



# BUILDING RESILIENCE FOR FOOD & NUTRITION SECURITY

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## REFUGEES, FOOD SECURITY, AND RESILIENCE IN HOST COMMUNITIES

TRANSITIONING FROM HUMANITARIAN ASSISTANCE TO DEVELOPMENT IN  
PROTRACTED REFUGEE SITUATIONS

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## ABSTRACT

An emerging literature shows how the mass arrival of refugees induces both short- and long-term consequences to hosting countries. The main contribution of this paper is to conduct a selective review of this literature from a food-security and resilience perspective. First, the paper identifies a number of direct and indirect food-security consequences of hosting refugees. It provides a conceptual framework for discussing these various channels through which refugee inflows influence food security in the hosting countries. In the short run, violence, environmental degradation, and disease propagation are risks, with indirect implications for food security, while the long-run channels include changes in infrastructure, trade, and labor markets, as well as competition for resources. Second, the literature review finds that the impact of large-scale influxes of refugees on host communities and on their food security is unequally distributed among the local population. Locals with better ex ante access to resources, education, and political connections are more likely to benefit as a result of refugee inflows, while the disadvantaged become increasingly vulnerable. In the short run, humanitarian aid (for example, food aid) is the usual global response, with varying impact on the food security and resilience of host countries. Effectiveness of the humanitarian aid depends, however, on its nature and on the country context, both of which need careful consideration. In the long run, humanitarian aid should pave the way for development. In particular, investments such as improving road infrastructure and fostering trade with refugees' countries of origin are strategies worth exploring for enhancing resilience and transitioning toward development. Finally, we stress the need for more research on the consequences of refugees and alternative policies on food security and resilience in host communities.

**Keywords:** protracted refugee situations, humanitarian assistance, food security, refugee policy, resilience

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## 1. INTRODUCTION

Every year, thousands of people flee their country or region of origin due to civil unrest. These movements of masses in order to escape violence have increasingly been recognized as a major global phenomenon. After World War II, the newly established United Nations High Commissioner for Refugees (UNHCR) recognized the existence of 400,000 refugees. The decolonization period as well as the resurgence of civil wars after the end of the Cold War led to a rapid increase in the number of people seeking protection in foreign countries, including the mass flight of Kurds from northern Iraq, refugees fleeing interethnic violence in former Yugoslavia, and the more than 2 million Rwandans fleeing to former Zaire, Tanzania, Burundi, and Uganda in 1994. More recently, repeated violence, combined with the severe drought in 2011, is responsible for more than 1 million Somali refugees, who are hosted in their neighboring countries (Kenya, Ethiopia, Yemen, Djibouti, or Eritrea). The civil war in Syria has also been followed by massive flows of refugees, hosted mainly in neighboring Turkey, Lebanon, Jordan, or Iraq. These events, among others, have resulted in a population of more than 8 million refugees in developing countries (UNHCR 2012b). Moreover, people that flee from violence in their place of birth do not always cross international borders but instead become internally displaced persons (IDPs). In 2012, the population of IDPs amounted to 17 million, largely concentrated in Afghanistan, Colombia, Democratic Republic of Congo (DRC), Iraq, Pakistan, Somalia, Sudan, and South Sudan (UNHCR 2012b).

Developed countries have recognized the severity of refugee situations by allocating humanitarian aid as a policy response. Such humanitarian aid can be directed either to the country of origin, in the hope of addressing the root causes of forced migration (Czaika and Mayer 2011), or to the refugee host country as an act of burden sharing (Morel 2009), or to both. Paradoxically, both proponents and opponents of providing humanitarian assistance to address refugee situations blame refugees for being a burden on their host country. Refugees interact with their host economies in various ways and can have far-reaching consequences on their local hosts. One negative consequence—the one most often cited—is the threat that refugees pose to the food security of host countries. Because civil wars can be long lasting, most refugees are likely to reside in host countries for protracted periods, implying significant long-lasting impacts on host communities and their food security. Furthermore, most refugees are hosted in neighboring countries that do not necessarily face better economic conditions and often have preexisting food insecurity. This may place a further burden on hosting populations and may erode their resilience to withstand shocks and achieve food security over time.

The purpose of this paper is to present a selective review of the interdisciplinary literature on the impacts of refugees on host communities' food security and resilience. The main aim is to draw policy insights from the selected literature for enhancing the resilience of host communities to better address food-security and nutrition challenges in protracted refugee situations. Much of the review is restricted to food-security impacts in host communities, which has not received the attention it deserves in policymaking circles. In addition, there is a growing evidence base on the impacts of refugees on host communities, which could inform policymakers about policy options for enhancing resilience and food security in protracted refugee situations. Furthermore, the focus on refugee impacts on the food security of host populations allows us to highlight key research gaps that we believe offer promising avenues for research on policies and interventions to promote resilience in host communities and improve the food security of host populations in protracted refugee situations. The paper is not a *systematic* review (see, for example, White and Waddington 2012). Rather, it is a selective review paper that draws mainly on well-known quantitative studies supplemented with qualitative evidence where deemed necessary.

The rest of the paper is organized as follows. Section 2 explores the regional trends in the estimated refugee population and links them with food insecurity. We document a strong correlation between the size of the refugee population and food security but argue against interpretations in which refugee inflows pose a universal threat to food security in receiving countries. Instead we call for a conceptual framework through which to analyze the consequences of population shocks on food security in hosting countries. In Section 3, we

present such a conceptual framework that discusses the multiple channels through which refugees may influence the food security, resilience, or both of the host population. The different components of that framework are discussed briefly and then linked to case-study evidence from Africa south of the Sahara (SSA). We also discuss studies that have quantitatively estimated the impacts of refugees on host communities using cross-country data. Based on our assessment of the existing literature through the lens of food security, in Section 4 we discuss the solutions usually proposed to deal with protracted refugee situations. Section 5 concludes with some policy recommendations and areas of promising research for moving the resilience agenda forward to strengthen the resilience of hosting populations under a protracted refugee situation.

## 2. REFUGEES AND FOOD SECURITY: A MISLEADING CORRELATION

At the end of 2012, the refugee population throughout the world was estimated to be almost 10 million. While the total number of refugees has not increased substantially during the last five years, the population of IDPs grew by 29 percent, to a total of more than 17 million (UNHCR 2012b). The stock of IDPs grew especially in Asia and the Pacific, the Middle East and North Africa, and Central Africa and the Great Lakes because of renewed displacement due to conflict (UNHCR 2012b). The majority of both the refugee and IDP populations reside in developing countries. One out of three refugees in developing countries is hosted in SSA, mainly originating from three conflict-riddled countries: Somalia (799,300), Sudan (527,800), and the DRC (476,500) (UNHCR 2012b). Moreover, during the last five years the refugee population in SSA increased by 20 percent (Table 2.1), largely as a result of drought-related emergencies and armed conflicts in the Horn of Africa and West Africa (UNHCR 2012b). Especially alarming is the deteriorating refugee situation in the Horn of Africa, which faced a staggering doubling of the number of refugees in the last five years, while it already hosts a large proportion of the long-term refugees.

**Table 2.1 Refugee and internally displaced populations by region, 2007 and 2012**

UNHCR/UN region	Refugees			IDPs		
	2007	2012	5-yr change	2007	2012	5-yr change
	Persons (x 1,000)		(percent)	Persons (x 1,000)		(percent)
<b>Total world</b>	9,680	9,882	2	13,740	17,671	29
<b>Developing countries</b>	7,599	7,567	0	9,215	12,516	36
Africa south of the Sahara	2,271	2,749	21	5,889	6,985	19
Central Africa and Great Lakes	1,100	479	-56	1,694	2,800	65
East and Horn of Africa	815	1,867	129	3,486	3,854	11
Southern Africa	181	135	-26	–	58	–
West Africa	175	268	53	709	273	-61
Middle East and North Africa	2,654	1,519	-43	2,533	3,593	42
Asia and Pacific	2,674	3,299	23	793	1,938	144
<b>Developed countries</b>	2,081	2,315	11	4,525	5,155	14
Americas	500	515	3	3,000	3,944	31
Europe	1,581	1,799	14	1,525	1,211	-21

Sources: UNHCR (2007, 2012b).

Notes: IDP = internally displaced person; UNHCR = United Nations High Commissioner for Refugees. The above figures do not include people in refugee-like situations as defined by the UNHCR and obviously do not capture the surge in Syrian refugees in the Middle East after 2012.

Large population movements tend to be initiated in countries suffering from (civil) war and political instability or induced by shocks and changes in the environment (Black 2001; Moore and Shellman 2007; Marchiori, Maystadt, and Schumacher 2013). Most forced migrants that cross international borders are hosted in their neighboring countries, where they do not necessarily face better economic or environmental conditions (Hatton and Williamson 2003). Moreover, contrary to forced migration originating from natural disasters, the long-lasting and repeatable nature of civil conflicts means that refugees are likely to stay for a relatively long time in their countries of asylum. As a consequence, refugee situations have become increasingly protracted, with many refugees holding their refugee status for more than five years with little

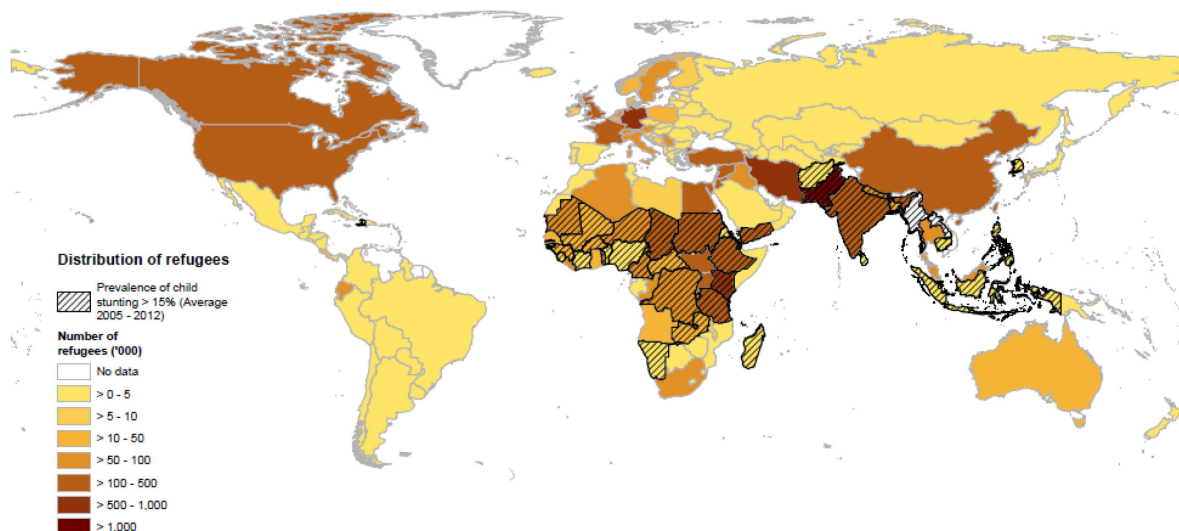


prospect of returning to their country of origin in the near future.<sup>1</sup> At the end of 2012, 6.4 million refugees (about 70 percent of the total refugee population) were in a protracted situation (UNHCR 2012b).

There is no doubt that such large movements and settlements of refugees have a far-reaching impact on the host country. Several case studies illustrate that the recent influx of refugees is associated with high levels of food insecurity in Liberia (WFP 2011, 2013a, 2013b); in Burkina Faso, Chad, Liberia, and Niger (FAO 2013); and in the neighboring countries of Syria (ACTED 2013). All these policy documents link refugees with deteriorating food-security status of the host community, possibly related to increased pressure on natural resources, disruptions in the food and labor markets, and deteriorating health services. Nonetheless, anecdotal evidence does not provide an adequate basis to claim that refugees place a burden on the food security of host communities. The studies cited above are qualitative and descriptive in nature and are short on presenting an appropriate counterfactual for drawing causality inferences.

At the global level, the link between food security and refugees suggested by cross-country correlation shows that countries that receive a high number of refugees largely coincide with areas already facing deteriorating food security. For example, Figure 2.1 shows a positive geographic relationship between food insecurity status, measured as the prevalence of child stunting, and refugee populations hosted by destination countries. Interestingly, such a correlation is likely to influence the political discourse surrounding refugees. A similar map was indeed used in the 1990s by heads of states and governments or their representatives at the World Food Summit to conclude that “Major refugee movements can cause food-security problems both among the refugees themselves and in the receiving areas” (UNHCR, quoted in FAO 1996, sect. 15).<sup>2</sup> However, it is not surprising to find a strong association between refugee hosting and negative socioeconomic outcomes, given that the overwhelming majority of refugees are hosted in neighboring developing countries. Such a correlation tells us little about the causal impact of refugees on the food security of the hosts.

**Figure 2.1 Refugees by destination and prevalence of child stunting, 2005–2012**



Source: UNHCR (2012b) and von Grebmer et al. (2013).

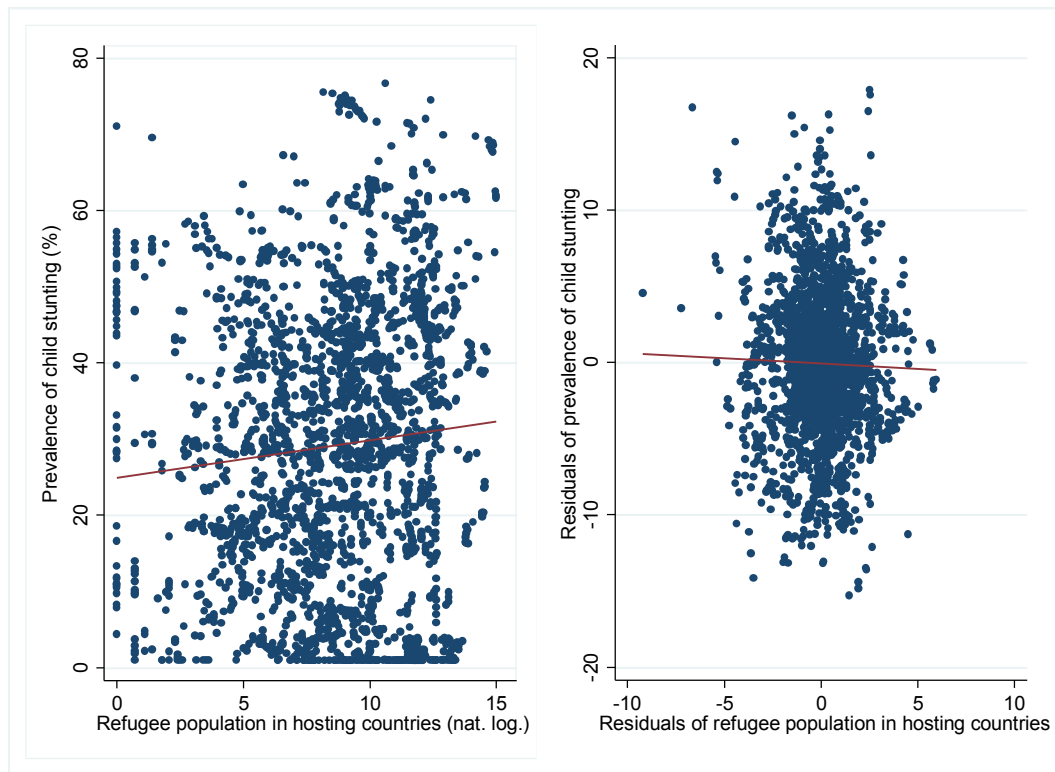
Note: Missing data for child stunting are reported for Somalia.

