Policy Research Working Paper 9917

Social Cohesion and Refugee-Host Interactions

Evidence from East Africa

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WORLD BANK GROUP
Social Sustainability and Inclusion Global Practice
January 2022

Policy Research Working Paper 9917

Abstract

Building upon the literature on contact theory, this paper explores the role of inter-group interaction in shaping social cohesion between refugees and host communities in East Africa. It draws upon first-hand quantitative (n=16,608) and qualitative data collected from refugees and nearby host communities in urban and camp-like contexts in Ethiopia, Kenya, and Uganda. Focusing on the Uganda data, OLS regressions reveal a positive and significant correlation between refugee-host interaction and the perception of hosts towards refugees. This association disappears when an instrumental variable (IV) approach is used to address endogeneity issues, except when only data from the urban context is used. The analysis of cross-country data highlights further differences in the types of interaction and perception that matter between urban and camp-like contexts. It also suggests that ethno-linguistic proximity between refugee and host populations is associated with more positive attitudes. In all contexts, an important part of attitude formation appears to take place at the intra-group level, within households and immediate neighbourhoods, independently of individual interaction with the out-group. The paper proposes a series of policy recommendations to improve refugee-host social cohesion, with different approaches required in urban and camp-like contexts.

This paper is a product of the Social Sustainability and Inclusion Global Practice. It is part of a larger effort by the World Bank to provide open access to its research and make a contribution to development policy discussions around the world. Policy Research Working Papers are also posted on the Web at http://www.worldbank.org/prwp. The authors may be contacted at alexander.betts@qeh.ox.ac.uk.

Social Cohesion and Refugee-Host Interactions: Evidence from East Africa*

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Keywords: Social Cohesion, Contact Theory, Refugees, East-Africa
JEL Classifications: O1, J15, J61, K37

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1 Introduction

Do refugee-host interactions shape host attitudes towards refugees? Gordon Allport's seminal work on 'contact theory' suggests that, under certain conditions, inter-group contact can reduce prejudice between majority and minority groups (Allport 1954). Empirical evaluations of contact theory shows that inter-group interactions often reduce prejudice (Pettigrew and Tropp 2006; Paluck et al. 2019). Yet, contact theory may not necessarily apply to refugee-host interactions and attitudes. The contact hypothesis rests on four conditions – equal status, inter-group cooperation, common goals, and support by social and institutional authorities – which are rarely met in refugee contexts. Empirically, interventions aimed at addressing ethnic or racial prejudice generally generate weaker effects (Paluck et al. 2019). Meanwhile, the literature that tests the 'contact hypothesis' in relation to refugees and host populations is mostly limited to a few studies that focus on the impact of sudden refugee flows in European countries on public attitudes and support for right-wing parties. While most of these studies find that contact (or short-term 'exposure') has negative effects on host attitudes towards refugees (Halla et al. 2017; Dinas et al. 2019; Ajzenman et al. 2020; Rozo and Urbina 2020; Rozo and Vargas 2021), some find no effect (Hennig 2021) or heterogeneous effects that vary with the intensity of exposure (Albrecht et al. 2020; Steinmayr 2021) and differ in urban versus rural contexts (Dustmann et al. 2019). The broader literature on 'native' attitudes towards immigration also focuses almost exclusively on Europe and North America and reaches mixed conclusions (Hopkins 2010; Hainmueller and Hopkins 2014). Experimental evidence is mostly inexistent[1] and there is practically no research that explores the relationship between inter-group interaction and host community attitudes towards refugees or migrants in a developing country context, despite the fact that the overwhelming majority of refugees reside in low- and- middle- income countries (UNHCR 2020).

This paper therefore explores the determinants of social cohesion between refugees and proximate host communities[2] in East-Africa. It addresses three main questions. First, what role does refugee-host interaction play in determining the quality of the relationship between refugees and the nearby host community? Second, what other factors shape attitudes and perceptions of host communities towards refugees, and vice versa? Third, under what conditions is the host community likely to have particular concerns about the impact of refugees on the economy, security, or identity, or to be supportive of refugees' access to rights?

These questions matter because understanding the determinants of social cohesion can enable policy-makers and practitioners to design programmes that improve the willingness

[1] Using a RCT mixing locals and internally displaced people, Zhou and Lyall (2021) finds no evidence that increased levels of contact reduce prejudice toward IDPs.

[2] It is important to note that 'host communities' are not always a monolithic group consisting of only host nationals with citizenship, especially in urban areas. For example, in Eastleigh in Kenya and Bole Michael in Ethiopia, we came across some economic or educational migrants who are neither citizens nor displaced. On the other hand, in Nakivale settlement in Uganda, Dollo Ado camps in Ethiopia, and Kakuma camp in Kenya, surrounding hosts are predominantly host nationals with citizenship.

of host communities to receive and integrate refugees. This is especially important within East Africa, where communal conflict has sometimes taken places between refugees and host communities and exclusionary refugee policies have sometimes been justified with recourse to public opinion. While a range of hypotheses exist relating to the determinants of social cohesion (e.g. labour market competition hypothesis, fiscal burden hypothesis, and group threat hypothesis), contact theory offers a potential avenues for designing policies and programmes at the local level. For example, it may shed light on whether including refugees and host communities alongside one another within assistance programmes or settlement design offers a means to improve social cohesion. Furthermore, applying contact theory to social cohesion within an East African context offers a means to examine whether and to what extent research findings within the 'North' apply similarly or differently within the 'South'.

The underlying research draws upon first-hand quantitative data collected in urban and camp-like contexts in Uganda, Kenya, and Ethiopia (n=16,608) – the Refugee Economies Dataset. Survey questionnaires included modules relating to host community attitudes towards refugees and vice versa, as well as the type and frequency of inter-group interaction. Our analysis primarily focuses on Uganda, because we have survey data on host community interactions with refugees for this country but not for the others. When relevant and feasible, we also present descriptive statistics and regressions using data from the three countries, in order to enable some level of comparison and generalization. We triangulate quantitative results with qualitative data. In addition to describing the patterns and correlates of attitudes towards refugees across all three countries, the research uses ordinary least squares (OLS) and instrumental variable (IV) regressions to explore the complex relationships between individual perceptions, refugee-host interactions, and group perceptions using data from Uganda.[3] Based on this, the paper complements the existing literature on contact theory by being among the first to explore the role of interaction in shaping host community attitudes towards refugees in a developing country context.

OLS regressions identify a positive and significant correlation between refugee-host interaction and the perception of hosts towards refugees. However, the results of OLS regressions could be biased by reverse causality in the relationship between attitudes and refugee-host interaction, by omitted variables, and by mismeasurement issues. To address endogeneity issues, we use a technique called an 'instrumental variable approach'. We instrument the measure of host interactions with refugees by 1) the share of refugees living in the locality and 2) the intensity of refugee-host interactions among other household and community members. Effective F-tests and Sargan-Hansen tests for over-identifying restrictions suggest that these instruments are valid.

With IV regressions, the association between attitudes and refugee-host interaction dis-

[3]This is because the Refugee Economies Dataset only has data relating to host community interactions with refugees for Uganda, although it has data relating to refugee and host community perceptions and refugees' interactions with the host community for all three countries.

appears in the full Uganda sample, indicating that endogeneity issues significantly bias OLS regressions. Interestingly, the positive association between hosts' interactions with refugees and their attitudes towards refugees remains statistically significant – albeit small — when the analysis is restricted to Kampala, the capital city. This reflects important differences in the nature of refugee-host interactions and perceptions in urban and rural contexts, which we illustrate using qualitative data. The analysis also suggests that a significant part of attitude formation takes place at the intra-group level, within households and immediate neighbourhoods, independently of inter-group interaction.

For comparison, we use OLS and IV regressions to explore whether refugees' perception of host trustworthiness are influenced by refugees' intensity of interactions with host. Results are broadly similar to the analysis of host perceptions of refugees. While OLS regressions identify a positive and significant association between interactions and refugees' perceptions of hosts, IV regressions show that this association is not robust. Results also suggest that refugee perceptions of hosts are partly formed at the intra-group level, within households and immediate neighbourhoods, independently of inter-group interaction.

Finally, we combine descriptive statistics, regression analysis, and qualitative evidence in order to unravel the complexity of host community attitude formation and to generate new hypotheses. In this process, the qualitative data plays a particularly important role in elucidating contradictions, puzzles or nuances in our findings, which are often less noticeable in quantitative surveys. We further find that ethno-linguistic proximity seems to affect host perceptions; positive attitudes towards refugees are usually observed in contexts where both host and refugee communities are of Somali ethnic origin. Our qualitative methods highlight that host attitudes also appear to depend on households' socio-economic standing and relation to refugees in the local context. Refugees may be perceived as a threat or as competitors by certain groups of host nationals, yet simultaneously be viewed by other host members within the same neighbourhood as contributors to local economies and development. Moreover, at the local community – or even individual – level, host nationals can hold seemingly contradicting beliefs. For example, while urban hosts are less tolerant of refugees than rural hosts, and often see refugees as an economic burden, they are more progressive in a rights perspective and feel less threatened by refugees' presence.

Based on these findings, we make a series of recommendations for programmes seeking to improve refugee-host social cohesion: 1) facilitate opportunities for refugee-host interaction, including through economic exchange; 2) target interventions promoting intra-group attitude change at the neighbourhood and household levels; 3) focus differently on the perceived 'winners' and 'losers' of refugee-hosting; 4) design distinctive social cohesion programmes for urban and camp-like contexts; and 5) incorporate data collection relating to both perceptions and interactions into UNHCR and World Bank socio-economic household surveys focusing on refugee and host communities.

2 Context

This paper focuses on East Africa, which hosts more than a fifth of worlds' refugees (UNHCR 2020). Despite its rich endowment in human, social, and natural capital, the region – including some neighbouring states in Horn of Africa – is plagued by a complex history of political instability, ethnic tension, and weak governance, making displacement a long-standing regional challenge (UNHCR and the World Bank 2015). War and insecurity have triggered major displacements of people in the region, and most of the displacement cases have become protracted (UNHCR and the World Bank 2015; Vemuru et al. 2020). Exploring the determinants of social cohesion is especially important in this region because in many instances, social cohesion between refugees and host communities has broken down, sometimes resulting in violence or xenophobia. It is a region in which contact theory might offer particularly useful insights for the design of humanitarian and development programmes – from livelihoods to health and education – that facilitate greater refugee-host community interaction.

Our data is derived from research in Uganda, Kenya, and Ethiopia. These countries have a long history of accommodating refugees from neighbouring countries, including Somalia, South Sudan, the Democratic Republic of Congo, Eritrea, and Burundi. Yet each one has different legal and policy frameworks relating to refugees: Uganda allows refugees the right to work and freedom of movement, Kenya does not, and Ethiopia has gradually started to expand socio-economic rights for refugees. They also have different economic profiles with, for example, different degrees of opportunity for agriculture or commerce in refugee-hosting areas. For site selection within researched countries, we have always included the capital city and one refugee camp to compare the research results between camp and urban contexts.

2.1 Uganda

In this paper, we primarily focus on our data collection in Uganda. Of the three researched countries, Uganda offers the most generous regulatory environment for refugees in the country. Uganda's Refugee Act of 2006 provides refugees with the right to work and a significant degree of freedom of movement. Given fewer restrictions, refugees in Uganda generally enjoy a better degree of socio-economic rights and freedom compared to Ethiopia and Kenya (UNHCR and the World Bank 2015). Uganda has been recognised as having one of the most progressive refugee policies in the world because of its longstanding 'self-reliance' model, which has been implemented practically since independence, and repackaged at different historical junctures (UNHCR and the World Bank 2015). In addition to allowing refugees to work, its settlements aim to provide refugees with access to plots of land to cultivate and to pursue self-reliant status.

Uganda has 1.4 million refugees, making it the largest refugee-hosting country in Africa. We conducted our fieldwork in Kampala and Nakivale refugee settlement, which was se-

lected because it was the largest refugee settlement in Uganda when we embarked on our preliminary study in 2013. We focused on Congolese and Somali refugees in both sites. In both Kampala and Nakivale settlement, refugees and local Ugandans interact regularly and frequently at, for example, schools, churches, mosques, markets, social events, or community-based organisations.

The Nakivale settlement is Africa's oldest refugee camp and was founded in 1958. It hosts around 100,000 refugees. Located in the Isingiro District of Southern Uganda, the settlement is jointly managed by the Office of the Prime Minister (OPM) and UNHCR. Due to refugees' access to plots of land under the self-reliance model, the majority of refugees engage in agriculture. Ugandan nationals living in the surrounding areas are also largely reliant on natural resources to conduct farming, animal husbandry, and to some extent fishing. Commercial activities exist but only at a small scale. The socio-economic status of local populations is generally low. There are no clear physical boundaries between Nakivale settlement and its surrounding communities. In fact, some Ugandan villages are located inside the settlement.

Kampala hosts around 100,000 refugees from several neighbouring countries. Across the city, different refugee populations have different settlement patterns. Most Somalis live in the Kisenyi area where a considerable number of ethnic Somali people also reside. In contrast, the majority of Congolese refugees co-reside with Ugandans in the Nsambya and Katwe areas. Refugee-concentrated areas in Kampala usually have a combination of residential and commercial parts. While there is significant variation, in general, the socio-economic conditions of the local host populations in these areas are low, with small-scale trading activities being the predominant livelihood for them.

2.2 Kenya

Kenya's regulatory framework imposes restrictions on refugees' right to work and to move freely, notably through its encampment policy, which requires refugees to generally reside in either the Dadaab or Kakuma refugee camps, located in remote border regions (UNHCR and the World Bank 2015). At the time of our research, Kenya hosted nearly 500,000 refugees. Our data collection covers two sites – Kakuma refugee camp and Nairobi. While Dadaab camp is the largest refugee-hosting site in Kenya, due to insecurity, we were unable to include it in our study.

Kakuma refugee camp was set up in 1992 in Turkana County in north-western Kenya, hosting some 164,000 refugees. Given its proximity to South Sudan, more than half of the population of camp residents were South Sudanese. Refugees from Somalia formed the second largest sub-population, followed by those from Democratic Republic of Congo, Ethiopia, and Burundi. We focused on the three largest refugee groups – South Sudanese, Somali, and Congolese refugees in Kakuma camp. Kakuma camp is hosted in a historically marginalised area, which is largely devoid of any major investment or development activities

by the national government, or private enterprises. The socio-economic status of indigenous Turkana people have been generally considered limited or even poorer than refugees (Omata 2020). There are constant interactions between refugees and Turkana hosts through trade and use of social facilities, such as clinics and water points inside the camp. However, there have also been reports of occasional communal violence between refugees and the Turkana host community.

Despite the country's encampment policy, Nairobi hosts more than 65,000 refugees of various nationalities, and refugees often enjoy greater economic freedom compared to Kakuma. This phenomenon is largely due to a de facto 'legal pluralism' within Kenya, in which official restrictions on refugees are differently enforced and implemented in different parts of the country (Betts et al 2018). In Nairobi, we focused on Somali and Congolese refugees – the two largest refugee populations at the time of our fieldwork. More than 30,000 Somali refugees reside in the neighbourhood of Eastleigh, which is widely known as a predominantly Somali section of the city. The presence of a large Somali-Kenyan population has offered Somali refugees a space for 'segmented assimilation' (Lindley 2011). Refugees and Somali-Kenyan hosts regularly and densely interact through economic activities and also at schools, mosques, and other social events within Eastleigh.

Refugees from DRC trail Somali refugees in number, with nearly 20,000 living in the Kenyan capital as of 2017. Congolese are more dispersed across areas such as Kasarani and Kayole. The nature of the relationships between Congolese refugees and their neighbouring Kenyan hosts is quite different from those of Somali refugees, primarily because Congolese refugees do not have ethnic counterparts amongst Kenya's citizenry in the ways that Somali refugees do. Instead, they take advantage of their command of Swahili – Kenya's national language – to find traction in the urban economies of Nairobi. Also, Congolese refugees regularly mingle with Kenyan hosts at churches and other social events. Across the city, there are occasional examples of communal violence that have been reported in both Somali and Congolese-hosting areas (Betts et al. 2020).

2.3 Ethiopia

Ethiopia is known both as a destination and a transit country for refugees in East Africa. At the time of our fieldwork in 2018, the country hosted some 900,000 refugees. Our research sites included the Dollo Ado refugee camps in the Somali region of the country and the capital city, Addis Ababa. While other regions, such as Gambella, hosted a larger number of South Sudanese refugees, we selected the Dollo Ado camps hosting predominantly Somali refugees in order to compare the findings with other sites, since Somali refugees have been always included across all our research sites. At the point of our study, the Dollo Ado refugee camps hosted around 220,000 almost exclusively Somali refugees given its proximity to the Somali border.

Similarly to Kenya, the Ethiopian government has operated an encampment policy to-

wards refugees within the country. However, two legal exceptions to encampment have allowed refugees to live in Addis: the Out-of-Camp Policy (OCP) and the Urban Assistance Program (UAP). For historical reasons, the former is almost exclusively for Eritrean refugees who are able to support themselves or be supported by relatives. The latter is for refugees with medical, protection, or humanitarian concerns that camp-level facilities cannot adequately address. Many UAP refugees are from Somalia. At the time of our research, there were 17,000 Eritrean refugees with OCP status, who were dispersed across different areas in Addis Ababa including suburbs. Most Eritrean refugees reside in apartment compounds where many Ethiopian host nationals live. Due to the historical bonds with Ethiopia, we came across a number of Eritrean refugees who have already had kinship ties or newly developed friendships with Ethiopian host communities. Meanwhile, there were some 5,000 Somali refugees with UAP in Addis Ababa, and the vast majority of them concentrated in the Bole Michael areas – the city's 'Little Mogadishu' given a large presence of Somali-Ethiopians and other groups of Somali origin. As observed in Eastleigh and Kisenyi, Somali refugees in Bole Michael closely engage with Somali-Ethiopians in their day-to-day lives. In our study, we included both Eritrean and Somali refugees.

Ethiopia has historically had a restrictive approach to hosting refugees, limiting their rights to work and move freely. However, in 2019, its Government adopted a new Refugee Proclamation expanding refugee rights, including the right to work and to move freely, albeit one which is yet to be fully implemented in practice (Vemuru et al. 2020). In some regions of the country – such as Gambella – there have been notable examples of communal violence between refugees and host communities, but these have rarely been reported in Dollo Ado or Addis Ababa.

As shown above, while there is variation in the contexts across our research sites in Uganda, Kenya, and Ethiopia, it is true that both refugees and host people communicate and interact in many aspects of their-day-to-day lives, which makes the use of contact theory particularly relevant to our research sites. In camp areas, the members of host communities frequently use the social facilities set up by relief agencies inside the camps, while in urban areas, refugees and hosts live next to each other often in poorer segments of cities. Also, understanding the factors that nurture or damage social cohesion between refugees and host communities is extremely important for refugee protection in the region. In the East and Horn of Africa, refugee-hosting areas are largely neglected by the host government and are left underdeveloped and unstable (UNHCR and the World Bank 2015). In those areas, the host communities are usually required to share local resources such as land, river, and forests with refugees. Outside designated camps, since refugees largely give up access to relief aid, most of them enter the same labour and commercial markets with host communities who suffer from shortage of lucrative economic opportunities. Given the scarcity of resources and opportunities in the region, an absence of cohesive and positive relationships can easily turn to social and economic exclusion of refugees, or even result in hostility and violence towards them amongst national hosts (also see UNHCR and the World Bank 2015).

3 Theoretical Motivation

Gordon Allport's (1954) book The Nature of Prejudice outlined 'contact theory', which has subsequently become one of the most influential theories in the social sciences – applied across sociology, political science, and economics. It suggests that, under certain conditions, inter-group contact can reduce prejudice between majority and minority groups. The conditions he identified include socio-economic equality, shared norms, cooperation, and institutional support. The ideas have been widely applied to examine attitudes and prejudice relating to, for example, race, sexual orientation, religion, and immigration.

The evidence on the impact of inter-group contact on receiving community attitudes to immigrants is mixed (Paluck et al. 2019). On the one hand, for example, Quillian (1996)'s finding of a positive relationship between inter-group interaction and white racial attitudes towards African-Americans has been widely cited across the immigration literature. On the other hand, for example, Hopkins (2010) examines panel data on US public attitudes to immigration to explore a 'politicized places hypothesis', finding that when faced with a large influx, local communities adopt negative attitudes, albeit only when the influx is combined with destabilising local demographics and salient political rhetoric at the national level.

Relatedly, there is a broader literature that examines the correlates of 'native' attitudes to immigration. This literature tries to explain attitudes, policy preferences, and voting preferences, usually focusing on European or North-American contexts. Its main methodological challenge has generally been to identify causal relationships in the absence of panel data sets or experimental methods. This literature identifies two main sets of explanations underlying 'native'– i.e. host community – attitudes (Hainmueller and Hopkins 2014). First, economic explanations. From this perspective, host communities are concerned with the effects of immigration on labour market competition i.e. increased supply of low-skilled workers leads to a decrease in wages (Mayda 2006) or the fiscal implications i.e. immigrants pay less taxes and claim more benefits (Dustmann and Preston 2007). However, empirical evidence for these hypotheses is limited. In terms of the labour market competition hypothesis, opposition to immigrants is not focused on immigrants with similar skills to the host community. In terms of the fiscal burden hypothesis, higher income people are no more likely to oppose low-skilled labour (Hainmueller and Hiscox 2007). Second, cultural explanations. From this perspective, 'natives' are more likely to favour immigrants with common identities such as nationality, ethnicity, and race (Sniderman et al. 2004; Ford 2011). However, the mechanisms that underlie this have often been hard to identify. There is a consensus in the literature that what matters is the 'sociotropic' role of culture – i.e. perceptions of difference, and that the relationship between cultural difference and exclusionary attitudes is not inevitable but contingent upon contextual mediating factors such as the media and elite discourse (Hopkins 2010; Hainmueller and Hopkins 2014).

