

Original Research

Understanding the motivation and processes of international migration into Ugandan cities

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Abstract

There are several drivers and patterns of migration emerging on the African continent. The drivers and behavior of migrants are yet to be fully examined when cities are the destinations. This paper attempts to understand the motivations and behavior of international migrants based in three Ugandan cities. Drawing from Ravenstein's laws of migration, we investigate how economic and business opportunities couple with conflict to influence international migration. Growing African economies, relative peace in destination cities appear as strong motivation for international migration. We analyze migrant movement to multiple destinations as 'waves' to understand why some people make several migration journeys between several cities. We employ the framing of origin-destination (OD) to spatially analyze the waves of migration. The paper utilized a mixed-method approach involving qualitative data, geospatial analysis, social network analysis and measures of association to understand migration waves. Results show that several drivers interact to trigger multiple waves of migration from different African countries into the Ugandan cities. Whereas conflict and violence are discussed in various literature as the main driver, this paper establishes that economic opportunities, social and family reunions, are increasingly becoming significant to explain waves of migration.

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Résumé

Plusieurs facteurs et modèles de migration apparaissent sur le continent africain. Les facteurs et le comportement des migrants doivent encore être pleinement examinés lorsque les villes sont les destinations. Cet article tente de comprendre les motivations et le comportement des migrants internationaux basés dans trois villes ougandaises. En nous appuyant sur les lois de Ravenstein relatives à la migration, nous étudions comment les opportunités économiques et commerciales, associées aux conflits, influencent la migration internationale. La croissance des économies africaines et la paix relative qui règne dans les villes de destination semblent être des motivations fortes pour la migration internationale. Nous analysons les mouvements migratoires vers plusieurs destinations comme des « vagues » afin de comprendre pourquoi certaines personnes effectuent plusieurs voyages migratoires entre plusieurs villes. Nous utilisons le cadre origine-destination (OD) pour analyser spatialement les vagues migratoires. Cet article utilise une approche mixte combinant des données qualitatives, une analyse géospatiale, une analyse des réseaux sociaux et des mesures d'association pour comprendre les vagues migratoires. Les résultats montrent que plusieurs facteurs interagissent pour déclencher de multiples vagues de migration depuis différents pays africains vers les villes ougandaises. Alors que les conflits et la violence sont présentés dans diverses publications comme les principaux facteurs, cet article établit que les oppor-

tunités économiques, les retrouvailles sociales et familiales jouent un rôle de plus en plus important pour expliquer les vagues de migration.

1. Introduction

Globally migration has become a key feature of human mobility in recent decades, despite a long-standing history of movement (Dean & Edge, 2024; Sîrbu et al., 2021). Literature shows that close to one billion people are currently residing outside their places of origin, accounting for nearly one-seventh of the world's population (Sorichetta et al., 2016; Rossi, 2018). In recent decades, the influence of motivations driving migration in Sub-Saharan Africa transcends conflict and violence. The changing economic conditions, and regional political integration couple with relatively improved mobility to enable migrants relocation even at longer distances. Africa hosts more than 31 million international migrants, the majority of whom originate from countries on the continent (Biehler et al., 2025; Maunganidze & Mbiyozo, 2024). This has made intra-African migration the most dominant form of trans-boundary mobility (de Haas & Frankema, 2025). Despite the scale and significance of intra-African migration, there is less scholarly attention because most studies on migration in Africa focus on migration to other regions of the world, primarily Europe (Limák, 2014).

Since the 1960s, violent conflict has affected more than 80 percent of African countries (Olawale, 2018). This has played a major role in shaping regional migration dynamics (FAO, 2017). Uganda is a major destination particularly for migrants originating from neighboring and conflict-affected countries. Over the past two decades, Uganda has seen an increase in the number of international migrants and reports show that migrants now account for approximately 3.9 percent of the national population (Mirembe et al., 2019; Migrants & Refugee Section, 2021), making it the most international migrant destination in Africa (Kadigo & Maystadt, 2023). But not all migrants into Uganda move because of conflict and violence, other drivers including Uganda's strategic location, relative political stability, cross-border social and cultural ties, and refugee-friendly policy framework have increased its attractiveness as a regional destination (Kadigo & Maystadt, 2023; Betts et al., 2017), (UNHCR, 2016; Routes et al., 2021).

Uganda has played a significant role in hosting refugees and asylum seekers (Migrants & Refugee Section, 2021). The country is currently ranked among the largest refugee-hosting nations globally (Herbert & Idris, 2018). The laws governing refugees in Uganda's 2006 Refugees Act and 2010 are widely regarded as the most progressive in the world. The policy grants refugees rights to work, freedom of movement, and access to social services, as well as access to land for agricultural use (UNHCR, 2016; Ahimbisibwe, 2019). As a result, Uganda is known for refugee protection, refugee settlement models, and humanitarian governance in Africa (Grzeskowiak, 2024; Bohnet & Schmitz-Pranghe, 2019; Ruaudel & Morri-son-Métois, 2017). But some international migrants are also motivated by the economic opportunities, which for some couples with the refugee policy to motivate moving to Uganda.

This paper addresses two knowledge gaps regarding motivation other than conflict on one hand, and behavior of international migrants, on the other hand. Existing studies have largely focused on rural refugee settlements (Vemuru Varalakshmi et al., 2016; van Hove & Johnson, 2021; Alupo, 2025; Bohnet & Schmitz-Pranghe, 2019; Paul et al., 2022). We analyze

two specific objectives. a) to analyse the drivers of international migration and explore how different motivations interact to shape migration decisions. b) and to spatially analyze the migration waves and patterns of international migration. The study highlights emerging insights into the migration waves and the non-conflict or violence motivation drivers.

