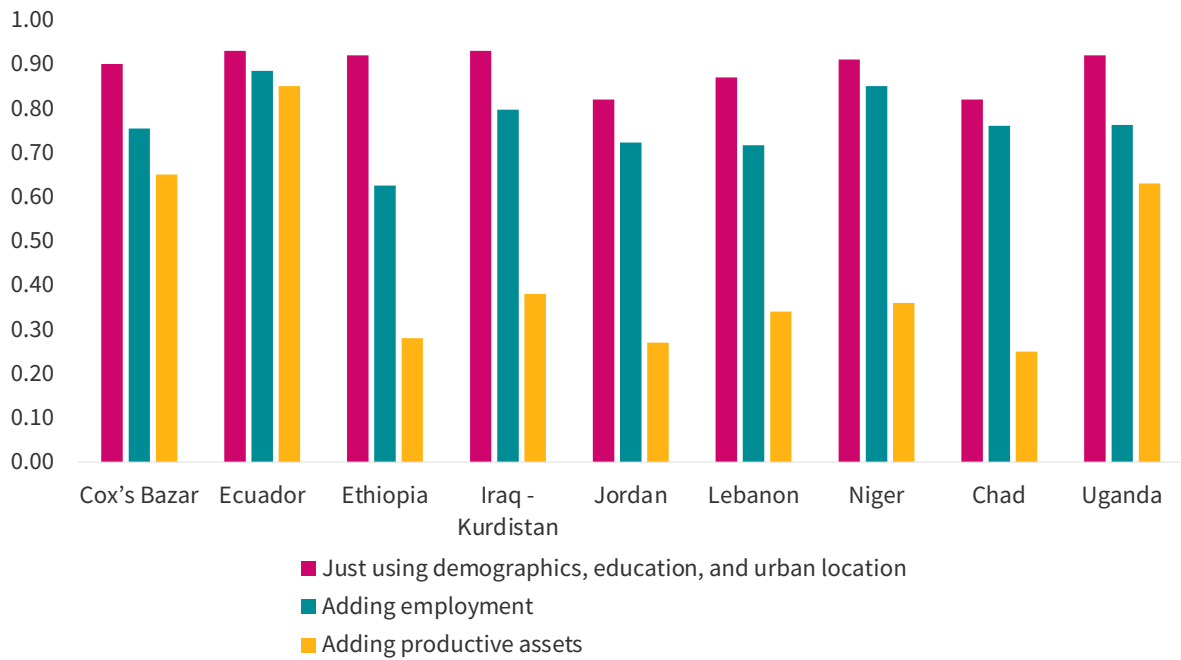
The analysis here builds on Brief 1 and the harmonized data set, to show which factors are the most distinctive between hosts and refugees. Brief one in this series contrasted hosts and refugees/displaced people in terms of demographics, education, and assets using the harmonized data. In this section, the analysis uses a propensity score matching technique that looks at the overlap across characteristics for the two populations to shed light on the degree of similarity between hosts and refuges are across settings. Appendix A presents more details on how this is calculated.

While refugees on average tend to be younger, live in larger households, and have lower education, there are significant similarities with the host population when looking only at these dimensions. Figure 7 (and Appendix Figure A.1) summarizes the similarity on these basic characteristics (i.e., demographics, education of the household head, and urban location) and shows that, in the settings considered, many hosts share demographic and education levels comparable to the refugees/displaced.[19]

However, when employment and productive assets are considered, hosts and refugees exhibit significant differences. When factors such as employment rates, type of work, and productive assets are compared, the overlap or similarity between hosts and refugees declines substantially (Figure 7 and Appendix Figures A.2 and A.3), though the extent of the shift depends on the setting. In other words, it is relatively easier to distinguish whether a household was displaced or not when their labor and productive characteristics are known. While numerous unobserved factors may determine the extent of the overlap between the two populations, this simple analysis indicates why it is important to triangulate different metrics of the capacity to generate income to assess differences between hosts and refugees across most countries. This also underscores why attention should be paid to better measuring those elements to understand variation in outcome measures such as monetary poverty.

A suggestive pattern is that greater similarities in employment and assets between hosts and refugees are observed in Uganda and Ecuador, which also are relatively progressive in their policies. Figure 8 plots the degree of similarity between refugee/displaced populations and their hosts and its relationship with a score measuring how liberal refugee policies are in the countries considered, in terms of free movement, access to the labor market, and other public services. The figure shows that there exists a positive relationship between the two variables, suggesting that settings where displaced and non-displaced households show higher similarity levels tend to coincide with more progressive asylum policies.[20] An interesting pattern is seen for Cox's Bazar, where the degree of similarity is very high but the enabling environment is restrictive, which could be partly explained by the fact that both populations were very similar and highly poor to begin with.

Figure 6. How similar are refugees/displaced and hosts?

- Just using demographics, education, and urban location
- Adding employment
- Adding productive assets

Source: Authors' calculations using the harmonized database.
Note: Figures present a similarity score based on propensity sore matching. See Appendix A for details on how the score is constructed.