How has this literature been applied to refugees and forced migration? There is a burgeoning literature on the impact of forced displacement on host communities, much of which

focuses on the material impact on receiving communities. Verme and Schuettler (2021) survey that literature and argue that it broadly shows that the impact on host communities' employment and wages are not significant, but that when results are significant, they are often negative on employment and positive on wages, albeit in the short run. Hennig (2021) extends this to show that the presence of refugee shelters in Germany may result on downward pressure on rent prices, contributing to opposition to immigration. In contrast, Dempster et al. (2020) look at survey data to argue that there is no inevitable relationship between these types of material and economic effects and people's attitudes to refugees. The literature assessing the impact of refugees in low- and middle-income countries shows that refugees can stimulate host economies (Alix-Garcia et al. 2018; Maystadt and Duranton 2018; Taylor et al. 2016) but also have negative impacts, for example by undermining health (Baez 2011; Montalvo and Reynal-Querol 2007) and competing for scarce resources and jobs (Depetris-Chauvin and Santos 2018; Tumen 2016; Ruiz and Vargas-Silva 2015). The total effect is mixed, with some benefiting and some losing from refugee presence (Fallah et al. 2019; Maystadt and Verwimp 2014; Alix-Garcia and Saah 2009).

The literature aiming to test the contact hypothesis with refugee and host populations mostly focuses on European countries. While most studies conclude that refugee-host contact has negative effects on host attitudes towards refugees, effects and mechanisms seem to vary with the context and the intensity of exposure. Exploiting a natural experiment in Greece, Dinas et al. (2019) show that exposure to the mass influx of asylum seekers during the European refugee crisis leads to an increase in right-wing support on the Greek islands. The mechanisms they identify are sociotropic and relate to the perceived negative impact of influx on culture. Exploiting the quasi-random settlement of refugees in Sweden between 1985 and 1994, Rozo and Urbina (2020) find migration shocks are associated with lower support for immigration. Here, the result appears to be largely driven by attitude change among young males working in low-wage blue-collar occupations. Ajzenman et al. (2020) explore the impact of exposure to mass transit migration in the Eastern Mediterranean during the refugee crisis on the attitudes and beliefs of 'natives.' They find that 'natives' entrepreneurship falls substantially and anti-migrant sentiment increases in localities that are close to migrant routes compared to those further away. Dustmann et al. (2019) use election data to explore the effect of the quasi-random allocation of refugees to municipalities (or not) on voting shares for anti-immigration parties. They find that in most municipalities, the allocation of larger refugee shares leads to an increase in voting for anti-immigration parties. However, in large and urban municipalities – in which interactions between 'natives' and refugees might be assumed to be greater – the pattern is the opposite. Steinmayr (2021) uses exit poll data from the September 2015 elections in Austria to show short-term exposure to transiting refugees increased Far Right voting, whereas sustained contact decreased Far Right voting. Also in Austria, Halla et al. (2017) combine census data and election results at the community-level and find that refugee inflows significantly increased Far Right voting. They find suggestive evidence that voters worry about negative effects

of immigration on labour markets and on the quality of their neighbourhood. Similarly, Albrecht et al. (2020) examine whether exposure to ethnic minorities change the majority's attitudes towards them, by looking specifically at the relationship between the location of asylum reception centres in the Netherlands and panel data on local attitudes towards ethnic diversity. They find that locals who live in the close neighbourhood of a refugee centre develop a more positive attitude towards ethnic diversity, in particular if exposure lasts at least six months, while people living in municipalities that host refugees, but not in their close neighbourhood, develop a more negative attitude.

However, most of this research focuses on Europe, and there are grounds to believe that the determinants of host community attitudes and perceptions to refugees in developing countries may be quite different. While the number of studies based on contact theory is yet very limited in East Africa, there is an emerging body of literature that explores the refugee-host relationships in the region. In sum, the empirical materials from different studies present mixed and diverse findings on a range of factors that contribute to determining the nature of refugee-host relations and cohesion.

Broadly speaking, similar to Global North, economic explanations are applicable to East Africa. However, the existing empirical studies on East Africa show explanatory factors that are different from those in Europe. One of the clear differences between host states in Global North (Europe and North America) and East Africa is the resource and accommodating capacity of receiving communities and countries. In many countries in East and Horn of Africa, refugees often do not have free choice to move to the most welcoming or resourceful area, but often have to reside in 'designated areas' which are usually underdeveloped (see UNHCR and the World Bank 2015). Economies in these host areas are generally weak. The presence of refugees can add a serious strain on weak resource capacities and few economic opportunities, which can lead to causing or exacerbating strained relations between two groups (UNHCR and the World Bank 2015). For instance, the study conducted by Ali et al. (2017) investigated the conflicts between refugee and host communities in Kakuma refugee camp in Kenya and identified the main causes of tensions. Overall, the primary reason for tensions is competition for the limited livelihood assets, especially access to natural resources such as land, water, and wood in the penurious semi-arid area where the refugees and host community live in close proximity (Ali et al. 2017). Other studies in East and Horn of Africa also highlight that sharing of limited environmental resources often leads to tensions and conflicts between refugees and local host populations (for example, Smith et al. (2021) work on Ethiopia and Djibouti; Emmanuel (2020) on Tanzania).

On the other hand, the presence of refugees can sometimes lead to economic interactions with and new opportunities for hosts, which often lead to positive perspectives of refugees within receiving communities. Brown et al. (2018) on urban refugee economies in Addis Ababa highlights that refugees' economic activities in the informal sector are largely tolerated by the host communities, who view refugees as contributors to the local economy and as a source of labour for Ethiopian businesses. Similarly, Vemuru et al. (2020) show

that in Addis Ababa, refugees and hosts interact in the course of trade. A complex set of relationships have emerged around these economic interactions, including both cooperation and competition.

In some of the East African countries, refugee issues are looked at through a security lens and refugees are often scapegoated for increased crime and violence. The research undertaken by Emmanuel (2020) in Tanzania sheds light on how the insecurity, which local hosts believe is brought by the refugees, can lead to formulation of negative perceptions to refugees amongst host people. His study indicates that the high rate of inflow of refugees is associated with the illegal importation of arms, given the relatively few hurdles of border-crossing in the North Western regions of Tanzania. Host members think that imported arms have led to an increased number of armed robbery in the refugee-hosting areas and disturbed local peace and tranquillity, which resulted in negative sentiment to refugees (Emmanuel 2020).

Cultural explanations are widely observed in the literature on refugee-host relationships in East Africa (and Horn of Africa). In East Africa, because most refugees are from immediate neighbouring countries, they often have cultural and ethnic proximity with hosts, which can lead to forming positive relationships between the two groups (UNHCR and the World Bank 2015). For example, in some refugee-hosting regions in Ethiopia, there are common ties of kinship, language, and ethnicity between refugee and Ethiopian hosts due to cross-border cultural and economic connections (Vemuru et al. 2020). Especially in the Somali region of Ethiopia, a long history of displacement, shared ethnic identity, and cultural bonds, have fostered some forms of solidarity between the groups (Vemuru et al. 2020). However, interestingly, according to Smith et al. (2021) research on refugees camps in other parts of Ethiopia and Djibouti, even though the majority of refugee populations in the camps and the surrounding community are of the same ethnic origin, this did not necessarily lead to harmonious cooperation or resource-sharing between refugees and local hosts.

Meanwhile, research indicates that inter-group contact between refugees and hosts through social and religious activities seems to nurture positive relationships. In Ethiopia, refugees and hosts frequently interact at religious ceremonies, social occasions such as weddings and funerals, and sports events. Refugees and hosts alike note that relationships of mutual trust are constructed through repeated social exchanges (Vemuru et al. 2020).

The existing literature above demonstrates significant variation for the role of inter-group contacts and its impact on perceptions between refugees and hosts in East Africa. Given a number of differences in the receiving contexts between the Global North and East Africa, the sources of social cohesion between refugees and host communities may therefore be quite different from the factors highlighted by existing research in Europe.

The paper both fills a gap in, and develops, the existing literature on both contact theory and attitudes to immigration in at least two regards. First, it is one of the first studies to explore the contact hypothesis in host community attitudes towards refugees within a developing country context empirically. We also explore differences between urban

and camp-like settings. Second, we examine how attitude formation is shaped by networks, suggesting that the 'contact effect' may also be shaped by dynamics at the intra-group level. It implies that one of the limiting factors underlying the positive impact of contact may be the way it is mediated through neighbourhood and household level discussions. Although it is beyond the scope of the paper to examine this intra-group attitude formation process, it is something that is touched upon within the literature on the economics of information's discussion of, for example, 'echo chamber effects', which describe non-Bayesian behaviours at an intra-group level (Bénabou 2015; Bénabou and Tirole 2016; Levy and Razin 2019).

4 Research Design

Our analysis relies on quantitative data (Section 4.1) and qualitative data (Section 4.2) collected in refugee camps, settlements, and cities in Kenya, Uganda, and Ethiopia. We use OLS and IV regressions (Section 4.3) to assess the extent to which interactions between refugees and hosts affect their perceptions of the other community.

4.1 Quantitative Data

Our analysis uses first-hand data collected in Kenya, Uganda, and Ethiopia between 2016 and 2018 (n= 16,608). Our survey covered the three capital cities – Nairobi, Kampala, and Addis Ababa – and three groups of camps or settlements, the Kakuma camps in Kenya, the Nakivale settlement in Uganda, and the Dollo Ado camps in Ethiopia. The first data collection took place in Kakuma in November-December 2016, followed by Nairobi in May 2017, and both Ugandan research sites in April 2018. Finally, data collections in Addis Ababa and Dollo Ado were undertaken between September and December 2018.

In each site, we surveyed representative samples of the numerically most significant refugee populations and the host nationals in the community living nearby. For camp-like contexts, this means nationals of the three countries residing in towns and villages in the immediate vicinity of the camps and, in the case of Nakivale, inside the settlement. In the capitals, we restricted the geographic scope of the research to areas with a high concentration of refugees, as such 'hosts' refer to host nationals living in refugee-dense neighbourhoods.[4] For each population in these locations we used simple random sampling or two-stage cluster sampling to obtain representative data. The sampling methodology and sample sizes of all host and refugee strata are detailed in Tables A.1 and A.2 in the Appendix.

The questionnaires included modules on a range of themes such as demographics, economic activities, income, consumption, assets, networks, mobility, health, well-being, and social cohesion. While the basis of the questionnaires remained similar in each site, we im-

[4]In Kampala, these are Kisenyi, Nsambya, and Katwe areas; in Nairobi, Eastleigh, Kayole, Umoja, Kasarani, and Githurai; and in Addis Ababa, Bole Michael, Jemmo, Gofa Mebrat Hail, Megenagna, Hayahulet, and Gerji.

proved the questionnaire over time and adapted the questions to the different contexts and research priorities. The questionnaires were translated into the most prevalent languages of respondents in each location. We recruited and trained enumerators from both the host and refugee communities to facilitate trust and minimise the risk of misunderstandings between them and respondents.

Our research examines the association between refugee-host interactions and social cohesion. We measure social cohesion as attitudes held towards the outgroup. The attitude measure stems from various statements about the outgroup and is explained in detail in the next paragraph. The subsequent paragraph explains how we measures refugee-host interactions. The modules on interactions with and opinions of the outgroup differed substantially across nationalities and locations. As a result, the attitude measure is differently defined when we study the hosts' perceptions of refugees and the refugees' perceptions of hosts and across different host samples.

When studying hosts' perceptions of refugees, we primarily focus on hosts living in Uganda because only Ugandan hosts were asked about their interactions with refugees. The social cohesion outcome measure is a standardised index of perceptions of refugees.[5] The index is constructed by applying principal component analysis (PCA) to a series of 11 statements about refugees.[6] The index is given by the first principal component (standardised).[7] The 11 questions considered to construct the aggregate are listed with descriptive statistics in Table A.3 in the Appendix. footnoteAll opinion statements are answered on a 4-point Likert scale from "Strongly Disagree", "Disagree", "Agree", to "Strongly Agree". When studying refugees' perceptions of hosts, we consider refugees across the three countries. The outcome is a binary variable indicating whether the respondent agrees (=1) or disagrees (=0) that host nationals are trustworthy.[8]

[5]There is no clear consensus regarding the conceptualization and measurement of social cohesion. This lack is noted in a World Bank desk review (De Berry and Roberts 2018) on social cohesion in forced migration, which acknowledges how social cohesion is a 'composite concept that encompasses a range of vectors including the attitudinal and emotional, the collective, the institutional and systemic, and the socio-economic' (p.27). The three indices presented in De Berry and Roberts (2018)'s review are comprehensive measures of social cohesion that employ a wide range of both macro and micro-level indicators. The common denominator among the micro-level indicators is attitudes towards the outgroup (horizontal axis) and of the state (vertical axis), and an emphasis on trust and threats. Further, most of the presented literature above uses a measure of either directly reported attitudes or indirect attitudes through votes or poll data. While the measure of social cohesion employed in this paper – perceptions – is non-exhaustive as a proxy of social cohesion, it is in line with the recommended indices and existing literature.

[6]For the cross-country analysis, the perception index is constructed using PCA with eight statements because of limited data availability.

[7]The higher the value of the perception index, the more positive is the overall host opinion of refugees. Table A.5 shows that a 1-point change in the Likert scale of any of the statements (e.g. from "Agree" to "Strongly Agree") typically corresponds to a 0.1-0.3 standard deviation change in the index, ceteris paribus. As a result, a one-standard deviation change in the index broadly corresponds to completely changing opinion about at least one statement, certeris paribus. To illustrate, for the full sample, going from "Strongly Disagree" to "Strongly Agree" regarding whether refugees are friendly, ceteris paribus, will change the index by 0.9 standard deviations.

[8]The other questions used to construct the perception index for the host populations were not asked to refugees in all contexts.

The explanatory variable of interest is an index of interaction with the outgroup. The index is constructed by aggregating the variables quantifying the number of times respondents i) shared meals, ii) had conversations, and iii) had business exchanges with someone in the outgroup in the past month. We winsorize the sum of the three variables to limit the influence of outliers and standardise the index to facilitate interpretation.[9] Summary statistics of all variables used in this analysis are presented in Tables A.3-A.4 in the Appendix.

4.2 Qualitative Data

Our quantitative research is complemented by in-depth qualitative research across all research sites. As we put particular emphasis on capturing the voices of both refugees and local hosts and their subjective views, the main qualitative method we used was interviewing. From 2016 to 2019, we conducted more than 600 interviews across the three countries. In addition, in order to triangulate the information and to obtain different perspectives, we interviewed non-refugee stakeholders including staff members of relevant UN agencies and NGOs, and local and national government officials in charge of refugee community affairs. In each research site, our qualitative data collection was systematically implemented through following sequencing. First, in order to nurture a good contextual understanding, we began our data collection by discussing with key informants, such as refugees who are in leadership positions (even in cities, there exist some forms of community representation systems of refugees) and members of local host representatives who have been living in a research site for a long time. At this stage, we mainly drew upon one-to-one unstructured interviews with open-ended questions. This step enabled us to attain a broad understanding of the lives of refugees and host communities and the relationships between them in each site and also contributed to inform the designing of survey questionnaires based on local contexts. Second, we shifted to semi-structured individual interviews and focus group discussions with more specific questions on themes which had emerged during the initial interviews with key informants. This allowed us to deepen our understanding of refugee-host relationships in each of the research sites. The main purpose of our qualitative research is not to make generalizations of findings. However, to minimise the influence of specific groups in findings, we endeavoured to include various groups of refugees (and hosts to some degree), notably those from different genders, ethnicities, and age groups (the qualitative methods used and a breakdown of participants is detailed in Table A.6 in the Appendix). The analytical procedure of qualitative data is as follows. First, all of the conducted interviews were transcribed by the interviewer, who is in charge of qualitative research of the project, from the field notes. Next, each interview data was reviewed and explored by the researcher to identify repeated ideas or topics which are broadly related to the interactions/contacts/perceptions between refugees and hosts. Then, based on the initial identification of ideas and topics,

[9]Higher values of the index indicate more interaction with the outgroup. A one standard deviation change in the index corresponds to about 10-15 more direct interactions in the past month (the number varies slightly depending on the sample considered, as shown in Tables A.3-A.4 in the Appendix).

the researcher developed a set of codes and categorized the relevant interview data across all research sites following the coding system. Finally, the researcher analysed and linked the different codes together into cohesive, overarching themes related to social cohesion and refugee-host relationships. Once this analytical process was completed, the qualitative data was integrated with quantitative results. Our rich qualitative data enabled us to interpret the results of survey, explore causal relationships for the patterns we observe and to substantiate our data through narratives. In order to protect the privacy of interviewees, all respondents are either anonymized or given pseudonyms in this paper.

4.3 Identification Strategy

Focusing on the Uganda sample (because of data availability), we first explore the correlation between host community attitudes towards refugees and refugee-host interactions. We use OLS regressions of the index of the perception index (P_i) on the interaction index (I_i) using individual level data:

$$P_i = \alpha + \beta_1 I_i + \beta_2 P_{HH} + \beta_3 P_{EA} + \gamma X_i + \mu + \varepsilon_i \quad (1)$$

Each observation is a respondent from the host community. We control for the perception index among other household members (P_{HH}) and among neighbours (P_{EA}) to account for the fact that perceptions are partly formed at the group level through discussions, gossips, and common narratives.[10] The geographic area considered as a neighbourhood when creating P_EA is provided by the Enumeration Areas of the Uganda national census by the Ugandan Bureau of Statistics (UBOS).[11] We also control for a vector of socio-economic and demographic variables X_i to limit the risk of omitted variable bias. We use two approaches to select the variables included in X_i. First, we selected a list of variables that could explain perceptions or interactions based on our knowledge of the literature (see Tables A.3 and A.4 in the Appendix for descriptive statistics). We include enumeration areas fixed effects (μ_{EA}) or household fixed effects (μ_{HH}) to control for unobserved characteristics that are constant within EAs/households. Second, we implement the double LASSO method of Chernozhukov et al. (2017) using the original list of potential controls augmented with fourth-degree polynomials along with all first-order interactions and the inverse hyperbolic sine transformation of continuous variables (Knaus et al. 2020). We also estimate specifications without control variables.

Three main methodological challenges could afflict this OLS regression – and more gen-

[10] P_{HH} and P_{EA} are standardised to facilitate interpretation. Before standardisation, the variable P_{HH} is set as equal to 0 (= the mean of the perception index P_i) in households with only one adult.

[11] When describing host perceptions across all sites in the later OLS analysis without a measure for interaction (Table 4), the neighbourhoods are defined by similar Enumeration Areas from the Kenyan census for respondents in Nairobi, by villages around Kakuma, by the five main towns close to each of the five Dollo Ado camps, and by specific sublocations to the official woredas in Addis Ababa.

erally the non-experimental literature on contact theory. The first challenge is the problem of reverse causality. An association between interaction and attitudes could reflect a causal relationship from interactions to attitude, a causal relationship from attitude to interactions, or a simultaneous relationship between the two variables. The second challenge relates to omitted variable bias. Despite the important number of control variables and the inclusion of household fixed effects to control for unobserved characteristics at the household level, we cannot rule out that important variables are missing from our regression equation. The third challenge relates to mismeasurement. Our main outcome variable could certainly be affected by mismeasurement issues as perceptions are typically hard to measure. Mismeasurement of outcome variables is usually considered as less problematic: under classical assumptions, mismeasurement of the dependent variable reduces precision but does not lead to bias (Hausman 2001). The main explanatory variable – refugee-host interactions – could also be mismeasured. Yet, we have no reason to think that mismeasurement is important or correlated with the true variable or the error term. Attenuation bias is possible but unlikely to be very important. In an attempt to address these three endogeneity issues, we use an instrumental variable (IV) approach. We consider two categories of instrumental variables predicting the degree of refugee-host interactions: (1) the proportion of refugee population living in the host enumeration area an instrumental variable, which we denote z_a, and (2) the degree of refugee-host interactions reported by respondents' kin and neighbours – which we denote I_{HH} and I_{EA} respectively.[12]

The credibility of the IV analysis crucially depends on two key assumptions.