2. Theoretical Framework for understanding migration

Migration studies have for long been shaped by Ravenstein's theory following his essays of 1885. In the essays collated by Grigg, Ravenstein postulated eleven principles or rules that explain migration motivations and behavior (Grigg, 1977). Ravenstein argued that migration was mainly involving short distance and that there was relatively little increase in the average distance travelled by migrants. But the principles also introduced multiple migration destinations of migrants as 'waves'. According to Ravenstein, population increase in rural areas, drives migration to influence growth of cities. The movement is associated with what Ravenstein frames as the "push" and "pull" factors. 'Push' as the conditions in resident places that compare differently with 'pull' conditions in destination areas. In the context of this paper, Ravenstein's economic law of migration is a major driver for motivating migrants into cities because of the higher incomes, wages and lifestyle, conditions that continue as dominant to date. This has been underscored by several studies in recent years utilizing large datasets on cities to analyze the link between economic structural transformation and migration, both in terms of motivation as well as impact on city economies (Ji et al., 2022; Luca et al., 2023; UN-Habitat, 2017; World Bank, 2021; World Economic Forum, 2017). Three related issues are theorized in literature and summarized as, a) the determinants of size and skill composition of immigrant flows; b) immigrants adaptation to the economy of the host country, and c) the impact of immigrants on the host country's economy (Borjas, 1989). Recent works argue that migration to a city of attraction usually involves multiple motivations and is not simply a relocation from the periphery to the city. The multiple motivations drive complex wavelike motions to multiple destinations (Grigg, 1977). This study draws from this theory to understand the wavelike motion of migrants from countries into Ugandan cities, extending the notion of 'periphery' beyond geographical territory to economic opportunities.

In tandem with Ravenstein's law of distance, migration is understood as a step-by-step movement as 'migration waves'. Recent studies on migration have underscored this theory to analyse the drivers of international migration (Day, 2019; Paul, 2011; Riss, 2025). Drawing on large datasets and statistical analyses, these debates have discussed international migration through the lenses of micro and macro neoclassical economic theory to advance understanding of the motivations and behaviour of international migrants. Informed by new data sources such as geospatial and imagery as well as drawing on econometric methods that decompose variables of push and pull factors, technological advances are increasingly important in the understanding of migration motivation (Massey et al., 1993). In this paper we draw on Ravenstein's theory as modified by Borjas to examine behaviour of migrants in a step-by-step process underlain by relative declining costs and risks, to study international migration into Ugandan cities. Conflict areas are not experiencing declining risk but rather risk declines at destination which translates into a pull factor. Some of the recent studies by Edward Taylor and others utilize large datasets to dive into the impact question of migrants to destination places, a dimension that this paper does not attempt to address but important in underscoring the motivational outcomes at destination places (Taylor et al., 1996). Thus,

the theoretical framework that informs this study considers Ravenstein's laws on migration (distance, economy, technology) as modified by Borjas (technological advancement, labor bifurcation) to deepen our understanding of how international migration into Uganda cities unravels.

2.1. Migration debates in Uganda

In the discussions about migration in Uganda, it is critical to reflect on the various viewpoints and interests of many players, such as politicians, civil society organisations, scholars, and migrants. While household surveys and censuses in Uganda can provide data on migration trends, they may not always give us a complete picture of the underlying motivations and processes behind migration. As mentioned, Uganda is a major migrant destination for international migrants due to an array of both pull factors. Relatively stable social and political conditions coupled with an improving economy combine to attract international migrants. The potential to attract migrants from neighboring nations and beyond is also underpinned by the relatively favorable investment environment that interests people looking for employment opportunities, business, and investments in sectors including agriculture, tourism, industry and education. There are both expected and unusual categories of immigrants arriving in Uganda. Conflict and violence driven refugees have for long primarily come from South Sudan, the Democratic Republic of Congo, and Somalia (UNHCR, 2016; Routes et al., 2021; MGSOG, 2017). However, there has been an increasing trend of economic migrants in recent years, especially professionals with expertise, businessmen and students. Uganda has also become a transit place for migrants to other destinations, such as European countries (MGSOG, 2017). Given the varied spectrum of migrants arriving in Uganda, it is important that policy and strategies are developed in a flexible and adaptable approach that reflects the unique needs and ambitions of migrant communities.

2.2. Politics and Politicization of international migration

The politics and politicization of international migration in Uganda manifests in various ways. Migration is a highly politicized topic that many politicians and government use in the context of refugees to acquire international financial support. While politicians often gain political clout on the basis of refugees and migrants, in most cases, they also blame migrants for social or economic problems in host communities. At the same time, migratory politics can be driven by more significant political and social factors inside Uganda and the region (Tuccio et al., 2019; Nabuguzi, 1993). For example, an influx of refugees from neighboring countries can cause conflicts and rivalry for resources and jobs with host communities. In turn, politicians often use this to win or consolidate power (Maystadt & Verwimp, 2014; Salehyan & Gleditsch, 2006). In Uganda, migration management includes several actors and levels of governance, notably national, local governments, civil society organizations, and international actors, which can lead to tensions and power struggles (Bjørkhaug et al., 2025; Nkiko & Ahimbisibwe, 2025; Zhou et al., 2022). To note is that the politicization is often related to refugees and other migrants from conflict areas. On this backdrop of these debates, we frame the politics and politicization of migration in Uganda through the lens of political power and local level competition for resources and services with the host communities. The politics plays out more vividly when host communities express grievances against the seemingly over-services refugees at their expense. Politicians latch on to contest the care for refugees

as opposed to host communities for political clout, a feature in Uganda politics that is evident across the country (Bjørkhaug et al., 2025; Kalyango Sebba & Zanker, 2022; Murahashi, 2021).

3. Materials and Methods

3.1. Description of the Study Cities

This research was carried out in three Ugandan cities as part of an inter-country research project on migration, urbanization and conflict. The broader research was undertaken in Uganda, Ethiopia and Nigeria where in each country three cities were selected. In the case of Uganda and this paper, empirical data was collected from three cities of Kampala, Kasese, Gulu and the criteria of selection includes primate city, industrial city and post-conflict city. Kampala was selected as a study area because it's a primate city that hosts the largest urban population in Uganda, and also being the economic hub, while host to the central political decision-making institutions and governance structures. Kampala is a critical city where rapid in-migration intersects with pressures on land, infrastructure, and informal economic sectors that often lead to social tensions and conflict. Kampala provides a good setting for examining how migration drivers interact with structural inequalities and governance challenges to shape migrant decisions and movement waves. Kasese was selected for being an industrial city characterized by cross-border trade, political tensions, and both historical and contemporary labour inflows driven by employment opportunities, economic growth, land access and service delivery challenges. While Gulu city was selected due to the history of conflict displacement of peoples both from within the northern region and forced migrants from neighboring countries of South Sudan and the Democratic Republic of Congo. This characteristic makes Gulu city a good study area for understanding how experiences of conflict, social fragmentation, and livelihood disruption shape motivations, processes (waves), and patterns of migration. With over 1.5 million residents, Kampala, the country's capital, has the highest population among the study cities followed by Gulu (146,858) and Kasese (101,679).