Figure 7. Relationship between degree of similarity and liberality of asylum policy
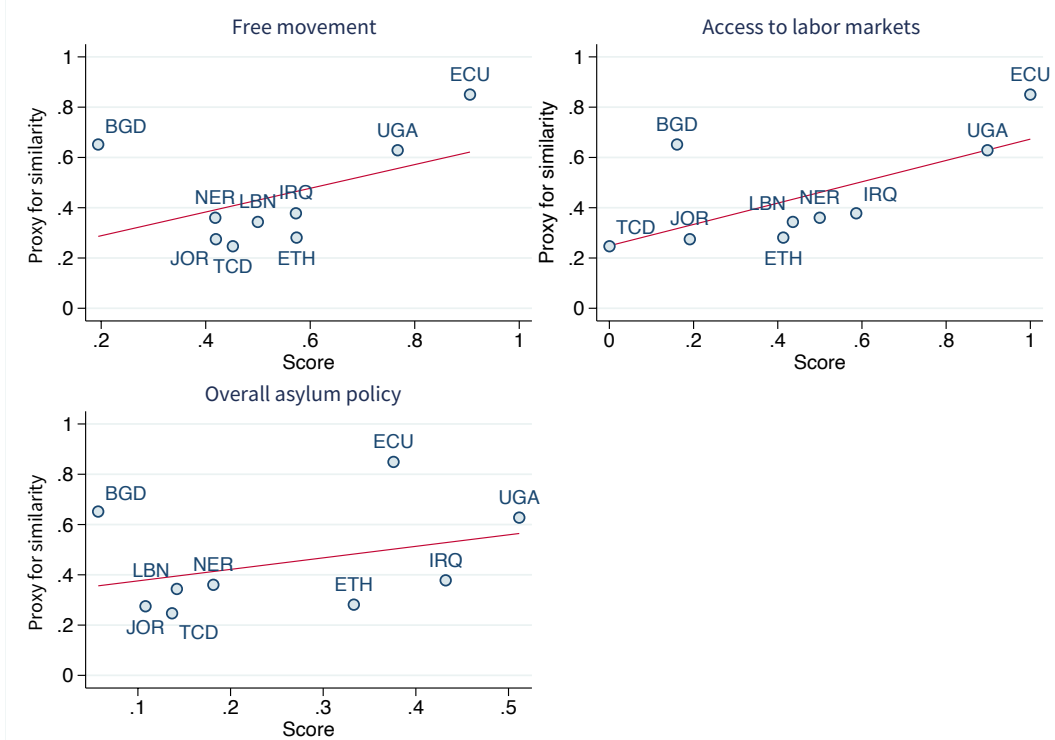
Source: Authors' calculations using the harmonized database.
Note: Figures present a similarity score based on propensity sore matching. See Appendix A for details on how the score is constructed.

Discussion

This brief illustrates the importance of going beyond the narrower monetary poverty framework to assess the wellbeing of displaced populations. A more comprehensive understanding of constraints faced by FDPs, in turn, requires data that capture a broad range of indicators for both displaced people and hosts in the same survey. The analysis above highlights several key points.

First, monetary poverty is not an adequate summary statistic for displaced people's welfare when the capability deprivations introduced by legal restrictions to mobility and work are significant. The analysis illustrates that, particularly in camp settings where livelihoods depend largely on humanitarian aid, the relationship between caloric intake or monetary poverty and people's capacity to generate income and be prosperous is likely to be significantly weaker. For the displaced Rohingya in Cox's Bazar, Bangladesh, food consumption and calorie intake are very similar to, even higher than, those of the host population in the same district. Yet Rohingya livelihoods are entirely dependent on aid, and restrictions on work and movement fuel this aid dependency. In contrast, in Uganda, while poverty is higher for refugees and challenges remain, some important measures indicate better prospects for integration and a clearer path out of aid dependency in a more progressive legal environment. This highlights the importance of triangulating between standard welfare indicators and the opportunities afforded to FDPs and why focusing only on standard welfare indicators can lead to incomplete and incorrect inferences.

Second, to inform inclusion policies, we need to measure indicators that can help in understanding the broader constraints that limit capabilities and access to opportunity. Using a broader set of indicators that capture mobility and opportunity is key to assessing welfare for all, and particularly for refugees. Using the harmonized database, we showed that markers of access to opportunities (i.e., work and ownership of productive assets) are key differentiating features between hosts and refugees across the various settings analyzed but that similarities between the two populations are greater in more liberal settings. While these findings cannot be interpreted as causal, they emphasize the value of triangulating a broad set of indicators to assess welfare. Ultimately, labor incomes depend on many elements (e.g., education, infrastructure, connectivity, legal frameworks, etc.). Factors such as health, language skills, and networks are also important to understand, as they also determine economic outcomes (Brell, Dustmann, and Preston, 2020). While collecting consumption data can be useful, especially under time and budget constraints, this should not come at the cost of measuring employment, assets, and other markers of agency and economic-social integration.