<sup>1</sup> UNHCR defines a protracted refugee situation as “one in which 25,000 or more refugees of the same nationality have been in exile for five years or longer in a given asylum country” (2012b, 23). The most protracted refugee situation currently occurs in Pakistan among the Afghan refugees (whose population is estimated to be about 2.6 million).

<sup>2</sup> Such a map was based on 1996 figures and is given in the appendix (Figure A.1). Despite an apparent lack of strong correlation, it illustrates how weak evidence may enter and influence the political debate. We can also show a similar picture based on the most recent data from the Global Hunger Index (Figure A.2 in the appendix).

More generally, cross-country correlation cannot claim causality because it does not take into account various confounding factors that drive part of the correlation. The effects of such confounding factors can be shown in simple graphical representations, as in Figure 2.2. The correlation between refugee population (in natural logarithm) and food insecurity as measured by the prevalence of child malnutrition is shown for the period 1960–2008. The left panel of Figure 2.2 suggests that hosting refugees is positively related with the prevalence of child stunting. The right panel of Figure 2.2 shows the correlation of the residuals of refugee population and the incidence of malnutrition in the host country, using country-demeaned values of each variable. We thereby remove all unobserved effects that do not vary over time and are fixed within a country (such as climate, historical ties, political orientation, and so on). As a consequence, the positive correlation between the refugee influx and food security disappears. Without further investigation at a more disaggregated level, it is difficult to assess whether this phenomenon points to a lack of systematic evidence of the impact of refugees’ inflows on the food security of the local hosts or to a standard aggregation problem because the impact of refugees is likely to be diluted in national statistics in cross-country analyses.

**Figure 2.2 Correlation between child stunting and natural logarithm of refugee population, 1960–2008**



Source: Authors’ calculation using refugee population data from UNHCR (2012b) and child stunting data from World Bank (2013). Due to the large number of missing values on child malnutrition, we use the interpolation technique based on nutrition-growth elasticities as described by Breisinger et al. (2012).

Notes: Prevalence of child malnutrition (stunting) is measured as the percentage of children under age five whose height for age is more than 2 standard deviations below the sex- and age-specific median for the international reference population (World Bank 2013). The left panel indicates the raw correlation and the right panel shows the correlation of the residuals of child stunting and refugee population net of country fixed effects. Similar patterns are observed if the time fixed effects are also removed in the right panel. Similar conclusions are drawn when the interpolation technique is not used or when refugee data are taken from the alternative Polity IV dataset on forcibly displaced populations.

Finally, cross-country analyses cannot identify clear mechanisms that drive the correlation between the refugee population and food security. It should be recognized that refugees interact in a complex way with their host community and, in turn, affect food security through various direct and indirect channels. Hence, the association between refugees and food insecurity should be reassessed in a more holistic manner, and there is a need for a conceptual framework that considers several channels. This paper aims to take stock of the evidence on the refugee–food security link by providing a coherent review and synthesis of the studies that focus on various channels and policy options for addressing protracted refugee situations. The next section provides a conceptual framework and makes use of it to review the existing studies on the causes and impacts of refugees in the host communities.

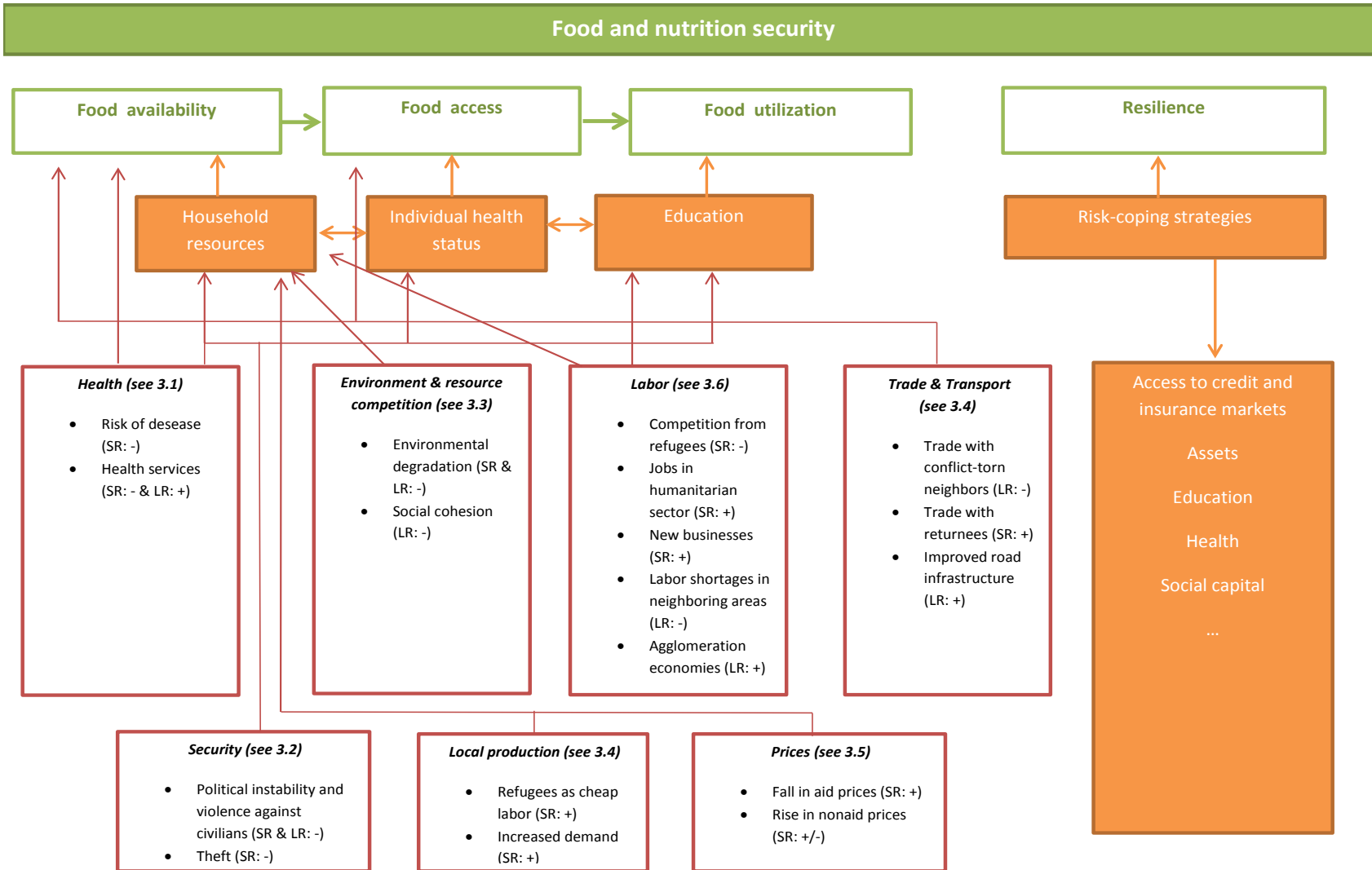
### 3. CAUSES AND IMPACTS OF REFUGEES IN HOST COMMUNITIES: REVIEWING THE LITERATURE THROUGH A CONCEPTUAL FRAMEWORK

As the refugee crises in different parts of the world unfold, it is important to understand how these mass movements of refugees influence their host communities at the economic, social, environmental, and security levels. This section provides a conceptual framework to explore how a sudden inflow of refugees may affect the food security and resilience of a host community, in a developing-country context. It primarily explores the potential impacts of refugee inflows through the lens of food security, so this work is complementary to that of Alix-Garcia, Bartlett, and Saah (2012). However, it does not aim to assess the net effects of refugee or IDP inflows, because it does not take into account the food-security impacts on refugees (this is done by, for example, Hynes et al. 2002; Kondylis 2008; Ruiz and Vargas-Silva 2013; and Verwimp and Muñoz-Mora 2013) or IDPs themselves (Ibáñez and Vélez 2008; Adelman, Gilligan, and Lehrer 2010; Ibáñez and Moya 2010; Fiala 2012; Rahim, Jaimovich, and Ylönen 2013). This section further discusses the importance of coping strategies, the expected short-term versus long-term effects (including when refugees repatriate), and the distributional consequences on the hosting population.

Figure 3.1 applies an extended framework of food security. The mass influx of refugees shapes the dimensions (in bold) and subdimensions (in italics) of food security in various ways. The first three components of food security refer to a narrow definition, emphasizing the availability, accessibility, and utilization of food. Food availability is determined by domestic food production, commercial food imports (and hence transport costs) and food aid (FAO 2006). Food accessibility refers to the ability of a household to produce or purchase food needed by all household members (Ecker and Breisinger 2012). Food accessibility is largely determined by food prices and household resources (Hoddinott 2012) as well as transportation infrastructure. Household characteristics such as level of education and health status are likely to affect both food availability (through food production) and food accessibility (through earning potential and consequent food consumption). As the third dimension, household and within-household preferences determine food utilization, which refers to an individual's dietary intake and his or her ability to absorb nutrients (Pieters, Guariso, and Vandeplass 2013). The optimal intake of food within a household is influenced by gender equality (Shroff et al. 2011; Duflo 2012) and depends on norms and habits (Atkin 2013). The ability to absorb nutrients is also determined by the individual's level of education and health status (Robeyns 2006).

So far the above description is limited to the determinants of food-security status. Ecker and Breisinger (2012) and Pieters, Guariso, and Vandeplass (2013) rightly acknowledged the importance of food-security stability as well as the potential overlap in food-security dimensions. *Stability* refers to the capacity of the household to cope with a shock (vulnerability) and to recover from it over time (resilience). For presentation purposes, we pool these two terms under *resilience* and will discuss the various *risk-coping strategies* households in the hosting economies may adopt in the face of massive inflows of refugees. The term *resilience* is therefore understood as the ability of people, communities, countries, and global institutions to prevent, anticipate, prepare for, cope with, and recover from shocks and not only bounce back to where they were before the shocks occurred but become even better off (adapted based on IFPRI 2020 policy consultation). Pieters, Guariso, and Vandeplass (2013) also warned that it is difficult to distinguish between the different components, for example to differentiate food availability from accessibility. A price increase, an issue of particular interest in the present review, would affect both availability and accessibility in very different ways depending on whether the household is a net food seller or buyer (Singh, Squire, and Strauss 1986). By construction, such a conceptual framework is therefore a simplified representation of a complex reality. Despite this limitation, we believe that the framework constitutes a useful tool to assess the different channels through which mass inflows of refugees could affect the hosting population. The following subsections discuss these channels through which refugee inflows affect food security, starting with the most direct impacts on food security. The next subsections focus on the health (Section 3.1), the security and conflict (Section 3.2), and the environmental (Section 3.3) channels. The discussion then turns to more indirect, but no less

**Figure 3.1 Conceptualizing the impact of refugees on food security in host communities**



Source: Adapted from Pieters, Guariso, and Vandeplas (2013).

Notes: SR = short-run (at least at the peak of the refugee presence); LR = long-run (for example, several years after the refugees have left).

important, impacts on food security. Section 3.4 investigates the impact of refugee inflows on local production, transportation, and trade, while Sections 3.5 and 3.6 discuss the implications on prices and labor markets, respectively, and the impact of these on households' food security.

### 3.1 HEALTH

The earnings capacity of a household, and thereby its food security, depends critically on the health of its adult members (see, for example, Beegle 2005). Because incomes in rural areas depend largely on labor-intensive agricultural production, the health status of the household might be vulnerable to the influx of refugees through various health-related channels. First, refugee inflows put pressure on the health system of the host community inasmuch as refugee movements have been associated with the spread of infectious diseases (Kalipeni and Oppong 1998) and especially with the diffusion of malaria (Kazmi and Pandit 2001; Montalvo and Reynal-Querol 2007). If refugee inflows increase the prevalence of infectious disease (for example, malaria or HIV), this increase is likely to lower the earnings of agricultural households and may also suppress the overall availability of food in the refugee-hosting areas. Second, the movement of refugees originating from countries suffering from war may lead to conflict spillover effects into the host country (Akopari 1998; Salehyan and Gleditsch 2006; Blattman and Miguel 2010), which would then have negative consequences on the host country's health system. Third, another potential negative health impact includes the deterioration of the local health infrastructure (Kalipeni and Oppong 1998).

Unfortunately, the evidence on the impact of refugee influxes on adult health outcomes in the hosting areas is almost nonexistent. At the global level, the study by Montalvo and Reynal-Querol (2007) is often presented as supportive evidence of the negative consequences of refugees on the host country (see, for example, Bosker and Garretsen 2009; Baez 2011; and Barreca, Fishback, and Kantor 2012). Montalvo and Reynal-Querol (2007) found that the spread of malaria in host countries occurs through the movement of refugees (for each 1,000 refugees there are between 2,000 and 2,700 cases of malaria). This effect, however, is statistically significant only when the sample is restricted to the tropical countries but not when the entire sample of refugee-hosting countries is used. The focus on refugees who come from tropical countries excludes about two-thirds of the refugee population, and because those from tropical countries represent a particular type of refugee it is difficult to generalize this finding. Another problematic issue is the focus on one particular outcome: the incidence of malaria. First, this health outcome is highly sensitive to measurement error because it is inherently difficult to identify individuals diagnosed with malaria (Vosti 1990; Gallup and Sachs 2000). Second, weather shocks, often shared by the origin and host country, not only are linked with malaria outbreaks (for example, Craig, Snow, and le Sueur 1999) but may also trigger conflicts (Hsiang, Burke, and Miguel 2013) and thus refugee inflows. Such omitted factors make the interpretation of the impact of refugee shocks on malaria outbreaks difficult to study.