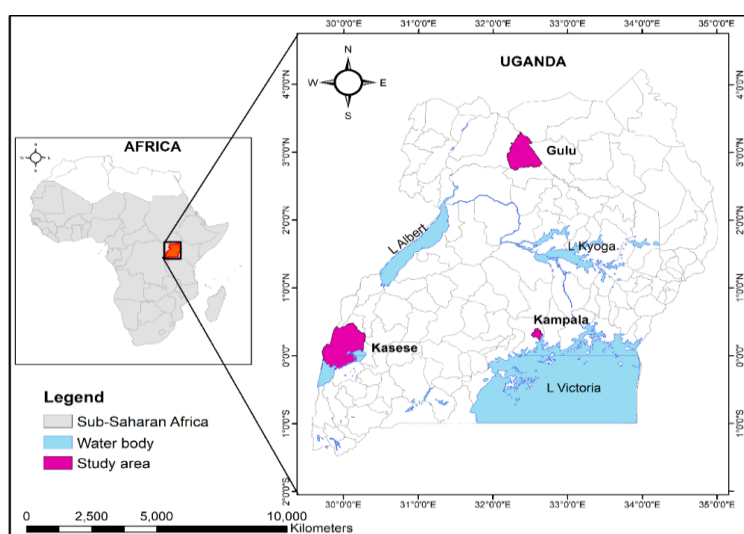


Figure 1. Showing the three cities where the fieldwork was conducted in in Uganda and an inset of Uganda's location in East Africa (**Source:** Authors analysis)

3.2. Sampling techniques and data collection methods

The study employed a cross-sectional research design with mixed-methods approach that combined quantitative and qualitative techniques of data collection and analysis. While migration involves changing one's residence, it is not the only type of human mobility. Because of this heterogeneity of migration streams, it is challenging to identify migrants, and therefore conducting a random sampling was not feasible (Armstrong et al., 2021). Migrant sampling can be more complicated, and the process may be difficult if the sample is drawn from a specific origin of migrants. For this reason, we employed snowball sampling, which is a non-probability sampling technique used when carrying out research with a hard-to-reach population where potential respondents are dispersed, lack formal registration that they cannot be easily identified or of a systematic sampling frame (Beauchemin & González-Ferrer, 2011). With the help of the local leaders (LC1), we identified up to five respondents based on the country of origin who were found to fulfil the study criteria. The respondents were then asked to recommend other prospective respondents who satisfy the study criteria. This process continued through multiple stages until we reached a point where there were no recommendations. For dominant migrant groups such as those from the Democratic Republic of Congo and South Sudan, we stopped data collection once we reached saturation, that is, when newly referred respondents no longer provided additional information. For some of the countries, such as Zambia, Sudan, and Comoros, the LC1 used a community contact person to identify them. The criteria for selection of migrants are (i) being an international migrant and (ii) having resided in the study city for at least six months in order to include recent migrants. A total of 163 international migrants were surveyed throughout this process, with 45 from Kasese, 26 from Gulu, and 92 from Kampala. To reduce bias in the snowball sampling, we used multiple referral chains, which helped to reduce the dominance of using a single network. This means that when an interviewee recommended a potential interviewee, we double checked with the LC1 leaders and at least 2 other people to verify the recommended person. Since snowball sampling is a non-probability approach, the sample size here is not a statistical representation of all international migrants in the study cities. As a result, snowball sampling may over-represent migrants of a certain group or factor, such as migrants having stronger social ties, and under-represent other groups (isolated or undocumented migrants). Therefore, the findings in this study should be interpreted as reflecting migration motivations and processes among migrants who were reachable through networks in the study cities and not as the entire international migrant population living in the study cities.

Data were collected following two ways, a structured household survey administered at migrants' residences and secondly, key informant interviews with leaders of migrant groups. The questionnaire captured data grouped into three broad categories: push factors, pull factors, and socio-demographic characteristics. Push factors included the following variables: conflict, persecution, need for medical care, and need for education. Pull factors consisted of employment opportunities, business opportunities, family reunion, marriage, group influence, and access to better education. Socio-demographic indicators were also collected and included age, sex, level of education, and the number of first-arrival migrants in a household. To capture spatial data, GPS locations of the migrants were recorded since the surveys took place at the migrant homes. To spatialize migrant movement patterns, respondents were asked to report all previous places of residence for longer than six months along their migration journey. This included intermediate origins and destinations prior to their arrival in the

study city. For each migrant, we recorded the country and lower administrative divisions associated with every movement and the order in which these movements occurred. This enabled us to obtain multiple origin-destination pairs for individuals who had migrated in more than one migration wave. On the other hand, interviews with migrant leaders provided insights into migration drivers, and settlement patterns that were not fully captured through the questionnaire. Google Earth imagery overlayed with administrative boundaries of countries was then used to record all the origins of the migrants, including destinations before their final destination. This approach allowed us to distinguish between single-wave migrants and multi-wave migrants, which formed a basis for our analysis of migration waves. Additional spatial data was downloaded from OpenStreetMap. This spatial data was needed for Origin-Destination (OD) mapping and spatial modelling.

3.3. Data analysis techniques

First, we mapped the Origin-Destination (OD) of migrants to visualize the migration patterns (waves of migration) into the three study cities based on the spatial data collected during the survey. The key datasets used were GPS destination coordinates, which were captured during the survey, geocoded origin coordinates derived by exporting the administrative shapefile of the migrant's origin and migration patterns to Google Earth imagery. All OD points were imported into ArcGIS together with other spatial data (administrative shapefile boundary of the migrant's origin and destination) and were later projected into a common coordinate system. We then used the XY-to-Line tool under the feature class in the data management tools to generate flow maps to visualize the pattern/waves of migration. For migrants with multiple migration waves, multiple flow lines were generated. The number and volume of each migration wave are color coded to visualize the behavior. The final outcome was an OD flow map showing migration patterns and the intensity of migration flows into the three cities (Gulu, Kasese, and Kampala).

Secondly, we employed social network analysis to further understand the network structures linking migrant origins, destinations, and motivations. We used Gephi to perform the network analysis. Where the nodes show both origin countries and migration drivers, while the edges show the relationship between them. The edge weights show the strength of the relationship. In Gephi, we used the standard network layout algorithms (ForceAtlas layout) to visualize clustering patterns and identify highly connected origins and dominant drivers within the network. The degree of centrality was calculated to assess the strength of each node in the network. The final outputs are network graphs showing how migrant groups, origins, and motivations are interlinked, which helped us to understand how specific drivers influence certain origin groups and patterns of migrant flows into the three study cities.