Systematic data collection across a broad range of indicators is necessary to shape effective policies and interventions; it opens the door to using evidence to guide policy through a better understanding of potential trade-offs and costs of policies for hosts. The recent review by Brell, Dustmann, and Preston (2020) highlights the value of such data in developed countries to illustrate the significant heterogeneity in outcomes among refugees across different host countries. The general pattern shows that refugees start off behind other immigrants in employment and wages and that, while refugees catch up over time, this catch-up is more pronounced in employment rates than in wages. Systematic data collection should be a priority to generate evidence on the impact of inclusion policies on hosts in developing settings, as well.

Acknowledgments

Bibliography / End Notes

1. Front page photo: World Bank / Tanvir Murad Topu. Last page photo:© The World Bank Group, All Rights Reserved.
2. https://www.unhcr.org/en-us/globaltrends.html
3. https://www.unhcr.org/en-us/globaltrends.html
4. https://www.unhcr.org/en-us/figures-at-a-glance.html
5. United Nations High Commissioner for Refugees (UNHCR) refugee population factsheet (as of 15 July 2019) http://data2.unhcr.org/en/situations/myanmar_refugees
6. Staff calculation based on UNHCR refugee population factsheet (as of 15 July 2019) and Bangladesh Bureau of Statistics (BBS) population census 2011.
7. This is the density reported for Camp 3 in Ukhia in the UNHCR assessment "Settlement and protection profiling of all camps Ukhia/Teknaf, Cox's Bazar, Bangladesh, round 5, July 2019."
8. Host households in Cox's Bazar live in largely rural areas of the district, where consumption poverty is both high and significantly worse than the national average of 24.5 percent. Poverty rates outside the district capital of Cox's Bazar Saddar are higher than both the national and district averages, with the primary hosting subdistricts of Teknaf and Ukhia reporting small-area poverty estimates of 30 percent and 40 percent respectively. In 2016, only 55 percent of adults over 18 in Cox's Bazar reported being literate. In addition, only half of all households reported access to electricity, and less than 3 percent reported access to piped water. According to the 2011 census, infrastructure and social indicators are also significantly worse outside the district capital and notably in the primary hosting sub-districts.
9. The CBPS is the result of a partnership between the Yale Macmillan Center Program on Refugees, Forced Displacement, and Humanitarian Responses (Yale Macmillan PRFDHR), the Gender & Adolescence: Global Evidence (GAGE) program, the Poverty and Equity Global Practice of the World Bank, and the State and Peacebuilding Fund (SPF), administered by the World Bank. The SPF is a global fund to finance critical development operations and analysis in situations of fragility, conflict, and violence.
10. For more information about the sampling design see Endara et. al. (2022).
11. For more information see Brief 1 in this series.
12. The CBPS collects information on consumption of food and non-food items (including transport expenditures and household supplies) using a recall methodology. For the former, the time frame is the past 7 days from interview, while consumption of non-food items extends to the past 30 days from interview. The consumption module was administered to an adult older than 15 years, knowledgeable about the household's food and non-food consumption and expenditures.
13. United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA) Financial Tracking Service. "Bangladesh: 2020 Joint Response Plan for Rohingya Humanitarian Crisis (January- December)." https://fts.unocha.org/appeals/906/summary
14. World Bank (2020). "Cox's Bazar Local Government Capacity and Service Delivery Assessment. Options of Using LGIs for Service Delivery, Local Economic Development and Disaster Management." Washington, DC: World Bank.
15. https://www.worldbank.org/en/country/bangladesh/brief/cox-s-bazar-panel-survey-briefs
16. https://www.worldbank.org/en/country/bangladesh/brief/cox-s-bazar-panel-survey-briefs
17. Corna et al. (2019) document mistrust, depression, post-traumatic stress disorder (PTSD) symptoms, and sleeping problems among the markers of distress in Cox's Bazar camps. Some months after arriving in Bangladesh, almost half of Rohingya children reported experiencing indicators of distress and sleeplessness (IOM 2018). More recent data collected as part of the CBPS effort confirm the prevalence of trauma and experiences of violence among the displaced Rohingya (Guglielmi et al. 2020). Analysis of the trauma and mental health and the crime and conflict modules of the CBPS reveals that 1 out of 2 Rohingya reported having been close to death, and 44 percent reported having experienced torture or combat situations. While only 6 percent of Rohingya reported having personally experienced rape or sexual abuse, the large majority had either witnessed it or heard about others' experience. Hussam et at (2022) also show that 38 percent of Rohingya displaced in their study sample screened as moderately or severely depressed is comparable to, for example, Syrian refugees in Greece (Poole et al., 2018) and emphasize the implications of low employment

opportunities on psychological wellbeing in Cox's Bazar camps. While concerted efforts to address mental health and trauma have been a part of the humanitarian effort, the 2020 Joint Response Plan for the Rohingya Crisis noted the urgent need for scaled-up psychosocial support for children under the age of 18 (UNHCR, 2020).