Case studies may shed more light on the health channel and the implications of forced migration on healthcare provision in host communities. The change in basic healthcare provision indirectly affects food security because changes in adult health have implications for households' earning capacity. A mass arrival of refugees typically imposes a heavy burden on healthcare spending in host countries and on the capacity of the existing healthcare facilities in the receiving areas, which are often already struggling to provide adequate services to the local communities (Whitaker 2002). The host government's financial and administrative capacity to manage the sudden increase in demand for health services largely determines the impact on healthcare provision. For example, during the Rwandan refugee crisis the Tanzanian government was much better equipped to handle the shock to its healthcare system than was its Zairean (now DRC) counterpart (see anecdotal evidence in Porignon et al. 1995; Goyens et al. 1996; and Whitaker 2002).

Occasionally, refugee-assistance programs may lead to inequality in healthcare access between refugees and hosts when implemented in parallel to the host government's services. Orach and De Brouwere (2004) showed that refugees had better access to health services than the rural host population in northern Uganda. These inequalities have also been shown to be detrimental to refugee-host relations (Lawrie and Van Damme

2003). However, host communities may benefit from improved health services when host and refugee health services are integrated (Orach and De Brouwere 2004) or when health services provided in the camps are also made available to the local hosts. Van Damme and colleagues (1998) showed that in Guinea, the refugee-assistance program actually improved the health system through strengthening of health capacity and transportation infrastructure. In contrast to the quantitative evidence given by Baez (2011), fieldwork observations by Maystadt and Verwimp (forthcoming) also report health services to have improved following the refugee inflows in Tanzania. Meanwhile in Kenya, host communities reported having better access to health services, education facilities, and transportation since the establishment of the refugee camps (NORDECO 2010). Such cases encourage positive perceptions of refugee presence in host communities and promote harmonious refugee-host relationships (Orach and De Brouwere 2004).

Child health is another important development outcome affected by various factors, including refugee presence and household food security. Long-run effects of refugee hosting on child health can be assessed by analyzing changes in human capital indicators such as height. In the case of the Kagera region in Tanzania, Baez (2011) studied the effect of the presence of Rwandan refugees on children's height and found that it was associated with worsening child height and a significant increase in the prevalence of child morbidity and child mortality among the host communities. Baez (2011) hypothesized that this impact was due to an increase in the prevalence of infectious diseases and vector-borne illnesses or in the competition for various resources (labor, food, land, and wood) caused by the arrival of refugees.<sup>3</sup> One caveat in the Baez study is that at the time he did not observe the final adult height of the children studied, only their height in puberty or just before onset of puberty.<sup>4</sup> Recent studies in human biology, however, show that puberty offers an opportune window for recovering height growth losses experienced in early childhood (see Coly et al. 2006; Prentice et al. 2013; and Hirvonen 2014). Therefore, for the purpose of this review, we estimated the same regression model as Baez (2011) by reconstructing part of the main regression table in Baez using the recent 2010 round of the Kagera Health and Development Survey. Table 3.1 presents the results of this analysis and shows that the height gap between children originating from areas characterized by high and low density of refugee inflows is no longer statistically significant. This finding suggests that the children whose growth, as measured by height, was hindered due to the arrival of refugees were able to catch up with the control group during puberty.

The foregoing section demonstrates that more research is needed to better understand the long-term health consequences of hosting refugees. In particular, there is no longitudinal quantitative evidence on the implications for youth and adult health outcomes and the impact on household food security. Finally, the qualitative studies highlight the importance of context, especially on the capacity of the hosting government to handle the sudden refugee shock to its healthcare system, as well as the extent to which refugee-focused external health assistance can affect health outcomes of the local populations.

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<sup>3</sup> Baez (2011) related the refugee crisis in Kagera to a "natural experiment" that was sudden, with a sharp variation in its impact across the region. The geographic variation as well as the access to data before and after the crisis allowed the author to construct control and treatment groups akin to a setting in a more conventional randomized controlled trial. As a consequence, a causal interpretation could be given to the estimates.

<sup>4</sup> Height is a particularly useful measure here because, unlike weight, it captures the long-term effects of poor health and undernutrition (Ruel and Hoddinott 2008). Furthermore, our results are robust to using height-for-age z-scores, but in Table 3.1 we opt for reporting the regressions based on raw measures of height to facilitate a direct comparison with the results presented by Baez (2011).

**Table 3.1 Long-run impacts of refugee hosting on height in the Kagera region, 1991–2010**

Outcome	Treatment variable:		West = 1, East = 0				Distance to the Rwandan border			
	Preshock mean		Pooled		Panel		Pooled		Panel	
	West = 1	East = 0	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
As reported by Baez using the 2004 data:										
Height (cm)	84.90 (1.030)	86.31 (0.639)	-1.943 (2.068)	-1.719** (0.680)	-1.777* (0.914)	-2.184* (1.189)	0.028 (0.023)	0.020** (0.009)	0.028** (0.011)	0.029** (0.012)
Observations			1,861	1,785	1,159	1,078	1,861	1,785	1,159	1,078
Estimates using the 2010 data:										
Height (cm)	84.90 (1.662)	86.37 (0.631)	0.254 (1.939)	0.341 (1.391)	-1.459 (1.973)	-1.002 (1.406)	-0.008 (0.023)	0.004 (0.016)	0.003 (0.023)	0.014 (0.016)
Observations			1,199	1,151	1,084	1,038	1,199	1,151	1,084	1,038
Controls?			No	Yes	No	Yes	No	Yes	No	Yes

Source: Kagera Health and Development Survey 1991–2010 (Beegle, De Weerd, and Dercon 2006; De Weerd et al. 2012) and Baez (2011).

Notes: \* significant at the 10 percent level; \*\* significant at the 5 percent level. Standard errors in parentheses are clustered at the village-year level. The unit of observation is a child who was under five in 1994 and 10–15 years old in 2004 or 16–21 years old in 2010. The difference-in-difference regressions include controls for individual characteristics (age and sex), household characteristics, parental education, household assets and expenditures, rainfall variability, distance to closest health facility, and time-invariant village fixed effects. The sample size in the pooled regressions is smaller due to the high outmigration rate at this age (16–21). The survey team did track and interview most of these migrants, and including them in the sample provides broadly similar results.



### 3.2 SECURITY AND CONFLICT

Perceptions of the impact of refugees on the hosting community through the security and conflict mechanism start from the belief that refugees pose security problems in hosting countries (Salehyan and Gleditsch 2006; Ruegger and Bohnet 2011; Bohnet 2012). Salehyan and Gleditsch (2006) argued that the presence of refugees enhances the likelihood of a host country's experiencing political instability and conflict. Refugee camps may encourage the expansion of rebel social networks across borders by feeding grievances among refugees and allowing for an exchange of resources (weapons, combatants, and ideas). Refugee camps can also be used for mobilization and logistical coordination to perpetuate violence in the countries of origin or to provide motivation and resources for domestic political opposition in the host country. Examples portraying this situation are the conflict prior to 1992 between the Palestine Liberation Organization and both Jordan and Lebanon (Salehyan and Gleditsch 2006), the emergence of the Taliban in Afghanistan from Afghan refugees in Pakistan (Keen 2008), and eastern DRC and Darfur (de Waal 1997; Milner and Loescher 2004; Prunier 2008).<sup>5</sup> Policymakers have linked insecurity and conflict with refugee inflows and therefore tend to believe that refugees affect food security in host communities through the conflict channel (Jacobsen 2000; Rutinwa and Kamanga 2003). Indeed, experiences of the protracted refugee situations have raised much concern over the security implications of refugees on host countries, even though empirical evidence is largely missing (except for Salehyan and Gleditsch 2006; and Fearon and Laitin 2011).

From a methodological point of view, it is often very difficult to separate conflict spillovers associated with refugees' presence from conflict arising from economic and political motives (greed and grievances) and ethnic differences (Stavenhagen 1996; Fearon and Laitin 2003; Collier and Hoeffler 2004) as well as operational factors such as access to arms, illicit trade and finances, and geographic factors (Ballentine and Sherman 2003; Buhaug, Gates, and Lujala 2009). Establishing causality is a major challenge for this literature because the impact of refugees cannot be isolated from other negative conflict spillovers arising from, for example, trade channels or disease propagation. Moreover, much of the literature assesses the effects of refugee inflows from the onset of conflict, defined at the national level. Given the lack of evidence showing that refugee inflow is the actual cause of conflict spillover, it is difficult to conceive of refugees as posing a direct threat to security at the national level. This raises the question of whether there are a number of alternative channels through which refugees affect security in host countries.

First, food production activities may be disrupted as farmers flee or limit their farming activities due to security concerns and conflict. This disruption can lead to lower food production and availability locally, but in protracted refugee contexts it may imply long-term disruption of food production. Alix-Garcia and Bartlett (2012) and Alix-Garcia, Bartlett, and Saah (2013) examined spatial changes in agricultural production in the presence of civil war in Sudan and showed that farmers abandon their land due to insecurity, which leads to lower production and welfare losses to rural landowners. Due to lower production, farmers earn less income from the sale of farm output surplus, implying that they have less cash to purchase food from the market.

Trade in food products may also be interrupted by crime and conflict if refugee inflows result in security threats along trading routes or border posts. However, trade often continues, and the mere prevalence of insecurity and conflict causes food prices to spike because transaction costs increase, which leads to even higher food prices. Traders might charge risk premiums to protect themselves and their goods against security costs (Goldsmith 2013). Fighting groups might also impose extortion/taxation, forcing some traders to

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<sup>5</sup> In his insightful book, Prunier (2008) showed that refugees from a similar country may have very different security implications across borders. Beginning in April 1994, approximately 1.5 million Rwandese refugees hosted in eastern DRC differed significantly from their counterparts fleeing to western Tanzania. Practically all politicians and military men, also called the *génocidaires*, went to the DRC (former Zaire), where President Mobutu favored the fallen regime (Prunier 2008). The dynamics of mobilization and militarization enforced in the eastern Congolese camps through, for example, the control of food supply and the purchase of weapons were some of the roots of the subsequent conflict in DRC in 1997, known as the first Congolese war (Prunier 2008).

withdraw from the market and inducing a separate increase effect on food prices as the total quantities of traded food decrease.<sup>6</sup> Finally, insecurity and conflict in host communities and along routes may prevent the flow and operations of food and emergency aid, resulting in unabated food insecurity (Majid and McDowell 2012; Menkhaus 2012). In some instances the situation can worsen if conflict involves the destruction of road infrastructure and looting from market centers and food storage facilities, implying that traders may need to find alternative routes and markets to reach consumers in host communities. However, it is difficult to separate the multiple price effects that lead to the overall increase in food prices. Moreover, these effects are likely to occur in contexts beset with conflict and insecurity (regardless of the presence of refugee inflows), and conflict and crime are often not perpetrated by refugees but by militia and rebel groups, which led to the refugee situation in the first place (Jacobsen 2000).

Real or perceived, negative externalities from the presence of refugees may also indirectly spur conflict in host countries. An increase in competition for scarce resources, housing, and employment and a decline in the standard of living have been argued to create favorable conditions for civil strife (Martin 2005; Salehyan and Gleditsch 2006). In contrast, refugee inflows may trigger an increase in the flow of (government and donor) resources into the refugee-hosting areas (see below) (Czaika and Mayer 2011). Fisk (2012) established a statistical association between the presence of refugee camps and the level of violence against civilians but proposed a different mechanism. Given the resources injected into the hosting economies (see below) by humanitarian assistance, this increase in violence against civilians (so-called one-sided violence) is explained by a surge in incentives for armed groups to extract resources from civilians (local hosts and/or refugees) through violent means. This explanation is consistent with other evidence stressing the vulnerability of refugees to violence (Keen 1998; Jacobsen 1999).

Security concerns have consistently frustrated efforts to resolve refugee situations and hindered the formulation of effective regional development strategies (Milner and Loescher 2004). They therefore need to be considered when dealing with food insecurity in protracted refugee situations. Most governments respond to security concerns in refugee camps by closing borders and restricting refugee movements to make it easier for the military and police forces to control the security problem. However, these measures may further constrain the limited trade that often persists in refugee settings, potentially hampering the import supply of food into local markets and worsening food insecurity in the host community (Hendrix and Brinkman 2013). There appears to be limited evidence to suggest that these policy approaches necessarily lower the risk of insecurity and conflict, or of how they affect the food security of the host community. Moreover, the effects of such responses may exacerbate the likelihood of conflict and insecurity by fueling resentment and strife among refugees and related ethnic groups in the host community (Jacobsen 2000). Generally the mechanisms through which the multiple channels at play operate are not well understood, and there is a need to conduct rigorous research, irrespective of whether conflict is caused by refugee inflows or otherwise. Understanding these links between refugees, security, conflict, and food security can provide useful insights for alternative policies in refugee settings.

### 3.3 ENVIRONMENTAL DEGRADATION AND RESOURCE COMPETITION

Large-scale refugee influxes are likely to increase population pressure on the often already fragile environment and accelerate natural-resource depletion in host areas (Jacobsen 1997; Martin 2005; Berry 2008). The environmental impacts of refugees indirectly affect the food security of the host community through deforestation, soil erosion and land degradation, unsustainable water extraction, and water pollution, which have both short-run and long-run effects (Whitaker 2002; Martin 2005). The presence of refugees in Tanzania

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<sup>6</sup> Aklilu and Catley (2009) documented the example of livestock trade among the pastoralists in the Horn of Africa, where trade in cattle has continued for years despite conflict and a protracted refugee situation in surrounding areas. In this case, the livestock traders incur costs associated with the security challenges of protecting themselves and their livestock, which they sell in exchange for cash and food products.

accelerated deforestation rates and depletion of soil nutrient availability for agricultural crops, causing additional soil erosion and thereby affecting the host's agricultural production and food security (Berry 2008).<sup>7</sup> Moreover, increased firewood depletion forces women to spend more time collecting firewood, negatively affecting child nutrition and women's ability to care for their children (UNEP 2005). Similarly, excessive water extraction arising from refugee inflows reduces the amount of water available per capita in the host community and increases competition. Women are forced to spend more time in obtaining water, and downstream communities have less water available for irrigation (Johnson and Libecap 1982).