Thirdly, we then performed Chi-square tests to examine whether migration motivations varied significantly across migrants' countries of origin. We used Pearson chi-square contingency coefficient as a proxy for association (Mirkin, 2001). The analysis was performed in SPSS, and we used a P-Value of less than 0.05 to determine statistical significance.

Ordinal Least Squares (OLS) regression (global statistical model) is applied to examine factors associated with the number of first-arrival migrants (in each household) in the three cities. The dependent variable was the number of first-arrival migrants reported per household. And the independent variables were the push and pull factors and socio-demographic varia-

bles (Table 1). We coded all migration drivers as binary variables, as 1 for reported and 0 for not reported. The analysis was performed in ArcGIS, and the model performance was assessed using the Akaike's Information Criterion (AICc), R^2 and adjusted R^2 diagnostics. The regression equation is as follows (Yue et al., 2018):

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon \dots \dots \dots \text{Equation 1}$$

Where Y is the dependent variable, X_n represents the set of explanatory variables, β_n is the regression coefficients and ε is the random error residual. In simple terms, the OLS model is used here to provide a general overview of the main factor associated with international migration into Ugandan cities. It helps to identify the key factors that influence international migration into Ugandan cities at an aggregate level. However, it does not account for spatial differences in how these factors influence migration across the different locations within each city.

To address this limitation of not accounting for differences, the OLS, we applied a Geographically Weighted Regression (GWR) to examine how the factors influencing migration vary spatially across the three cities (Fotheringham, A. Stewart Chris, Brunsdon Martin, 2002; Hu et al., 2018). We used the same dependent and independent variables used in the OLS model in the GWR. But first, we tested for multicollinearity among the explanatory variables using Variance Inflation Factors (VIF) produced by the OLS. All the variables in the OLS had a VIF value below 5, which showed that there was an absence of multicollinearity (O'Brien, 2007). The GWR model generated local empirical results for each observation, factoring in spatial variations and including goodness-of-fit measures such as R^2 and Corrected Akaike Information Criterion (AICc) which we used to evaluate model performance (Jensen, 2007; Fotheringham et al., 1998). The equation for GWR is given as follows:

$$y_i = \beta_0(u_i v_i) + \sum_k \beta_k(u_i v_i) x_{ik} + \varepsilon \dots \dots \dots \text{Equation 2}$$

Where y_i is dependent variable at location i ; $\beta_0(u_i v_i)$ is intercept for location i ; $\beta_k(u_i v_i)$ is local parameter estimates for the independent variable x_i at location i .

4. Results

4.1. Processes of international migration into Ugandan cities

International migration into Ugandan cities is a combination of both direct migration and a step-by-step (wavelike) process. While most migrants reported to have come directly to Uganda, a significant number had first migrated to one or more intermediate countries before reaching the destination city in Uganda. This was common among migrants originating from non-neighboring countries such as Somalia, Eritrea, Ethiopia and Nigeria. This indicates that migration, most especially from distant places, is not usually a single event but rather a step-by-step process to the final destination (Figure 2 a and b), which illustrates the migration waves. Figures 2a and 2b show that several migrants settled in Uganda on their second wave of migration. The results further show that distance is a very important element in understanding international migration into Ugandan cities but not a limitation due to improved modes of travel. Migrants from neighboring countries were found to migrate to Ugandan cities that are close to their borders. For example, migrants from the Democratic Republic of

Congo were mostly found in Kasese, while the majority of those from South Sudan were mostly found in Gulu City (figure 2c). Therefore, geographical proximity remains an important element in shaping migration processes and behavior. In addition, beyond geographical proximity, results from the interviews show that the high concentration of migrants from neighboring countries in cities such as Kasese and Gulu is closely linked to the cross-border social ties, mainly tribal and family relations. For example, the Bakonzo tribe are found in both Kasese and the eastern Democratic Republic of Congo. Therefore, for many migrants, migrating to Kasese is perceived as settlement within familiar kinship and community networks, which are shaped by shared ethnic and cultural affiliations. Similar to Gulu, most migrants from South Sudan share common language and cultural ties. For example, the Acholi tribe are found in both South Sudan and Northern Uganda. This therefore reveals that cross-border social connections are important in determining the choice of a final destination for international migrants from neighboring countries. On the other hand, migrants from more distant origins (countries), such as Somalia, Eritrea, Ethiopia, Nigeria, Comoros and Zambia, are mainly found in Kampala. This shows that long-distance migrants choose to migrate to big urban areas with several opportunities, which confirms Ravenstein's theory that long-distance migrants head for major cities in other countries. This shows that Ugandan cities play different roles in shaping migration, and distance, together with the urban context, is very central in shaping migration processes.