18. Overall, the regulatory framework embodies the following key refugee protection principles and freedoms: i) property rights and access to land, ii) right to access employment and engage in income generating activities, iii) right to access public social services including education and health, iv) freedom of movement and association, and v) the right to documentation and equality before the law.

19. The specific characteristics considered for each country in this analysis can be found in Table A1, Appendix A.

20. Details on the definition of the similarity measure can be found in Appendix A, and definitions of each policy dimension are provided in the second brief of this series.

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Appendix A: Measuring the similarity between displaced households and their hosts

Propensity scores are one useful tool for accounting for observed differences between two groups of individuals, for example, refugees vs. hosts. A propensity score is a number between 0 and 1 expressing the probability of belonging to one of the groups –in this case, the group of displaced households–, given a set of characteristics. Once the propensity score is calculated, it is possible to graph the percentage of individuals with scores within a given range for each of these groups, as presented in Figures A.1, A.2 and A.3. The more the graphs of both groups overlap across score values, the higher the common support.

As mentioned, propensity scores are specific to the set of characteristics considered. For Figure A.1, the propensity scores were calculated using only demographic characteristics, education of the household head, and whether households live in an urban area. Propensity scores used in Figure A.2 also include employment, and in Figure A.3 add asset ownership variables. These propensity scores were obtained by taking predictions after a Probit regression. The complete regression with all the variables is included in Table A.1.

Finally, Figure 7 and Table A2 present a measure summarizing the similarity between refugees and their hosts based on the R2 of the propensity score matching regression. This similarity measure is computed as one minus the R2 from the Probit regressions used to obtain the propensity scores. Its values can be interpreted as the percentage of the group classification that is not explained by the variables included. Thus, a high value means that the characteristics considered are not too different for hosts and refugees. The larger this value, the higher the common support between host and refugees. By comparing the second and third columns of the table it is possible to observe that including more characteristics in the estimation of the propensity score increases the dissimilarity between groups in all contexts or reduced the common support. The dissimilarities increase when including variables related to the labor market and asset ownership. The values for the second column correspond to regressions adding employment, and the values in the third column when adding assets.

Table A.1. Probit regressions including demographic characteristics, education, and employment and asset indicators

	Cox's Bazar		Ecuador		Ethiopia		Iraq - Kurdistan		Jordan	
	Odd ratio	SE	Odd ratio	SE	Odd ratio	SE	Odd ratio	SE	Odd ratio	SE
HH Size	0.92	(0.02)**	0.96	(0.02)+	1.19	(0.03)**	1.05	(0.04)	1.04	(0.03)
Share of kids <15	1.41	(0.21)*	1.56	(0.32)*	0.45	(0.09)**	3.01	(1.30)*	2.16	(0.67)*
Share of elderly >64	0.47	(0.12)**	0.84	(0.15)	0.37	(0.09)**	5.81	(4.08)*	0.99	(0.47)
Female HH head	0.81	(0.05)**	0.89	(0.07)	1.13	(0.09)	0.85	(0.21)	0.87	(0.14)
Urban										
Education of household head										
Primary incomplete	0.88	(0.05)*			1.05	(0.10)				
Primary complete	0.38	(0.04)**	1.34	(0.40)	0.92	(0.15)	1.27	(0.17)+	1.28	(0.17)+
Secondary incomplete	0.57	(0.04)**	1.99	(0.66)*	1.16	(0.11)	1.64	(0.33)*	0.56	(0.10)**
Secondary complete	0.72	(0.14)+	2.49	(0.73)**	1.00	(0.21)	1.23	(0.29)	0.62	(0.11)**
Higher than secondary but not university	1.07	(0.56)	3.96	(1.34)**	0.49	(0.09)**	0.76	(0.24)	0.32	(0.09)**
University incomplete or complete	0.18	(0.06)**	3.08	(0.91)**	0.45	(0.10)**	1.06	(0.27)	0.62	(0.14)*
Labor force participation rate in HH	4.79	(4.28)+	1.51	(0.28)*	2.24	(0.53)**	59.69	(34.67)**	4.48	(1.64)**
Employment rate in HH	0.03	(0.03)**	2.93	(0.51)**	0.16	(0.04)**	0.44	(0.23)	0.28	(0.11)**
HH head's Employment status										
Paid Employee			0.76	(0.10)*	0.49	(0.06)**	0.62	(0.13)*	0.77	(0.12)+
Non-Paid Employee			0.21	(0.14)*	0.70	(0.26)				
Employer			0.38	(0.08)**			0.81	(0.20)	0.58	(0.24)
Self-employed			0.64	(0.09)**	0.54	(0.08)**	0.47	(0.12)**	0.41	(0.15)*
Other			1.21	(0.36)	0.50	(0.08)**	0.45	(0.18)*	0.25	(0.10)**
HH head's Economic sector										
Agriculture	0.26	(0.03)**	0.86	(0.15)	0.59	(0.08)**	1.23	(0.51)	2.17	(1.06)
Industry	0.89	(0.09)	1.32	(0.15)*	1.37	(0.24)+	2.37	(0.41)**	1.13	(0.18)
Services	0.52	(0.05)**	1.15	(0.11)	0.92	(0.12)	1.02	(0.17)	0.96	(0.18)
Other	1.05	(0.11)								
Ownership of agriculture land					0.37	(0.04)**				
Ownership of a motorized vehicle	0.19	(0.07)**					0.41	(0.05)**	0.24	(0.04)**
Ownership of house	0.60	(0.05)**			0.07	(0.01)**	0.06	(0.01)**	0.05	(0.01)**
Non-improvised dwelling			1.95	(0.35)**	0.44	(0.03)**			0.11	(0.03)**
Rooms per capita	0.40	(0.05)**	0.60	(0.04)**	1.21	(0.14)+	0.39	(0.05)**	0.71	(0.10)*
Electricity in dwelling	0.41	(0.02)**	0.86	(0.52)	0.44	(0.03)**			1.46	(0.61)
Observations	3,663		1,841		5,168		1,265		2,275	