The environmental impact channels of refugees' effects on the food security of host communities are certainly plausible, but rigorous research on these impact channels in refugee settings is still lacking. Moreover, establishing causality in these relationships is difficult because environmental scarcity is argued to act as an indirect cause of conflict, and settlement patterns also influence the environmental impacts of refugees (Jacobsen 1997). Negative (exogenous) environmental impacts are thought to engender competition for resources, which may then cause conflict and refugee situations as people flee conflict, but this impact pathway has been contested in the literature (Gleditsch 1998; Homer-Dixon 1999; Schwartz, Deligiannis, and Homer-Dixon 2000). Hence, there might be misconceptions about the negative impacts of refugees on the environment because it is difficult or even impossible to determine the exact environmental impacts of refugees, given the lack of an adequate counterfactual (Kibreab 1997; UNEP 2005).

The main livelihood/occupation of the refugees relative to that of the locals appears to determine the extent of resource competition and natural resource depletion that occurs in refugee situations. Hence some have advocated for providing refugees with alternative livelihood opportunities that are different from the main livelihoods that the local poor depend on. More importantly, the livelihood opportunities proposed are alternatives to those that involve the deforestation and charcoal trading that is common in many refugee situations in Africa. Cooperative resource management solutions are believed to mitigate the impacts of refugees on the environment, thereby attenuating the risks of resource-related conflicts (Martin 2005) and improving successful integration (World Bank 2011). In that respect, the environmental support programs limiting the collection of firewood by refugees around the Dadaab camp in Kenya or providing alternative fuel sources have shown relative success in limiting environmental degradation and likely mitigating impacts on the host communities' food security (Milner and Loescher 2004).

So far, we have assessed the direct and indirect effects of refugees on the food-security system of the hosting community by looking at the mechanisms that are often proposed as general (negative) consequences of hosting refugees. However, refugees also directly affect the different determinants of food security—food availability, access, and utilization (Figure 3.1)—which are covered in the following sections.

### 3.4 LOCAL PRODUCTION, TRANSPORTATION, AND TRADE: MAIN DETERMINANTS OF FOOD AVAILABILITY

Food availability is not only determined by local production but also by the ability of households to benefit from food imports from neighboring regions or countries.<sup>8</sup> As Pieters, Guariso, and Vandeplass (2013) pointed out, the supply of food is largely contingent on the road and market infrastructure, the degree of market

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<sup>7</sup> Refugees used 65 percent more wood than the local average Tanzanian because most firewood would be sold as charcoal or used for building materials.

<sup>8</sup> Food importing is usually done by traders (wholesale and retail) and sometimes by governments, but usually not individually by households. Also, in situations of large refugee inflows, aid agencies often import food as part of their refugee assistance programs. One cannot exclude the possibility that refugees are themselves producing some food. Indeed, a small plot of land is usually allocated to refugees within refugee camps. Theoretically, such within-camp production has the potential to increase food supply, but it is likely to remain limited in magnitude (see footnote 11).

integration, and local market conditions. The existing literature suggests that the host communities may actually benefit from the presence of refugees.

First of all, the large-scale arrival of refugees provides increased trade opportunities to the local community. The significant increase in local market size provides greater market access and opportunities for farmers to liquidate their surplus (Whitaker 2002). For example, prior to the arrival of refugees, farmers in western Tanzania often had to rely on cross-border trading with neighboring Burundi and Rwanda because of difficulties in finding local markets (Ndege et al. 1995; Whitaker 2002). As a result of the refugee presence, the markets moved closer to the local Tanzanian farmers, who then benefited from better access to trade opportunities. Furthermore, the land availability in the northwestern part of Tanzania facilitated the expansion of agricultural production. Finally, the nonfarm sector also benefited from the increased demand from national and international humanitarian workers, although at the cost of driving the existing petty businesses out of the market due to fiercer competition (Alix-Garcia, Bartlett, and Saah 2012; Maystadt and Verwimp, forthcoming).<sup>9</sup> In Kenya, pastoralists have also taken the opportunity to sell livestock products to the refugee camps, a trade that is estimated to yield US\$3 million to the host country every year (NORDECO 2010). Every year, an average of 15 camels and 30 shoats (that is, sheep and goats) are slaughtered within the Dadaab refugee camps, of which the majority are sold by local hosts. Moreover, trade and employment opportunities have also emerged around the Dadaab camps in Kenya. Wholesalers inside refugee camps are reported to import commodities from Somalia with high unit value, such as sugar, powdered milk, pasta, fruit drinks, and upmarket consumer goods.

A second benefit is the improvement in market efficiency and trade dynamism because of road investments made by international organizations (Jacobsen 2002), given the strong link between road accessibility and economic development (see, for example, Fan, Hazell, and Thorat 2000; Jacoby and Minten 2009; and Dorosh et al. 2012). Recent evidence by Maystadt and Duranton (2013) also suggests that refugee-hosting areas may still benefit from the refugee presence several years after the refugees have been repatriated, thanks to the long-term benefits of improved road accessibility. In other contexts, refugee influxes are associated with increased pressure on infrastructure and public services in host countries, requiring additional public spending from often already financially strapped governments. On the whole, the impact on food availability will depend in the short run on the ability of producers, notably in terms of input (land, labor, and capital) to react to an upward shift in demand, while investments in roads initially made to serve refugee camps seem to be crucial to determine the long-term impact of refugees in host communities.

### 3.5 FOOD AND NONFOOD PRICES: DRIVER OF FOOD ACCESSIBILITY

Food accessibility is largely determined by food prices and household resources. Hence, the massive arrival of refugees is likely to change prices in the hosting areas. However, the impact of the presence of refugees and humanitarian workers is expected to be product and time dependent and to have a dual effect. Increased demand exerts an immediate upward pressure on nonaid prices (food and nonfood) in hosting areas, incidentally leading to a general increase in the cost of living, while food aid partially offsets this price impact (Werker 2007).<sup>10</sup> In contrast, both food aid and the incentives to produce more of the preferred goods will have a second-order decreasing effect on prices.<sup>11</sup> The equilibrium prices resulting from both demand and

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<sup>9</sup> The new attractiveness of refugee-hosting areas seems to be accompanied by fiercer competition following the entry of larger-scale and more efficient entrepreneurs coming from other regions, like Mwanza, Shinyanga, or Kilimanjaro (Maystadt and Verwimp, forthcoming).

<sup>10</sup> The impact of food aid on local market prices is of course not specific to the refugee-hosting economy, although the evidence in other contexts is more mixed (see Margolies and Hoddinott 2012 for a review).

<sup>11</sup> A decrease in price may potentially result from within-camp production, but the price effect is likely to be marginal. At least in the case of Tanzania, refugee density makes the land allocation too small to have any potentially large effect on total food supply and prices.

supply changes will vary across products and over time as factor allocations may take time to adjust to prices. Hence, the net effect on prices will depend on the main food aid delivered, the local preferences, the reaction of local producers, and the ability to import substitutes. While markets are likely to correct the initial increase in food prices over time, the distributional consequences of such price effects may persist.

In the case of Tanzania, Alix-Garcia and Saah (2010) found large price effects on some agricultural products, mainly nonaid food goods (for example, plantains, legumes, milk, and beans) and nonfood goods (for example, housing). The authors regressed food prices of various markets on the distance to refugee camps and the related food aid. Table 3.2 indicates that by 1998 the inflows of Burundian refugees and the associated increase in demand had strongly increased the prices of maize, maize flour, legumes, and plantains.<sup>12</sup> However, the increased supply of maize through the food aid delivered by the World Food Programme (WFP) mitigated the increase in price, causing the net effect for maize to be close to zero. Interestingly, the higher nonaid prices could potentially induce producers to expand production (especially for bananas). Due to data unavailability, the long-term consequences of such general equilibrium effects are unknown. An exception is the study by Maystadt and Duranton (2013), who suggested that the inflow of refugees and associated long-term consequences of reduced transportation costs decreased general price levels by 2010 (including food prices), but a reduction in demand following resettlement was an obvious source of a price correction.

In another context, Figure 3.2 records similar price dynamics that Alix-Garcia, Bartlett, and Saah (2012) found in Darfur (Sudan). Although the authors were cautious in giving causal interpretation to price trends, they did observe strong correlations between the inflows of IDPs in 2004 and changes in food prices. For the preferred food items (sorghum and millet), average yearly prices strongly increased but were potentially compensated afterwards by the effect of food aid. However, the exogenous increase in supply of the bulk product of food aid (wheat) was not compensated by any significant increase in demand because it is not the preferred grain in Darfur. Such analysis underlines the importance of taking into account local preferences when predicting price effects in the short and long run. Alix-Garcia, Bartlett, and Saah (2012) also reported a large increase in the rental markets and urban sprawl along the main city (Nyala) close to IDP camps, having clear distributional consequences depending on the initial housing ownership. Finally, more anecdotal evidence from Kenya suggests similar price reactions. According to NORDECO (2010), the price of basic commodities such as maize, rice, wheat, sugar, and cooking oil was at least 20 percent lower in refugee camps than in towns without the camps in arid and semiarid parts of Kenya due to food aid and illegal imports from Somalia. In summary, the case studies from Tanzania, Kenya, and Uganda point to the importance of price reactions to the inflows of refugees. However, the general equilibrium and long-term effects would again depend on the extent of food aid inflows and the ability of households to adjust their production and consumption decisions to changes in prices.

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<sup>12</sup> The results are directly taken from Alix-Garcia and Saah (2010). The authors argued that a causal interpretation could be given to the results because “the location of the camps is random in a larger sense: the refugees entered Tanzania, rather than other border countries, as a result of directional pushes of internal conflict within their own countries, which is unlikely to have been affected by markets in Tanzania” (Alix-Garcia and Saah 2010, 12). They also suggested that the threat of reverse causality for food aid is minimal because, based on conversations with World Food Programme representatives, “the magnitude of aid shipments is determined by the population censuses conducted in the refugee camps rather than by local prices” (Alix-Garcia and Saah 2010, 12).

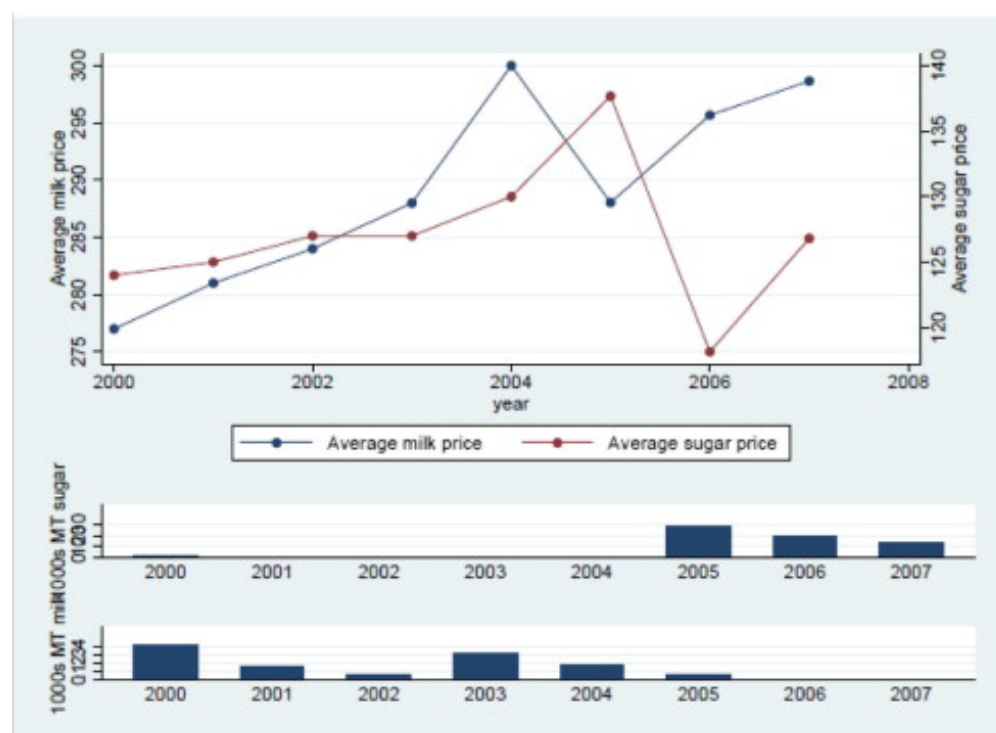
**Table 3.2 Impact of refugee camps and aid on agricultural prices in Tanzania, 1992–1998**

	Maize	Maize flour	Legumes	Plantains
Share of Burundian refugees	0.088* (0.053)	0.128** (0.057)	0.150*** (0.034)	0.398* (0.299)
Share of Rwandan refugees	-0.038 (0.065)	-0.050 (0.045)	0.081*** (0.028)	0.625*** (0.182)
Total aid	0.040*** (0.005)	0.015 (0.011)	-0.009 (0.007)	-0.037 (0.023)
Maize aid	-0.032*** (0.007)	-0.013 (0.012)		
Legume aid			-0.078** (0.035)	
Observations	2,335	2,183	2,417	1,849
R-squared	0.64	0.68	0.84	0.49

Source: Alix-Garcia and Saah (2010).

Notes: \* significant at the 10 percent level; \*\* significant at the 5 percent level; \*\*\* significant at the 1 percent level. Numbers in parentheses are robust standard errors. The dependent variable is the natural log of the food price. All variables are interacted with the inverse of the distance between the observed market and the closest refugee camp. Results from ordinary least squares regressions, including weather controls, market fixed effects, and year/month fixed effects.

**Figure 3.2 Trends in food prices in refugee-hosting Nyala (Darfur, Sudan), 2000–2008**



Source: Alix-Garcia, Bartlett, and Saah (2012), using price data provided by the local Food and Agriculture Organization office in Nyala (Darfur) and data on aid delivered to the entire country by the World Food Programme.

Notes: MT = million metric tons. The observed changes in both prices and aid are attributed to the arrival of internally displaced persons in Nyala in late 2004.

### 3.6 LABOR: DRIVER OF FOOD AVAILABILITY AND ACCESSIBILITY

The presence of refugees usually has a profound impact on labor market outcomes in hosting areas, which is a key driver of food security. Together with food prices, household resources constitute the major determinant of food accessibility, but in turn, the use of labor will largely determine farming households' ability to increase production (see Section 3.4). Refugees generally constitute a large supply of mainly low-skilled labor, creating opportunities that benefit both local farmers and entrepreneurs. Qualitative evidence from Tanzania suggests that the abundance of refugee labor enabled farmers to expand and increase production (Whitaker 2002). The evidence from the Karagwe district of Tanzania suggests that, on average, farmers doubled their production of bananas and beans between 1993 and 1996 (Whitaker 2002). Similarly in Guinea, Liberian refugees gave a boost to rice production by facilitating an expansion of cultivation to the lower swamp areas (Van Damme 1995).

The larger pool of low-skilled labor from the refugee population is, however, likely to come at a cost to the local low-skilled workers, and especially so for the poor and landless. Based on more than 2,700 households followed over time between 1991 and 2004, Maystadt and Verwimp (forthcoming) show that the agricultural workers in the region of Kagera in Tanzania were the most vulnerable to increased labor market competition from the refugee influx, while self-employed farmers were more likely to benefit. Table 3.3 reports that real consumption per adult equivalent increased by about 8 percent following the doubling of refugees in Kagera, but benefits were lower for those initially working as agricultural workers or self-employed in nonagricultural activities.<sup>13</sup> Kreibaum (2013) indicated that economic gains were distributed differently among the host communities in Uganda, with benefits specifically concentrated among those owning businesses or properties, compared with those depending on wage income. Comparing urban households in Darfur that have seen huge inflows of IDPs in their neighborhoods with similar households in Kordofan with no IDPs, Alix-Garcia and Bartlett (2012) found a significant difference in the changes in occupations between 2000 and 2010. They observed an abandonment of agricultural activities near the city in Darfur in favor of entry into the service sector (the skilled sector in particular for women).

In Kenya, the impact assessment led by NORDECO (2010) did not point to such a substitution effect between refugees and unskilled workers, because the local wages appeared to be significantly higher in Dadaab than in other comparable parts of Kenya. This situation can be linked to the importance of pastoralism, serving as a complementary activity to diversify the sources of livelihood.<sup>14</sup> The apparent lack of labor substitutability may also explain why not only well-off households made use of the economic opportunities associated with the refugee camps in Kenya. Around the Dadaab refugee complex, the low-middle-income group and the poor are primarily engaged in selling their products to refugee camps (NORDECO 2010). The locals may also benefit from increased employment opportunities in the international relief organizations (Whitaker 2002; Landau 2004). For example, about 600–700 local people are reported to have fixed employment in the humanitarian sector, while an additional 500 jobs are found in the refugee-related trade sector.

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<sup>13</sup> Maystadt and Verwimp (forthcoming) suggest that these results can be causally interpreted as lower-bound estimates because (1) there was little maneuvering room to move large and unanticipated flows of refugees very far away from the border, (2) refugee camps were systematically located in the worst places (in terms of initial real consumption per adult equivalent), (3) the results could not be explained by a trend existing before the refugees arrived, and (4) native displacements and attrition rates were actually lower in refugee-hosting areas compared with other areas.

<sup>14</sup> NORDECO (2010) reported a decrease in average livestock holdings per household in the area surrounding the Dadaab camp due to increased population and limited grazing resources. However, a similar trend has been documented in many other arid and semiarid lowland parts of eastern Africa (Headey and Kennedy 2012), making it difficult to attribute these Dadaab findings to the refugee situation.

**Table 3.3 Impact of refugees on consumption in Tanzania, 1991–2004**

	<b>Real consumption per adult equivalent</b>	
<b>Refugee index (RI)</b>	0.083** (0.034)	0.062* (0.034)
<b>Agricultural self-employed * RI</b>		0.008** (0.004)
<b>Nonagricultural labor * RI</b>		-0.007 (0.006)
<b>Agricultural labor * RI</b>		-0.009* (0.005)
<b>Nonagricultural self-employed * RI</b>		-0.018*** (0.004)
<b>Observations</b>	4,220	4,220
<b>R-squared</b>	0.31	0.32

Source: Maystadt and Verwimp (forthcoming).

Notes: \* significant at the 10 percent level; \*\* significant at the 5 percent level; \*\*\* significant at the 1 percent level.

Numbers in parentheses are robust standard errors. The dependent variable is the natural logarithm of real consumption per adult equivalent. Results are from ordinary least squares regressions, including weather controls, time-varying household characteristics, household and village fixed effects, and year fixed effects. The refugee index is computed by village as the sum of the refugee population across 13 refugee camps, weighted by the distance between the concerned village and each refugee camp.

However, not all is positive because many skilled workers from the public sector may leave their positions to work for relief agencies due to inflated salaries offered by these organizations (Whitaker 2002). In Tanzania, the employment opportunities generated by national and international organizations around refugee camps are reported to have attracted a large number of (relatively skilled) migrants from other regions of Tanzania (Landau 2004). This migration may result in long-term benefits for the hosting economies (through the accumulation of human capital and agglomeration economies—see Maystadt and Duranton 2013), but it comes at a cost to the neighboring regions. Büscher and Vlassenroot (2010) provided qualitative evidence of this employment boost in the context of the eastern part of the DRC.<sup>15</sup> The authors illustrated how the humanitarian presence has transformed the city of Goma in North Kivu by providing labor opportunities not only in the humanitarian sector but also in the service sector (for example, tourism, restaurants, shops, hotels, private security).

The review of the literature clearly points to the importance of the labor markets for determining food availability when refugees can be used to expand local production and food accessibility by their indirect effects on household resources. It appears rather clear that the distributional effects through the labor markets will be affected by the degree of substitutability between refugees and the different segments of the local host population.

<sup>15</sup> The authors pointed to the artificial nature of this development, the associated transfer of power and legitimacy from the state to international actors, and the renewed local conflict dynamics.



## 4. ADAPTATION MECHANISMS AND POLICY OPTIONS: TRANSITIONING TO DEVELOPMENT

The economic and food-security impacts of large-scale influxes of refugees on host communities are both important and complex. The previous section discussed the emerging body of literature on quantifying these impacts on host communities (Alix-Garcia and Bartlett 2012; Alix-Garcia, Bartlett, and Saah 2012, 2013; Alix-Garcia and Saah 2010; Maystadt and Verwimp, forthcoming; Maystadt and Duranton 2013; NORDECO 2010; Kreibaum 2013). So far the results are very context specific, but three main stylized facts that relate to food security in host communities can be derived. These stylized facts allow us, then, to frame some important research questions in terms of resilience-enhancing policies in host communities.

First, the current focus on health and violence in refugee situations is clearly too limited. The literature review and conceptual framework point to the multiple direct and indirect impact pathways that need to be considered. For instance, the role of labor and goods markets as adaptation mechanisms is critical in refugee settings, because these markets can provide vehicles for positive impacts on food security as well as negative impacts for some subgroups of the host community. The positive impacts of these market-based mechanisms depend on the ability of local producers to respond to increased demand (in particular for food), the ability of traders to engage in trade (of both food and nonfood not produced locally), and the potential for learning and transfer of technical skills between refugee and host-community labor. These factors depend on preexisting conditions such as infrastructure, labor skill levels, land availability, and agricultural potential, but likely also on refugee policy (for example, refugee work regulation, refugees' access to land, restrictions on trade and refugee mobility, and so on). Therefore, it is imperative to evaluate a broad spectrum of policies and investments that have the potential to strengthen the ability of host households and refugees to adapt to the dynamics of refugee settings through goods and labor market mechanisms, even if such policies and investments may take time to implement.<sup>16</sup> Environmental degradation should also be taken seriously as one potential pathway of refugees' impact on food security in the host community, in both the short and the long run. Food security of the host community is affected by the quality of the environment and may be protected by enhancing environmental resilience through various policies and programs, such as the careful selection of refugee camp locations and settlement structure (based on environmental research evidence) as well as implementation of environmental programs in host communities designed to mitigate negative environmental impacts of refugees (for example, reforestation and soil conservation interventions). The long-term nature of these adaptation mechanisms and policies highlights the need for longitudinal studies in refugee settings.

Second, as Chambers (1986) seminaly argued, the inflows of refugees are likely to have profound consequences on the distribution of socioeconomic outcomes among the host population. Overall the impacts on local households depend on a number of factors (such as age, gender, class and occupation, and so on), but these factors are also likely to determine the distribution of (positive and negative) impacts among the host population. For instance, the immediate effects of a food price increase are twofold. As net consumers of food absorb a negative income effect from higher prices, farmers who would have produced a surplus benefit from an increased demand for agricultural products in local markets. In the particular case of Tanzania and Uganda, the overall net impact has been viewed as positive and persistent over time (Maystadt and Verwimp, forthcoming; Kreibaum 2013; Maystadt and Duranton 2013) but with major distributional consequences that require careful consideration in relation to refugee policy. Alix-Garcia and Bartlett (2012) also highlighted similar distributional impacts in the case of IDP flows in Darfur but, contrary to Maystadt and Verwimp (forthcoming), they found evidence of a negative, but short-lived, overall impact. The different context (rural

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<sup>16</sup> For instance, it may take several years to complete a public program that builds or rehabilitates roads in a host community, especially if there are security challenges. However, given the protracted duration of most refugee situations and the long-term positive impacts associated with infrastructure investments, public works programs may be beneficial and potentially facilitate the transition to development in host communities in the long run.

versus urban settings) and the importance of land availability to increase agricultural production and productivity (Maystadt 2011) may constitute a major explanation for the different study results.<sup>17</sup> Assessing the more general validity of these case studies remains a major knowledge gap for future research.

All in all, it may be useful to differentiate between distributional impacts in terms of economic and social impacts of refugee inflows on host communities. The evidence seems to suggest that poorer households in the host community are likely to benefit from increased public goods (such as health infrastructure) and services, yet they may fare less favorably in terms of market-based economic opportunities that arise from the inflow of refugees. Those households who initially have access to some physical (for example, land, housing, livestock), human (education), and social (community ties and leadership) capital are in a better position to reap most of the economic benefits while minimizing the costs associated with an influx of refugees in their community. The likely result is that better-off households enter more rewarding economic activities (for example, new businesses or work in the humanitarian sector) or profitably expand existing activities (for example, agricultural production), while the worse off are possibly trapped in poverty (for example, landless agricultural laborers competing with cheap refugee labor). For this reason, to better inform policy, it is also important to consider the potentially ameliorating impacts of safety-net policies targeted at the poor of the host community, and to perform impact evaluations of alternative safety-net interventions in host communities.

Third, there is a need to recognize the interdependencies between refugees and their hosts, including the period for some years after the refugees have left the host areas. Households and local communities may need some time to adjust to population shocks associated with refugees (both the sudden influx at the beginning and the gradual or sudden departure of refugees to their countries of origin). In the short run, environmental degradation and disease propagation are certainly risks that need to be controlled for to support adaptation mechanisms by the host population. The risk of violence and crime cannot be understated. However, in the long run, humanitarian assistance should pave the way for development efforts. In particular, the development efforts may have an opportunity to capitalize on investments such as improved road infrastructure and social networks formed during the refugee situation, for example, by fostering trade that takes place via the improved roads or is based on the social networks formed between the repatriated refugees and host communities.

In terms of policy, an obvious if not simplistic approach to enhancing food security and resilience in the host community is to promote conflict resolution, strengthen governance institutions in the country of origin, and accelerate the transition from humanitarian aid to economic recovery and growth (Collier and Rohner 2008). The underlying assumption that the food security of the host community will improve once refugees return to their countries of origin has not been tested empirically, but this seems to be a premise of most refugee-development policies. Many long-term solutions (including repatriation and resettlement as proposed by the UNHCR) appear to hinge on the assumption that removing the protracted refugee population from the host community will improve outcomes for all. This assumption does not consider how these policies or solutions may affect the food security of both the host community and the refugees in the long run (after the refugees have left). Anecdotal evidence from the refugee-hosting areas of Malawi, Tanzania, and West Africa suggests that some combinations of conflict resolution, economic recovery, and gradual strengthening of governance institutions in the refugee-sending countries—Mozambique, Rwanda, and Liberia, respectively—helped to reduce refugee inflows and ultimately engendered voluntary repatriation of refugees. However, while food security in some of these host communities improved, it is not clear whether the improvement was a direct result of the refugees' returning to their countries of origin (Zetter 1995; Crisp 2010; World Bank

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<sup>17</sup> A qualitative assessment in Kenya also pointed to a net positive impact on the hosting population (NORDECO 2010). As a result of labor income, incomes to local contractors, and trading activities with refugees, the annual benefits to the local population were roughly estimated to be about US\$14.2 million, which translates into US\$95 in annual per capita benefits. The difference from the Sudanese case may be due to pastoralism, a livelihood activity that is different from those found among refugees outside of the camps.

2011). Irrespectively, while conflict resolution is desirable, the process of resolving conflict and promoting economic recovery often takes a long time, and there is a paucity of research on how best to accelerate it (Crisp 2010). Since the timing and nature (sequence and magnitude) of conflict resolution interventions can affect the duration of conflict, it could affect the impact on food security in host communities. The limited evidence available only suggests that addressing conflict through mediation soon after disputes erupt and through incorporation of local governance structures often shortens the duration of conflict and is likely to limit refugee inflows into host communities (Regan and Stam 2000; Regan 2002).

Traditionally, though, the international community, under the leadership of the UNHCR, has usually relied on three main solutions to protracted refugee situations: voluntary repatriation, local integration, and resettlement.<sup>18</sup> These programs assume that integrated interventions in host communities are effective at addressing the challenges of protracted refugee situations and their related food-security impacts. However, there is no formal evaluation of the long-term impacts of these approaches on the food security of host communities. Moreover, these three policy options involve unique challenges and none of them is a one-size-fits-all solution.

In the short run, one set of policy instruments that has been used widely in refugee settings is humanitarian aid. The myriad types and modalities of humanitarian aid have wide-ranging impacts on food security in host communities. The timing, source, and type of aid as well as where and to whom it is targeted have significant implications for the food security and resilience of the host community (Barrett and Maxwell 2005; Tschirley and del Castillo 2007; Lentz et al. 2013). Of all the different types of humanitarian aid, food aid is probably linked most closely to food security and has received much debate and analysis in the literature. In general, food aid improves food availability and can mitigate sharp increases in prices of aid-related food items in the short run (del Ninno, Dorosh, and Subbarao 2007; Kirwan and McMillan 2007). However, depending on whether it is directed only to refugee camps or to nearby households in the host community as well, it will have varying distributional impacts. Often the poorer households of the host population are disfavored if the supply is not sufficient to prevent local food price hikes, and in these circumstances the aid likely erodes their capacity to build resilience and long-term food security (Chambers 1986).