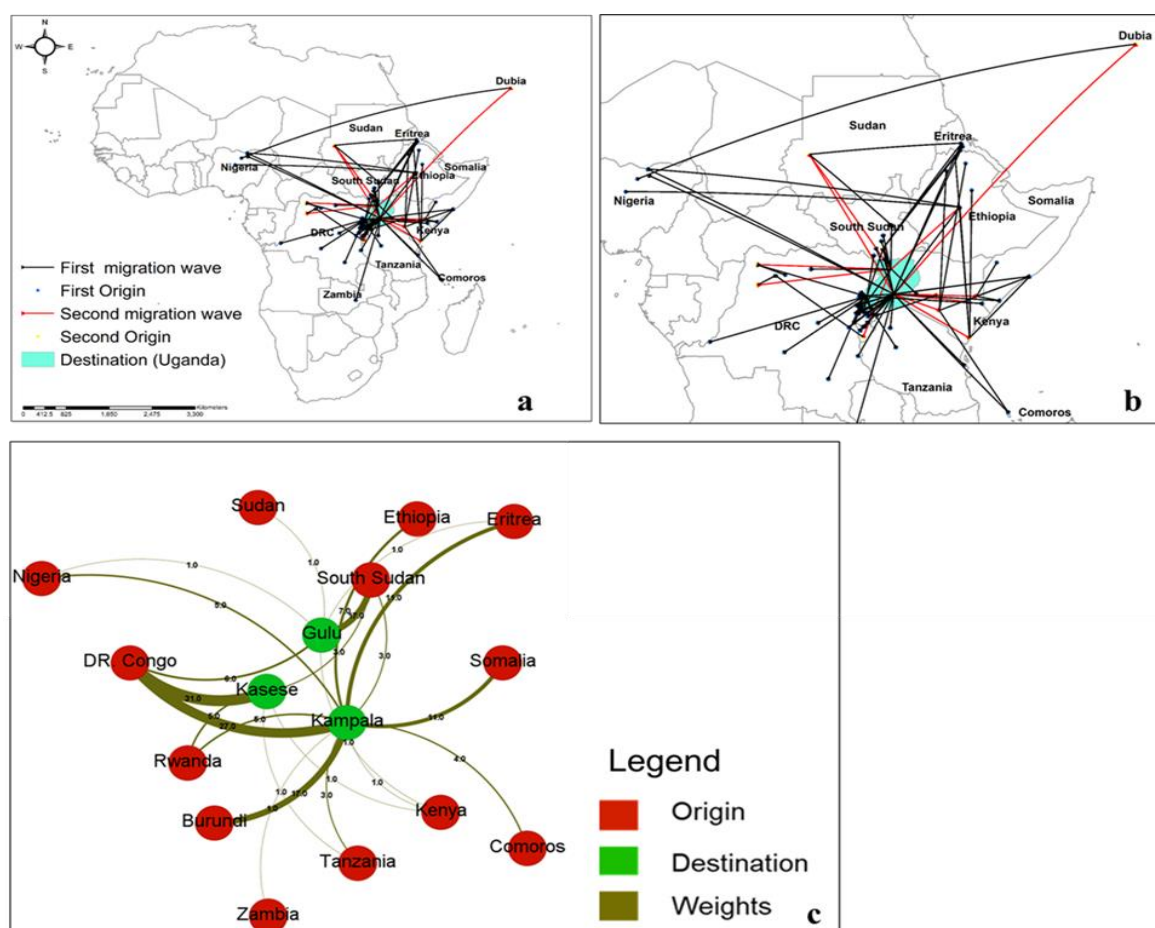


Figure 2. Origin–destination patterns and migration waves of international migrants into Ugandan cities. (a) and (b) show the waves of migration and the movements from countries of origin to intermediate locations and onwards to the final destination in Ugandan cities. Black lines show first migration waves, while the red

lines show second migration waves. Points mark origin locations and final destinations within Uganda. (c) is a network showing the origin and destination flows and red nodes indicate countries of origin, while the green nodes show the destination cities (Kampala, Gulu, and Kasese). The line thickness shows the strength of migration flows between origins and destinations.

4.2. Motivations for international migration into Ugandan cities

The results show that the motivations driving international migrants into Ugandan cities is a complex process which is shaped by conditions at origin (push factors) and the perceived opportunities at destination. The migrants report to have had multiple motivations to migrate. However, it's important to note that drivers vary by country of origin. The findings show that conflict and violence are the main drivers for migrants originating from the Democratic Republic of Congo, South Sudan, Burundi, Ethiopia, Eritrea, and Somalia. Although conflict was found to be the primary trigger of migration, it rarely functions in isolation. Migrants from conflict-affected origins reported that they also migrated due to marriage, family reunion, and desire for better opportunities. This reveals that social and economic motivations are very important as they interact with push factors at origins to shape the destination choices of migrants. In addition, migrants most especially from conflict-affected origins such as Ethiopia, Eritrea, Somalia, Burundi, and the Democratic Republic of Congo reported that persecution contributed to their migration (Figure 3).

On the other hand, the findings show that desire for economic opportunities such as the search for business opportunities was an important factor that motivated migrants from Burundi, Rwanda, Kenya, Tanzania, and parts of the Democratic Republic of Congo. Given the significant number of migrants from the Democratic Republic of Congo who migrated in search of business opportunities shows that economic drivers often coexist with conflict-driven migration. The finding further reveals that some drivers of migration are origin specific. For example, migrants from Comoros reported having migrated due to the need to have access to better medical care. Migrants from Nigeria reported to have migrated due to search for better education (Figure 3). To analyze the coupling of migration drivers, the chi-square test reveals that several drivers are statistically significant in influencing migration. These include conflict and violence, persecution, educational needs, group influence, business opportunities, and healthcare all of which are significant ($p < 0.05$) (Table 1). This reveals that migration motivations to Ugandan cities differ across countries of origin.