Notes: Regression at the household level. ** p<0.01, * p<0.05, + p<0.10
Source: Authors' calculations using the harmonized database

Table A.1. Continued

	Lebanon		Niger		Chad		Uganda	
	Odd ratio	SE	Odd ratio	SE	Odd ratio	SE	Odd ratio	SE
HH Size	1.00	(0.03)	0.92	(0.02)**	1.09	(0.02)**	0.97	(0.02)+
Share of kids <15	1.55	(0.41)+	1.00	(0.21)	0.65	(0.12)*	2.36	(0.56)**
Share of elderly >64	0.50	(0.16)*	0.43	(0.11)**	0.97	(0.19)	7.07	(8.25)+
Female HH head	0.62	(0.09)**	1.18	(0.09)*	1.41	(0.11)**	0.96	(0.08)
Urban			1.10	(0.08)	0.07	(0.01)**		
Education of household head								
Primary incomplete	0.74	(0.09)*	14.71	(110.21)	0.67	(0.31)	0.67	(0.07)**
Primary complete	1.21	(0.20)	0.64	(0.08)**	0.82	(0.08)*	0.43	(0.07)**
Secondary incomplete	0.81	(0.09)+	0.50	(0.10)**	1.13	(0.13)	0.66	(0.09)**
Secondary complete	0.84	(0.15)	0.32	(0.15)*	0.86	(0.13)	0.51	(0.10)**
Higher than secondary but not university			2.20	(1.34)	0.89	(0.38)	0.57	(0.10)**
University incomplete or complete	0.66	(0.14)+			1.06	(0.19)	0.77	(0.33)
Labor force participation rate in HH	2.00	(0.60)*	0.79	(0.13)	0.83	(0.14)	1.06	(0.30)
Employment rate in HH	0.43	(0.10)**	0.58	(0.14)*	1.23	(0.25)	0.64	(0.19)
HH head's Employment status								
Paid Employee	1.09	(0.16)	1.09	(0.13)	0.77	(0.10)+	0.39	(0.07)**
Non-Paid Employee			0.46	(0.20)+	1.12	(0.25)		
Employer	0.79	(0.21)					0.35	(0.19)+
Self-employed	0.66	(0.12)*	0.83	(0.09)+	0.68	(0.07)**	0.34	(0.06)**
Other			0.40	(0.16)*	1.54	(0.29)*	0.88	(0.21)
HH head's Economic sector								
Agriculture	1.52	(0.41)					1.13	(0.17)
Industry	1.27	(0.14)*					0.93	(0.17)
Services	0.65	(0.08)**					1.05	(0.16)
Other								
Ownership of agriculture land			0.10	(0.03)**	0.11	(0.01)**	0.23	(0.02)**
Ownership of a motorized vehicle	0.45	(0.04)**	0.17	(0.05)**	0.52	(0.09)**	0.61	(0.11)**
Ownership of house	0.05	(0.01)**	0.16	(0.01)**	0.06	(0.01)**	2.31	(0.24)**
Non-improvised dwelling	0.35	(0.07)**	0.26	(0.02)**	0.81	(0.06)**	0.93	(0.08)
Rooms per capita	0.90	(0.05)+	0.54	(0.09)**	1.23	(0.13)*	1.00	(0.14)
Electricity in dwelling			0.38	(0.05)**	0.82	(0.11)	1.00	(0.08)
Observations	2,809		7,319		9,285		1,788	

Notes: Regression at the household level. ** p<0.01, * p<0.05, + p<0.10
Source: Authors' calculations using the harmonized database

Table A.1. Proxy measure for similarity between refugees/displaced and hosts

Context	1 – R² Figure A.1	1 – R² Figure A.2	1 – R² Figure A.3
Cox's Bazar	0.90		0.65
Ecuador	0.93		0.85
Ethiopia	0.92		0.28
Iraq - Kurdistan	0.93		0.38
Jordan	0.82		0.27
Lebanon	0.87		0.34
Niger	0.91		0.36
Chad	0.82		0.25
Uganda	0.92		0.63

Figure A.1. How similar are refugees/displaced and hosts using just demographics, education, and location variables?