First, the instrumental variables should be strong predictors of the endogenous variable. In Nakivale, Uganda, the proportion of refugees living in the enumeration area (z_a) is associated with more refugee-host interactions. A 10 percentage-point increase in z_a is associated with a 0.13 standard deviation increase in the interaction index (Table 2, Column 1). The association is stronger in the Kampala subsample. With the full Uganda sample and the Kampala subsample, the effective F-statistic of the first-stage regression is larger than 10, which is the threshold usually considered in the literature on weak instruments (Olea and Pflueger 2013; Staiger and Stock 1997). In Nakivale, the effective F-test is borderline: slightly above or below 10 depending on the list of control variables included in the regression. The degree of refugee-host interaction reported by respondents' kin (I_{HH}) and neighbours (I_{EA}) are strong predictors of host respondents' own degree of interaction with refugees. With the full Uganda sample, a one standard-deviation increase in I_{HH} is associated with a 0.55 standard deviation increase in the interaction index I_i and a one standard-deviation increase in I_{EA} is associated with a 0.39 standard deviation increase in the interaction index I_i (based on Table 2, Column 2); the effective F-statistic of the first-stage regression is above 100. This is much higher than all the thresholds defined in the

[12]The respondents' own values are excluded when calculating I_{HH} and I_{EA}. Both variables are standardised to facilitate interpretation. Before standardisation, the variable I_{HH} is set as equal to 0 in households with only one adult.

literature (Andrews et al. 2019; Lee et al. 2020). We conclude that the first-stage regressions are generally strong.

The second key assumption to have a valid IV is the exclusion restriction: the instrument cannot be correlated with the error term ε_i in equation (1), conditionally on covariates.

We carefully represent the causal model we have in mind using a directed acyclic graph (DAG), in order to identify possible sources of endogeneity (Figure 1). The perceptions that survey respondents have about refugees depend on three categories of factors. First, the characteristics of the respondents and their households. For example, the employment status and wealth of the respondent might directly influence the perceptions of refugees as competitors or economic contributors. Second, the perceptions that other hosts living around have about refugees can influence the perception of the respondent. Gossips, rumours, and discussions can certainly forge the perceptions that hosts have about refugees. Finally, whether the respondent frequently interacts with refugees may influence perceptions, in line with contact theory. This latter variable is our main explanatory variable of interest – but this variable is likely to be endogenous. The respondent's interactions with refugees also depends on three factors. First, the characteristics of the respondents and their households. For example, language skills may directly affect respondents' ability to interact with refugees. Second, the level of refugee-host interactions among kin and neighbours may influence respondents' level of interaction with refugees, either through emulation or competition. Finally, the share of refugees in the locality of the respondent should directly affect the possibility and frequency of interactions.[13] The latter two variables are our chosen instruments.

The characteristics of individuals living in an EA – including the proportion of refugees – is expected to depend on the characteristics of the EA. In refugee camps and settlements, the initial placement of refugees is determined by camp authorities. The allocation process first and foremost depends on space availability, arrival date, and administrative decisions that are often quasi-random (MacPherson and Sterck 2021; Siu et al. 2021). Movements within settlements and camps are possible but not frequent. For example, our panel data for Kenya shows that in any given year around 1.7% of refugees in Kakuma relocate within the camp (Betts et al. 2021). In cities, the process is completely different. Refugees decide where to live and usually co-locate with fellow nationals. For these reasons, our presumption was that the exclusion restriction would be more likely to be satisfied in refugee camps.

We draw two conclusions from this DAG. First, controlling for kin and neighbours' perception of refugees (P_{HH} and P_{EA}) is essential to limit omitted variable bias in OLS

[13] A fourth possible factor influencing respondents' interactions with refugees is the perceptions that other hosts living around have about refugees ($P_{EA} \Rightarrow I_i$). For example, if refugees have a bad reputation, respondents may avoid contact with them to protect their own reputation. While such a link is certainly possible, it would not affect the validity of the IV specification. However, a strong link going the other way around ($I_i \Rightarrow P_{EA}$) would be more problematic. Implicitly, our empirical strategy assumes that the effect of one particular individual (here the respondent) on group behaviour (here the perceptions of the respondent's contacts) is negligible (assumption of "atomicity").

regressions and ensure that the exclusion restriction is satisfied in IV regressions. Depending on the specification, we control for P_{HH} and P_{EA} directly by including these variables in the regression, or indirectly by including fixed effects.

Second, the main source of concerns for the exclusion restriction is the possibility that the characteristics of the EA and the share of refugees in enumeration areas affect or are affected by some unobserved characteristics of respondents which also influence perceptions. To limit this source of endogeneity, all regressions include a long list of socio-economic and demographic covariates. The main concern for the first instrument (% of refugees, z_a) is related to the important literature showing that refugees can impact host populations by limiting access to jobs, healthcare, or education for example. In our preferred specification, we therefore control for many socio-economic variables, including a dummy identifying if the respondent has a job, the number of years of formal education, a dummy identifying if the respondent has vocational training, a heath index, a mental health index (PHQ9), an asset index, and a food insecurity index (HFIAP). We take reassurance from two observations. First, in the Uganda sample, we find no robust evidence showing that these socio-economic variables are correlated with the outcomes of interest (Table 3). Second, including or excluding these controls does not affect the results much (Table 2). For the second instrument, the main risk relates to perceptions of refugees and hosts among kins and neighbours. We control for these variables in all IV regressions. We also use different combinations of instruments and control variables to assess the robustness of methods and findings. First, we use all instruments jointly. We use the Sargan-Hansen test of over-identifying restrictions to test the joint null hypothesis that the instruments are valid. Reassuringly, we cannot reject the null hypothesis at conventional thresholds, both for the Nakivale and the Kampala subsamples. This suggests that our presumption that the exclusion restriction would be more likely to be satisfied in Nakivale may not have been warranted. Second, we test a specification in which only I_{HH} and I_{EA} is used as an instrument and z_a is used as a control variable to block the path $z_a \Rightarrow X_i \Rightarrow P_i$ and partly address concerns about the validity of the exclusion restriction. We also consider a specification in which only z_a is used as instrument for I_i. Finally, we assess the extent to which results differ when control variables are included versus dropped from the IV regressions. This test is inspired by the literature on unobservable selection and coefficient stability (Altonji et al. 2005; Oster 2019; Cinelli and Hazlett 2020). Finding that results do not change much when observables are included is a sign that endogeneity issues may be negligible, under the assumption that observable and unobservable characteristics induce similar endogeneity problems.

As described in the results section below, all IV specifications lead to similar results. Opting for one or all instruments or dropping control variables do not seem to change any of the conclusions of IV, reduced form, and first-stage regressions. As always with non-random instrumental variables, the question of whether the exclusion restriction is (approximately) valid remains. Yet, given the substantial risks of reverse causality and omitted variables, and, to a lesser extent mismeasurement, we argue that a 2SLS estimation using a plausibly

exogenous instrument is superior to a flawed OLS regression, especially since all the evidence we have suggests that the exclusion restriction might be approximately valid.

In all regressions, we cluster standard errors at the level of the enumeration areas to account for the fact that two-stage cluster sampling was used in most contexts (Abadie et al. 2017).

We study the perceptions of refugees about host populations using a similar methodology. Three differences should be highlighted. First, because of limited data availability, the outcome variable focuses on one particular type of perception: trustworthiness. We consider a dummy equal to one for refugees who reported that the host population can be trusted and zero otherwise. Second, questions on interactions were asked to refugees in all research sites, implying that the analysis can include all contexts.[14] Finally, the IV analysis of refugees' perceptions of hosts in Uganda is done in the same way as the IV of host perceptions explained above, using both relative population and peer interactions as instruments. The cross-country analysis employs only the instrument on peer interactions. In some specifications, the effective F-statistics and Sargan-Hansen J statistic associated with the IV regressions give grounds of concern. Endogeneity might be due to the fact that refugee populations are very mobile – certainly more than host populations (Betts et al. 2021) – and that place of residence and mobility are likely to be affected by the individual characteristics of refugees. The exclusion restriction may be violated if unobserved characteristics correlated with refugees' choice of residence also explain their perceptions of hosts. Given these limitations, we are particularly cautious when interpreting the results of IV regressions for the refugee samples and have reported most of these in the Appendix.

5 Results

5.1 Host Perceptions of Refugees

Table 1 shows the results of OLS regressions of hosts' perception index on the interaction index. While Columns 1-3 consider the full Uganda sample, Columns 4-6 are restricted to the Nakivale settlement and Columns (7-9) are restricted to Kampala. We consider three sets of control variables: a long list defined in Table A.3 in the Appendix (Panel A), a list selected using the double LASSO method of Chernozhukov et al. (2017) (Panel B), and no control variables except the averages of the perception index among other household members and host households living in the same community (Panel C). We consider three sets of fixed effects: context fixed effects (Columns 1, 4, and 7), EA fixed effects (Columns 2, 5, and 8),

[14]For refugees, the neighbourhoods used for peer interactions and peer perceptions are still Enumeration Areas (EAs) in the Ugandan research sites as well as for Somali refugees in Nairobi. The Congolese neighbourhoods in Nairobi are not official EAs, but 22 sub-locations of the five areas where most Congolese refugees live, that are similar in size to the EAs. In Kakuma, neighbourhoods are defined by the lowest administrative level of the camps ("blocks"), while in Dollo Ado at the level of the five camps. In Addis Ababa, refugee neighbourhoods are given by the official woredas.

and households fixed effects (Columns 3, 6, and 9). The perception and interaction indices are standardised to facilitate interpretation. We draw two conclusions from this table.

First, the correlation between the number of interactions that host respondents have with refugees is positive and statistically significant in most specifications. The magnitude of the association is moderate. In the Uganda sample, a one-standard-deviation increase in the interaction index is associated with a 0.076 to 0.1 standard-deviation increase in the perception index.[15] The association is somewhat stronger in the Nakivale settlement, both in terms of statistical significance and magnitude. With household fixed effects, the correlation is positive but not always significant with the Kampala sample. This might indicate that omitted variables at the household level drive the positive association between interactions and perceptions in the Kampala context.

Second, there is a strong correlation between respondents' perception of refugees and the perception of other household members and neighbours. The association is statistically significant and large.[16] In the Uganda sample, a one-standard-deviation increase in the average perception index of other household members is associated with a 0.26 to 0.3 standard-deviation increase in the perception index. A one-standard-deviation increase in the average perception index of respondents' neighbours is associated with a 0.33 standard-deviation increase in the perception index. The significance and magnitude of these correlations is stable across contexts and robust to various specification changes, for example, excluding the measures of perception among other household members and neighbours or considering other aggregation methods to construct the perception and interaction indices.

These correlations should not be interpreted as causal because of possible endogeneity issues. We believe that omitted variable bias is unlikely to fully explain the positive correlation observed in Nakivale as regression coefficients remain very stable when going from a regression without controls to a regression with a full set of control variables and household fixed effects (Altonji et al. 2005; Oster 2019). But omitted variable bias is possible in Kampala, as the inclusion of household fixed effects leads to insignificant results. Most importantly, reverse causality could bias regression coefficients in all contexts. And mismeasurement problems could lead to attenuation bias.

In Table 2, we use an IV approach to address endogeneity issues. The structure of Table 2 is similar to Table 1 with respect to samples and control variables. We consider two instruments: 1) the proportion of refugees living in respondents' EA (Columns 1, 4, and 7), and 2) the average interaction index among other household members and neighbours

[15] With respect to the types of interaction, we find that sharing meals is somewhat more strongly associated with positive perceptions than simply having conversations or business exchanges, whether measured by number of meals/conversations/exchanges or through binary indicators of having participated in any of these exchanges. As the differences are small, and including the separate measures might induce multicollinearity, we keep the focus of this analysis to the overall interaction index.

[16] We explored whether this intra-cluster correlation in perceptions is notable also at higher geographical levels than neighbourhoods. When considering the opinions of peers in the six research sites or the three countries, there is no longer any correlation between the individuals' and peers' opinions. As such, individual opinions seem to be strongly influenced by the immediate and local networks, and less so by the wider society.

(Columns 2, 5, and 8). We also consider the two instruments together (Columns 3, 6, and 9). Results suggest that the instruments are strong and likely to be exogenous. The effective F-statistics of the first-stage regressions are generally much larger than 10, which is the threshold below which instruments tend to be considered as weak in the literature (Staiger and Stock 1997; Olea and Pflueger 2013). There is one exception – the regression shown in Column 4 Panel B, which we will interpret cautiously (F-statistic = 7.6). Reassuringly, when the instruments are considered jointly, the first-stage regressions are strong, and the Sargan–Hansen J tests fail to reject the null hypothesis that the over-identifying restrictions are valid. As the assumptions to have a valid IV seem to be satisfied, we interpret the results of IV regressions causally.

The results from the IV regressions are very different from the results of the OLS regressions. In the full Uganda sample and in the Nakivale sample, refugee-host interactions do not seem to impact the perceptions that host have about refugees. This finding contrasts with the positive correlation that we had observed in Table 1, which is probably driven by endogeneity issues.[17] It might be that Ugandans that have positive views on refugees are more prone to interact with them and not the contrary.[18] In Kampala, interactions with refugees seem to positively affect the perceptions that Ugandans have of refugees. The effect is however rather small. When control variables are included, the estimated effect of a one-standard deviation increase in refugee-host interactions ranges between 0.095 and 0.12 standard deviations. Regression coefficients are statistically significant at conventional thresholds in all specifications.

In conclusion, the results from OLS regressions show that there is a positive relationship between refugee-host interactions and the perceptions of host populations about refugees. In Nakivale, this relationship seems to be partly driven by endogeneity issues as the results of IV regressions are not statistically significant. In Kampala, however, we find some evidence of a positive – albeit relatively small – effect of interactions on perceptions.

In the remainder of this section, we use correlational analysis and qualitative evidence to explain these contrasting results and explore other potential determinants of host perceptions. We study the correlates of host perceptions for Uganda in Table 3 and for the cross-country sample in Table 4. We highlight four main findings:

First, respondents' perceptions are highly correlated with the perceptions of other household members and neighbours. The regression coefficients are very large and highly signif-

[17]The lack of significance does not appear to be driven by lower statistical power resulting in larger standard errors in the IV specifications compared to OLS specifications.

[18]We explored this hypothesis by inverting our main specification and regressing refugee-host interactions on perceptions: $I_i = \alpha + \beta_1 P_i + \beta_2 I_{HH} + \beta_3 I_{EA} + \gamma X_i + \mu + \varepsilon_i$. Not surprisingly, β_1 is positive and statistically significant in OLS regressions. When instrumenting P_i by P_{HH} and P_{EA}, estimates of β_1 are statistically insignificant, suggesting that there is no important causal relationship between refugee-host interaction and perceptions (in both directions). However, we emphasize that the exclusion restriction of these IV regressions is unlikely to be satisfied because the perceptions of neighbours and other household members are likely to affect the degree of interaction respondents decide to have with refugees (e.g. to avoid reputation damage).

icant in all specifications. These variables are by far the most important predictors of perceptions. Using the method of Sterck (2019), we estimate that the two variables explain about 52% of the variation in respondents' perception in the cross-country OLS regression (Table 4, Column 1). In comparison, the second most important predictor – health – explains only 1.2% of the variation in respondents' perception.[19] This result confirms our intuition that perceptions are not formed independently of the context and of other people, but shaped at household and neighbourhood levels.

For instance, the perceptions towards refugees are often shared within a host household, and even transferred across generations within households. In Kampala, we came across several Ugandan families whose parent generation started interacting with refugees in the neighbourhood through day-to-day activities and built positive relationships with refugees. In those families, the second generation – their children – also have dense interactions and similarly favourable views to refugees. Joan, an 18-year-old Ugandan who lives in Katwe, explained how her mother developed a relationship with a Congolese refugee family:

> My mother came from a rural village to Kampala. My mother and Nelly [a refugee] lived in neighbourhood in Kampala and they went well. They taught English and Swahili each other. Nelly was buying vegetable from my mother so they came to know each other well. (Joan, UGX, Kampala)

Joan explained that even after her mother's death, the positive relationship with Nelly's family has maintained, which has led to her positive perceptions to refugee communities in general.

Furthermore, host perceptions may be shaped by local gossip as well as government and media narratives. Community-level attitudes towards refugees may be formed through rumours and misinformation, particularly if people lack knowledge about who refugees are. Local government officials in Kampala highlighted that most locals do not fully understand why refugees come to Uganda, sometimes regarding them to be 'economic migrants' who compete for opportunities (John, Ugandan, Kampala). Similar perspectives were expressed by host nationals in Kenya, often with an emphasis on a terrorist-related security threat, even in the absence of being able to provide clear evidence to support such claims. According to several Kenyan host community members, whenever Al-Shabaab perpetrated terrorist attacks occur, securitisation by the national government has exacerbated intolerance and hostility towards Somali communities at a local level (see also ReDSS 2015). However, it is possible that the impact of national government campaigns on host community perceptions may be short-term.

[19] On a related note, all regression specifications controls for physical and mental health, the latter using the widely employed depression measure PHQ9. Interestingly, there is an association between depression and holding more negative attitudes towards refugees. The association is less robust for hosts in Uganda (Table 3) than for the full sample (Table 4). This association also applies to depression among refugees and their opinions of hosts, in line with findings on Posttraumatic Stress Disorder (PTSD)-related symptoms and trust in hosts in the recent Kakuma Socioeconomic Survey (Fix et al. 2019).

Second, not all interactions are associated with more positive perceptions. Recall that the above regressions suggested that the impact of interactions on perceptions seems different in Nakivale and Kampala. Our qualitative research provides evidence of how perceptions towards refugees can vary substantially among local host populations depending on the pattern of economic interaction or the position held in relation to refugees. For instance, in refugee-hosting areas in Kampala, perceptions relating to refugees differ between landlords and tenants. Ugandan landlords acknowledge the contributions made by refugee tenants and express positive views to refugees, as illustrated by the following statement of a Ugandan landlord in Kiganda area where many Somali refugees reside.

> Refugees are doing well and behaving well... They contributed to local development. For instance, rent in this area went up due to refugee influxes since refugees pay well and pay better. (Betty, UGX, Kampala)

On the other hand, while it is hard to prove causality between refugee influxes and rent hikes, Ugandan tenants in these suburbs with large numbers of refugees often blame the refugees for increased rents. As this example indicates, at a micro-economic level, refugees can have a redistributive effect that creates 'winners and losers' within host populations. The nature of interactions with refugees differs between 'host winners' and 'host losers', and hence interaction may reinforce either positive or negative perceptions, for example by feeding the narratives of refugees as contributors or as competitors.

Another illustration of this is how host interactions and perceptions may vary depending on the host's own position as employer or employee. At the time of our research in Kitengera, Nairobi in 2017, mounting tension fed by growing economic competition between Congolese refugees and local hosts had manifested itself in a communal conflict. According to local media, a personal quarrel between a Congolese refugee and his Kenyan friend occurred at a bar in Kitengera, resulting in the Congolese injuring the Kenyan. The Congolese refugee was arrested by the police and taken to court. After this incident, some groups of Kenyan locals started organising protests against the entire Congolese refugee community in Kitengera. In an interview with a local government official, he described the nature of this conflict as the increasing frustration of Kenyan casual labours towards refugees:

> Most of these protestors were Kenyan manual workers who also engaged in lower paid jobs such as hawkers, security guards, and factory workers. They have no special skills and only limited levels of education. They claimed the number of Congolese refugees has become too big in Kitengera and were taking away our jobs. (Joseph, Kenyan, Kitengera, Nairobi)

On the other hand, Kenyan business owners in the same area, especially those who directly employ Congolese refugees, took an opposing position. For instance, Alex, a Kenyan M-Pesa and phone selling shop owner in Kitengera since 2002, strongly sided with refugees. When asked whether he thinks refugees are taking away Kenyan jobs or not, he responded:

> No, Congolese refugees are not taking jobs away by force... The employers should be able to decide who to hire. This is business not charity... I definitely prefer to hire refugees. If refugees disappear from here, many of our business will be damaged. It is not only a source of employment, but they also bring other Congolese refugees as customers. They increase our sales. (Alex, Kenyan, Kitengera, Nairobi)

The comments from Kenyan hosts in Kitengera show a critical difference between employers and labourers in terms of attitude towards refugees. The literature suggests that hosts are not uniformly affected by the presence of refugees, and that the poorest or most vulnerable within a given community are usually at the highest risk of being negatively impacted (Chambers 1986; Verme and Schuettler 2021). Meanwhile, business owners, like those in Kitengera, may be able to benefit from cheap refugee labour, and take on positive attitudes towards the refugees they interact with.

We observe the same pattern with Ugandan landowners versus non-landowners around the Nakivale settlement. Rural camp contexts often observe heightened resource competition between host and refugees, and in the case of Nakivale there is tension over access to land. The provision of land by the Ugandan government to refugee households is a central underpinning of its self-reliance strategy. Refugees have traditionally been given access to a plot of land upon arrival, which can be used for both consumption and commerce. However, the more than 60% increase in refugee numbers in Nakivale in the years preceding our survey had left the settlement overwhelmed, as the size of the settlement remained the same. As OPM became unable to provide adequate size of land for new arrivals, they instead started locating refugees at the border of the settlement, leading to a 2017 local demonstration against refugees in Nakivale. In our interviews in 2018, villagers living around the settlement expressed concerns about growing tension relating to land access sparked by the influx of refugees. The Ugandan vice chairperson of a church located adjacent to the settlement shared his feeling about the increasing tension over land:

> Refugees are good people. As long as refugees stay inside the settlement area, we have no problem. But when they come to our land, it is a problem. (Samson, Kazya church EA, Nakivale).

Since most Ugandan villagers living around Nakivale settlement are engaged in farming and animal husbandry that rely upon access to land, the increased occupation of land by refugees has posed a threat to their livelihoods and consequently made the relationship with refugees strained. Our survey data shows differences in opinions between the 70% of Ugandans around Nakivale who own land and the 30% who do not. Whilst across both groups about 8 out of 10 believe refugees are competitors, the landowners are significantly more likely to think of refugees also as economic contributors – 76% agree they are, as opposed to only 63% among hosts without land. This is perhaps explained by the fact that

Ugandan landowners interact with refugees not only as competitors, but also as customers and employees.

Third, correlational analysis suggests that ethno-linguistic proximity matters in forming perceptions. We observe generally positive opinions on refugees in contexts where both host and refugee communities are of Somali ethnic origin. Indeed, living in these areas, all else equal, is associated with more positive perceptions overall (Table 4, Column 1 and 4), as well as with specific opinions on refugees' economic contribution and character traits, and more progressive beliefs about refugee rights (Table 5, Panels A, C, and D).[20] The Somali Ethiopians living near the Dollo Ado camps and the Somali Kenyans in Eastleigh (Nairobi) are noticeably more positive to refugees than hosts in the other research sites. Moreover, within each of the three capital cities, hosts in Somali neighbourhoods are significantly more positive towards refugees than those in areas hosting Congolese or Eritreans.

Somali ethnic bonds are particularly strong and crucial for shaping the relationship and perceptions between refugees and hosts in the Dollo Ado camps close to the Somali-Ethiopia border area. Somali Ethiopian host communities largely share a positive view to refugees. According to local elders living near the camps, *"We are all Somali. We have common language, religion, and culture. They are our brothers and sisters. There are no differences between refugees and hosts"* (FGD 2, Melkadida).

Around Dollo Ado, the positive perception of hosts towards refugees seems to stem not only from shared language, culture, and beliefs, but also from the Somali Ethiopian hosts' understanding of the camps as part of a Greater Somalia, and respect for common authorities. A regional Somali king – King Abdille – plays a critical role in making cohesive relationship between refugees and indigenous people. According to Somali Ethiopian village leaders living nearby Hilaweyn camp:

> Abdille made the order to us to treat refugees well. He said 'refugees are our Somali people, don't disturb them'. He prohibited discrimination and exclusion of refugees in this zone. His order is one of the major reasons why refugees and hosts are living peacefully and well here. He also provided land to host refugees. (Village leaders, Host, Hilaweyn)

According to both refugees and hosts, being accustomed to the same 'Somali systems', with shared principles and governing structures, has facilitated both groups to foster peaceful and cohesive relationships. In Dollo Ado areas, most local residents are Muslim and follow Islamic laws and court systems, which enabled Somali refugees to use the similar systems used in Somalia. In the Dollo Ado camps, local conflict resolution committees consist of an equal number of elders from host and refugee communities, who have equal power. While

[20] When disaggregating the overall host perception index into four components (Table 5), we find that the coefficient of the Somali dummy is positive and significant for the three sub-indices on opinions on refugees' rights, character, and economic contribution. There is no significant association with the index on perceived threats.

both refugees and Ethiopian host members have access to Ethiopian law and court systems, many of family and communal issues, such as engagements, marriage, divorce, and domestic violence are usually handled by the local committees or Islamic courts.

The importance of shared values and structures in shaping relationships is also highlighted by Somali Kenyans and Somali refugees living in Eastleigh, Nairobi – often portrayed as 'Little Mogadishu' (Carrier 2017) due to a dominant Somali presence. There, Somali refugees live together with Somali Kenyan hosts and regularly meet them through madrassa schools, mosques, and volunteer and social activities. As they live in the same locations, refugees and hosts often face common problems. In Eastleigh, there are some community-based organisations (CBOs) which assist social problems facing residents. In most of these CBOs, refugees and locals work together to solve common issues facing them such as poverty, school dropout, alcohol among youth, and their beneficiaries include both refugees and Kenyans. (Mustafa, SOM, Eastleigh, Nairobi). In one focus group discussion with seven Somali Kenyan hosts living in Eastleigh, all participants supported the following view to Somali refugees, highlighting the bond across the groups:

> For us, we feel much closer to Somali refugees than other tribes of Kenya. We are from different countries but we are psychologically closer. We share the same clan system. We speak the same language, and have similar religion, food, and culture. (FGD 2, host, Eastleigh, Nairobi)

In Eastleigh, it is common for refugees and hosts to build partnerships and set up joint-businesses, and Somali Kenyan business partners expressed positive views to their refugee counterparts. One female Somali Kenyan co-owns a wholesale clothing with a Somali refugee in Eastleigh. She explained their partnership as follows:

> We are not relatives but we have been living in the neighbourhood. . . It is good to do business together with Somali refugees. They are trustworthy. We have many things in common – language, culture, religion so it is easy to work together. (SOM Kenyan, Eastleigh, Nairobi)

Fourth, there seems to be distinct differences in how refugees are perceived by urban and rural nationals. All else equal, being an urban host is associated with about a 0.3 standard deviation reduction in the perception index (Table 4, Column 4). However, the use of an aggregated perception index masks stark differences between urban and rural hosts in the different types of opinions the index consists of. In Table 5 and Figure 2, we disaggregate the overall host perception index into four components for how they perceive refugees in relation to (a) economy, (b) security, (c) character, and (d) entitlements. As is evident from the Table and Figure, the nature of social cohesion between hosts and refugees differs between camps and cities. The next paragraphs explore the four dimensions further.

Perhaps most strikingly, urban hosts hold much lower regards about refugees' economic role in their community than rural hosts. All else equal, living in the capitals versus rural

contexts is associated with a 0.56 decrease in the index on refugees' economic contribution (Table 5, Panel A). Hosts in Addis are particularly negative, where only 44% agree that refugees have increased economic opportunities for the host community and only 36% that refugees have generated employment. This is understandable as the number of refugees who are working in Addis Ababa is small, due to the strict restrictions on refugees' right to work there. While hosts in Addis are generally positive to refugees, relatively few acknowledge their economic contributions to the host economy. For instance, Ayan, a female Somali Ethiopian living in Bole Michael, explained:

> I have many Somali refugee friends... Many of them face economic issues... Compared to host, they are much poorer... I don't think refugees are making contributions [to host]. Many of them are in hardship and they don't have room to contribute. (Ayan, Somali national, Bole Michael)

Meanwhile, residents around camps acknowledge how refugees' presence contributes to the local economy, with more than 9 in 10 agreeing that refugees have generated employment and created economic opportunities for the host nationals. These communities are and have historically been more disadvantaged than their urban counterparts and hence appreciate the economic opportunities that arise from proximity to a camp economy. As is widely recognised, the influxes of refugees and aid organisations can dramatically change the socio-economic landscape of hosting areas, in part due to investments made by humanitarian and development actors. For example, the impacts of the five Dollo Ado camps on the region have been significant. Since the camps are relatively new, most of the current host populations have witnessed and experienced these impacts on their own lives. During a focus group discussion, the host community elders from near the Kobe camp described these changes:

> Kobe camp was established in 2011. Before that, it was very much like a forest, surrounded by trees and bushes... After the camp was established, there was serious environmental degradation and depletion due to the large refugee population... But on the other hand, we received new forms of international assistance. Job opportunities emerged. Many educational and health facilities were set up. Water points were drilled. (Elders, Host, Kobe)

However, we also find that urban hosts feel less threatened than rural hosts by refugee presence (Table 5, Panel B). This reflects how urban hosts in the three countries feel less threatened by competition from refugees than the rural hosts do. It is also driven by a large disagreement about insecurity issues among Kenyan hosts in Nairobi and Kakuma. Similar to hosts in most of our research sites, the hosts in Nairobi tend to disagree that refugees create issues of insecurity. In contrast, 79% of indigenous Turkana villagers around Kakuma believe refugees cause insecurity issues. In this context, tensions over livelihoods and resources are common, and more than 9 in 10 Turkana also consider refugees competitors. Violent

clashes between the groups emerge especially when refugees engage in activities that Turkana people have claimed for themselves, such as collecting firewood, or if refugees are found illegally rearing livestock on Turkana community land. While many Turkana interviewees acknowledged economic benefits brought by refugees, they concurrently suggested that the presence of the camp has downsides.

Furthermore, urban hosts are less likely to consider refugees friendly or trustworthy (Table 5, Panel C). In this aspect, there is also large variation between the three countries. Whilst 91% of Ethiopian respondents and 82% of Kenyan respondents agree that refugees are friendly or "good people", only 52% of Ugandan respondents think so, and the same pattern applies to perceived trustworthiness. Dollo Ado stands out as a site where nearly all hosts consider refugees friendly and trustworthy, illustrating both the "camp effect" and the "ethno-linguistic effect" of the Somali bond.

Finally, urban hosts hold more 'progressive' attitudes concerning which rights refugees should be granted (Table 5, Panel D). Hosts across all sites generally portray progressive views about refugees from a rights perspective. For example, an overwhelming 90% agree that refugees should access free health care and that refugee children should access school.[21] Moreover, 85% think that refugees should have the right to work, with only a marginal difference between rural and urban hosts. However, rural hosts are more reluctant than urban hosts to provide refugees with the right to live where they want (57% agree as opposed to 70% of urban hosts).

In summary, our empirical findings highlight the significant variability and complexity of host perceptions. Opinions are heterogeneous both across and within the research sites. Within any given context, seemingly contradictory views may exist. For example, in urban areas, tolerance levels are generally lower and refugees are more likely to be perceived as an economic burden, and yet hosts are more likely to hold progressive (cosmopolitan) attitudes to refugee rights. The Turkana hosts around Kakuma see refugees as a security threat while generally regarding them as friendly and valuing their economic contribution. Ugandan landowners in Nakivale view refugees as both competitors and contributors. These 'mixed' sentiments – positive and negative – are not mutually exclusive, but rather co-existent in host society. However, we also observe some clear patterns across contexts. For example, the role of ethno-linguistic proximity (notably revealed through the so-called 'Somali bond') plays a role in shaping attitudes, the importance of neighbourhood and household-level attitude formation, and the role of a household's own socio-economic position in relation to refugees (landlord or tenant, employer or employee, landowner or non-landowner) are important themes across context. Furthermore, a clear theme is the distinction between urban and rural contexts: through our Uganda data there is evidence that direct interactions may play a causal role in shaping attitudes in cities, but not in camp-like settings. Further, we find evidence across the countries that attitudes in camp-like settings are more positive than in

[21] These two statements were asked to hosts in all sites except the Kakuma Camps in Kenya.

cities, and that the attitudes in the two context types are shaped by different sets of factors, with, for example, concerns about economic contribution being strikingly greater in urban areas and security concerns greater in camp-like contexts.

5.2 Refugee Perceptions of Hosts

In Table 6, we use the full cross-country sample to study the relationship between refugee-host interactions and refugees' trust in hosts. The dependent variable is a dummy variable indicating whether the refugee respondents trust their host population. In Columns 1-3, we report the results of OLS regressions with country-, neighbourhood-, and household fixed effects respectively. Columns 4-6 report the IV estimates, instrumenting the interaction index with the average interaction index among other household members and neighbours. As before, we consider three sets of control variables: a long list defined in Table A.4 (Column 4) in the Appendix, a list selected using the double LASSO procedure (Column 5), and no control variables except the averages of the perception index among other household members and host households living in the same community (Column 6). We highlight three findings.

First, the relationship between interactions and perceptions is also positive and significant also among refugees, but less robust. The OLS regressions indicate that a one standard-deviation increase in the interaction index is associated with a 13 to 17 percentage point increase in the likelihood of reporting that host nationals are trustworthy. When limiting the analysis to the Uganda sample, OLS regressions still point to a positive and significant association between refugee-host interactions and trust in Kampala, but not in Nakivale (Table A.7 in the Appendix). However, the cross-country IV regressions in Table 6 columns 4-6 indicate that this positive association in the OLS is not robust, as the coefficient of the interaction index is close to zero and not statistically significant. However, we do have some concerns about these IV specifications.[22] The IV results for Uganda are also complicated to interpret (Table A.8 in the Appendix), first because the proportion of refugees in the enumeration area appear to be a weaker instrument here,[23] and second because we find some evidence that the instruments might not be exogenous in this context. These issues imply that the results of the refugee sample IV regressions should be interpreted very cautiously. If anything, IV results suggest that higher refugee-host interactions does not lead to more trust in hosts.

Second, we observe that other correlates of refugee opinions mirror the main findings

[22]The first-stage of the IV regression is very strong (Effective F-statistic > 300) and we cannot reject the null hypothesis of the Sargan-Hansen J test that the instruments are valid. Still, the p-value of the Sargan-Hansen J test is close to the critical threshold of 0.1 when control variables are selected using the double Lasso procedure, indicating that results should be interpreted cautiously.

[23]For refugees in Uganda, OLS regressions suggest that the degree of interaction with host populations does not depend much on the proportion of refugees versus hosts living nearby. Instead, both in the Uganda sample and in the full sample, the most important predictors of refugee-host interactions are having a job and speaking English or the local language.

amongst hosts. Most notably, refugee perceptions seem to be formed through gossip and common narratives, as individual opinions greatly correlate with the perception of other household members and of neighbours. Further, in the full cross-country sample of refugees, when controlling for the location fixed effects, being Somali is associated with a 16.6 percentage point higher likelihood of finding hosts trustworthy (Table 6, Column 2). Qualitative research supports how Somali ethnic bonds play an important role in shaping refugees' perceptions of host nationals – just as with host perceptions. In Bole Michael, a Somali-concentrated area in Addis Ababa, during focus group discussions with Somali refugees, a number of participants highlighted that they made contacts with their co-ethnic hosts at mosques and schools. One of them described the relationship with Somali Ethiopian hosts:

> [our relationship is] not bad. We are of the same origin. We speak the same language. It is hard to distinguish refugees from Somali Ethiopians [in Bole Michael]. (Somali refugees, Bole Michael, W1)

Across our research countries, we observe business partnerships between Somali refugees and host nationals of Somali ethnic origin. In Nairobi, Somali refugees who have resources to invest in their own businesses often use Somali Kenyans as 'cover' to obtain business licenses and property contracts. These refugee business owners believe Somali Kenyans can get necessary documents and procedures much quicker than refugees can, because of their citizenship, and are generally highly appreciative to their Kenyan partners.

Third – and again in line with observations among host populations – different types of interactions may lead to different perceptions. Similar to how hosts who have gained from refugees' presence tend to like refugees, refugees who have economically benefited from hosts through business or employment usually express positive views about hosts. However, a more complex pattern emerges among Congolese refugees in urban areas, in particular, whose employment opportunities through hosts may take on an exploitative nature. The dynamics of these host-refugee interactions serve to showcase that being popular with hosts may not necessarily be only positive for refugees.

Congolese refugees in Nairobi take advantage of the command of Kiswahili – Kenya's national language – and common religious affinity with Kenyan hosts in order to be socio-culturally accepted and find employment provided by Kenyans. The reputation of Congolese informal labour is generally positive among Kenyan employers. However, one of the main reasons for their positive views cited by the hosts is that Congolese refugees accept cheaper wages than Kenyan labourers, due to the scarcity of job opportunities. Indeed, this is also reflected in our quantitative data, where employed hosts in the areas where Congolese refugees live earn four times as much as employed Congolese – 320 USD vs 82 USD per month. This is in part due to occupational segregation between hosts and refugees, but even when controlling for the type of work, as well as demographics and human capital accumulation, the pay gap remains statistically significant and substantial in size: Congolese refugees in these areas earn on average 70 USD less per month than equally qualified Kenyans

who do the same job. Many Congolese employees appreciate being given paid employment without formal registration procedures and status, which many of them do not possess. However, most of them were dissatisfied with their lower salary and poor working conditions. Maurice is a 34-year-old Congolese male refugees who came to Nairobi in 2015. He is employed by a Kenyan security company as a security guard. He explains about the wage discrimination as follows:

> [At our company] There are about 40 Congolese refugee employees... Refugees accept cheaper payment, so it is easier for an employer. Now I am paid 6000 KES per month [about 55 USD]. I work from 6pm to 6am. 12 hours per day and 7 days a week. I have no holidays... [For the same job] Kenyans get 12000-15000 KES [110-240 USD] per month.

The same pattern applies to Congolese refugees and Ugandans in Kampala. Nevertheless, these refugee workers rarely express their frustration with respect to exploitative economic relationships or other negative perceptions of hosts. One Ugandan coordinator of a CBO who has been working for refugees in Kampala since 2012 explained as follows:

> Refugees are careful to have good reputation and not to cause any problem with hosts because they understand they will be kicked out of here if something occurs. This is why they are disciplined. (Ugandan coordinator of CBO, Kampala)

The comment above suggests that Congolese refugees sacrifice considerable human labour and make significant efforts to maintain a good image among hosts in order to make a living.

5.3 Consistency with Existing Literature

This is among the very first papers to explore the 'contact hypothesis' for refugee-host community interaction in a developing country context. Until now, nearly all of the research examining the impact of refugee-host interaction on host community attitudes towards refugees had focused on Europe (one exception comes from Rozo and Vargas (2021), who assessed the impact of the recent refugee crisis in Colombia). Consequently, it is particularly interesting to explore how our findings diverge from the existing, predominantly rich-country literature on contact and 'native' attitudes. What is similar and what is different?

While the European literature focuses on both contact (as sustained interaction) and exposure (as short-term interaction during transit), our focus is very much on the former (Ajzenman et al. 2020; Steinmayr 2021). Our OLS regression analysis findings are consistent with the contact hypothesis (Allport 1954), revealing a positive and statistically significant correlation between interaction and positive perceptions. We have sought to address issues of endogeneity issues – reverse causality in particular – by using an IV approach. The introduction of the IV leads to the disappearance of the positive correlation between contact and attitudes when considering the full Uganda sample or data from the Nakivale settlement.

In Kampala, we find some evidence of a positive – albeit small – effect of interactions on perceptions. The finding that the effect of refugee-host interactions is more positive in urban contexts resonates with the work of Dustmann et al. (2019) who, using data from Denmark, find that refugee presence is associated with lower vote shares for anti-immigration parties in large urban municipalities, while the opposite is true in rural municipalities. Interestingly, this suggests that some of the mechanisms and findings relating to the impact of contact on social cohesion in the 'North' may also be applicable in the 'South'.

Another robust finding of our analysis is that respondents' attitudes are closely correlated with other household members and immediate neighbours, which highlights the importance of intra-group attitude formation processes alongside inter-group contact as closely related mechanisms for attitude formation. While Hopkins (2010), for example, looks at the inter-relationships between contact and national-level processes of attitude formation, our research highlights the need to examine the inter-relationship between contact and local-level (neighbourhood or household) processes of attitude formation. This suggests the need for further research to explore how exactly neighbourhood and household-level processes of intra-group attitude formation interact with members' experiences of inter-group contact.

Our results further suggest that ethnic and linguistic ties between refugees and hosts matter for perceptions and attitudes. 'Group threat theory' predicts that diversity leads to opposition (Quillian 1996; Hjerm 2007; Stephan and Stephan 2017). Steele and Abdelaaty (2019) find that greater ethnic diversity is associated with decreased support for refugees; however, this relationship is not consistent across all measures of diversity. We find suggestive evidence that proximity in terms of ethnicity and language between refugees and host communities correlates with more positive mutual attitudes of hosts towards refugees, and vice versa.

Our qualitative research complements these insights, but inevitably also speaks to some of the other theoretical explanations for social cohesion within the literature such as the labour market competition and fiscal burden hypotheses. Overall, though, we interpret both the quantitative and qualitative findings as rejecting the 'any contact' version of contact theory, but we confirm the importance of understanding the enabling conditions through which contact improves social cohesion (Pettigrew and Tropp 2006). The key question is: under what conditions does contact lead to social cohesion? To be effective in promoting refugee-host social cohesion, contact may be most effective in the context of a) shared norms (e.g. ethno-linguistic proximity), b) mutually beneficial socio-economic opportunity, and c) within-group community structures that amplify positive perceptions. The identification of these mechanisms are, however, preliminary findings that requires further research, including through intervention-based studies.

In 2021, the World Bank, UNHCR, and FCDO commissioned a series of papers on social cohesion and forced displacement. Many of the findings in this paper resonate with preliminary findings in that broader collection. Several papers highlight that refugee arrivals or returns can, under certain conditions, be linked to host-refugee tensions (Groeger et al. 2021;

Ruiz and Vargas-Silva 2021), especially following an influx (Coniglio et al. 2021). However, these effects are not inevitable (Aksoy and Ginn 2021), are shaped by the wider economic context (Müller et al. 2021; Hoseini and Dideh 2021), and can be mitigated through particular policies and interventions (Murard 2021), including those that encourage particular forms of interaction or shared opportunity (Ferguson et al. 2021).

Within the collection, three papers in particular offer general support for the role of the contact hypothesis in relation to social cohesion. Focusing on IDPs in the DRC, Pham et al. (2021) find that although displacement is negatively associated with perceptions of social cohesion in aggregate, people who host displaced populations in their communities have higher perceptions of social cohesion across most indicators. Allen et al. (2021) show that Colombians who have less contact with Venezuelans tend to support policies that are more restrictive. Meanwhile, although Zhou et al. (2021) find no evidence that proximity to refugee settlements is associated with more negative or positive attitudes towards refugees, they do find that host communities with the greatest exposure to refugee settlements (i.e. geographically closer to larger settlements) experienced substantial improvements in local development and public goods provision.

Our paper makes a distinctive contribution to this collection by beginning to specify the conditions under which contact contributes to social cohesion. Inter-group Interaction does not inevitably lead to more positive host community attitudes towards refugees (or vice versa). Three main conditions appear to be important for the contact hypothesis to hold: shared social norms, shared economic opportunity, and intra-group cohesion. Each of these find some broader resonance among the papers. High levels of unemployment (Müller et al. 2021; Albarosa and Elsner 2021) and horizontal inequality (Hoseini and Dideh 2021; Sedova et al. 2021) are generally viewed as contributing to more negative host attitudes towards refugees. Bertinelli et al. (2021) highlight the role that inter-group and intra-group diversity can play in shaping social cohesion. Meanwhile Tellez and Balcells (2021) discuss the important role of intra-group cohesion. Overall, the papers reinforce the view that interventions that promote contact can strengthen inter-group social cohesion, but that they are likely to be most effective alongside interventions that create the conditions for success.

6 Policy and Program Implications

Our overall findings are that host community attitudes towards refugees (and vice versa) are likely to be shaped by a complex combination of intra-group attitude formation at the neighbourhood level and inter-group interaction, with different mechanisms of interaction likely to be more salient for attitude formation in particular contexts (e.g. urban versus camp-based). The findings of the paper cannot be generalised and are limited to the context in which the data was collected. Furthermore, each of the three countries require nuanced

recommendations that take into account their different legal frameworks for refugee management, as well as variation in the nature and perception of refugee-host relationships in each context. This means that tailored recommendations should ultimately be formulated for specific countries and contexts. Nevertheless, a series of broad policy and programmatic implications follow logically from our findings, each of which could also be explored further through intervention-based research.

1) Facilitate and pilot new opportunities for refugee-host interaction, including through economic exchange and social activities.

Our findings show that refugee-host interaction is correlated with more positive host community perceptions of refugees. This implies that the more interaction that takes places, the better relations are likely to be between the communities. However, our analysis also suggests that the causal relationship may be the other way around: those with positive attitudes are those who self-select to interact more frequently with refugees; those with negative attitudes avoid interaction. Despite this, there is sufficiently strong evidence of a correlation, combined with a recognition that attitude formation takes place through neighbourhood and household-level clusters to imply that it would be worthwhile to pilot intervention-based studies to explore the conditions under which contact within aid programmes – whether relating to livelihoods, public services, or community engagement – leads to improved social cohesion (e.g. the role of shared norms, shared socio-economic opportunity, and within-group community structures that amplify positive perceptions). A key focus should be on specifying the enabling conditions through which contact improves social cohesion. Intervention-based studies could learn from, or be integrated within, existing pilots that involve the participation of both refugees and host communities; for example, in the context of the Global Compact on Refugees, the Comprehensive Refugee Response Framework (CRRF), and the World Bank's Development Response to Displacement Impacts Project (DRDIP).

2) Target interventions promoting intra-group attitude change at the neighbourhood and household levels.

A key finding of our research is that individual host community members' perceptions of refugees are strongly correlated with the perceptions of other household members and immediate neighbours. Across our full data set of host respondents, household members and neighbours' attitudes towards refugees appear to explain more than 50% of variation in individual attitudes. This implies a strong clustering effect in attitude formation. Individuals' attitudes towards refugees are constituted within their immediate communities. In combination with our other findings, this suggests that host community attitudes towards refugees (and vice versa) are formed through intra-group interactions independently of their inter-group interactions, and through their localised interactions with their own communities. This suggests that interventions aimed at influencing social cohesion should target the neighbourhoods and households rather than individuals, focusing in particular on identify-

ing and targeting 'influencers' within those communities. It suggests that a next step in the development of intervention-based studies on refugee-host social cohesion could be to pilot interventions that introduce information, representations, or topics for deliberative debate into neighbourhood or household-level focus groups, and explore their impact on intra-group attitude formation at the level of the neighbourhood. Further research could also shed light on the causal mechanisms through which positive and negative attitudes form and diffuse within networks (e.g. through intra-communal norm entrepreneurs).

3) Adopt a political economy lens to understand the distributive consequences of refugee hosting, and focus differently on perceived 'winners' and 'losers' within the host community.

Our research reveals significant variation in host community attitudes towards refugees. In particular, our qualitative data suggests that one reason for this is the particular socio-economic position of host community individuals and households with respect to the presence of refugees. For example, where host community members sit as landlords/tenants, employers/employees, or land-owners/agricultural workers may influence whether they view refugees as contributors or competitors. Put simply, there may be a social class dimension to attitude formation: owners of capital and land are more likely to view refugees positively; workers or tenants who rely upon high wages and low rents are more likely to regard refugees as a source of competition. This suggests that attempts to engage in intra-group attitude change should adopt a political economy lens. Perceived 'losers' need to share in the benefits of hosting refugees, including through targeted access to employment opportunities and public services. Perceived 'winners' should be supported to advocate for the benefits of hosting refugees at a community level.

4) Adopt distinctive social cohesion programmes for urban and camp contexts, with different degrees of emphasis on economic, security, identity-related, and rights-based attitudes.

The nature, scope, and type of economic and political dynamics in urban and rural refugee and host communities are variable, and policies need to be tailored to reflect such variations. Our analysis suggests differences in the mechanisms that shape host community attitudes towards refugees (and vice versa) in urban and camp contexts. There is also some evidence that different domains of interaction may be more salient with camps or urban contexts. Generally, host community attitudes towards refugees appear more positive in camp contexts than urban contexts. Examining four sub-indices of attitudes (economy, security, character, and rights) suggests different sources of positive and negative attitude formation in camps compared to cities. In camp-like contexts, perceptions relating to economic contribution appear to be an especially important basis for positive attitude formation, while perceptions relating to security threats may sometimes be an important source of negative attitude formation. In urban areas, negative perceptions appear to relate mainly to economic competition and perception of character. While further research is needed to explore these different domains of interaction and attitude formation, the analysis provides some basis on

which to believe that different types of intervention may be more effective in camp versus urban contexts. A next step for intervention-based studies and pilots might, for example, focus on attempts to increase economic interactions relating to inter-group exchange and employment in camp contexts, and attempts to address cultural or identity-based stereotypes in urban contexts.

5) Incorporate data collection relating to both perceptions and interactions into UNHCR and World Bank socio-economic household surveys focusing on refugee and host communities.

Important advances have been made in both UNHCR and World Bank household survey data collection in refugee-hosting areas. One of the key insights of this paper has been to recognise the value of systematically collecting data relating to both interactions and perceptions. The analysis within this paper has been possible because the Refugee Economies Dataset is based on a wide-ranging socio-economic survey that included questions on the quality and quantity of different types of refugee-host interaction (e.g. business exchange, conversation, shared meal) and host community attitudes towards refugees/refugee attitudes towards hosts (e.g. relating to the economy, security, identity). Including modules on these variables alongside a wide range of other socio-economic indicators and control variables enabled us to explore the relationship between interactions and perceptions, both as aggregated indexes and disaggregated types of interaction and perception. A weakness of our overall Refugee Economies Dataset is that we only collected data on the quality and quantity of host community interactions with refugees in Uganda, although we collected data on refugee interactions with the host community and both communities' mutual perceptions across all three countries. We believe our research highlights the value of refining these variables and systematically collecting related data in future UNHCR and World Bank data collection. In particular, UNHCR and World Bank socio-economic household surveys in refugee-hosting areas should systematically focus on both refugees and hosts, and include attitudinal questions relating to both social cohesion, and its likely determinants (including contact).

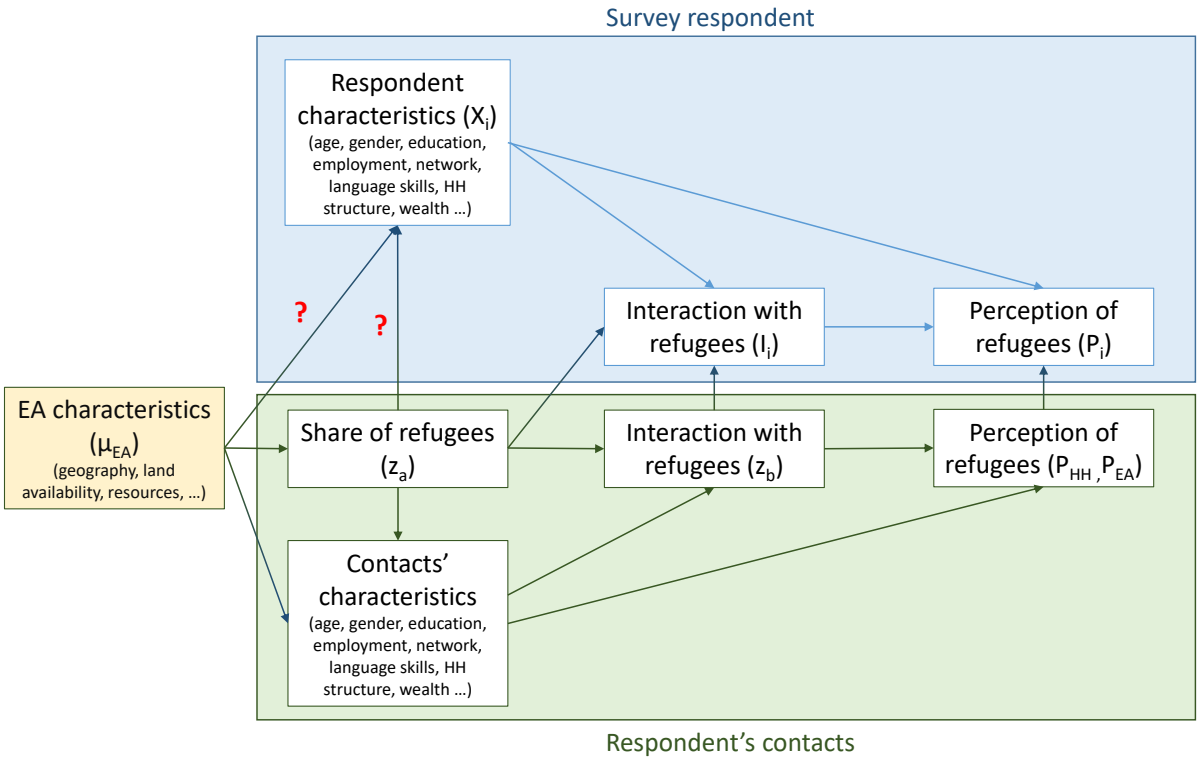

Figure 1 – Directed Acyclic Graph (DAG) of Causal Model

Table 1 – Perceptions of host populations about refugees with the Uganda sample (OLS regressions)

	Dependent variable: hosts' perceptions of refugees								
	Sample = Uganda			Sample = Nakivale			Sample = Kampala		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A - Controls listed in table A.2									
Interaction index	0.0762***	0.0919***	0.100*	0.0875**	0.128**	0.191**	0.0792**	0.0706*	0.0365
	(0.0222)	(0.0317)	(0.0589)	(0.0341)	(0.0539)	(0.0872)	(0.0292)	(0.0389)	(0.0677)
Perceptions within HH	0.291***	0.258***		0.316***	0.295***		0.254***	0.213***	
	(0.0423)	(0.0432)		(0.0587)	(0.0591)		(0.0557)	(0.0570)	
Perceptions among neighbours	0.332***			0.317***			0.342***		
	(0.0282)			(0.0497)			(0.0381)		
R-squared	0.353	0.380	0.754	0.329	0.352	0.764	0.390	0.421	0.757
Panel B - Controls selected with double Lasso									
Interaction index	0.0800***	0.0963***	0.0868	0.0810**	0.131***	0.165**	0.0779**	0.0811**	0.0260
	(0.0210)	(0.0309)	(0.0590)	(0.0322)	(0.0472)	(0.0799)	(0.0330)	(0.0411)	(0.0691)
Panel C - No controls									
Interaction index	0.0769***	0.100***	0.0868	0.0906**	0.132**	0.183*	0.0695**	0.0772*	0.0258
	(0.0219)	(0.0314)	(0.0597)	(0.0323)	(0.0487)	(0.0893)	(0.0294)	(0.0405)	(0.0701)
Perceptions within HH	0.302***	0.268***		0.334***	0.312***		0.271***	0.227***	
	(0.0414)	(0.0431)		(0.0640)	(0.0653)		(0.0523)	(0.0542)	
Perceptions among neighbours	0.336***			0.337***			0.346***		
	(0.0268)			(0.0417)			(0.0355)		
R-squared	0.337	0.365	0.747	0.310	0.335	0.758	0.359	0.390	0.742
Observations	1500	1500	1500	647	647	647	853	853	853
Fixed effects	Context	EA	HH	Context	EA	HH	Context	EA	HH

Notes: Columns 1-3 consider the full Uganda sample, Columns 4-6 are restricted to the Nakivale settlement and Columns (7-9) are restricted to Kampala. We consider three sets of control variables: a long list defined in Table A.3 (Panel A), a list selected using the double LASSO method of Chernozhukov et al. (2017) (Panel B), and no control variables except the averages of the perception index among other household members and host households living in the same community (Panel C). We consider three sets of fixed effects: context fixed effects (Columns 1, 4, 7), EA fixed effects (Columns 2, 5, 8), and households fixed effects (Columns 3, 6, and 9). The perception and interaction indices are standardized to facilitate interpretation. Standard errors in parentheses are clustered at the enumeration area level to account for two-stage cluster sampling. Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2 – Perceptions of host populations about refugees with the Uganda sample (IV regressions)

	Dependent variable: hosts' perceptions of refugees								
	Sample = Uganda			Sample = Nakivale			Sample = Kampala		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A - Controls listed in table A.2									
Interaction index	-0.00592	0.0268	0.0183	-0.0698	0.000971	-0.0136	0.122**	0.111*	0.115***
	(0.0278)	(0.0263)	(0.0216)	(0.0571)	(0.0281)	(0.0234)	(0.0520)	(0.0596)	(0.0421)
Effective F-Statistic	26.63	133.3	136.3	10.94	140.3	161.8	26.14	34.09	41.30
Hansen J statistic (p-value)			0.453			0.453			0.673
R-squared	0.347	0.351	0.350	0.307	0.323	0.320	0.388	0.389	0.389
Panel B - Controls selected with double Lasso									
Interaction index	-0.0113	0.0350	0.0237	-0.140	-0.0394	-0.0378	0.0957**	0.0970**	0.0950**
	(0.0198)	(0.0270)	(0.0219)	(0.127)	(0.0350)	(0.0344)	(0.0488)	(0.0489)	(0.0450)
Effective F-Statistic	29.87	137.8	136.1	7.641	155.7	156.0	21.49	41.71	47.23
Hansen J statistic (p-value)			0.385			0.673			0.598
R-squared	0.333	0.340	0.338	0.278	0.304	0.316	0.339	0.360	0.339
Panel C - No controls									
Interaction index	-0.00486	0.0252	0.0174	-0.0308	-0.0210	-0.0233	0.0508**	0.0830*	0.0725**
	(0.0174)	(0.0258)	(0.0204)	(0.0228)	(0.0314)	(0.0255)	(0.0249)	(0.0462)	(0.0300)
Effective F-Statistic	30.78	137.4	141.2	12.51	140.3	177.4	23.48	42.94	48.24
Hansen J statistic (p-value)			0.733			0.954			0.782
R-squared	0.330	0.334	0.333	0.295	0.298	0.297	0.358	0.359	0.359
Observations	1500	1500	1500	647	647	647	853	853	853
Instruments	% refugees	I_{HH}, I_n	All	% refugees	I_{HH}, I_n	All	% refugees	I_{HH}, I_n	All

Notes: Columns 1-3 consider the full Uganda sample, Columns 4-6 are restricted to the Nakivale settlement and Columns (7-9) are restricted to Kampala. We consider three sets of control variables: a long list defined in Table A.3 (Panel A), a list selected using the double LASSO method of Chernozhukov et al. (2017) (Panel B), and no control variables except the averages of the perception index among other household members and host households living in the same community (Panel C). We consider two instruments: 1) the proportion of refugees living in respondents' EA (Columns 1, 4, 7), and 2) the average interaction index among other household members and neighbours (Columns 2, 5, 8). We also consider the two instruments together (Columns 3, 6, 9). The perception and interaction indices are standardized to facilitate interpretation. Standard errors in parentheses are clustered at the enumeration area level to account for two-stage cluster sampling. Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3 – Perceptions of host populations about refugees with the Uganda sample (OLS regressions with controls)

	Dependent variable: hosts' perceptions of refugees								
	Sample = Uganda			Sample = Nakivale			Sample = Kampala		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Interaction index	0.0762***	0.0919***	0.100*	0.0875**	0.128**	0.191**	0.0792**	0.0706*	0.0365
	(0.0222)	(0.0317)	(0.0589)	(0.0341)	(0.0539)	(0.0872)	(0.0292)	(0.0389)	(0.0677)
Perceptions within HH	0.291***	0.258***		0.316***	0.295***		0.254***	0.213***	
	(0.0423)	(0.0432)		(0.0587)	(0.0591)		(0.0557)	(0.0570)	
Perceptions among neighbours	0.332***			0.317***			0.342***		
	(0.0282)			(0.0497)			(0.0381)		
Age	-0.0120	-0.0129	-0.0144	-0.00749	-0.00792	-0.00922	-0.0189	-0.0200	-0.0310
	(0.00814)	(0.00860)	(0.0163)	(0.00845)	(0.00840)	(0.0167)	(0.0141)	(0.0156)	(0.0271)
Age squared	0.0000962	0.000106	0.000133	0.0000554	0.0000598	0.0000802	0.000159	0.000174	0.000295
	(0.0000917)	(0.0000969)	(0.000184)	(0.0000967)	(0.0000957)	(0.000197)	(0.000162)	(0.000177)	(0.000294)
Being female	0.0426	0.0484	0.0441	0.0379	0.0426	0.0683	0.0455	0.0566	0.0328
	(0.0636)	(0.0654)	(0.0852)	(0.103)	(0.105)	(0.121)	(0.0764)	(0.0757)	(0.109)
Being married/living w/partner	0.0231	0.0255	0.0458	0.0204	0.00555	0.0234	0.0160	0.0223	0.0125
	(0.0394)	(0.0400)	(0.128)	(0.0662)	(0.0740)	(0.231)	(0.0552)	(0.0547)	(0.158)
Living in urban context	0.0136								
	(0.0528)								
Being Somali (refugees and hosts)	0.0326						0.103**		
	(0.0375)						(0.0437)		
Has a job/an economic activity	0.0120	0.0180	0.0276	0.0224	0.0327	-0.00205	0.0262	0.0348	0.114
	(0.0418)	(0.0467)	(0.0830)	(0.0498)	(0.0585)	(0.0914)	(0.0616)	(0.0666)	(0.110)
Years of formal education	-0.000837	-0.000730	0.00766	-0.000368	0.00140	0.00108	-0.00135	-0.00322	0.00828
	(0.00526)	(0.00539)	(0.0131)	(0.00803)	(0.00732)	(0.0156)	(0.00842)	(0.00887)	(0.0214)
Has vocational training	-0.0117	-0.00746	-0.0461	0.0571	0.0796	0.0816	-0.0105	-0.00780	-0.0193
	(0.0558)	(0.0576)	(0.124)	(0.0994)	(0.112)	(0.242)	(0.0742)	(0.0755)	(0.153)

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Has good English skills	0.136**	0.139**	0.0777	0.00312	-0.0354	-0.105	0.165***	0.182**	0.115
	(0.0540)	(0.0645)	(0.123)	(0.150)	(0.157)	(0.293)	(0.0573)	(0.0685)	(0.149)
Has good local language skills	-0.143**	-0.144*	-0.121	-0.0727	-0.0176	0.0780	-0.148*	-0.163*	-0.156
	(0.0708)	(0.0768)	(0.256)	(0.168)	(0.199)	(0.937)	(0.0854)	(0.0858)	(0.226)
Heath index	0.00302	0.00416	0.00451	-0.00571	-0.00297	0.00788	0.00991	0.0101	0.00112
	(0.00468)	(0.00590)	(0.0107)	(0.00953)	(0.00940)	(0.0166)	(0.00676)	(0.00944)	(0.0148)
Mental health index (PHQ9)	-0.00808	-0.00777	-0.0172**	0.00462	0.00491	-0.0172	-0.0204***	-0.0219***	-0.0185
	(0.00647)	(0.00765)	(0.00815)	(0.0121)	(0.0123)	(0.0116)	(0.00530)	(0.00716)	(0.0122)
Has relative(s) in same site	0.0262	0.0117	0.0109	-0.0203	-0.0434	-0.0618	0.0705	0.0737	0.108
	(0.0494)	(0.0530)	(0.0875)	(0.0786)	(0.0914)	(0.136)	(0.0639)	(0.0663)	(0.105)
Has relative(s) in Western countries	0.154	0.140	0.0358	0.241**	0.217**	0.0582	0.106	0.103	0.0321
	(0.119)	(0.126)	(0.336)	(0.103)	(0.0892)	(0.400)	(0.134)	(0.146)	(0.377)
Father's years of formal education	-0.0104	-0.0105	-0.0116	0.000704	0.000991	0.0107	-0.0133*	-0.0130*	-0.0197
	(0.00692)	(0.00686)	(0.0126)	(0.0180)	(0.0187)	(0.0286)	(0.00745)	(0.00739)	(0.0147)
Mother's years of formal education	-0.00307	-0.00254	0.0000339	-0.0374**	-0.0348**	-0.0343	0.00203	0.00272	0.00534
	(0.00744)	(0.00762)	(0.0148)	(0.0144)	(0.0152)	(0.0357)	(0.00813)	(0.00836)	(0.0153)
Household size (no. of people)	-0.00557	-0.00323		0.00466	0.00858		-0.00819	-0.00814	
	(0.00854)	(0.0103)		(0.0164)	(0.0177)		(0.0102)	(0.0130)	
Dependency ratio in household	0.0218	0.0176		0.00607	-0.00452		0.0352	0.0412	
	(0.0229)	(0.0251)		(0.0360)	(0.0378)		(0.0384)	(0.0409)	
Female head of household	-0.0570	-0.0519		-0.00180	0.0128		-0.0866	-0.0863	
	(0.0532)	(0.0588)		(0.0963)	(0.107)		(0.0606)	(0.0646)	
Asset index	0.0497***	0.0539***		0.0788***	0.0778***		0.0210	0.0239	
	(0.0167)	(0.0199)		(0.0233)	(0.0237)		(0.0226)	(0.0290)	
Food insecurity index (HFIAP)	0.0769*	0.0673		0.138*	0.107		0.0225	0.0368	
	(0.0429)	(0.0534)		(0.0663)	(0.0823)		(0.0585)	(0.0697)	
Observations	1500	1500	1500	647	647	647	853	853	853
R^2	0.353	0.380	0.754	0.329	0.352	0.764	0.390	0.421	0.757
Fixed effects	Context	EA	HH	Context	EA	HH	Context	EA	HH

Notes: The table shows the regressions in Panel A of Table 1, with the full set of control variables described in Table A.3 in appendix. Columns 1-3 consider the full Uganda sample, Columns 4-6 are restricted to the Nakivale settlement and Columns (7-9) are restricted to Kampala. We consider three sets of fixed effects: context fixed effects (Columns 1, 4, 7), EA fixed effects (Columns 2, 5, 8), and households fixed effects (Columns 3, 6, and 9). The perception and interaction indices are standardized to facilitate interpretation. Standard errors in parentheses are clustered at the enumeration area level to account for two-stage cluster sampling. Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4 – Perceptions of host populations about refugees with the cross-country sample (OLS regressions with controls)

	Dependent variable: hosts' perceptions of refugees				
	(1)	(2)	(3)	(4)	(5)
Perceptions within HH	0.460***	0.446***			
	(0.0197)	(0.0208)			
Perceptions among neighbours	0.329***				
	(0.0179)				
Age	-0.00751*	-0.00783*	-0.00676	0.00186	-0.00495
	(0.00400)	(0.00415)	(0.00634)	(0.00529)	(0.00466)
Age squared	0.0000758	0.0000837	0.0000958	-0.0000622	0.0000398
	(0.0000489)	(0.0000511)	(0.0000793)	(0.0000634)	(0.0000571)
Being female	-0.0207	-0.0159	-0.00268	-0.0675***	-0.0239
	(0.0211)	(0.0216)	(0.0256)	(0.0235)	(0.0209)
Being married/living w/partner	0.0257	0.0263	-0.0123	0.0172	0.0294
	(0.0209)	(0.0217)	(0.0358)	(0.0256)	(0.0240)
Living in urban context	-0.00785			-0.287***	
	(0.0229)			(0.0955)	
Being Somali (refugees and hosts)	0.0462**			0.441***	
	(0.0187)			(0.106)	
Has a job/an economic activity	-0.0237	-0.0216	0.00480	-0.108***	-0.0410**
	(0.0171)	(0.0178)	(0.0260)	(0.0275)	(0.0200)
Years of formal education	-0.000433	-0.0000453	0.00133	-0.0107***	-0.00291
	(0.00235)	(0.00246)	(0.00367)	(0.00390)	(0.00280)
Has vocational training	-0.0276	-0.0244	-0.0227	-0.0385	-0.0281
	(0.0256)	(0.0275)	(0.0441)	(0.0389)	(0.0279)
Has good English skills	0.0507**	0.0546*	0.0398	0.206***	0.0645**
	(0.0251)	(0.0280)	(0.0433)	(0.0408)	(0.0304)
Has good local language skills	-0.0409*	-0.0578*	-0.0687	-0.235***	-0.0407
	(0.0246)	(0.0300)	(0.0518)	(0.0588)	(0.0384)
Heath index	-0.0104***	-0.0126***	-0.00490	-0.0308***	-0.0197***
	(0.00252)	(0.00299)	(0.00506)	(0.00501)	(0.00399)
Mental health index (PHQ9)	-0.00601**	-0.00826***	-0.00961*	-0.0150***	-0.00993**
	(0.00266)	(0.00310)	(0.00513)	(0.00568)	(0.00410)
Has relative(s) in same site	-0.000291	-0.00384	0.00620	-0.0423	-0.0107
	(0.0150)	(0.0159)	(0.0290)	(0.0259)	(0.0229)
Has relative(s) in Western countries	0.00164	-0.0288	-0.0196	0.111	0.0160
	(0.0406)	(0.0446)	(0.0858)	(0.0695)	(0.0521)
Father's years of formal education	-0.00733**	-0.00679**	-0.00591	-0.0114***	-0.00925***
	(0.00288)	(0.00301)	(0.00548)	(0.00392)	(0.00330)
Mother's years of formal education	0.00649*	0.00767*	0.00624	0.000249	0.00851*
	(0.00358)	(0.00392)	(0.00648)	(0.00539)	(0.00460)
Household size (no. of people)	0.0126***	0.0151***		0.00299	0.0128**
	(0.00304)	(0.00366)		(0.00642)	(0.00501)
Dependency ratio in household	-0.0231**	-0.0306***		-0.00851	-0.0302**
	(0.00934)	(0.0102)		(0.0169)	(0.0152)
Female head of household	-0.00442	-0.00354		0.00176	0.0294
	(0.0201)	(0.0222)		(0.0336)	(0.0320)
Asset index	0.00428	0.00473		0.0172	0.00562
	(0.00644)	(0.00700)		(0.0142)	(0.0121)
Food insecurity index (HFIAP)	0.0297**	0.0402***		0.0381	0.0486*
	(0.0133)	(0.0151)		(0.0332)	(0.0263)
Observations	6664	6671	6671	6671	6671
R^2	0.618	0.636	0.872	0.389	0.542
Fixed effects	Country	Neighbourhood	HH	Country	Neighbourhood

Notes: All specifications consider the full cross-country sample of host respondents and include the full set of control variables described in Table A.3 in appendix. We consider three sets of fixed effects: country fixed effects (Columns 1 and 4), neighbourhood fixed effects (Columns 2 and 5), and households fixed effects (Columns 3). To show the association between perceptions and context-specific indicators such as living in an urban context or within a Somali community, Columns 4 and 5 do not control for the perceptions of neighbours. The perception and interaction indices are standardized to facilitate interpretation. Standard errors in parentheses are clustered at the highest level of sampling, which is neighbourhoods in contexts with two-stage cluster sampling and households in context with simple random sampling. Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 5 – Perceptions of host populations about refugees with the cross-country sample (OLS regressions with controls as per Table 4)

	(1)	(2)	(3)	(4)	(5)
Panel A - Dependent variable: Economic Index					
Perceptions within HH	0.292***	0.265***			
	(0.0266)	(0.0271)			
Perceptions among neighbours	0.426***				
	(0.0231)				
Living in urban context	-0.0591**			-0.585***	
	(0.0239)			(0.0861)	
Being Somali (refugees and hosts)	0.0803***			0.590***	
	(0.0195)			(0.0972)	
Observations	7417	7426	7426	7426	7426
R-squared	0.557	0.579	0.820	0.413	0.549
Panel B - Dependent variable: Threat Index					
Perceptions within HH	0.411***	0.391***			
	(0.0216)	(0.0225)			
Perceptions among neighbours	0.260***				
	(0.0156)				
Living in urban context	0.0532*			0.395***	
	(0.0273)			(0.0895)	
Being Somali (refugees and hosts)	-0.0152			0.0847	
	(0.0159)			(0.101)	
Observations	7204	7211	7211	7211	7211
R-squared	0.376	0.394	0.750	0.094	0.289
Panel C - Dependent variable: Character Index					
Perceptions within HH	0.414***	0.391***			
	(0.0224)	(0.0235)			
Perceptions among neighbours	0.315***				
	(0.0183)				
Living in urban context	-0.00250			-0.275***	
	(0.0236)			(0.104)	
Being Somali (refugees and hosts)	0.0156			0.203**	
	(0.0155)			(0.0962)	
Observations	7165	7173	7173	7173	7173
R-squared	0.514	0.533	0.814	0.298	0.451
Panel D - Dependent variable: Rights Index					
Perceptions within HH	0.452***	0.433***			
	(0.0202)	(0.0211)			
Perceptions among neighbours	0.246***				
	(0.0141)				
Living in urban context	0.0614**			0.315***	
	(0.0251)			(0.0801)	
Being Somali (refugees and hosts)	0.0296*			0.238**	
	(0.0171)			(0.0994)	
Observations	7237	7246	7246	7246	7246
R-squared	0.433	0.452	0.785	0.171	0.326
Fixed effects	Country	Neighbourhood	HH	Country	Neighbourhood

Notes: All specifications consider the full cross-country sample of host respondents and include the full set of control variables described in Table A.3 in appendix. We consider three sets of fixed effects: country fixed effects (Columns 1 and 4), neighbourhood fixed effects (Columns 2 and 5), and households fixed effects (Columns 3). To show the association between perceptions and context-specific indicators such as living in an urban context or within a Somali community, Columns 4 and 5 do not control for the perceptions of neighbours. We consider four different outcome indices regarding refugees' economic contribution (Panel A), perceived threats from presence of refugees (Panel B), refugees' character (Panel C) and refugee rights (Panel D). The perception and interaction indices are standardized to facilitate interpretation. Standard errors in parentheses are clustered at the highest level of sampling, which is neighbourhoods in contexts with two-stage cluster sampling and households in context with simple random sampling. Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

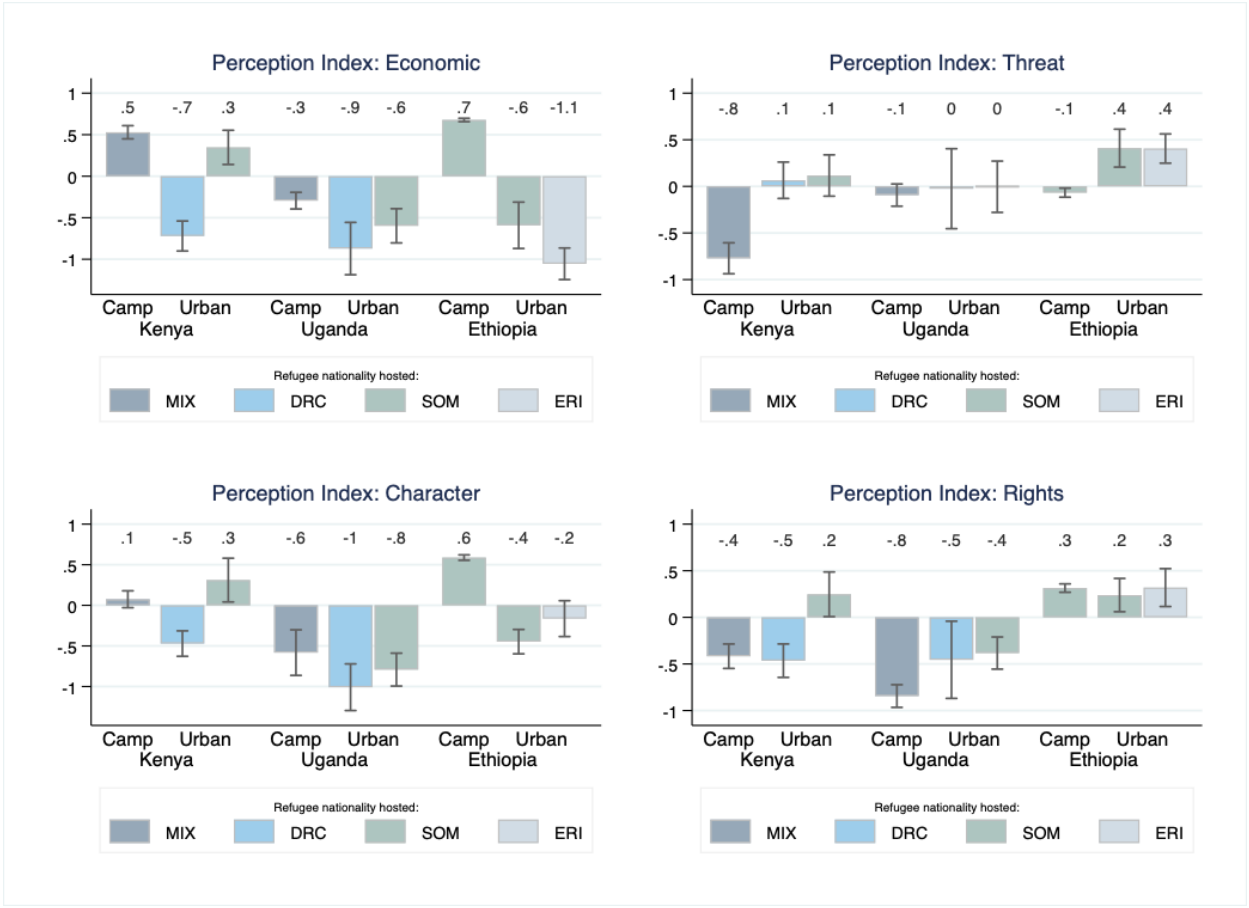

Figure 2 – Disaggregation into specific perception indices.

Note: The indices are relative comparisons across the research sites. For descriptive statistics in levels for all opinions, see Table A.3 and Figures A.1-A.2 in Appendix.

Table 6 – Perceptions of refugees about host populations in the cross-country sample (OLS and IV regressions)

	Dependent variable: 1(hosts are trustworthy)					
	OLS regresssions			IV regressions		
	(1)	(2)	(3)	(4)	(5)	(6)
Interaction index	0.0131***	0.0136***	0.0172*	-0.0123	-0.00855	-0.00550
	(0.00461)	(0.00519)	(0.0102)	(0.00792)	(0.00855)	(0.00801)
Perceptions within HH	0.168***	0.156***		0.165***		0.161***
	(0.00979)	(0.0103)		(0.00971)		(0.00985)
Perceptions among neighbours	0.207***			0.146***		0.160***
	(0.0111)			(0.0152)		(0.0151)
Age	0.000203	0.000308	-0.000271	0.000482		
	(0.00256)	(0.00259)	(0.00335)	(0.00257)		
Age squared	0.00000544	0.00000348	0.00000150	0.00000168		
	(0.0000336)	(0.0000340)	(0.0000435)	(0.0000339)		
Being female	0.0180**	0.0168*	0.0106	0.0152*		
	(0.00911)	(0.00920)	(0.0118)	(0.00906)		
Being married/living w/partner	-0.00715	-0.00448	0.0119	-0.00605		
	(0.0103)	(0.0104)	(0.0161)	(0.0102)		
Living in urban context	-0.0147			-0.0422		
	(0.0137)			(0.0408)		
Being Somali (refugees and hosts)	-0.0136	0.166***		0.0660		
	(0.0153)	(0.0586)		(0.0449)		
Has a job/an economic activity	-0.00671	-0.0116	-0.0104	-0.00140		
	(0.00972)	(0.00984)	(0.0174)	(0.0105)		
Years of formal education	-0.0000817	-0.000763	-0.00185	-0.000749		
	(0.00117)	(0.00126)	(0.00194)	(0.00122)		
Has vocational training	-0.0253**	-0.0210*	-0.00639	-0.0201*		
	(0.0118)	(0.0126)	(0.0197)	(0.0118)		
Has good English skills	0.00730	0.0182	0.0188	0.0262**		
	(0.0124)	(0.0133)	(0.0195)	(0.0131)		
Has good local language skills	0.0113	0.0101	0.00517	-0.00190		
	(0.0154)	(0.0177)	(0.0243)	(0.0166)		
Heath index	-0.00417***	-0.00394***	0.0000256	-0.00434***		
	(0.00135)	(0.00140)	(0.00247)	(0.00135)		
Mental health index (PHQ9)	-0.00235**	-0.00357***	-0.00438*	-0.00322***		
	(0.00117)	(0.00129)	(0.00242)	(0.00115)		
Has relative(s) in same site	0.00334	0.00151	0.0200	-0.00408		
	(0.0107)	(0.0112)	(0.0192)	(0.0109)		
Has relative(s) in Western countries	-0.00655	0.00202	-0.0108	-0.000972		
	(0.0127)	(0.0142)	(0.0216)	(0.0140)		
Father's years of formal education	-0.00305***	-0.00341***	0.000164	-0.00327***		
	(0.00110)	(0.00115)	(0.00207)	(0.00108)		
Mother's years of formal education	0.00178	0.00171	0.000797	0.00127		
	(0.00194)	(0.00210)	(0.00324)	(0.00202)		
Household size (no. of people)	-0.00929***	-0.00830***		-0.00897***		
	(0.00202)	(0.00222)		(0.00201)		
Dependency ratio in household	0.0209***	0.0204***		0.0224***		
	(0.00523)	(0.00523)		(0.00505)		
Female head of household	0.0331***	0.0379***		0.0405***		
	(0.00904)	(0.00975)		(0.00908)		
Asset index	0.0141***	0.0172***		0.0158***		
	(0.00505)	(0.00542)		(0.00506)		
Food insecurity index (HFIAP)	0.00267	-0.00858		-0.00997		
	(0.00947)	(0.0107)		(0.00979)		
Effective F-Statistic				336.8	340.1	368.0
Hansen J statistic (p-value)				0.613	0.109	0.741
N	7451	7453	7453	7450	7450	7450
R-squared	0.553	0.568	0.827	0.554	0.556	0.545
Fixed effects	Country	Neighbourhood	HH	Context	Context	Context
Instruments				I_{HH}, I_n	I_{HH}, I_n	I_{HH}, I_n

Notes: All columns consider the full cross-country sample of refugee respondents. The dependent variable is a dummy variable indicating whether the refugee respondents trust their host population. The OLS regressions (Columns 1-3) consider three sets of fixed effects: country fixed effects (Column 1), neighbourhood fixed effects (Column 2), and household fixed effects (Column 3). The IV regressions (Columns 4-6) consider context fixed effects only, as the instruments (perceptions of others) are defined at the neighbourhood- and household levels. The IV specifications consider three sets of control variables: a long list defined in Table A.4 in Appendix (Column 4), a list selected using the double LASSO procedure (Column 5), and no control variables except the averages of the perception index among other household members and host households living in the same community (Column 6). The perception and interaction indices are standardized to facilitate interpretation. Standard errors in parentheses are clustered at the enumeration area level to account for two-stage cluster sampling used in most of the research contexts. Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

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Online Appendix

A Supplementary Tables and Figures

Table A.1 – Host Sampling Strategies

Host population	**Sampling strategy**	**Sample size** Individuals (HHs)
Kenya Kakuma (November-December 2016)		
Kenyan hosts	Household sampling: We worked with community leaders to construct a list of Turkana villages in the 3 closest locations to the refugee camp of Kakuma (107 villages and about 27,631 households). We then used random sampling proportional to size to select 11 villages. In each village, we used a Òspin-the-penÓ strategy to randomly select households. Within-household sampling: In households with less than 5 adults, all adults were interviewed. When the number of adults was higher than 5, we interviewed the household head as well as 4 other adults randomly selected.	602 (157)
Kenya Nairobi (May 2017)		
Kenyan hosts	Household sampling: We used two-stage cluster sampling using the sampling frame of the 2009 census organized by the Kenyan National Bureau of Statistics (KNBS). In the first-stage of the two-stage cluster sampling strategy, we selected 40 EAs in Eastleigh (Somali area) and 40 EAs in Kasarani, Githurai, Umoja and Kayole (where most of Congolese refugees live). In Eastleigh, 21 EAs were deemed too insecure and dropped from the sampling frame. Following a mapping exercise of each selected EA, we randomly selected a given number households in each map. Within-household sampling: In households with less than 5 adults, all adults were interviewed. When the number of adults was higher than 5, we interviewed the household head as well as 4 other adults randomly selected.	1,133 (542)
Uganda Nakivale (April 2018)		
Ugandan hosts	Household sampling: We used two-stage cluster sampling, using data from the 2014 census provided by the Ugandan Bureau of Statistics. In the first stage, we randomly selected 30 enumeration areas in Nakivale sub-county using random sampling proportional to the size of the refugee populations of interest (with replacement). We then used satellite images to map the selected areas and identify all households. A fixed number of households was then randomly selected in each enumeration area. Households were visited and interviewed if they were of the target nationality. Otherwise a replacement households was selected and visited. Within-household sampling: Within each household, interviews were conducted with up to four adults. The household head and the main food preparer were interviewed in each household; if the number of remaining adult household members exceeded two, the remainder were chosen by random draw.	666 (340)

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Host population	**Sampling strategy**	**Sample size** Individuals (HHs)
Uganda Kampala (April 2018)		
Ugandan hosts	Household sampling: We used two-stage cluster sampling, using data from the 2014 census provided by the Ugandan Bureau of Statistics. In the first stage, we randomly selected 60 enumeration areas in Kampala district using random sampling proportional to the size of the refugee populations of interest (with replacement, 30 Somali and 30 Congolese). We then used satellite images and community mobilisers to map the selected areas and identify all households. A fixed number of households was then randomly selected in each enumeration area. Within-household sampling: Within each household, interviews were conducted with up to four adults. The household head and the main food preparer were interviewed in each household; if the number of remaining adult household members exceeded two, the remainder were chosen by random draw.	954 (441)
Ethiopia Dollo Ado (November-December 2018)		
Ethiopian hosts	Household sampling: We did a census of the host areas in the vicinity of each of the five camps between Dollo Ado town and Bogol (Buramino, Hilaweyn, Kobe, Melkadida, and Bokolmanyo) and used stratified simple random sampling to select the sample. Within-household sampling: In each selected household, we interviewed a maximum of three adults. The household head and the main food preparer were interviewed in each household; if the number of remaining adult household members exceeded one, the remainder were chosen by random draw.	2,929 (1148)
Ethiopia Addis Ababa (September-October 2018)		
Ethiopian hosts	Household sampling: We used a sampling strategy in two steps. First, we spatially selected random mapping locations within the refugee sampling areas (Bole Michael for Somali refguees and Nifasilk Lafto 1 (Jemmo), 2, 5 (Gofa Mebrat Haile), 6, 9, 12 and Bole 5 (Magenagna/Haya Hulet), 10 (Gerji) for Eritrean refugees). Second, we randomly selected 15 households from the 50 households closest to each random mapping location. Within-household sampling: In each selected household, we interviewed a maximum of three adults. The household head and the main food preparer were interviewed in each household; if the number of remaining adult household members exceeded one, the remainder were chosen by random draw.	1,328 (615)
Total Hosts		**7,612 (3,243)**

Table A.2 – Refugee Sampling Strategies

Sub-population	**Sampling strategy**	**Refugee sub-population** (UNHCR data)	**Sample size** Individuals (HHs)
Kenya Kakuma (November-December 2016)			**1,362 (480)**
Somali refugees	Household sampling: We used two-stage cluster sampling using UNHCR registration data. We first randomly selected 20 blocks in the camp (sampling proportional to size with replacement). Following a mapping exercise of each selected block, we randomly selected 8 households on each map. Within-household sampling: In households with less than 5 adults, all adults were interviewed. When the number of adults was higher than 5, we interviewed the household head as well as 4 other adults randomly selected.	40,074 individuals (26% of camp)	456 (160)
South-Sudanese refugees	Household sampling: Similar to the sampling strategy used for Somali refugees in Kakuma. Within-household sampling: Same procedure as for Somali refugees in Kakuma.	82,339 individuals (54% of camp)	463 (160)
Congolese refugees	Household sampling: Similar to the sampling strategy used for Somali refugees in Kakuma. Within-household sampling: Same procedure as for Somali refugees in Kakuma.	9,171 individuals (6% of camp)	443 (160)
Kenya Nairobi (May 2017)			**1,257 (450)**
Somali refugees	Household sampling: We used two-stage cluster sampling using the sampling frame of the 2009 census organized by the Kenyan National Bureau of Statistics (KNBS). First, we used simple random sampling with replacement to select 40 Enumeration Areas (EAs) in Eastleigh. However, 21 EAs were deemed too insecure and dropped from the sampling frame. Following a mapping exercise of each selected EA, we randomly selected a given number households on each map. Within-household sampling: Same procedure as for Somali refugees in Kakuma.	27,714 individuals (46% of Nairobi refugees)	556 (246)
Congolese refugees	Household sampling: We worked with community leaders of the Banyamulenge and Banyamasisi ethnic groups to established lists of household heads in Kasarani, Githurai, Umoja and Kayole. We focused on the two most important Congolese ethnic groups living in Nairobi: the Banyamulenge and the Banyamasisi. From the 7 lists we obtained, we used stratified simple random sampling to selected about 8% of households. Within-household sampling: Same procedure as for Somali refugees in Kakuma.	16,138 individuals (27% of Nairobi refugees)	701 (204)

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Sub-population	**Sampling strategy**	**Refugee sub-population** (UNHCR data)	**Sample size** Individuals (HHs)
Uganda Nakivale (April 2018)			**1,624 (585)**
Somali refugees	Household sampling: Using data from the 2014 census provided by the Ugandan Bureau of Statistics, we identified the 4 EAs in at least 30 Somali household live in Nakivale. We mapped these areas and used simple random sampling to select households. Ê Within-household sampling: Within each household, interviews were conducted with up to four adults. The household head and the main food preparer were interviewed in each household; if the number of remaining adult household members exceeded two, the remainder were chosen by random draw.	16,559 individuals (16% of settlement)	822 (290)
Congolese refugees	Household sampling: We used two-stage cluster sampling, using data from the 2014 census provided by the Ugandan Bureau of Statistics. In the first stage, we randomly selected 30 enumeration areas in Nakivale sub-county using random sampling proportional to the size of the refugee populations of interest (with replacement). We then used satellite images map the selected areas and identify all households. A fixed number of households was then randomly selected in each enumeration area. Households were visited and interviewed if they were of the target nationality. Otherwise a replacement households was selected and visited. Within-household sampling: Same procedure as for Somali refugees in Nakivale.	44,978 individuals (44% of settlement)	802 (295)
Uganda Kampala (April 2018)			**932 (380)**
Somali refugees	Household sampling: We used two-stage cluster sampling, using data from the 2014 census provided by the Ugandan Bureau of Statistics. In the first stage, we randomly selected 30 enumeration areas in Kampala district using random sampling proportional to the size of the refugee populations of interest (with replacement). We then used satellite images and community mobilisers to map the selected areas and identify all households. A fixed number of households was then randomly selected in each enumeration area. Within-household sampling: Same procedure as for Somali refugees in Nakivale.	20,545 individuals (20% of Kampala refugees)	459 (206)
Congolese refugees	Household sampling: Similar to the sampling strategy used for Somali refugees in Kampala. Within-household sampling: Same procedure as for Somali refugees in Nakivale.	40,986 individuals (40% of Kampala refugees)	473 (174)

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Sub-population	**Sampling strategy**	**Refugee sub-population** (UNHCR data)	**Sample size** Individuals (HHs)
Ethiopia Dollo Ado (November-December 2018)			**2,711 (1,152)**
Somali refugees	Household sampling: We worked in the five refugee camps spanning between Dollo Ado town and Bogol in Ethiopia (Buramino, Hilaweyn, Kobe, Melkadida, and Bokolmanyo). We used the sampling frame of UNHCRÕs Standardised Expanded Nutrition Survey (SENS). UNHCR provided an anonymized list of the addresses of all households in the different camps. Households were randomly selected from this list using stratified simple random sampling. Within-household sampling: In each selected household, we interviewed a maximum of three adults. The household head and the main food preparer were interviewed in each household; if the number of remaining adult household members exceeded one, the remainder were chosen by random draw.	218,982 individuals (100% of refugees)	2,711 (1,152)
Ethiopia Addis Ababa (September-October 2018)			**1,110 (626)**
Somali refugees	Household sampling: We focused on Somali refugees living in Bole Michael. Due to the limited size of the registered population of Somali refugees in Addis Ababa, we surveyed all Somali adults living in Bole 1 and 2. The population was mobilized in 2 steps. First, all refugees in UN-HCR/ARRA database were contacted by a group of community mobilizers and asked to come to a local NGO for an interview. Many refugees could not be reached via the given phone numbers. After the list was exhausted, community mobilizers were sent to mobilize Somali refugees beyond the lists. Within-household sampling: All adults were interviewed.	Census	417 (191)
Eritrean refugees	Household sampling: Focusing on the high refugee concentration areas of Nifasilk Lafto 1 (Jemmo), 2, 5 (Gofa Mebrat Haile), 6, 9, 12 and Bole 5 (Magenagna/Haya Hulet), 10 (Gerji), we drew a simple random sample of all registered urban refugees from the UNHCR/ ARRA database. A large part of the refugees on the list had moved into different areas in Addis Ababa, could not be reached via their contact details, or had left the city or refused to participate. Refugees who had moved within Addis Ababa were interviewed even if they were living outside the high refugee concentration areas. Within-household sampling: Same procedure as for Somali refugees in Dollo ado camps.	8,491 (73% of Addis refugees)	693 (435)
Total Refugees			**8,996 (3,673)**

Table A.3 – Descriptive Statistics by Host Sample

	Cross-country			*Uganda*			*Nakivale*			*Kampala*		
	Mean	Std.Dev.	Obs	Mean	Std.Dev.	Obs	Mean	Std.Dev.	Obs	Mean	Std.Dev.	Obs
Perceptions												
The presence of refugees has increased economic opportunities for host community	0.77	0.42	7497	0.60	0.49	1605	0.72	0.45	661	0.51	0.50	944
The presence of refugees has generated employment	0.73	0.44	7451	0.56	0.50	1607	0.73	0.44	661	0.44	0.50	946
Refugees are competitors	0.72	0.45	7375	0.76	0.43	1607	0.83	0.38	661	0.71	0.45	946
Refugees are creating problems of insecurity	0.41	0.49	7354	0.50	0.50	1576	0.54	0.50	662	0.47	0.50	914
Refugees are taking over our land*	0.36	0.48	5709	0.57	0.50	1575	0.65	0.48	651	0.51	0.50	924
Refugees are friendly (good people)	0.80	0.40	7372	0.52	0.50	1596	0.52	0.50	662	0.52	0.50	934
Refugees are trustworthy	0.69	0.46	7270	0.40	0.49	1577	0.47	0.50	662	0.34	0.48	915
Refugees should have the right to work	0.85	0.36	7290	0.65	0.48	1610	0.55	0.50	662	0.72	0.45	948
Refugees should have the right to live where they want	0.62	0.48	7264	0.42	0.49	1602	0.32	0.47	658	0.49	0.50	944
Refugees should access free health care**	0.91	0.29	6944	0.76	0.43	1611	0.74	0.44	662	0.77	0.42	949
Refugee children should access free primary schooling**	0.90	0.30	6932	0.73	0.44	1610	0.71	0.45	662	0.75	0.44	948
Interactions***												
Shared meals				1.41	4.73	1613	1.12	3.77	662	1.61	5.29	951
Personal conversations				10.99	13.58	1612	14.86	15.30	662	8.30	11.51	950
Business interactions				4.42	8.28	1612	5.07	7.74	662	3.97	8.61	950
Total interactions				14.53	14.84	1611	18.64	14.03	662	11.66	14.72	949
Control variables												
Age	33.26	12.15	7612	34.48	13.28	1620	37.58	14.75	666	32.31	11.67	954
Age squared	1253.82	965.17	7612	1364.86	1123.99	1620	1629.55	1306.54	666	1180.07	933.76	954
Being female	0.54	0.50	7612	0.56	0.50	1620	0.57	0.50	666	0.55	0.50	954
Being married/living w/partner	0.62	0.49	7612	0.54	0.50	1620	0.69	0.46	666	0.44	0.50	954
Living in urban context	0.45	0.50	7612	0.59	0.49	1620	0.00	0.00	666	1.00	0.00	954
Being Somali (refugees and hosts)	0.77	0.42	7612	0.70	0.46	1620	1.00	0.00	666	0.49	0.50	954
Has a job/an economic activity	0.51	0.50	7612	0.70	0.46	1620	0.69	0.46	666	0.71	0.45	954
Years of formal education	6.60	5.96	7612	7.83	4.92	1620	4.35	3.50	666	10.25	4.28	954
Has vocational training	0.14	0.35	7612	0.14	0.34	1620	0.09	0.29	666	0.17	0.37	954
Has good English skills	0.32	0.47	7612	0.40	0.49	1620	0.08	0.28	666	0.61	0.49	954
Has good local language skills	0.59	0.49	7612	0.92	0.27	1620	0.95	0.21	666	0.90	0.30	954
Heath index	3.04	3.79	7612	4.21	4.41	1620	4.89	4.51	666	3.74	4.28	954
Mental health index (PHQ9)	4.02	4.31	7612	5.61	5.13	1620	5.41	5.26	666	5.76	5.03	954
Has relative(s) in same site	0.64	0.48	7612	0.63	0.48	1620	0.60	0.49	666	0.64	0.48	954
Has relative(s) in Western countries	0.04	0.21	7612	0.03	0.16	1620	0.01	0.09	666	0.04	0.19	954
Father's years of formal education	2.74	4.96	7612	3.72	4.95	1620	1.04	2.67	666	5.58	5.31	954
Mother's years of formal education	2.03	4.24	7612	2.87	4.36	1620	0.55	1.94	666	4.49	4.83	954
Household size (no. of people)	5.82	3.62	7612	4.98	2.52	1620	5.71	2.42	666	4.48	2.46	954
Dependency ratio in household	1.00	0.90	7612	1.07	1.08	1620	1.66	1.13	666	0.67	0.84	954
Female head of household	0.24	0.42	7612	0.33	0.47	1620	0.25	0.44	666	0.39	0.49	954
Asset index	0.26	1.15	7612	0.37	1.12	1620	0.17	1.11	666	0.52	1.10	954
Food insecurity index (HFIAP)	0.39	0.48	7612	0.45	0.50	1620	0.61	0.49	666	0.33	0.47	954

Notes: Opinion statements are answered on a 4-point Likert scale of agreement. The table shows the proportion who "Agree" or "Strongly Agree" to each statement.
**Land:* Asked to host nationals in Ethiopia and Uganda only. ***Health and education:* Asked to host nationals in all sites except Kakuma camp in Kenya.
****Interactions:* Asked to Ugandan hosts only. The table shows the number of interactions with refugees in the past month.

Table A.4 – Descriptive Statistics by Refugee Sample

	Cross-country			***Uganda***			***Nakivale***			***Kampala***		
	Mean	Std.Dev.	Obs	Mean	Std.Dev.	Obs	Mean	Std.Dev.	Obs	Mean	Std.Dev.	Obs
Perceptions												
(Host nationals) are trustworthy	0.55	0.50	8721	0.40	0.49	2511	0.59	0.49	1590	0.07	0.25	921
Interactions*												
Shared meals	1.10	3.87	7664	0.96	3.08	2535	0.87	2.55	1612	1.13	3.83	923
Personal conversations	2.76	6.96	7669	2.67	5.76	2541	2.21	4.57	1618	3.47	7.32	923
Business interactions	2.50	6.47	7670	2.91	5.77	2541	1.34	3.51	1618	5.66	7.63	923
Total interactions	5.75	10.36	7663	6.29	9.48	2535	4.28	7.48	1612	9.79	11.39	923
Control variables												
Age	31.11	11.55	8996	30.20	11.53	2556	30.28	11.88	1624	30.06	10.89	932
Age squared	1101.37	863.89	8996	1044.74	856.44	2556	1057.65	877.00	1624	1022.25	819.36	932
Being female	0.53	0.50	8996	0.54	0.50	2556	0.53	0.50	1624	0.57	0.50	932
Being married/living w/partner	0.48	0.50	8996	0.41	0.49	2556	0.43	0.49	1624	0.39	0.49	932
Living in urban context	0.37	0.48	8996	0.36	0.48	2556	0.00	0.00	1624	1.00	0.00	932
Being Somali (refugees and hosts)	0.60	0.49	8996	0.50	0.50	2556	0.51	0.50	1624	0.49	0.50	932
Has a job/an economic activity	0.31	0.46	8996	0.36	0.48	2556	0.33	0.47	1624	0.39	0.49	932
Years of formal education	5.67	5.17	8996	5.85	5.20	2556	4.52	4.71	1624	8.16	5.19	932
Has vocational training	0.18	0.38	8996	0.09	0.29	2556	0.07	0.26	1624	0.13	0.33	932
Has good English skills	0.22	0.41	8996	0.18	0.38	2556	0.12	0.32	1624	0.28	0.45	932
Has good local language skills	0.25	0.44	8996	0.08	0.27	2556	0.04	0.19	1624	0.15	0.35	932
Heath index	4.76	4.71	8996	5.15	4.93	2556	4.89	5.18	1624	5.60	4.40	932
Mental health index (PHQ9)	6.18	5.69	8996	6.57	5.96	2556	6.49	6.42	1624	6.70	5.08	932
Has relative(s) in same site	0.37	0.48	8996	0.36	0.48	2556	0.40	0.49	1624	0.29	0.45	932
Has relative(s) in Western countries	0.16	0.37	8996	0.16	0.37	2556	0.13	0.34	1624	0.21	0.41	932
Father's years of formal education	2.80	4.97	8996	3.90	5.47	2556	2.74	4.73	1624	5.93	6.05	932
Mother's years of formal education	1.35	3.39	8996	2.13	4.13	2556	1.10	3.01	1624	3.92	5.10	932
Household size (no. of people)	6.64	3.50	8996	5.79	2.74	2556	5.82	2.70	1624	5.75	2.82	932
Dependency ratio in household	1.24	1.21	8996	0.89	0.94	2556	0.86	0.91	1624	0.96	1.00	932
Female head of household	0.38	0.47	8996	0.39	0.49	2556	0.34	0.48	1624	0.47	0.50	932
Asset index	-0.10	0.80	8996	-0.17	0.87	2556	-0.19	0.95	1624	-0.13	0.70	932
Food insecurity index (HFIAP)	0.69	0.44	8996	0.62	0.48	2556	0.70	0.46	1624	0.50	0.50	932

Notes: Opinion statements are answered on a 4-point Likert scale of agreement. The table shows the proportion who "Agree" or "Strongly Agree" to the statement.
**Interactions:* Refugees in Kenya were not asked about their interactions with Kenyans in the first wave of data collection. The reduced cross-country sample in these variables is due to the attrition in the Kenya sample as we use interaction data from the second wave. All refugees in Uganda and Ethiopia were asked about interactions in the first wave.The table shows the number of interactions with host nationals in the past month.

Table A.5 – Components of the Standardised Perceptions Index

	Dependent variable: Standardised Perception Index			
	(1)	(2)	(3)	(4)
Economic Opportunity	0.259***	0.182***	0.334***	0.145***
	(7.46e-10)	(0.0141)	(4.31e-09)	(1.43e-09)
Employment	0.257***	0.167***	0.299***	0.153***
	(6.33e-10)	(0.0109)	(4.98e-09)	(1.49e-09)
Competition	-0.117***	-0.0293*	-0.0928***	0.00876***
	(7.55e-10)	(0.0163)	(2.74e-09)	(1.92e-09)
Insecurity	0.00233***	0.117***	0.146***	0.0651***
	(6.10e-10)	(0.0139)	(2.33e-09)	(1.60e-09)
Land		0.0578***	0.0338***	0.108***
		(0.0147)	(1.06e-09)	(1.20e-09)
Friendliness	0.296***	0.251***	0.301***	0.183***
	(8.04e-10)	(0.0191)	(2.22e-09)	(1.67e-09)
Trustworthyness	0.258***	0.230***	0.278***	0.167***
	(6.00e-10)	(0.0162)	(2.26e-09)	(1.81e-09)
Right to settle	0.161***	0.0768***	0.0198***	0.151***
	(4.13e-10)	(0.0192)	(1.85e-09)	(6.94e-10)
Right to work	0.251***	0.214***	0.250***	0.192***
	(7.37e-10)	(0.0118)	(1.79e-09)	(1.73e-09)
Education		0.241***	0.329***	0.212***
		(0.0164)	(3.15e-09)	(1.83e-09)
Health Services		0.247***	0.335***	0.203***
		(0.0179)	(3.53e-09)	(1.84e-09)
Observations	6671	1502	647	855
R^2	1.000	0.950	1.000	1.000

Notes: Column 1 consider all host respondents across the three countries, Column 2 host in Uganda, and Column 3 and 4 the sub-samples of host in Nakivale and Kampala. The dependent variable is the perception index, standardised within each sample. Standard errors in parentheses are clustered at the enumeration area level to account for two-stage cluster sampling used in most of the research contexts. Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A.6 – Qualitative Method: Interviews and FGDs

Kenya	Nationality	Individual interviews	Male/ Female	Focus Group Disucssions	Participants (Male/Female)
Kakuma	Congolese	19	(11/8)	11	78 (41/37)
	Somali	38	(26/12)	13	88 (61/27)
	South Sudanese	43	(31/12)	14	121 (NA)
	Kenyan	14	(12/2)	20	215 (NA)
Nairobi	Congolese	70	(49/21)	12	76 (50/26)
	Somali	80	(40/40)	9	40 (18/22)
	Kenyan	44	(28/16)	5	34 (NA)
Total		**308**		**84**	

Uganda	Nationality	Individual interviews	Male/ Female	Focus Group Disucssions	Participants (Male/Female)
Nakivale	Congolese	14	(10/4)	3	39 (29/10)
	Somali	14	(9/5)	2	14 (8/6)
	Ugandan	7	(6/1)	0	NA
Kampala	Congolese	12	(8/4)	6	40 (30/10)
	Somali	22	(14/8)	5	38 (28/10)
	Ugandan	28	(15/13)	0	NA
Total		**97**		**16**	

Ethiopia	Nationality	Individual interviews	Male/ Female	Focus Group Disucssions	Participants (Male/Female)
Dollo Ado	Somali	41	(29/12)	9	52 (40/12)
	Ethiopian	13	(11/2)	5	30 (27/3)
Addis Ababa	Somali	9	(4/5)	3	27 (22/5)
	Eritrean	17	(14/3)	5	27 (22/5)
	Ethiopian	13	(6/7)	1	5 (4/1)
Total		**93**		**23**	

Table A.7 – Perceptions of refugees about host populations with the Uganda sample (OLS regressions)

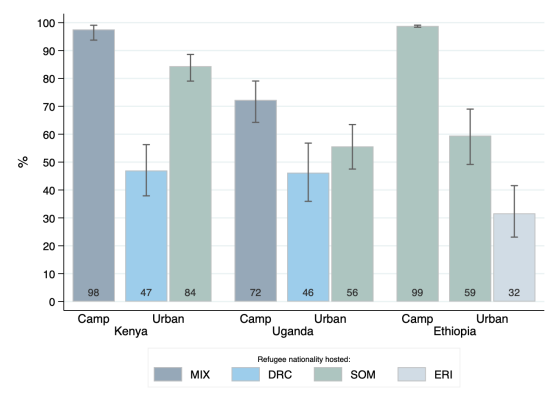
	Dependent variable: 1(hosts are trustworthy)								
	Sample = Uganda			Sample = Nakivale			Sample = Kampala		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A - Controls listed in table A.3									
Interaction index	0.0108	0.00882	0.0296*	-0.00115	-0.00148	0.0218	0.0420***	0.0406***	0.0503**
	(0.00965)	(0.0112)	(0.0164)	(0.0146)	(0.0155)	(0.0227)	(0.0115)	(0.0142)	(0.0218)
Perceptions within HH	0.187***	0.176***		0.195***	0.188***		0.0847**	0.0553	
	(0.0174)	(0.0178)		(0.0184)	(0.0189)		(0.0371)	(0.0394)	
Perceptions among neighbours	0.136***			0.148***			0.0981***		
	(0.0359)			(0.0352)			(0.0331)		
R-squared	0.569	0.578	0.804	0.489	0.497	0.772	0.096	0.133	0.525
Panel B - Controls selected with double Lasso									
Interaction index	0.0152	0.0108	0.0312*	0.00526	0.0121	0.0207	0.0367***	0.0406***	0.0503**
	(0.0100)	(0.0113)	(0.0176)	(0.0147)	(0.0148)	(0.0244)	(0.0111)	(0.0131)	(0.0215)
Panel C - No controls									
Interaction index	0.00745	0.00538	0.0256	-0.00753	-0.00930	0.0112	0.0395***	0.0381***	0.0490**
	(0.00967)	(0.0110)	(0.0165)	(0.0145)	(0.0153)	(0.0234)	(0.0113)	(0.0130)	(0.0197)
Perceptions within HH	0.195***	0.187***		0.209***	0.204***		0.0848**	0.0567	
	(0.0190)	(0.0196)		(0.0205)	(0.0210)		(0.0375)	(0.0390)	
Perceptions among neighbours	0.135***			0.202***			0.122***		
	(0.0323)			(0.0183)			(0.0343)		
R-squared	0.553	0.561	0.800	0.450	0.457	0.762	0.079	0.118	0.514
Observations	2505	2505	2505	1584	1584	1584	921	921	921
Fixed effects	Context	EA	HH	Context	EA	HH	Context	EA	HH

Notes: Columns 1-3 consider the full Uganda sample, Columns 4-6 are restricted to the Nakivale settlement and Columns (7-9) are restricted to Kampala. We consider three sets of control variables: a long list defined in Table A.4 (Panel A), a list selected using the double LASSO method of Chernozhukov et al. (2017) (Panel B), and no control variables except the averages of the perception index among other household members and refugee households living in the same community (Panel C). We consider three sets of fixed effects: context fixed effects (Columns 1, 4, 7), EA fixed effects (Columns 2, 5, 8), and households fixed effects (Columns 3, 6, and 9). The interaction index is standardized to facilitate interpretation. Standard errors in parentheses are clustered at the enumeration area level to account for two-stage cluster sampling. Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

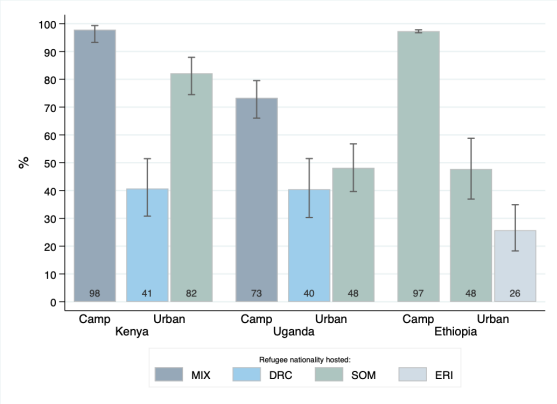
Table A.8 – Perceptions of refugees about host populations with the Uganda sample (IV regressions)

	Dependent variable: 1(hosts are trustworthy)								
	Sample = Uganda			Sample = Nakivale			Sample = Kampala		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A - Controls listed in table A.2									
Interaction index	-0.0630	-0.0325*	-0.0336**	-0.119	-0.0521*	-0.0534*	0.0123	0.0174	0.0171
	(0.0678)	(0.0172)	(0.0164)	(0.170)	(0.0304)	(0.0307)	(0.0539)	(0.0159)	(0.0158)
Effective F-Statistic	2.352	88.04	70.74	2.414	37.28	36.01	1.963	38.76	31.56
Hansen J statistic (p-value)			0.0916			0.843			0.198
R-squared	0.551	0.563	0.563	0.444	0.481	0.480	0.0854	0.0888	0.0886
Panel B - Controls selected with double Lasso									
Interaction index	-0.0434	0.00317	-0.000687	-0.235	-0.0155	0.0308	0.00856	0.00537	0.00916
	(0.0794)	(0.0243)	(0.0225)	(0.234)	(0.0392)	(0.0463)	(0.0423)	(0.0227)	(0.0211)
Effective F-Statistic	2.947	84.75	64.72	3.498	39.69	41.57	3.203	26.46	23.09
Hansen J statistic (p-value)			0.348			0.479			0.196
R-squared	0.546	0.561	0.560	0.406	0.485	0.627	0.0533	0.0709	0.0721
Panel C - No controls									
Interaction index	-0.00647	-0.0287	-0.0326**	-0.0819	-0.0376	-0.0383	0.0236	0.0191	0.0196
	(0.0249)	(0.0175)	(0.0159)	(0.0727)	(0.0270)	(0.0264)	(0.0329)	(0.0158)	(0.0152)
Effective F-Statistic	4.617	113.0	91.19	2.322	69.10	68.66	3.392	37.54	28.84
Hansen J statistic (p-value)			0.107			0.0776			0.183
R-squared	0.552	0.548	0.545	0.427	0.446	0.446	0.0752	0.0728	0.0731
N	2505	2505	2505	1584	1584	1584	921	921	921
Instruments	% refugees	I_{HH}, I_n	All	% refugees	I_{HH}, I_n	All	% refugees	I_{HH}, I_n	All

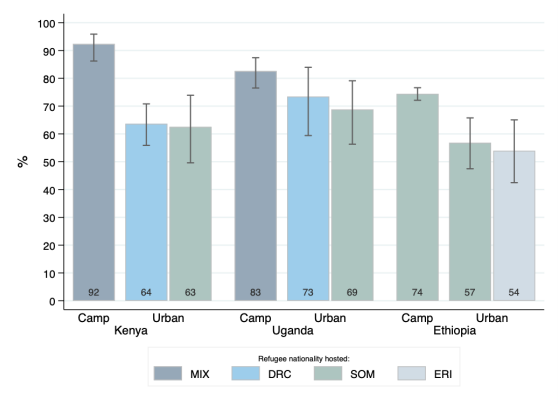
Notes: Columns 1-3 consider the full Uganda sample, Columns 4-6 are restricted to the Nakivale settlement and Columns (7-9) are restricted to Kampala. We consider three sets of control variables: a long list defined in Table A.4 (Panel A), a list selected using the double LASSO method of Chernozhukov et al. (2017) (Panel B), and no control variables except the averages of the perception index among other household members and host households living in the same community (Panel C). We consider two instruments: 1) the proportion of refugees living in respondents' EA (Columns 1, 4, 7), and 2) the average interaction index among other household members and neighbours (Columns 2, 5, 8). We also consider the two instruments together (Columns 3, 6, 9). The interaction index is standardized to facilitate interpretation. Standard errors in parentheses are clustered at the enumeration area level to account for two-stage cluster sampling. Significance levels are indicated by * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.



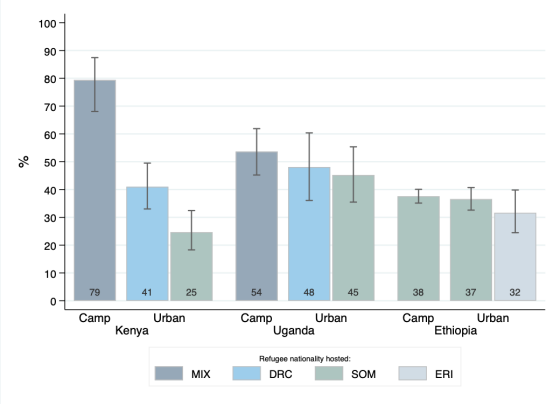
(a) "The presence of refugees has increased economic opportunities for host community"



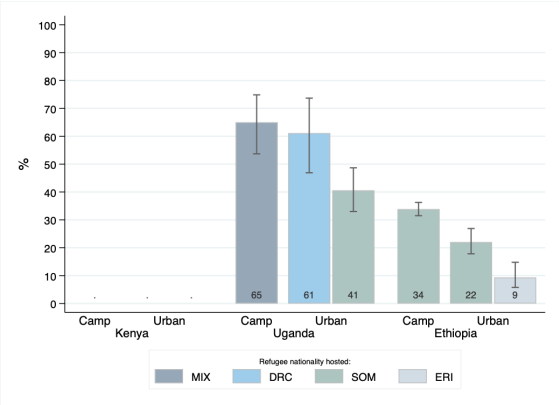
(b) "The presence of refugees has generated employment"



(c) "Refugees are competitors"



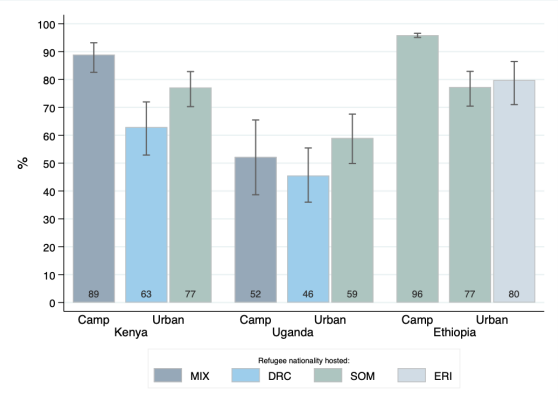
(d) "Refugees are creating problems of insecurity"



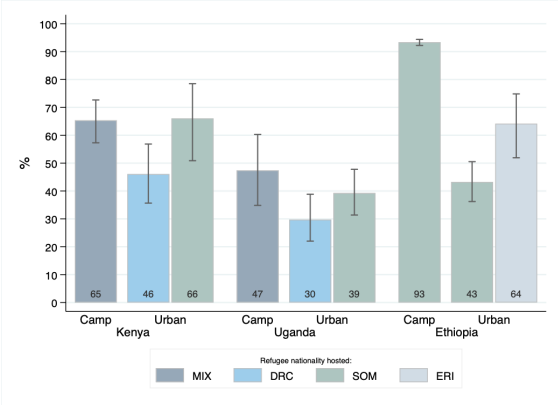
(e) "Refugees are taking over our land"

Figure A.1 – Hosts' perceptions of refugees: Economy and Threaths

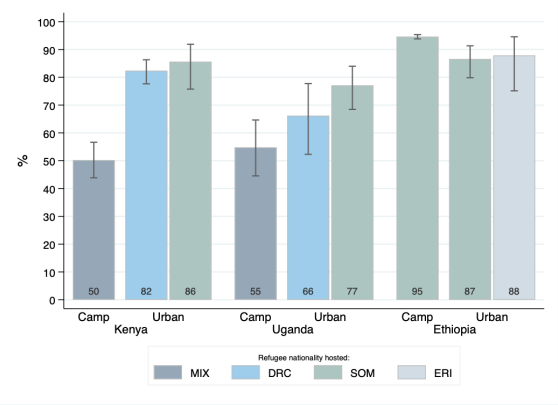
Data source: our survey data. Notes: Opinion statements are answered on a 4-point Likert scale of agreement. The figures show the percentage who "Agree" or "Strongly Agree" to each statement. The question on land (e) was not asked to Kenyan hosts.



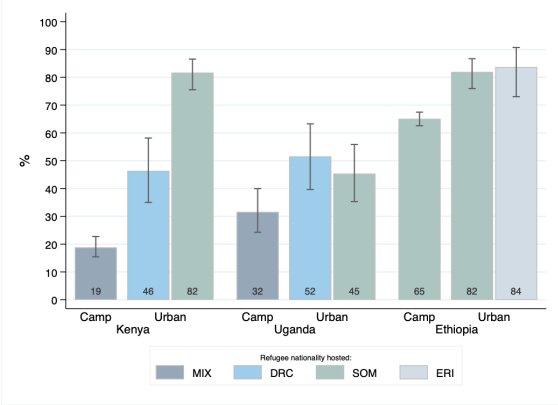
(a) "Refugees are friendly (good people)"



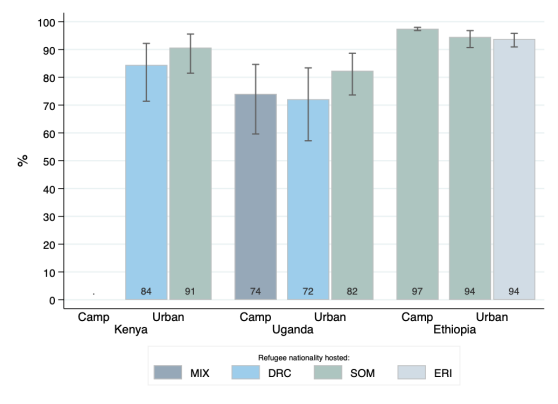
(b) "Refugees are trustworthy"



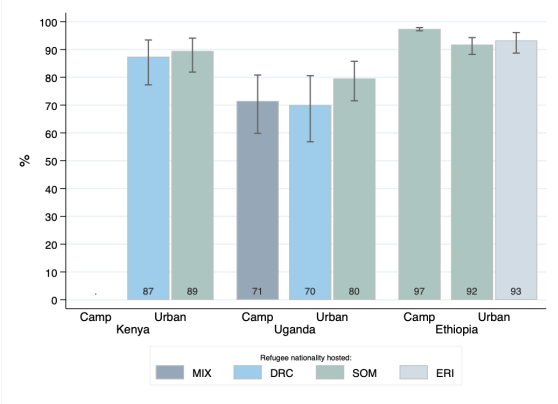
(c) "Refugees should have the right to work"



(d) "Refugees should have the right to live where they want"



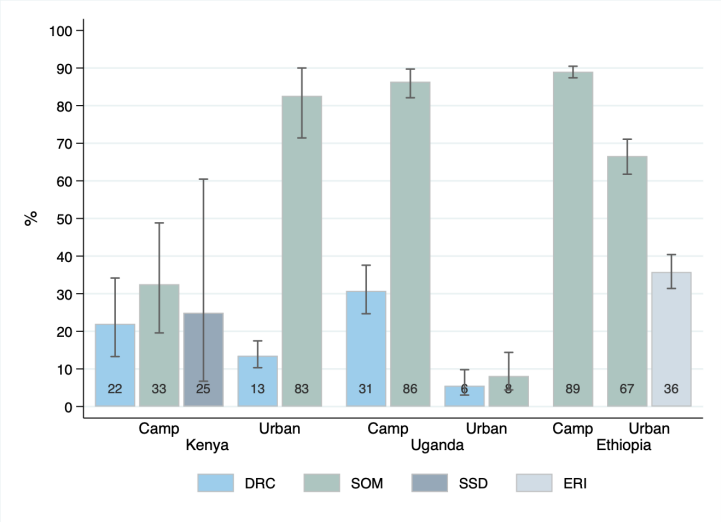
(e) "Refugees should access free health care"



(f) "Refugee children should access free primary schooling"

Figure A.2 – Hosts' perceptions of refugees: Character and Rights

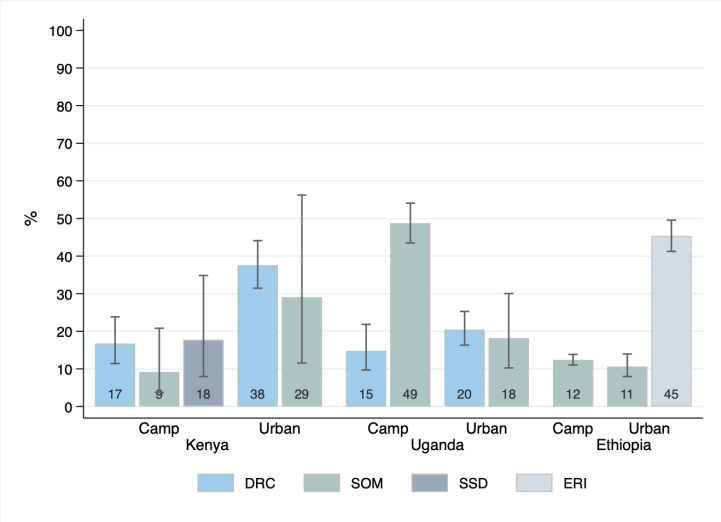
Data source: our survey data. Notes: Opinion statements are answered on a 4-point Likert scale of agreement. The figures show the percentage who "Agree" or "Strongly Agree" to each statement. The questions on health (e) and education (f) were not asked to hosts around the Kakuma camps.



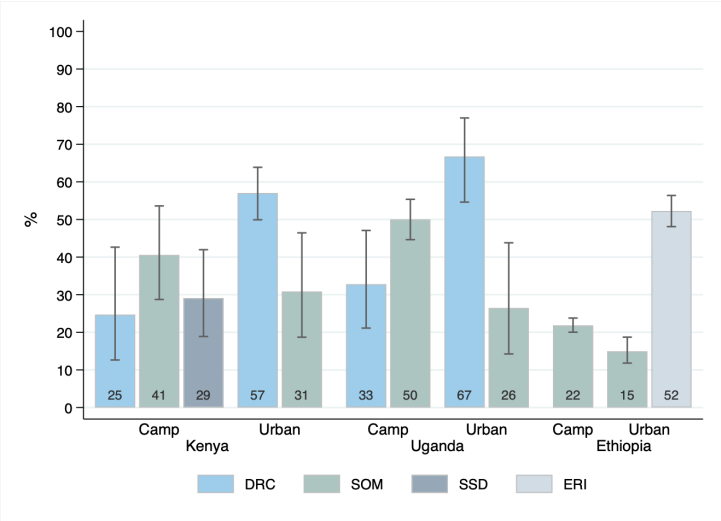
(a) "(Host nationals) are trustworthy"

Figure A.3 – Refugees' perceptions of hosts: Trust

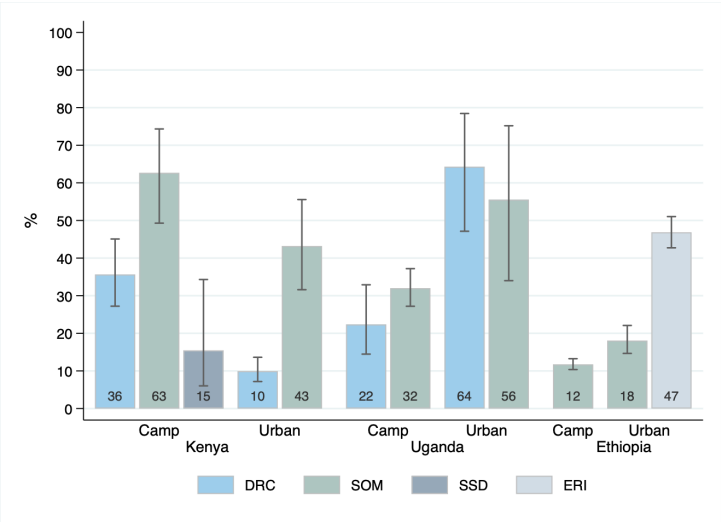
Data source: our survey data. Notes: The statement is answered on a 4-point Likert scale of agreement. The figure shows the percentage who "Agree" or "Strongly Agree".



(a) Shared at least one meal



(b) Had at least one personal conversation



(c) Had at least one business interaction

Figure A.4 – Refugees' interactions with hosts

Data source: our survey data. Notes: The figures show the percentage of refugees who shared at least one (a) meal, (b) conversation or (c) business exchange with a host national in the 30 days prior to the interview.