In the majority of cases, food aid is delivered (or targeted) to refugee camps and excludes the poor in the host communities. Usually the refugees will trade some of the food aid they receive with the host communities to obtain cash for purchasing other goods and services, and this trade often involves wealthier groups in the host communities, a practice that also has distributional implications for food security in the host community. This mechanism has led some to believe that it may be more efficient and equitable to provide cash transfers or vouchers (conditional or unconditional) to both refugees and poor households in the host communities, especially if food and other goods can be purchased at affordable prices from the local markets (Jaspars et al. 2007; Bailey, Savage, and O'Callaghan 2008; UNRWA 2011; GHA 2012; UNHCR 2012a). In addition to reduced transportation, storage, and distribution costs, the main advantage of cash-based interventions is to empower the beneficiaries to make efficient decisions on consumption and to increase protection inasmuch as cash is less visible and less subject to theft than food. A major risk is the fact that cash-based interventions may have a stronger impact on nonbeneficiaries when food markets are not well integrated (Basu 1996). Furthermore, the possible food price increases already constitute an operational concern in a protracted refugee situation.

A second risk in the humanitarian context is related to the fungible nature of cash-based interventions, which may be diverted with less difficulty than food aid by armed groups in conflict-prone areas. Vouchers

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<sup>18</sup> Another type of intervention is the provision of economic and educational activities within refugee settings, which has been implemented by nongovernmental organizations and mainline refugee agencies such as the United Nations Relief and Works Agency. These interventions allow refugees to maintain a basic livelihood as well as obtain livelihood skills that they can use later, upon eventual repatriation. However, these interventions might incur long-run costs inasmuch as they provide refugees incentives to remain in the host countries, thereby reinforcing the persistence of protracted refugee situations.

may constitute an interesting alternative in more fragile environments. UNHCR (2012a) already has experience with cash-based interventions in a wide range of countries, targeted to refugees with a particular focus on returnees (for example, in Chad, DRC, Jordan, Kenya, Pakistan, and Tanzania), IDPs (in Darfur and Somalia), and in limited cases, the host population (for example, in Lebanon). However, little is known about the relative efficiency of the interventions, which would require making the different modalities fully comparable in terms of program design, magnitude of transfers, and frequency of transfers (Hidrobo et al. 2014), while scaling up such interventions to the local hosts imposes an additional challenge of targeting the most in need among the host population. The randomized evaluation that Hidrobo and colleagues (2014) implemented in Ecuador provides certainly an interesting benchmark for future studies on the subject (Bailey 2013). Hidrobo and others (2014) indeed found that the quantity and quality of food consumed has improved under all modalities (cash, food, or vouchers) but food transfers led to larger increases in calories consumed while vouchers did much more to improve dietary diversity among both Columbian refugees and Ecuadorian hosts. Assessing the external validity of this study, in particular in rural and camp settings, would pave the way for more resilience-enhancing policies in protracted refugee situations. Despite the extensive review by Bailey (2013) and with a few exceptions (Aker 2013; Hoddinott, Sandström, and Upton 2013; Schwab, Margolies, and Hoddinott 2013; Hidrobo et al. 2014), we should acknowledge that “most evaluations of humanitarian assistance are not rigorous by academic research standards and are done with limited time and resources” (Bailey 2013, 4). Little is also known about the potential impact of hybrid interventions such as combining monetization, cash transfers, and public works programs that build infrastructure and human capital as well as include both refugees and the poor in the host community. All in all, the effects of different types and combinations of humanitarian aid on food security and resilience in host-community settings are not well understood and need much more research.

Whether food aid is procured locally, regionally, or from overseas is another aspect of food aid that has been debated in terms of its implications for food security of the host community, in both the short run and the long run. If food aid is imported from overseas and is not procured from local markets, it may reduce the incentives for farm production in the long run, thereby hampering the ability of the host community to transition from humanitarian aid to development. This generic effect of overseas imported food aid is reinforced in refugee settings because food production is often hampered by conflict and lack of security, and by the lack of production capacity and price incentives once the security conditions improve. Therefore the provision of food aid sourced from overseas may have less of an adverse effect in the short run, up to the point where conflict has abated. It may thus be advisable to phase out procurement of food aid from overseas and build capacity for agricultural production and marketing in the host community as security conditions improve, contingent on monitoring and evaluation of food production and of consumption requirements. This strategy emphasizes the dynamic nature of host-community settings and the need to set up surveillance monitoring and evaluation systems that can help inform decisionmakers on when to transition from one policy instrument to the other. Researchers also need to take these dynamics into consideration as they evaluate impacts of different types of food aid in refugee settings.

Related to the issue of food aid procurement is the geography of the host community. Recent work suggests that in coastal geographies there may be little difference in delivery time between food aid procured from overseas and that procured regionally. Significant differences are found only in landlocked settings, with local procurement significantly improving time frames of food aid delivery (Lentz, Passarelli, and Barrett 2013). Cost-effectiveness considerations are also important and suggest that local procurement may be cheaper. However, there are concerns that locally procured food aid is often unsafe and of lower quality. Thus, concurrently building capacity and upgrading regional food systems may yield greater benefits in the long term for food security in host communities. Simultaneously developing markets and road infrastructure may generate greater long-term benefits for the host community. However, there is limited empirical analysis of these approaches specifically in refugee settings.

Building the evidence base on effective strategies to enhance resilience and food security in host communities should be central in moving the agenda forward. The current lack of research means policy

decisions may not always have been based on evidence. Thus a more open and collaborative framework is needed that includes policymakers, development practitioners, and researchers to generate the evidence base for enhancing food security and resilience in host communities. Through research evidence and practice, UNHCR has realized the importance of refugee impacts on the hosting population and thus now implements programs (in coordination with others, such as the United Nations Development Programme) designed to minimize the negative impacts. For instance, in Tanzania, as a result of the problems that occurred in the district of Karagwe following the return of refugees to Rwanda in 1996, UNHCR and its partners implemented a joint program in 2008 in the framework of the UN's Delivering as One program to ease the transition in host communities following the repatriation of Burundi refugees from the district of Ngara.<sup>19</sup>

In some respects UNHCR (with WFP) has shown remarkable efficiency in addressing the challenges of protecting and supporting refugees and other groups or populations of concern. But more collaboration with other stakeholders is sorely needed. Based on our assessment, we come to the conclusion that innovative collaborations are essential in thinking about protracted refugee situations and their implications for food security in the host community. To some extent the problem is that protracted refugee situations have been the mandate of the UNHCR, which is already overstretched. Therefore the food-security challenge in protracted refugee situations should be seen as a long-term development challenge that calls for the engagement of other organizations and development approaches often applied in international organizations such as the United Nations Development Programme, Food and Agriculture Organization, World Bank, and other development agencies operating at national and regional levels. In our view, it is unrealistic to expect the UNHCR to take up the additional responsibility of implementing food-security and development programs for refugee host communities, and therefore innovative interorganizational collaborations may offer better results. It may be necessary to find an alternative agency or an institutional innovation that is separate from the UNHCR but coordinates closely with it to ensure effective transition from humanitarian aid to development. This institutional innovation that we propose requires coordination in partnership, and various models may have to be experimented with and tested to figure out what works. More research is certainly needed in that respect.

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<sup>19</sup> For more details, see [www.unhcr.org/print/4857de172.html](http://www.unhcr.org/print/4857de172.html).

## 5. CONCLUSION: MOVING THE RESEARCH AGENDA ON RESILIENCE FORWARD

An emerging literature addresses the impacts of refugees on host communities, in particular through the goods and labor markets, as well as on health. However, our understanding of the impact of refugees on food security in host communities is in its infancy and requires pushing the resilience agenda forward in several directions while conducting research on these multiple areas. Based on the review of literature, the main conclusions that we draw about moving the resilience and food-security agenda forward in refugee settings can be summarized into the following:

Most analyses have focused on one particular sector or impact channel (for example, health). However, **a more comprehensive or holistic view is needed**. As demonstrated in the framework presented in this paper (Figure 3.1), the issue is complex given the multiple and indirect channels through which refugees can affect food security in host communities. As pointed out in the literature review, the impacts are also likely to change over time and space, and they have important distributional consequences. The complexity of the impacts calls for **more complementary and integrative research approaches** including the innovative use of qualitative and quantitative research methods.

This review paper also sheds light on the **paucity of evidence on the three main solutions to protracted refugee situations** that UNHCR has used in most of its activities. Weighing the costs and benefits of each policy option and the respective impacts on food security requires a better understanding of the general impacts of these options on both the host population and the refugees' countries of origin. There is particular need to pay more attention to the consequences on the local communities of repatriation and integration of refugees or IDPs, which seem to have strong linkages with the food security of the host community. In addition, these options are argued to have been implemented without enough consideration of the long-term implications for the host communities. Beyond these interventions, we also need to open the door to hybrid approaches to dealing with the food-security problem in refugee situations, which have emerged more recently and incorporate more explicitly the concept of resilience and the notion of transitioning from refugee assistance to development. For instance, we still know very little about the relative efficiency of different interventions, such as conditional or unconditional cash, voucher, or food transfers, or their combination, in protracted refugee situations. Similarly, the impacts of infrastructure investments that take place in refugee situations and their implications for food security in the long run need to be understood to inform the possible approaches to linking humanitarian aid and development.

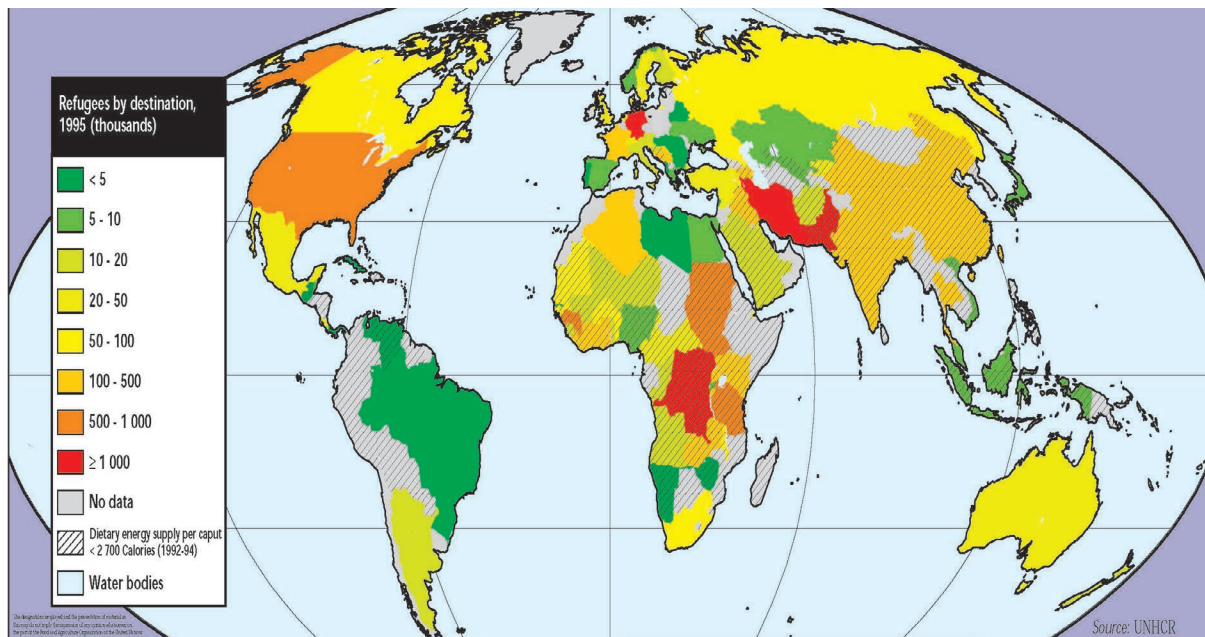
Due to data availability, many quantitative studies have focused on Tanzania; however, Tanzania might be a peculiar case. The case study of Dadaab offers additional evidence that some of the economic mechanisms found in Tanzania may be generalizable in other socioeconomic contexts, but the literature remains geographically too limited to allow for general conclusions. This certainly **calls for additional case studies** from other regions (for example, Syrian refugees in Jordan, Iraq, Turkey, or Lebanon, and Afghan refugees in Pakistan), studies contrasting the differential impact that could be hypothesized between refugees and IDPs, and studies of other refugee accommodation types (for example, camps versus self-settlement approaches).

The literature appears to be divided between assessing impacts on refugees and assessing impacts on the local hosts. Our literature review indicates that the **quality of interactions between refugees and hosts** largely determines outcomes in the way different interventions may operate among these two groups (such as food versus cash, education, employment, and so on). For example, targeting one group has indirect welfare implications for the other, and understanding this interaction is certainly a promising area of research. A better understanding of the social interaction and perceptions between refugees and local hosts, and the disparities between the two groups, could offer innovations in the attempt to employ local integration as a viable policy option. For example, the level of trust or social cohesion versus tension has

been reportedly affected by structural changes in the local economy induced by refugee inflows and associated humanitarian interventions and government policies. Understanding how social constructs such as mistrust or tensions may change due to the advent of refugees and associated policies or interventions can be integral in enhancing resilience to conflict in the local communities and hence food security.

Finally, a more practical knowledge gap is figuring out **how to align the incentives of policymakers, practitioners, and researchers**. The urgent nature of the humanitarian activities often conflicts with time and control requirements that are inherent in high-quality research. Preparation of fast-track research in close collaboration with implementing partners (WFP, UNHCR) would be programmatically favorable but may not yield the needed rigor for empirical evidence to better inform policies and programs in the long run. Thus greater collaboration between researchers and practitioners is needed and requires strong institutional partnerships to enable collaboration and long-term commitment by all stakeholders. This cooperation is urgently needed if significant improvements are to be realized in enhancing resilience and transitioning from humanitarian refugee assistance to development.

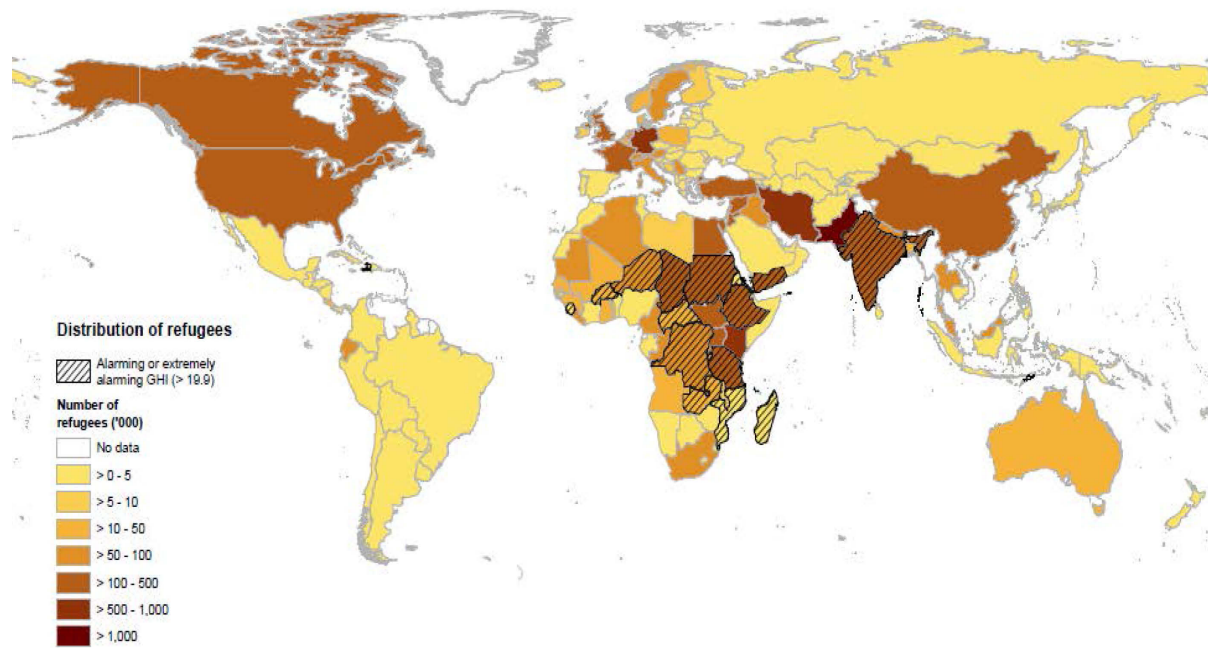
Figure A.1 Refugees by destination and dietary energy supply per capita, 1995



Source: FAO (1996) with data from United Nations High Commissioner for Refugees.



Figure A.2 Refugees by destination and Global Hunger Index, 2012



Source: UNHCR (2012b) and von Grebmer et al. (2013). Missing data for GHI are reported in 2013 for Afghanistan, Bahrain, Bhutan, Democratic Republic of Congo, Iraq, Myanmar, Oman, Papua New Guinea, Qatar, and Somalia.

Note: GHI = Global Hunger Index.

## REFERENCES

- ACTED (Agency for Technical Cooperation and Development). 2013. *Food Security Situation and Livelihood Intervention Opportunities for Syrian Refugees and Host Communities in North Jordan*. Paris.
- Adelman, S., D. O. Gilligan, and K. Lehrer. 2010. "Childhood Interrupted: How Conflict-Induced Shocks Shape Human Capital Formation." Unpublished. Washington DC: International Food Policy Research Institute.
- Aker, J. 2013. *Cash or Coupons? Testing the Impacts of Cash versus Vouchers in the Democratic Republic of Congo*. Working Paper 320. Washington, DC: Center for Global Development.
- Aklilu, Y., and A. Catley. 2009. *Livestock Exports from the Horn of Africa: An Analysis of Benefits by Pastoralist Wealth Group and Policy Implications*. Medford, MA, US: Feinstein International Center, Tufts University.
- Akokpari, J. K. 1998. "The State, Refugees and Migration in Sub-Saharan Africa." *International Migration* 36 (2): 211–234.
- Alix-Garcia, J., and A. Bartlett. 2012. "Occupations under Fire: The Labor Market in a Complex Emergency." Unpublished, Department of Agricultural and Applied Economics, University of Wisconsin, Madison.
- Alix-Garcia, J., A. Bartlett, and D. Saah. 2012. "Displaced Populations, Humanitarian Assistance and Hosts: A Framework for Analyzing Impacts on Semi-urban Households." *World Development* 40 (2): 373–386.
- . 2013. "The Landscape of Conflict: IDPs, Aid and Land-Use Change in Darfur." *Journal of Economic Geography* 13 (4): 589–617.
- Alix-Garcia, J., and D. Saah. 2010. "The Effect of Refugee Inflows on Host Communities: Evidence from Tanzania." *World Bank Economic Review* 24 (1): 148–170.
- Atkin, D. 2013. "Trade, Tastes and Nutrition in India." *American Economic Review* 103 (5): 1629–1663.
- Baez, J. E. 2011. "Civil Wars beyond Their Borders: The Human Capital and Health Consequences of Hosting Refugees." *Journal of Development Economics* 96 (2): 391–408. doi:10.1016/j.jdeveco.2010.08.011.
- Bailey, S. 2013. *The Impact of Cash Transfers on Food Consumption in Humanitarian Settings: A Review of Evidence*. Winnipeg: Canadian Foodgrains Bank.
- Bailey, S., K. Savage, and S. O'Callaghan. 2008. *Cash Transfers in Emergencies: A Synthesis of World Vision's Experience and Learning*. Middlesex, UK: World Vision International.
- Ballentine, K., and J. Sherman. 2003. *The Political Economy of Armed Conflict: Beyond Greed and Grievance*. Boulder, CO, US: Lynne Rienner Publishers.
- Barreca, A. I., P. V. Fishback, and S. Kantor. 2012. "Agricultural Policy, Migration, and Malaria in the United States in the 1930s." *Explorations in Economic History* 49 (4): 381–398.
- Barrett, C. B., and D. Maxwell. 2005. *Food Aid after Fifty Years: Recasting Its Role*. New York: Routledge.
- Basu, K. 1996. "Relief Programs: When It May Be Better to Give Food Instead of Cash." *World Development* 24 (1): 91–96.
- Beegle, K. 2005. "Labor Effects of Adult Mortality in Tanzanian Households." *Economic Development and Cultural Change* 53 (3): 655–683.
- Beegle, K., J. De Weerd, and S. Dercon. 2006. *Kagera Health and Development Survey 2004 Basic Information Document*. Washington, DC: The World Bank.
- Berry, L. 2008. "The Impacts of Environmental Degradation on Refugee-Host Relationships." *African Security Studies* 17 (3): 125–131.

- Black, R. 2001. *Environmental Refugees: Myth or Reality?* Geneva: United Nations High Commissioner for Refugees.
- Blattman, C., and E. Miguel. 2010. "Civil War." *Journal of Economic Literature* 48 (1): 3–57.
- Bohnet, H. 2012. "Large Refugee Populations, Resource Scarcity and Conflict." Paper presented at annual conference of the European Political Science Association, Berlin, June 21–23.
- Bosker, M., and H. Garretsen. 2009. "Economic Development and the Geography of Institutions." *Journal of Economic Geography* 9 (3): 295–328.
- Breisinger, C., E. Ecker, P. Al-Riffai, and B. Yu. 2012. *Policies and Investments for Poverty Reduction and Food Security*. Food Policy Report 25. Washington, DC: International Food Policy Research Institute.
- Buhaug, H., S. Gates, and P. Lujala. 2009. "Geography, Rebel Capability, and the Duration of Civil Conflict." *Journal of Conflict Resolution* 53 (4): 544–569.
- Büscher, K., and K. Vlassenroot. 2010. "Humanitarian Presence and Urban Development: New Opportunities and Contrasts in Goma, DRC." *Disasters* 34 (s2): S256–S273.
- Chambers, R. 1986. "Hidden Losers? The Impact of Rural Refugees and Refugee Programs on Poorer Hosts." *International Migration Review* 20 (2): 245–263.
- Collier, P., and A. Hoeffler. 2004. "Greed and Grievance in Civil War." *Oxford Economic Papers* 56 (4): 563–595.
- Collier, P., and D. Rohner. 2008. "Democracy, Development, and Conflict." *Journal of the European Economic Association* 6 (2–3): 531–540.
- Coly, A. N., J. Milet, A. Diallo, T. Ndiaye, E. Benefice, F. Simondon, S. Wade, and K. B. Simondon. 2006. "Preschool Stunting, Adolescent Migration, Catch-Up Growth, and Adult Height in Young Senegalese Men and Women of Rural Origin." *Journal of Nutrition* 136 (9): 2412–2420.
- Craig, M. H., R. W. Snow, and D. le Sueur. 1999. "A Climate-Based Distribution Model of Malaria Transmission in Sub-Saharan Africa." *Parasitology Today* 15 (3): 105–111.
- Crisp, J. 2010. "Forced Displacement in Africa: Dimensions, Difficulties and Policy Directions." *Refugee Survey Quarterly* 29:1–27.
- Czaika, M., and A. Mayer. 2011. "Refugee Movements and Aid Responsiveness of Bilateral Donors." *Journal of Development Studies* 47 (3): 455–474.
- de Waal, A. 1997. *Famine Crimes: Politics and the Disaster Relief Industry in Africa*. Bloomington: Indiana University Press.
- del Ninno, C., P. A. Dorosh, and K. Subbarao. 2007. "Food Aid, Domestic Policy and Food Security: Contrasting Experiences from South Asia and Sub-Saharan Africa." *Food Policy* 32 (4): 413–435.
- De Weerd, J., K. Beegle, H. B. Lilleør, S. Dercon, K. Hirvonen, M. Kirchberger, and S. Krutikova. 2012. *Kagera Health and Development Survey 2010: Basic Information Document*. Study Paper 46. Copenhagen: The Rockwool Foundation Research Unit.
- Dorosh, P., H. G. Wang, L. You, and E. Schmidt. 2012. "Road Connectivity, Population, and Crop Production in Sub-Saharan Africa." *Agricultural Economics* 43 (1): 89–103.
- Duflo, E. 2012. "Women's Empowerment and Economic Development." *Journal of Economic Literature* 50 (4): 1051–1079.
- Ecker, O., and C. Breisinger. 2012. *The Food Security System: A New Conceptual Framework*. Discussion Paper 01166. Washington, DC: International Food Policy Research Institute.
- Fan, S., P. Hazell, and S. Thorat. 2000. "Government Spending, Growth and Poverty in Rural India." *American Journal of Agricultural Economics* 82 (4): 1038–1051.

- FAO (Food and Agriculture Organization). 1996. *World Food Summit: Synthesis of the Technical Background Documents*. Rome. [www.fao.org/docrep/003/w2537e/w2537e00.HTM](http://www.fao.org/docrep/003/w2537e/w2537e00.HTM).
- . 2006. *Food Security*. Policy Brief 2. Rome.
- . 2013. *Crop Prospects and Food Situation*. Rome.
- Fearon, J. D., and D. D. Laitin. 2003. "Ethnicity, Insurgency, and Civil War." *American Political Science Review* 97 (1): 75–90.
- . 2011. "Sons of the Soil, Migrants, and Civil War." *World Development* 39 (2): 199–211.
- Fiala, N. 2012. *The Economic Consequences of Forced Displacement*. Brighton, UK: Households in Conflict Network.
- Fisk, K. 2012. "Do Refugees Trigger Conflict? Evaluating the Influence of Refugee Location on the Diffusion of Violence in Host Countries." Paper prepared for annual meeting of the American Political Science Association, New Orleans, August 29–September 2.
- Gallup, J. L., and J. D. Sachs. 2000. "The Economic Burden of Malaria." *American Journal of Tropical Medicine and Hygiene* 64 (1–2 Suppl): 85–96.
- GHA (Global Humanitarian Assistance). 2012. *Tracking Spending on Cash Transfer Programming in a Humanitarian Context: Briefing*. Bristol, UK. [www.globalhumanitarianassistance.org/wp-content/uploads/2012/03/cash-transfer-financing-final.pdf](http://www.globalhumanitarianassistance.org/wp-content/uploads/2012/03/cash-transfer-financing-final.pdf).
- Gleditsch, N. P. 1998. "Armed Conflict and the Environment: A Critique of the Literature." *Journal of Peace Research* 35 (3): 381–400.
- Goldsmith, P. 2013. "The Future of Pastoralist Conflict in the Horn of Africa." *Pastoralism and Development in Africa: Dynamic Change at the Margins*, edited by A. Catley, J. Lind, and I. Scoones, 131–142. New York: Routledge.
- Goyens, P., D. Porignon, E. M. Soron'gane, R. Tonglet, P. Hennart, and H. L. Vis. 1996. "Humanitarian Aid and Health Services in Eastern Kivu, Zaïre: Collaboration or Competition?" *Journal of Refugee Studies* 9 (3): 268–280.
- Hatton, T. J., and J. G. Williamson. 2003. "Demographic and Economic Pressure on Emigration out of Africa." *Scandinavian Journal of Economics* 105 (3): 465–486.
- Headey, D., and A. Kennedy. 2012. *Enhancing Resilience in the Horn of Africa: Synthesis of an Evidence-Based Workshop*. Washington, DC: International Food Policy Research Institute. [www.ifpri.org/sites/default/files/publications/cp\\_hornofafrica.pdf](http://www.ifpri.org/sites/default/files/publications/cp_hornofafrica.pdf).
- Hendrix, C., and H.-J. Brinkman. 2013. "Food Insecurity and Conflict Dynamics: Causal Linkages and Complex Feedbacks." *Stability: International Journal of Security and Development* 2 (2): 26. doi:10.5334/sta.bm.
- Hidrobo, M., J. Hoddinott, A. Peterman, A. Margolies, and V. Moreira. 2014. "Cash, Food, or Vouchers? Evidence from a Randomized Experiment in Northern Ecuador." *Journal of Development Economics* 107:144–156.
- Hirvonen, K. 2014. "Measuring Catch-Up Growth in Malnourished Populations." *Annals of Human Biology* 41 (1): 67–75. doi:10.3109/03014460.2013.827239.
- Hoddinott, J. 2012. "Agriculture, Health, and Nutrition: Toward Conceptualizing the Linkages." In *Reshaping Agriculture for Nutrition and Health: An IFPRI 2020 Book*, edited by S. Fan and R. Pandya-Lorch, 13–20. Washington, DC: International Food Policy Research Institute.

- Hoddinott, J., S. Sandström, and J. Upton. 2013. *Impact Evaluation of Cash and Food Transfers in Zinder, Niger: Analytical Report*. Rome: World Food Programme.  
<http://documents.wfp.org/stellent/groups/public/documents/resources/wfp257676.pdf>.
- Homer-Dixon, T. F. 1999. *Environment, Scarcity, and Violence*. Princeton, NJ, US: Princeton University Press.
- Hsiang, S. M., M. Burke, and E. Miguel. 2013. "Quantifying the Influence of Climate on Human Conflict." *Science* 341 (6151): 1235367. doi:10.1126/science.1235367.
- Hynes, M., M. Sheik, H. G. Wilson, and P. Spiegel. 2002. "Reproductive Health Indicators and Outcomes among Refugee and Internally Displaced Persons in Postemergency Phase Camps." *Journal of the American Medical Association* 288 (5): 595–603.
- Ibáñez, A. M., and A. Moya. 2010. "Vulnerability of Victims of Civil Conflicts: Empirical Evidence for the Displaced Population in Colombia." *World Development* 38 (4): 647–663.
- Ibáñez, A. M., and C. E. Vélez. 2008. "Civil Conflict and Forced Migration: The Micro Determinants and Welfare Losses of Displacement in Colombia." *World Development* 36 (4): 659–676.
- Jacobsen, K. 1997. "Refugees' Environmental Impact: The Effect of Patterns of Settlement." *Journal of Refugee Studies* 10 (1): 19–36.
- . 1999. *A "Safety-First" Approach to Physical Protection in Refugee Camps*. Working Paper 4. Cambridge: Massachusetts Institute of Technology Center for International Studies.
- . 2000. "A Framework for Exploring the Political and Security Context of Refugee Populated Areas." *Refugee Survey Quarterly* 19 (1): 3–22.
- . 2002. "Can Refugees Benefit the State? Refugee Resources and African Statebuilding." *Journal of Modern African Studies* 40 (4): 577–596.
- Jacoby, H. G., and B. Minten. 2009. "On Measuring the Benefits of Lower Transport Costs." *Journal of Development Economics* 89 (1): 28–38.
- Jaspars, S., P. Harvey, C. Hudspeth, L. Rumble, and D. Christensen. 2007. *A Review of UNICEF's Role in Cash Transfers to Emergency-Affected Populations*. Working Paper. New York: UNICEF Office of Emergency Programmes.
- Johnson, R. N., and G. D. Libecap. 1982. "Contracting Problems and Regulation: The Case of the Fishery." *The American Economic Review* 72 (5): 1005–1022.
- Kalipeni, E., and J. Opong. 1998. "The Refugee Crisis in Africa and Implications for Health and Disease: A Political Ecology Approach." *Social Science and Medicine* 46 (12): 1637–1653.
- Kazmi, J. H., and K. Pandit. 2001. "Disease and Dislocation: The Impact of Refugee Movements on the Geography of Malaria in NWFP, Pakistan." *Social Science and Medicine* 52 (7): 1043–1055.
- Keen, D. 1998. *The Economic Functions of Violence in Civil Wars*. Adelphi Paper 320. London: International Institute for Strategic Studies.
- . 2008. *Complex Emergencies*. Cambridge, UK: Polity Press.
- Kibreab, G. 1997. "Environmental Causes and Impact of Refugee Movements: A Critique of the Current Debate." *Disasters* 21 (1): 20–38.
- Kirwan, B. E., and M. McMillan. 2007. "Food Aid and Poverty." *American Journal of Agricultural Economics* 89 (5): 1152–1160.
- Kondylis, F. 2008. "Agricultural Outputs and Conflict Displacement: Evidence from a Policy Intervention in Rwanda." *Economic Development and Cultural Change* 57 (1): 31–66.

- Kreibaum, M. 2013. "Their Suffering, Our Burden? How Congolese Refugees Affect the Ugandan Population." Paper presented at Households in Conflict Network workshop, Berkeley, CA, US, November 20–22.
- Landau, L. B. 2004. "Challenge without Transformation: Refugees, Aid and Trade in Western Tanzania." *Journal of Modern African Studies* 42 (1): 31–59.
- Lawrie, N., and W. Van Damme. 2003. "The Importance of Refugee-Host Relations: Guinea 1990–2003." *Lancet* 362 (9383): 575.
- Lentz, E. C., C. B. Barrett, M. I. Gómez, and D. G. Maxwell. 2013. "On the Choice and Impacts of Innovative International Food Assistance Instruments." *World Development* 49:1–8.
- Lentz, E. C., S. Passarelli, and C. B. Barrett. 2013. "The Timeliness and Cost-Effectiveness of the Local and Regional Procurement of Food Aid." *World Development* 49:9–18.
- Majid, N., and S. McDowell. 2012. "Hidden Dimensions of the Somalia Famine." *Global Food Security* 1 (1): 36–42.
- Marchiori, L., J.-F. Maystadt, and I. Schumacher. 2013. *Is Environmentally-Induced Income Variability a Driver of Migration? A Macroeconomic Perspective*. Working Paper 2013-17. Paris: IPAG Business School.
- Margolies, A., and J. Hoddinott. 2012. *Mapping the Impacts of Food Aid: Current Knowledge and Future Directions*. Working Paper 2012/34. Helsinki: United Nations University World Institute for Development Economics Research.
- Martin, A. 2005. "Environmental Conflict between Refugee and Host Communities." *Journal of Peace Research* 42 (3): 329–346.
- Maystadt, J.-F. 2011. *Poverty Reduction in a Refugee-Hosting Economy: A Natural Experiment*. Discussion Paper 01132. Washington, DC: International Food Policy Research Institute.
- Maystadt, J.-F., and G. Duranton. 2013. "The Development Push of Refugees: Evidence from Tanzania." Paper presented at Households in Conflict Network workshop, Berkeley, CA, US, November 20–22.
- Maystadt, J.-F., and P. Verwimp. Forthcoming. "Winners and Losers among a Refugee-Hosting Population." *Economic Development and Cultural Change*.
- Menkhaus, K. 2012. "No Access: Critical Bottlenecks in the 2011 Somali Famine." *Global Food Security* 1 (1): 29–35.
- Milner, J., and G. Loescher. 2004. "Protracted Refugee Situations and State and Regional Insecurity." *Conflict, Security and Development* 4 (1): 3–20.
- Montalvo, J. G., and M. Reynal-Querol. 2007. "Fighting against Malaria: Prevent Wars While Waiting for the 'Miraculous' Vaccine." *Review of Economics and Statistics* 89 (1): 165–177.
- Moore, W. H., and S. M. Shellman. 2007. "Whither Will They Go? A Global Study of Refugees' Destinations, 1965–1995." *International Studies Quarterly* 51 (4): 811–834.
- Morel, M. 2009. "The Lack of Refugee Burden-Sharing in Tanzania: Tragic Effects." *Africa Focus* 22 (1): 107–114.
- Ndege, L. J., B. S. Piters, A. Nyanga, and L. Ngimbwa. 1995. *Tanzania/Netherlands Farming Systems Research Project, Lake Zone: Diagnostic Survey of Karagwe District*. Karagwe, Tanzania: Karagwe District Rural Development Programme.
- NORDECO (Nordic Agency for Development and Ecology). 2010. *In Search of Protection and Livelihoods: Socio-economic and Environmental Impacts of Dadaab Refugee Camps on Host Communities*. Copenhagen.
- Orach, C. G., and V. De Brouwere. 2004. "Postemergency Health Services for Refugee and Host Populations in Uganda, 1999–2002." *Lancet* 364 (9434): 611–612.

- Pieters, H., A. Guariso, and A. Vandeplas. 2013. *Conceptual Framework for the Analysis of the Determinants of Food and Nutrition Security*. Working Paper 13. The Hague: FoodSecure.
- Porignon, D., J.-P. Noterman, P. Hennart, R. Tonglet, G. Soron, E. Mugisho, and T. E. Lokombe. 1995. "The Role of the Zairian Health Services in the Rwandan Refugee Crisis." *Disasters* 19 (4): 356–360.
- Prentice, A. M., K. A. Ward, G. R. Goldberg, L. M. Jarjou, S. E. Moore, A. J. Fulford, and A. Prentice. 2013. "Critical Windows for Nutritional Interventions against Stunting." *American Journal of Clinical Nutrition* 97 (5): 911–918.
- Prunier, G. 2008. *Africa's World War: Congo, the Rwandan Genocide, and the Making of a Continental Catastrophe*. New York: Oxford University Press.
- Rahim, A. A., D. Jaimovich, and A. Ylönen. 2013. *Forced Displacement and Behavioral Change: An Empirical Study of Returnee Households in the Nuba Mountains*. Working Paper 157. Brighton, UK: Households in Conflict Network.
- Regan, P. M. 2002. *Civil Wars and Foreign Powers: Outside Intervention in Intrastate Conflict*. Ann Arbor: University of Michigan Press.
- Regan, P. M., and A. C. Stam. 2000. "In the Nick of Time: Conflict Management, Mediation Timing, and the Duration of Interstate Disputes." *International Studies Quarterly* 44 (2): 239–260.
- Robeyns, I. 2006. "Three Models of Education Rights, Capabilities and Human Capital." *Theory and Research in Education* 4 (1): 69–84.
- Ruegger, S., and H. Bohnet. 2011. "Refugees, Conflict and Ethnic Power Relations." Paper presented at American Political Science Association annual meeting, Seattle, WA, US, September 1–4.
- Ruel, M., and J. Hoddinott. 2008. *Investing in Early Childhood Nutrition*. Policy Brief 8. Washington, DC: International Food Policy Research Institute.
- Ruiz, I., and C. Vargas-Silva. 2013. "The Economics of Forced Migration." *Journal of Development Studies* 49 (6): 772–784.
- Rutinwa, B., and K. Kamanga. 2003. *Impact of Refugees in Northwestern Tanzania*. Dar es Salaam, Tanzania: Center for Study of Forced Migration.
- Salehyan, I., and K. S. Gleditsch. 2006. "Refugees and the Spread of Civil War." *International Organization* 60 (2): 335–366.
- Schwab, B., A. Margolies, and J. Hoddinott. 2013. *Impact Evaluation of Cash and Food Transfers for the Seasonal Emergency Safety Net in Hajjah and Ibb Governorates: Yemen Endline Report*. Washington, DC: International Food Policy Research Institute.
- Schwartz, D. M., T. Deligiannis, and T. F. Homer-Dixon. 2000. "Commentary: Debating Environment, Population, and Conflict." *Environmental Change and Security Project Report* 6:77–94.
- Shroff, M. R., P. L. Griffiths, C. Suchindran, B. Nagalla, S. Vazir, and M. E. Bentley. 2011. "Does Maternal Autonomy Influence Feeding Practices and Infant Growth in Rural India?" *Social Science and Medicine* 73 (3): 447–455.
- Singh, I., L. Squire, and J. Strauss. 1986. "The Basic Model: Theory, Empirical Results, and Policy Conclusions." *Agricultural Household Models: Extensions, Applications, and Policy*, edited by I. Singh, L. Squire, and J. Strauss, 17–47. Baltimore: Johns Hopkins University Press.
- Stavenhagen, R. 1996. *Ethnic Conflicts and the Nation-State*. London: Macmillan.
- Tschirley, D. L., and A. M. del Castillo. 2007. *Local and Regional Food Aid Procurement: An Assessment of Experience in Africa and Elements of Good Donor Practice*. Food Security International Development

- Working Paper 54562. East Lansing: Michigan State University Department of Agricultural, Food, and Resource Economics.
- UNEP (United Nations Environmental Programme). 2005. *Impacts of Refugees and Internally Displaced Persons on the Environment in Tanzania*. Geneva: UNEP Division of Environmental Policy Implementation.
- UNHCR (United Nations High Commissioner for Refugees). 2007. *Statistical Yearbook 2007*. Geneva.
- . 2012a. *An Introduction to Cash-Based Interventions in UNHCR Operations*. Geneva: UNHCR Division of Programme Support and Management. [www.unhcr.org/515a959e9.html](http://www.unhcr.org/515a959e9.html).
- . 2012b. *Statistical Yearbook 2012*. Geneva.
- UNRWA (United Nations Relief and Works Agency). 2011. *Sustaining Change*. Amman, Jordan: UNRWA Relief and Social Services Department. [www.unrwa.org/userfiles/201201154647.pdf](http://www.unrwa.org/userfiles/201201154647.pdf).
- Van Damme, W. 1995. "Do Refugees Belong in Camps? Experiences from Goma and Guinea." *Lancet* 346 (8971): 360–362.
- Van Damme, W., V. De Brouwere, M. Boelaert, and W. Van Lerberghe. 1998. "Effects of a Refugee-Assistance Programme on Host Population in Guinea as Measured by Obstetric Interventions." *Lancet* 351 (9116): 1609–1613.
- Verwimp, P., and J. C. Muñoz-Mora. 2013. *Returning Home after Civil War: Food Security, Nutrition and Poverty among Burundian Households*. Working Paper 123. Brighton, UK: Households in Conflict Network.
- von Grebmer, K., D. Headey, C. Béné, L. Haddad, T. Olofinbiyi, D. Wiesmann, H. Fritschel, S. Yin, Y. Yohannes, C. Foley, C. von Oppeln, and B. Iseli. 2013. *2013 Global Hunger Index: The Challenge of Hunger: Building Resilience to Achieve Food and Nutrition Security*. Bonn: Welthungerhilfe; Washington, DC: International Food Policy Research Institute; Dublin: Concern Worldwide.
- Vosti, S. A. 1990. "Malaria among Gold Miners in Southern Para, Brazil: Estimates of Determinants and Individual Costs." *Social Science and Medicine* 30 (10): 1097–1105.
- Werker, E. 2007. "Refugee Camp Economies." *Journal of Refugee Studies* 20 (3): 461–480.
- WFP (World Food Programme). 2011. *Ivorian Refugee Influx and Food Security: Nimba Refugee Assessment*. Rome.
- . 2013a. *Syrian Refugees and Food Insecurity in Iraq, Jordan and Turkey: Secondary Literature and Data Desk Review*. Rome.
- . 2013b. *Syrian Refugees and Food Insecurity in Lebanon: Secondary Literature and Data Desk Review*. Rome.
- Whitaker, B. E. 2002. "Refugees in Western Tanzania: The Distribution of Burdens and Benefits among Local Hosts." *Journal of Refugee Studies* 15 (4): 339–358.
- White, H., and H. Waddington. 2012. "Why Do We Care about Evidence Synthesis? An Introduction to the Special Issue on Systematic Reviews." *Journal of Development Effectiveness* 4 (3): 351–358.
- World Bank. 2011. *World Development Report 2011: Conflict, Security, and Development*. Washington, DC.
- . 2013. World Development Indicators database. Accessed on November 20. <http://data.worldbank.org/data-catalog/world-development-indicators>.
- Zetter, R. 1995. "Incorporation and Exclusion: The Life Cycle of Malawi's Refugee Assistance Program." *World Development* 23 (10): 1653–1667.