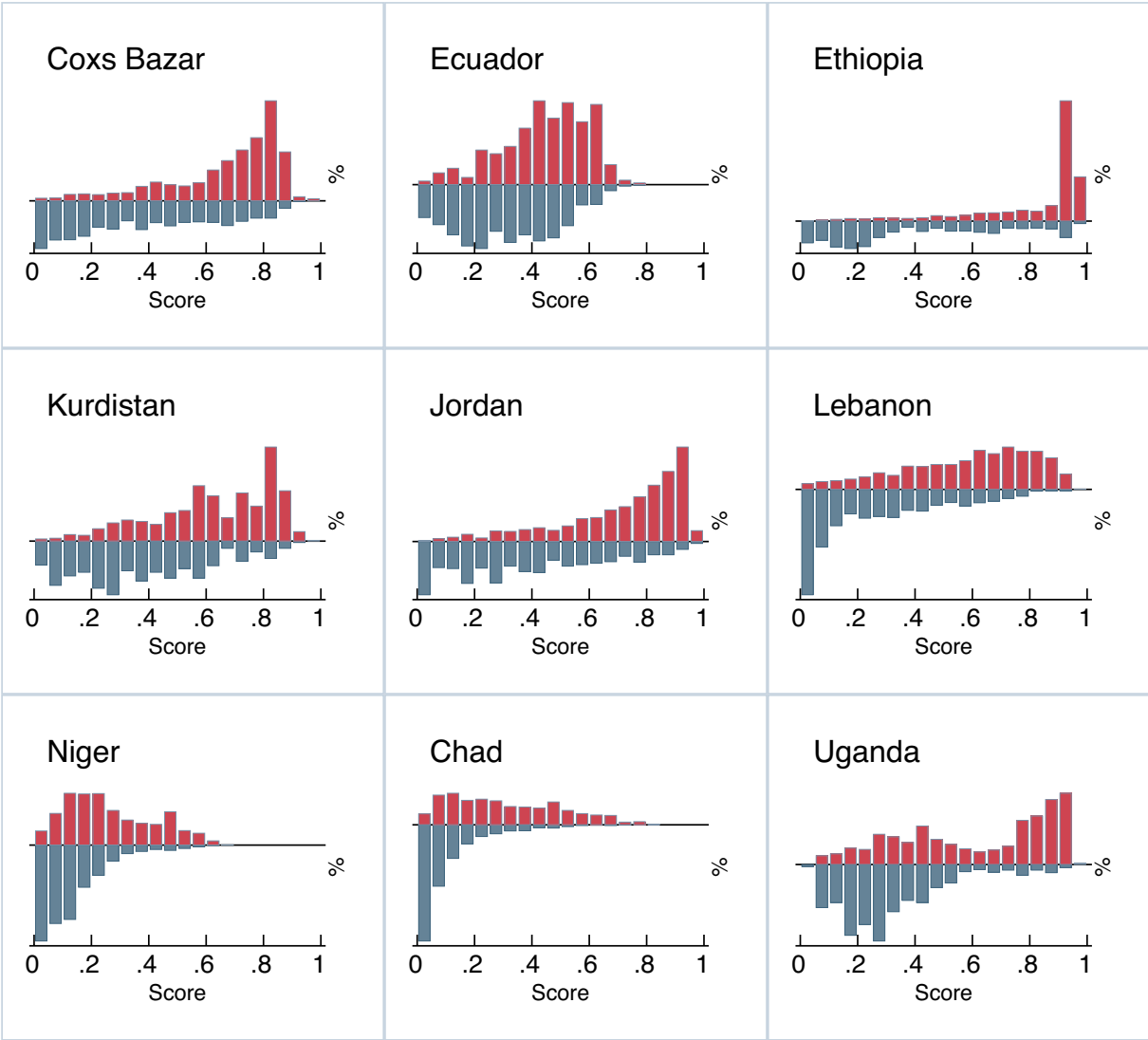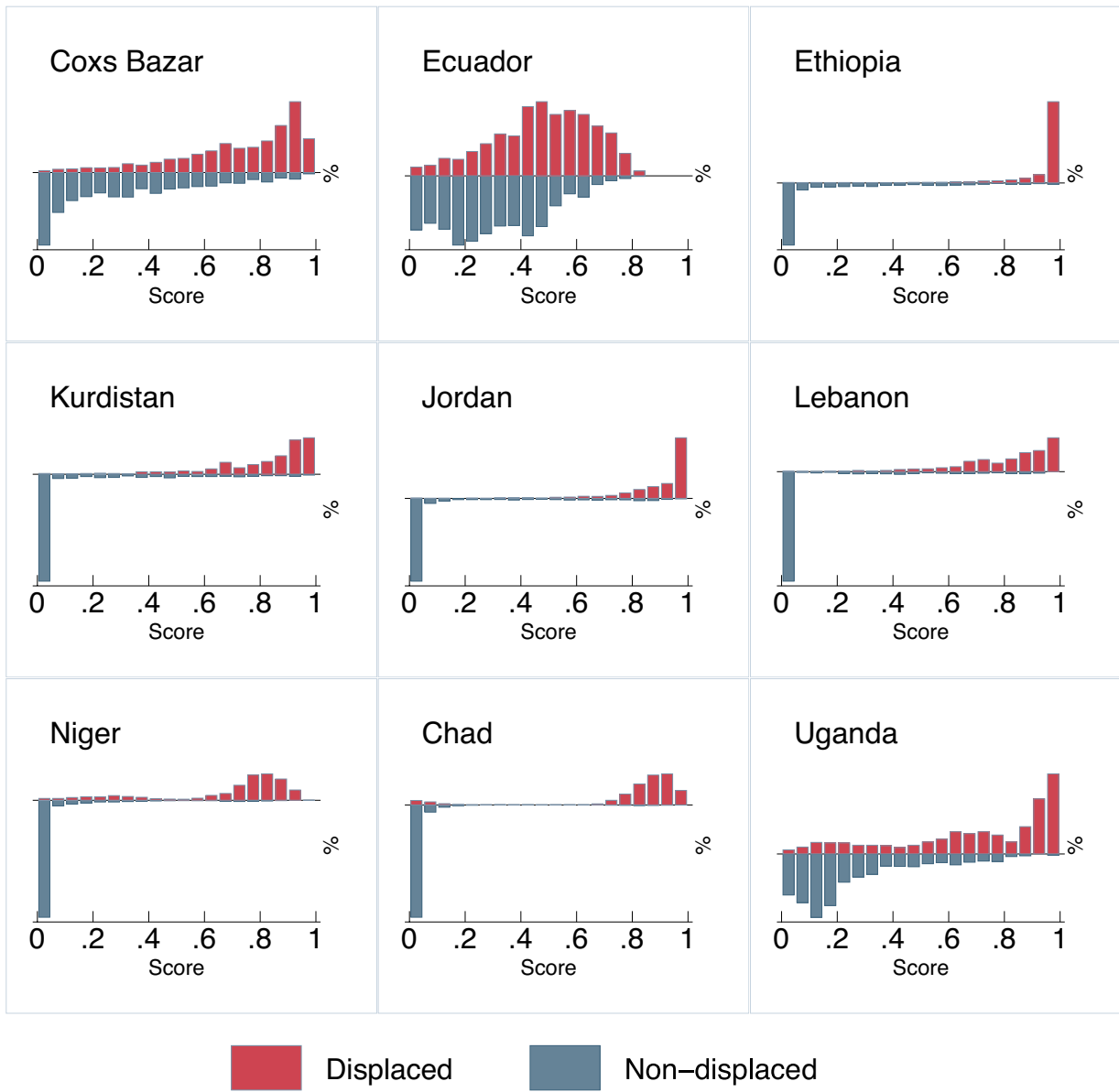Displaced   Non–displaced
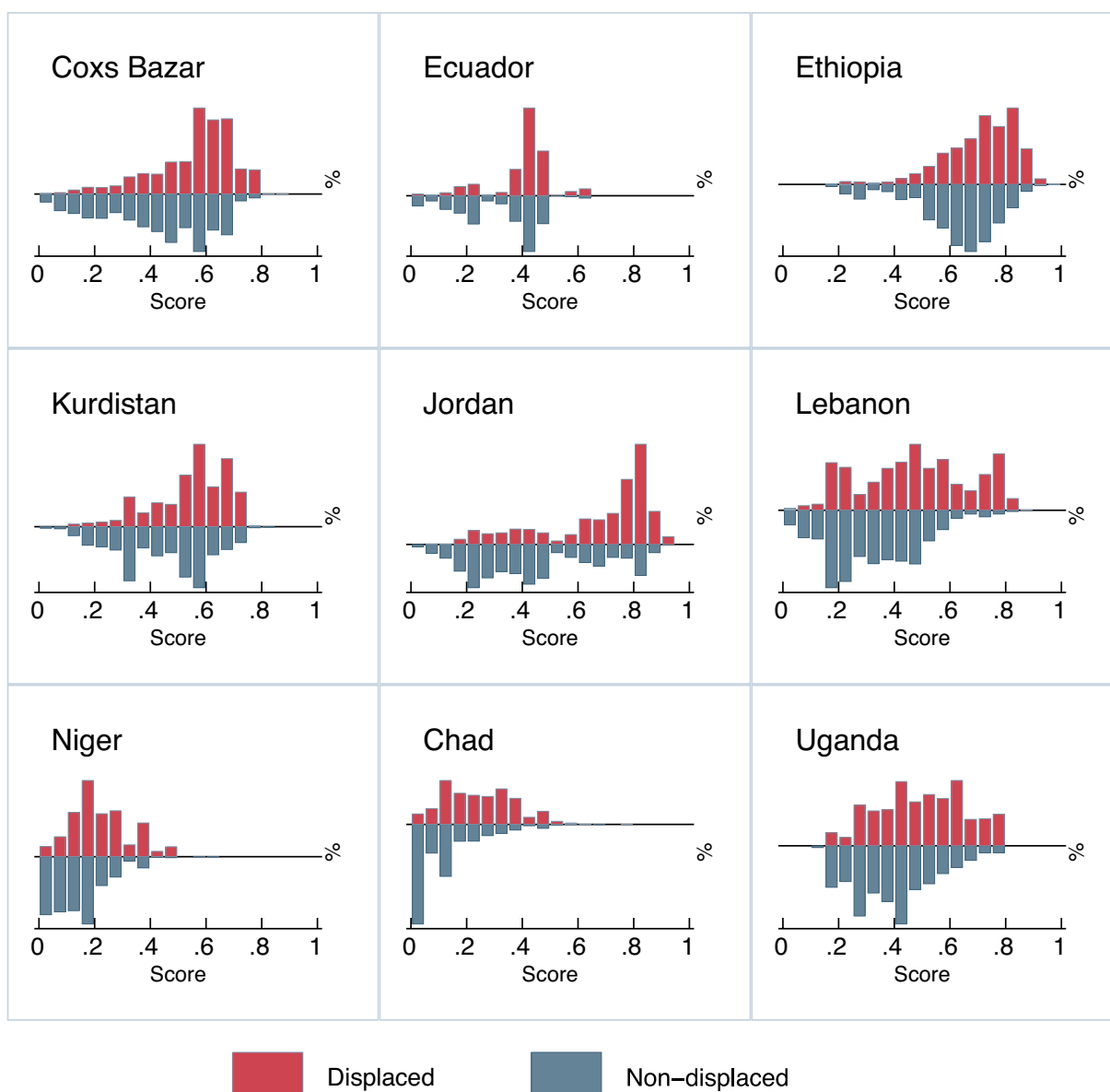
Figure A.2. How similar are refugees/displaced and hosts when also including employment?
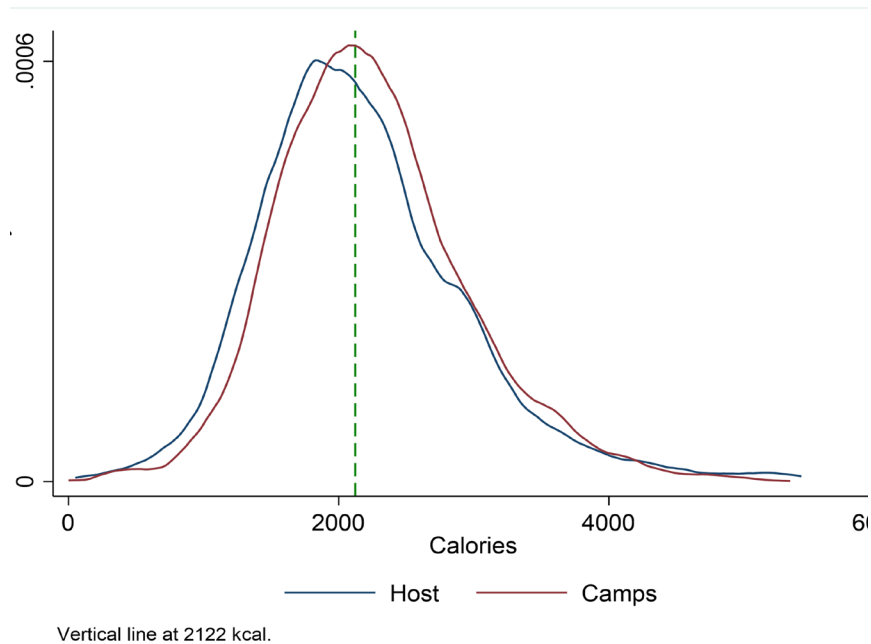

Displaced   Non–displaced

Figure A.3. How similar are refugees/displaced and hosts when also including productive asset indicators?

Displaced   Non-displaced

Appendix B. Additional Figures and Tables

Figure B.1. Distribution of calories consumed for Rohingya in camps and hosts

Vertical line at 2122 kcal.

Source. Authors' calculations using CBPS baseline.
Note: 2122 Kcal is the amount used for the official food poverty line in Bangladesh. In Bangladesh, the food basket includes eleven items (coarse rice, wheat, pulses, milk, oil, meat, fish, potatoes, other vegetables, sugar, and fruits). This food bundle provides the minimal nutritional requirements corresponding to 2,122 kcal per day per person.

Figure B.2. Share of refugees by quintile of per capita household consumption, Uganda

Composition of quintiles by refugee status
By quintile of pc total consumption

Source: Authors' calculations using URHS.