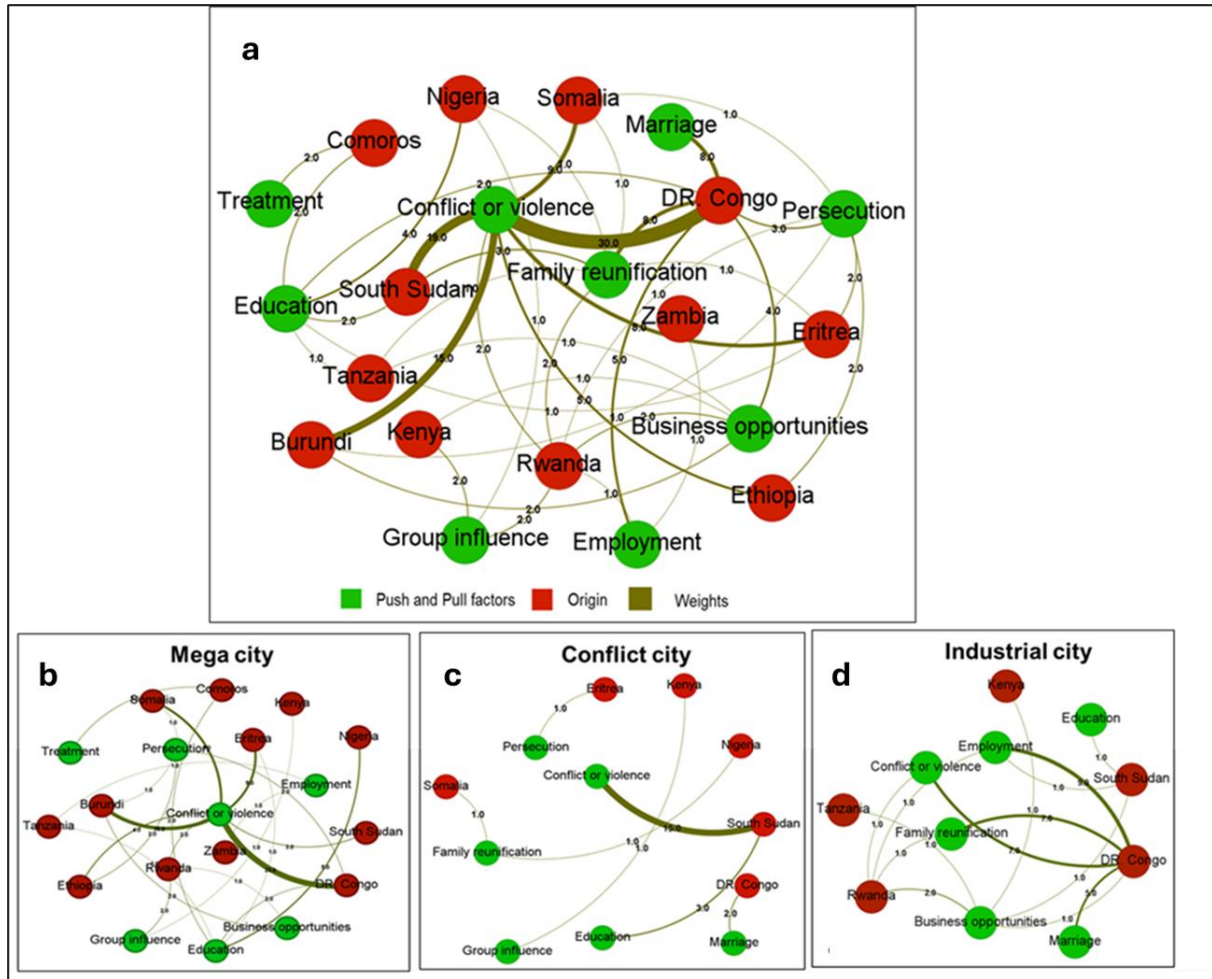


Figure 3. Drivers of international migration to Ugandan cities. The networks illustrate relationships between countries of origin (red nodes) and migration motivations and drivers (green nodes). The edges show the links between origin countries and migration drivers. Thicker lines indicate stronger association, which is based on the frequency of responses. (a) is a composite showing a network of all three cities, (b) shows the network for the megacity (Kampala), (c) is a network for the conflict city (Gulu), and (d) is a network for the industrial city (Kasese). The figure shows how migration drivers vary across city types and countries of origin.

Table 1. Chi-square test of association between country of origin and migration motivations.

	Pearson Chi-Square Tests	df	Asymptotic significance (2-sided)	Comment
Conflict or violence	55.703a	10	.000	Significant
Need for Education	44.019a	11	.000	Significant
Employment	15.774a	11	.150	Not significant
Persecution	41.872a	11	.000	Significant
Business	22.545a	11	.020	Significant
Family reunion	10.541a	11	.482	Not significant
Group influence	65.707a	11	.000	Significant
Marriage	14.002a	11	.233	Not significant
Need for medical care.	27.757a	11	.004	Significant

4.2.1. City-level differences in migration motivations

Analysis of city-level data shows that motivations of migration are shaped not only by conditions at origin but also by the specific pull factors at the destination cities in Uganda. Kampala (Mega city) was found to host over half of the sampled international migrants, having migrants from nearly all origin countries in this study. Conflict and persecution remain important drivers for migrants from Burundi, Eritrea, the Democratic Republic of Congo, Somalia and Ethiopia. In addition, the city was also found to attract migrants who are seeking better education, business opportunities, employment, and better healthcare (Figure 3a). Access to a wide range of educational institutions, like universities, among others, and better healthcare facilities, are key pull factors. Results from the interviews show that Kampala attracts many migrants mainly because it offers easy access to services provided by international organizations, particularly the United Nations High Commissioner for Refugees (UNHCR) and the International Organization for Migration (IOM). In Gulu, the motivations of migration are mainly shaped by conflict. The results reveal that migrants from South Sudan mainly migrated due to conflict. Gulu being located in close proximity to South Sudan makes it a city of refuge, as migrants come due to the search for security. At the same time, the findings indicate that family reunion and group influence are important migration drivers for migrants from Kenya and Nigeria, respectively. This shows that social networks play a role in shaping destination choice. Other motivations, including education, marriage, and experiences of persecution, are present but less dominant (Figure 3b). Although conflict was found to be one of the key drivers of migration to Kasese, Kasese exhibits a different motivational structure, with marriage, family reunion, employment, and business opportunities playing a more prominent role, particularly among migrants from the Democratic Republic of Congo and neighboring countries of Rwanda, Kenya and Tanzania. Kasese's role as an industrial city near the international border has historically made it an important destination for migrants who are seeking employment and business opportunities (Figure 3c). Marriage and family reunion emerge as important drivers of migration to Kasese, showing the city's position within a socially continuous cross-border space. The results further show that women are the more dominant migrant group in Kasese, and given that it's a border city, the pattern confirms Ravenstein's observation that women are more likely to undertake short-distance movements that are linked to marriage and family formation. The variations between the three cities illustrate the importance of city-specific pull factors. It is worth noting that historical patterns of movements and shared cultural affiliations across the Uganda-Democratic Republic of Congo border mean that migration into Kasese often involves reconnecting with existing social ties rather than forming entirely new ones.

4.2.2. *City-level differences in migration motivations*

The results from the global regression model (OLS) show that conflict is the only factor that is statistically significant when all factors are considered together. This finding shows that conflict is a very important factor in shaping international migration into Ugandan cities. However, the model further shows that all these factors only explain 20% of the variation in migration (Table 2). This reveals that international migration decisions to Ugandan cities are influenced by factors other than those included in table 2. This limited explanatory power of the model points to the importance of contextual and spatial dynamics in shaping migration decisions.

We further performed a geographically weighted regression model to understand the spatial heterogeneity of the factors influencing migration across Ugandan cities. The GWR results reveal that the factors influencing international migration into Ugandan cities vary across

space (Figure 4 a and b). Compared to the global OLS model, the GWR model has an improved explanatory power in explaining the variation in migration inflows (Table 3). The findings show the importance of spatial context in understanding international migration into Uganda.

Table 2. Summary of OLS estimates of the factors influencing migration

		Summary of OLS Results - Model Variables				
Variable	Coefficient [a]	Stderror	T-Statistic	Probability [b]	Robust_SE	VIF [c]
Intercept	1.461029	0.992232	1.472467	0.142972	0.875138	-----
Employment	-0.451913	0.552718	-0.817620	0.414845	0.461292	1.320704
Need for Education	0.901775	0.538644	1.674157	0.096164	0.554446	1.254301
Conflicts	1.311233	0.446291	2.938071	0.003821*	0.406234	1.579119
Persecution	-0.082578	0.445592	-0.185323	0.853220	0.526421	1.129778
Business Opportunity	-0.918348	0.669678	-1.371329	0.172301	0.398361	1.211168
Family reunion	-1.094919	0.779355	-1.404905	0.162099	0.388741	1.202734
Marriage	-0.912805	1.078761	-0.846160	0.398784	0.495478	1.189346
Group influence	-1.389896	1.174158	-1.183738	0.238364	0.517727	1.134245
Better Health	-0.934138	1.349326	-0.692300	0.489802	0.390947	1.130414
Age	0.011042	0.012240	0.902130	0.368405	0.013015	1.214414
Level of education	-0.058651	0.172949	-0.339120	0.734996	0.161874	1.319706
Sex	0.517282	0.396275	1.305362	0.193747	0.360246	1.362968
OLS Diagnostics						
Variable	Values					
Akaike's Information Criterion (AICc)	742.395					
Multiple R-Squared [d]:	0.204					
Adjusted R-Squared [d]:	0.141					
P-value	0.000					

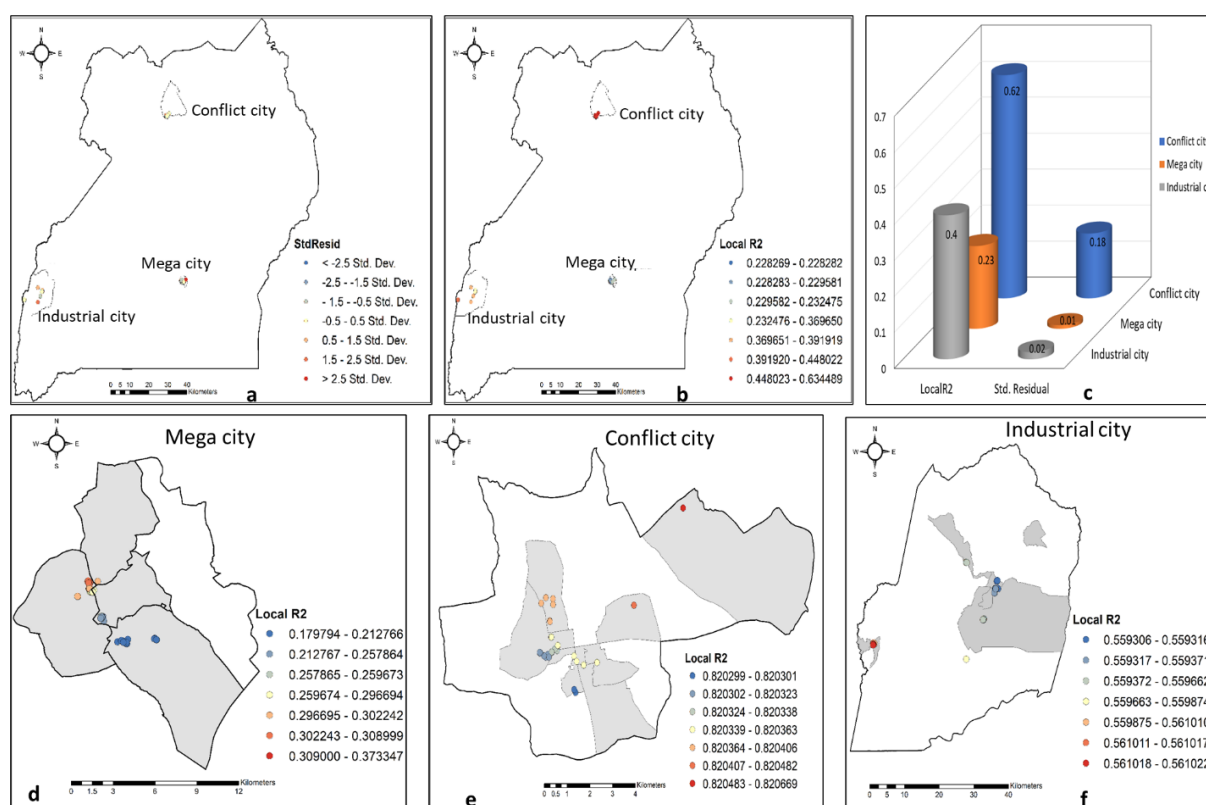


Figure 4. The spatial variation in the drivers of international migration across Ugandan cities based on Geographically Weighted Regression (GWR) results. Maps (a) and (b) show the spatial distribution of standardised residuals and local R^2 values, respectively. This shows how model performance varies across space. Graph (c) compares overall model performance of the model across the megacity (Kampala), conflict city (Gulu), and industrial city (Kasese). Maps (d), (e), and (f) show the city-specific spatial distribution of the local R^2 values for Kampala, Gulu, and Kasese, respectively. They show the model performance across space within each city and the blue colours show areas in which migration drivers explain a higher proportion of variation in migration inflows.

Table 3. Summary of the GWR model for variation in migration factors across Ugandan cities

VARNAME	VARIABLE
AICc	714.554
R2	0.497
R2Adjusted	0.372

4.3. City-level variation in factors influencing international migration

We conducted a city-level analysis of the factors influencing migration. A global OLS regression model is used here to provide a baseline picture of city-level differences. The results from the global OLS models estimated separately for each city showed that there are distinct combinations of significant factors across the three cities. In the conflict-city (Gulu), conflict and education are statistically significant factors influencing migration. Overall, all the global model for Gulu had an R^2 of 0.82. This shows that migration into Gulu is mostly explained by these factors. In the industrial city (Kasese), conflict and persecution are the only statistically significant factors influencing migration. The resultant model fit is relatively high (R^2 of 0.56). This indicates that migration into Kasese is also strongly influenced by these factors. Migration into the megacity (Kampala) is influenced by age and education, which were found to be the only statistically significant factors. However, the explanatory power of the global model

is generally low, with an R^2 of 0.26 (Table 4). This reveals that migration into Kampala is not influenced by factors such as conflicts like the other two cities, but Kampala is an attractive destination for migrants who are looking for better opportunities such as business, employment, and access to better services such as education and medical care, among others. This finding confirms the results from the interviews, which revealed that international migrants in Kampala are mainly attracted due to easy access to services from UNHCR and IOM. Also from the network analysis, the results reveal that migrants migrated to Kampala due to the search for better medical care, education, business opportunities and employment. In addition, the migrant population in Kampala is dominated by a young population aged 15-34. This explains why age and education are significant factors for Kampala, as younger migrants are more likely to migrate in search of better opportunities, access to education, and improved living standards. This is in line with Ravenstein's view that migration is dominated by young working-age adults.

We performed further analysis using a geographically weighted regression (GWR) to understand the spatial variation within each city. The results show that the factors influencing international migration into Ugandan cities vary not only by city but also across space within cities. This shows the importance of local context in shaping migration processes. In conflict and industrial cities, the GWR model does not significantly improve explanatory power relative to the global OLS models (Figures 4c, e and f). This shows that factors influencing migration are uniform across space within these city contexts. This spatial homogeneity confirms that migration into Gulu and Kasese is mainly shaped by conflicts and shared social and cultural ties rather than highly localized conditions. But the GWR model performs better in the megacity. The results showed that there is a spatial variation of factors influencing migration within the megacity. The model results increased significantly from 0.26 under the global model to 34 under the GWR (Figure 4c and d), and the GWR model had lower AICc values, indicating an improved model fit (Table 5). This improvement reveals that migration into Kampala is highly sensitive to localized urban conditions, for example, migrant networks, neighborhoods, opportunities in specific locations, and access to services, among other factors. This heterogeneous nature of migration processes within Kampala shows that migrants migrate for different reasons depending on local conditions within the city.

Table 4. Summary of OLS estimates of city-level analysis of factors influencing migration

	Variable	Coefficient a]	StdError	t-Statistic Probability[b]		Robust_SE	VIF [c]
Megacity	Intercept	2.506137	1.279438	1.958780	0.053623	1.373576	-----
Conflict City	Intercept	5.032399	2.49230	2.019175	0.057073	1.929445	-----
Industrial City		1.015117	1.640937	0.618621	0.540835	1.271276	-----
Megacity	Employment	0.233111	1.084439	0.214960	0.830347	1.602016	1.618230
Conflict City	Employment	0.961269	1.39889	0.687162	0.499872	0.399931	1.674054
Industrial City		0.657198	0.640499	1.026072	0.313061	0.442316	1.923308
Megacity	Better Education	0.596803	0.754590	0.790897	0.431337	0.849966	1.753817
Conflict City		0.380239	0.73729	0.515722	0.611703	0.656127	1.346982
Industrial City		-1.468378	1.248189	-1.176406	0.248684	0.878995	1.404655
Megacity	Conflict	0.105972	0.590443	0.179478	0.858015	0.558537	1.557223
Conflict City		5.378451	0.84659	6.353013	0.000003*	0.546218	2.325665

Industrial City		2.586675	0.777206	3.328172	0.002322*	0.410382	2.995322
Megacity	Persecution	-0.503690	0.481743	-1.045558	0.298910	0.459489	1.130703
Conflict City		0.895495	0.94885	0.943764	0.356554	0.474860	1.434144
Industrial City		4.268040	1.585217	2.692401	0.011495*	0.677321	1.161128
Megacity	Business opportunity	-1.550156	1.307342	-1.185731	0.239238	1.242716	1.604358
Conflict City		0.892420	1.12952	0.790083	0.438748	0.350926	1.580674
Industrial City		-0.355836	0.810987	-0.438769	0.663972	0.374462	1.815987
Megacity	Family reunion	-1.279390	1.210585	-1.056836	0.293763	0.800286	1.043475
Conflict City		2.109833	1.45575	1.449311	0.162750	0.601022	1.812888
Industrial City		0.995949	1.070848	0.930056	0.359767	0.622797	2.390818
Megacity	Marriage	-	-	-	-	-	-
Conflict City		-0.409380	1.769234	-0.231388	0.819486	-0.409380	1.319492
Industrial City		0.672983	1.036984	0.648981	0.521288	0.587403	2.241996
Megacity	Group influence	-2.370254	1.278120	-1.854485	0.067357	0.642273	1.163147
Conflict City		1.813337	1.90004	0.954365	0.351294	0.913355	1.597419
Industrial City		-	-	-	-	-	-
Megacity	Age	0.086503	0.025855	3.345654	0.001257*	0.023346	1.244624
Conflict City		-0.028726	0.02865	-1.002392	0.328130	0.034196	1.199641
Industrial City		-0.014359	0.012877	-1.115072	0.273674	0.010440	1.435758
Megacity	Education level	-0.556441	0.210881	-2.638649	0.009998*	0.208206	1.303090
Conflict City		-0.933634	0.32173	-2.901908	0.008817*	0.250737	1.932810
Industrial City		0.080431	0.287052	0.280196	0.781250	0.292099	1.676166
Megacity	Sex	-0.384384	0.467907	-0.821497	0.413799	0.448690	1.198054
Conflict City		-0.781641	0.936830	-0.834346	0.413942	0.381942	2.174706
Industrial City		0.283330	0.647375	0.437660	0.664766	0.527768	2.040394
Megacity	Better health	-3.203296	1.627890	-1.967760	0.052561	0.700367	1.272046
Conflict City		-	-	-	-	-	-
Industrial City		0.187555	1.668654	0.112399	0.911257	0.521513	1.286576
OLS Diagnostics							
City	Variable	Value					
Megacity	AICc	408.163496					
	R2	0.257059					
	R2Adjusted	0.154905					
	P-value	0.000314*					
Conflict City	AICc	139.981496					
	R2	0.820202					
	R2Adjusted	0.710103					
	P-value	0.000000*					
Industrial City	AICc	175.473039					
	R2	0.560224					
	R2Adjusted	0.398972					
	P-value	0.003268*					

Table 5. Summary of the GWR model for migration inflow for the city level analysis (AICc is Akaike's Information Criterion, measuring the model's performance.)

	VARNAME	VARIABLE
Megacity	AICc	400.944
	R2	0.335653
	R2Adjusted	0.221095
Gulu Conflict City	AICc	139.9901
	R2	0.820422
	R2Adjusted	0.710572
Industrial City	AICc	175.5757
	R2	0.560368
	R2Adjusted	0.398109

5. Discussion

Intra-African migration flows continue to be the most significant on the continent as most African migrants reside in other African countries. Cities continue to be the main destinations for the migrants (UNCTD, 2018; ACSS, 2021). Uganda receives immigrants from nearby nations and beyond the continent into its major cities. Conflict and political instability in adjacent nations has resulted in an influx of refugees from South Sudan, the Democratic Republic of the Congo, