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Review Article

The Dual Impact of Immigration and Refugee Movements on Food Security: Challenges, Contributions, and Sustainable Strategies

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Abstract: The Global Compacts on Refugees and Migration can significantly impact human mobility. Food security is a priority for migrants in transit, and humanitarian aid recognizes food access as lacking in displacement situations. Migrants face difficulties during mobility periods, increasing their health risks. Food security affects health and well-being and is essential to the human right to adequate living standards. Climate change and food system neo-liberalization have increased food insecurity and hunger, creating more nutritionally vulnerable displaced people. Refugee inflows affect food security and resilience of host communities in developing countries. Allowing refugees formal work leads to self-reliance, improved living standards, better labor outcomes for natives, higher tax revenues, and economic productivity. Global refugee numbers have increased, with Sub-Saharan Africa hosting one-third. Strategies for food security include increasing production, reducing waste, addressing changing diets, and improving consumer behavior through education and healthier processed foods. Balancing growing food demand with limited production capacity is crucial for food security.

Keyword: Food security, Refugee migration, Sustainable Strategies.

INTRODUCTION

The Global Compact on Refugees (GCR) and Global Compact for Safe, Orderly, and Regular Migration (GCM) have the potential to represent the most significant progress in human mobility by the international community in decades, assuming they are implemented with genuine intent (Garlick & Inder, 2021). Refugee migration is a key topic in political debates and has been the focus of extensive academic research. Most research has examined the movement of refugee populations, often prompted by violent conflicts in various parts of the world (Fransen, 2022). The migration of individuals due to conflict and the search for new opportunities have been persistent features of many societies. However, the designation of individuals as refugees and the creation of specific international refugee laws and welfare programs are relatively recent phenomena (Morris, 2021). Refugees' personal experiences are shaped by both temporal and geographical factors (Griffiths *et al.*, 2013, Robertson, 2014).

These experiences encompass both regular and irregular time-geographical patterns that discursively influence daily life. Refugees frequently navigate complex routes in their quest for safety and stability by moving through different visa categories and temporary residence permits. They often wait for an opportune moment to cross borders or apply for an asylum. They must periodically renew their documents to comply with the temporal requirements of their host countries. Even after reaching a permanent settlement, they are expected to successfully negotiate a process often guided by linear temporal logic, where the speed of integration is seen as a measure of success (Tefera & Gamlen, 2021). Human mobility, especially forced displacement, is increasing (IOM 2020). International migration, which includes all individuals who relocate to a country other than their birthplace, is common (IOM 2019). In 2019, there were 272 million international migrants, including approximately 25.9 million refugees. Simultaneously, an estimated 41.3 million people were internally displaced

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due to natural disasters, conflict, or violence, marking the highest number in recorded history (IOM 2020).

Many individuals who migrate internationally do so for employment, family, or educational purposes. Nonetheless, a significant number of people are compelled to leave their homes and countries because of a mix of urgent and involuntary factors such as violent conflict, persecution, and environmental changes. Their aim might be to enhance their living conditions or escape systemic issues such as poverty and food insecurity (IOM, 2020). As highlighted in a report by the Office of the High Commissioner for Human Rights (OHCHR, 2016), access to food is a critical priority for migrants in transit worldwide, and it was identified as one of the most significant unmet needs across the 18 countries examined. Humanitarian aid organizations, including those linked to the UN, such as the World Food Program (WFP), the International Organization for Migration (IOM), and the Office for the Coordination of Humanitarian Affairs, acknowledge the necessity of food access in displacement situations and frequently employ rapid survey questions to assess immediate food assistance needs. For instance, the WFP has consistently stressed the urgent requirement for food access for Venezuelan migrants traveling along the Venezuela-Colombia border, which is a crucial migratory route (WFP, 2020). Depending on their circumstances, migrants may spend varying lengths of time moving between their places of origin and their intended destinations. During these periods of active mobility, migrants may face numerous challenges, heightening their risk of various health issues (Matlin *et al*., 2028). Food security affects health and psychosocial well-being and is an essential element of the universal human right to an adequate standard of living, which implies sufficient and adequate food across four dimensions: availability, access, utilization, and stability (FAO *et al*., 2020).

Food accessibility encompasses three subdimensions: physical, economic, and social access (FAO, 2006; FAO *et al.*, 2020). Since 2009, social access has been included in the FAO definition of food security; however, it lacks a standardized definition and tool for measurement, and thus, is not currently reported globally. The absence of social access refers to situations in which, despite having adequate physical and economic access, individuals are denied food due to their membership in a specific group or social role (Napoli, 2011). Understanding the significance of food security and its related health risks as well as the existing knowledge gaps and international initiatives to eradicate global hunger is crucial. Consequently, this review examines the dual impact of immigration and refugee movements on food security, highlighting the challenges, contributions, and sustainability strategies involved.

Impacts of Immigration and Refugees on Food Security

As refugee crises emerge in various regions globally, it is crucial to comprehend how these large-scale movements impact host communities economically, socially, environmentally, and securely. This section outlines a conceptual framework for examining how a sudden influx of refugees might influence the food security and resilience of a host community, particularly in a developing country. It mainly investigates the potential effects of refugee arrivals from the perspective of food security, thus complementing the work of Alix-Garcia *et al*. (2012). However, it does not aim to evaluate the overall effects of refugee or IDP arrivals, as it does not consider the impact of food security on refugees themselves (as explored by Ruiz and Vargas-Silva, 2013).

For individuals with refugee experiences, the choice to leave their homeland is typically involuntary, often unexpected, and abrupt and can be a period of significant stress and separation from family and support networks. Upon reaching the host country, there is a transition from resettlement, which involves seeking asylum and receiving protection, to settlement, where individuals begin to develop a sense of belonging (Bikesh *et al*., 2020). Eating habits are influenced by food availability, cultural and religious customs, societal norms, personal experiences, and taste preferences, making food deeply connected to identity and cultural preservation (Gichunge *et al*., 2016). Food plays a vital role in fostering a sense of belonging, creating a sense of place, and building community connections (Marlowe, 2018). Food security affects health and psychosocial well-being and is a fundamental aspect of universal human rights to an adequate standard of living. It encompasses adequate and sufficient food across four key dimensions: availability, access, utilization, and stability (FAO *et al*., 2013).

Undoubtedly, the significant movement and settlement of refugees has a profound effect on the host nation. Various case studies have demonstrated that the recent surge of refugees is linked to high levels of food insecurity in Liberia (WFP, 2011), as well as in Burkina Faso, Chad, Liberia, and Niger (FAO, 2013), and countries neighboring Syria (ACTED, 2013). These policy documents consistently associate refugees with worsening food security conditions in host communities, potentially due to increased strain on natural resources, disruptions in food and labor markets, and declining health services. However, anecdotal evidence alone is insufficient to assert that refugees burden the food security of the host communities. The aforementioned studies are qualitative and descriptive and lack a suitable counterfactual to establish causality (Mabiso *et al*., 2014).

Globally, the correlation between food security and refugees indicates that countries receiving a large

number of refugees often coincide with regions already experiencing declining food security (Mabiso *et al*., 2014). The presence of refugees typically has a significant impact on labor market outcomes in host areas, which is a crucial factor in food security. Alongside food prices, household resources are major determinants of food accessibility, but the use of labor largely influences farming households' capacity to boost production (Mabiso *et al*., 2014).

The primary livelihood or occupation of refugees compared with that of locals seems to dictate the level of resource competition and natural resource depletion in refugee situations. Consequently, some have suggested offering refugees alternative livelihood opportunities that differ from those offered to the local poor. Notably, the proposed livelihood opportunities are alternatives to those involving deforestation and charcoal trading, which are prevalent in many African refugees. Cooperative resource management solutions are believed to alleviate refugees' environmental impacts, thereby reducing the risks of resource-related conflicts (Martin, 2005) and enhancing successful integration (World Bank, 2011). The disruptive effects of conflict and climate-related shocks, along with their tendency to cause human population displacement, are well documented in the literature. Given the increasing number of internally displaced people (IDPs) worldwide and the resulting strain on population and service demand in host communities, understanding the socioeconomic impacts is crucial, especially because many host communities in developing countries rely on agriculture (George and Adelaja, 2021).

Contributions of Refugees to Host Communities' Food Systems

When refugees are granted the opportunity to work, they can significantly enhance their contributions to the communities that host them by assuming the roles of employers, employees, taxpayers, and innovators. This not only allows them to better support themselves but also boosts the economy, benefiting their host countries. As refugees gain employment and become self-sufficient, the financial burden on host governments and donors decreases, or is eliminated. Conversely, when access to labor markets is restricted, refugees' ability to contribute diminishes, potentially increasing costs for both refugees and their supporters (Clemens *et al*., 2018). It is argued that permitting refugees to work legally can lead to greater self-reliance, improved living conditions for refugees, better labor market outcomes for native populations, increased tax revenues, and a more efficient economy overall. Refugees influence labor markets in developing nations, not only as workers but also as consumers. Like all immigrants, they spend their earnings on locally produced and imported goods. Due to the heightened demand for local goods and services and, indirectly, for labor, there is a consensus in migration economics literature that the overall effect of immigrants on the labor market performance of resident workers is generally minimal, although it can sometimes be negative for certain resident groups (Peri, 2014).

Additionally, developing countries that host refugees often receive substantial financial aid from the international community, which may come in the form of grants to the host nation or cash-based assistance (increasingly considered the best practice). In either case, international financial support acts as a significant demand-side stimulus in local goods markets, and some additional income is spent on locally produced goods and services rather than imports (Verme & Schuettler, 2019).

Numerous studies have now aimed to assess the impact of refugee inflows on the economic well-being of residents. These studies vary greatly in their focus (labor market, goods market, aggregate effects), methodological approach, timeframe, and context, including the size of the refugee influx, the income level of the host region, and the policy framework. Unsurprisingly, the findings are diverse, although most indicate positive outcomes for host communities (Khoudour & Andersson, 2017; Verme & Schuettler, 2019). A growing body of literature evaluates the effects of hosting refugees (Meyer *et al*., 2011, Ruiz and Vargas-Silva, 2017, Maystadt *et al*., 2019). While the literature underscores that refugees can have beneficial impacts on economic development, with potential distributional consequences, evidence from individual studies is mixed (Ruiz and Vargas-Silva, 2017, Maystadt *et al*., 2019, Verme and Schuettler, 2021).

Regional and Global Case Studies

The worldwide refugee population grew from roughly 10 million in 2010 to 20.4 million by the close of 2019 (United Nations High Commissioner for Refugees, 2020). Approximately 85 percent of these refugees are accommodated in developing nations (United Nations High Commissioner for Refugees, 2021), with Sub-Saharan Africa (SSA) hosting nearly one-third (Ruiz & Vargas-Silva, 2017). According to the United Nations High Commissioner for Refugees (United Nations High Commissioner for Refugees, 2019), the refugee count in this region tripled between 2010 and 2019, primarily due to ongoing conflicts (Verwimp and Maystadt, 2015, Kasozi, 2017, Ivanova *et al*., 2018). These prolonged conflicts have resulted in refugees remaining for extended periods, averaging 9–21 years as noted by Hunter (2009). The presence of refugees can significantly affect regions that are already facing economic challenges (Maystadt *et al*., 2019). Despite refugees traveling greater distances than in the 1980s (Devictor *et al*., 2021), most still find refuge in neighboring countries, which often grapple with their own socioeconomic difficulties. The United Nations High Commissioner for Refugees (2020) reports that 73 percent of refugees are situated in adjacent countries, with developing nations hosting approximately 85 percent of the global refugee population. The number of refugees under the United Nations High Commissioner

for Refugees (UNHCR) mandate in Sub-Saharan Africa rose from 2.2 million to 6.3 million during the same timeframe (United Nations High Commissioner for Refugees, 2020).

Two major shifts occurred suddenly in other parts of the world. This conflict in Syria led to a notable rise in refugees heading to Europe and the Middle East. More recently, an increase in the number of Venezuelan refugees has driven a surge in Latin America. Unlike these recent developments, Africa experienced a steady rise in displaced individuals from 2005 to 2020, primarily because of civil wars and political instability in nations such as South Sudan, the Democratic Republic of Congo, the Central African Republic, Somalia, Burundi, and Eritrea. Additionally, forced displacement in sub-Saharan Africa is marked by the prolonged nature of refugee situations (Verwimp and Maystadt, 2015; Bertinelli *et al*., 2022). In 2017, Sub-Saharan African countries recorded over 5.4 million refugees and 12.5 million Internally Displaced Persons (IDPs). Uganda was the leading host nation for refugees in 2017, accommodating 1.4 million refugees (UNHCR 2018).

According to the UNHCR, Uganda is considered one of the most supportive environments for refugees globally (World Bank, 2016). The Ugandan Refugee Act (2006) introduced new measures concerning refugees (Government of Uganda, 2006; see also Government of Uganda/UNHCR 2017), aligning with the 1951 Convention on the status of refugees and other international commitments; it established an Office of Refugees, repealed the Control of Alien Refugees Act, Cap. 62, and addresses other refugee-related issues (Andersson, 2013). Access to arable land offers a means of self-sufficiency within a settlement and potentially encourages mutual trade between refugees and local residents. The WFP provides food and cash assistance to refugees in Uganda, similar to other refugee-hosting countries. With the availability of agricultural land, relief aid, and freedom of movement, there are numerous opportunities for refugees to economically engage with businesses and households in the host country around the settlements (Muhangi *et al*., 2022).

The self-reliance strategy anticipates that refugees will economically sustain themselves by using a designated plot of land to develop a livelihood based on subsistence farming. While many have praised this policy as being progressive and advantageous for refugees, others have highlighted its shortcomings and implementation issues. With the growing influx of refugees in Uganda (approximately 1.5 million), making it the largest refugee-hosting nation in Africa and the third largest globally, the livelihoods of refugees in terms of food security, household income, health, and nutrition are very low. Therefore, promoting sustainable food production and resilient livelihoods is crucial for the well-being of refugees to reduce their reliance on humanitarian aid in the form of food rations and non-food items, and to improve their livelihoods (Svedberg, 2014).

Refugees often favor crop production as their agricultural activity of choice because they require less initial investment than other agricultural pursuits. Additionally, many refugees may gravitate towards agriculture because it is a familiar practice; one they engaged in before becoming refugees. Agriculture has traditionally been the livelihood of ancestors, providing sustenance for generations. However, the majority of the agricultural output is for subsistence, with most of the produce consumed by growers and only a small portion sold in nearby urban areas (Zhu *et al*., 2016). In Jordan, by the summer of 2016, the NHR had registered approximately 650,000 Syrians as refugees. In contrast, the Jordanian monarchy under King Abdullah II estimated that up to 1.4 million Syrians resided in Jordan, asserting that around 750,000 Syrians were already present before the conflict began in 2011. This figure seems inflated, especially since prior to 2011, Jordanian authorities had not reported a large number of Syrians living in the country. Neither King Abdullah II nor Jordanian officials clarified how this high number of unregistered Syrians was determined. Nevertheless, Syrians are estimated to comprise between one-tenth and one-sixth of Jordan's population. With a total population of 9.2 million, Jordan has accepted fewer Syrian refugees than Lebanon, but proportionally more than Turkey (Lenner and Schmelter, 2016). Jordan has long been a refuge for people fleeing neighboring Arab nations (Bank, 2016). The Middle East hosts the largest number of refugees and internally displaced persons (IDPs) globally, with most refugees originating in the region being of Iraqi (UNHCR, 2010c). Before the 2003 Iraq invasion, there were an estimated 500,000 Iraqi refugees, primarily in Turkey and Iran (Brookings, 2009). The 2003 invasion led to significant displacement, with many Iraqis relocating internally and an estimated two million crossing international borders as refugees (UNHCR, 2010).

The settlement patterns of Iraqi refugees are intricate, influenced by numerous factors such as the conflict in Iraq; individual household experiences; socio-demographic elements such as religion, ethnicity, education, and profession; connections to Iraqi communities abroad; and political aspects, including immigration policies and border controls. Over time, the financial condition of refugee households is believed to have worsened, primarily because most are unable to work legally and because of the gradual exhaustion of savings brought from Iraq (Zuntz *et al*., 2022). The increasing number of migrants and refugees has raised concerns about food security among these groups for international aid organizations and host country governments. Although more than half of all international migrants are hosted in high-income countries (HICs) (UN, 2019), a significant portion of refugees reside in low- or middle-income countries, such

as Turkey, Uganda, Palestine, and Pakistan (IOM, 2029). Even refugees who eventually settle in HICs, such as the USA, UK, and Australia, may still encounter food security issues, including nutritional challenges (Rosier, 2012; Lawlis and Islam, 2018). Conducting research among migrant/refugee populations to understand the reasons for ongoing food insecurity in HICs is essential to effectively address this issue. This systematic review focuses on this area. People from diverse cultural backgrounds have varying food habits and preferences, and access to traditional foods can be crucial for identity, nutrition, health, and cultural reasons (FAO 2029). Studies have shown that migrants/refugees often consume traditional food to maintain their cultural identity (White and Kokotsaki, 2004; Anderson *et al*., 2014). However, in the absence of familiar food, migrants may struggle to make nutritionally optimal choices, particularly when facing language barriers. The Middle East and North Africa encompass a vast geographic area, from Morocco to Iran, involving 20 countries (UNHCR, 2020).

Strategies for Mitigating Food Security Challenges

Approaches to addressing food security issues: The ongoing rise in population and consumption will lead to an increased global demand for food over the next 40 years. Competition for resources such as land, water, and energy, along with the overuse of fisheries, will challenge our food production capabilities. Additionally, there is an urgent need to minimize the environmental impact of food systems. Climate change poses a significant threat. However, it is possible for the world to produce more food and ensure efficient and fair distribution (Godfray, 2010). The effects of climate change present major challenges for food safety and endangering human health. Concurrently, strategies to mitigate food safety risks contribute to this global issue and have other environmental impacts, creating a cycle between the cause of the problem and the effect (Feliciano, 2022). Current agri-food systems are inadequate for meeting global demand and are responsible for 33% of all greenhouse gas emissions. Traditional agriculture cannot increase food production because of limited arable land, dwindling freshwater resources, and rising greenhouse gas emissions (Tahir, 2024).

Sustainable feeding of the global population is a major societal challenge. The population surge from 1961 to 2000 heightened food demand, which was met through scientific and technological advancements, governmental policies, institutional interventions, business investments, innovation, and delivery. However, increased agricultural inputs and outputs partially come at the cost of environmental harm (Keating *et al*., 2010). Previous solutions to food security suggest that leveraging agricultural advancements and reducing waste while addressing changing diets enabled a doubling of agricultural production and a reduction in environmental impacts (Keating *et al*., 2014). Nutritional food security is further complicated by the need to increase food availability, as over two billion people are obese or overweight. Reducing overconsumption in this group offers a significant opportunity to enhance food security without harming the environment and simultaneously reducing the global health burden of poor diets. Although dietary guidelines exist, they may not always be followed. A shift in consumer behavior through education combined with the increased availability of healthier processed foods that meet individual needs is necessary (Cole, *et al*., 2018). The challenge of feeding nine billion people by 2050 amid limited resources and increasing environmental pressures from current food production methods on one side and changing lifestyles and dietary patterns on the other, exacerbated by climate change effects, is considered one of the 21st century's greatest challenges. The first step towards achieving food security is to balance the growing food demand with limited production capacity (De Laurentiis, 2016).

CONCLUSION

Immigration and refugee flows affect food security, presenting both challenges and opportunities for displaced individuals and the communities hosting them. The increasing number of refugees, particularly in sub-Saharan Africa, puts pressure on local food systems and worsens food insecurity. Nonetheless, incorporating refugees into the workforce can stimulate economic growth, foster self-sufficiency, and improve living conditions. Uganda’s policies illustrate how involving refugees in agriculture can benefit both the refugees and host communities. To address food security issues, it is essential to increase production, minimize waste, and encourage sustainable eating habits. As climate change and conflicts lead to displacement, comprehensive strategies must address humanitarian needs while ensuring long-term food security through integration, sustainable farming practices, and effective international assistance.

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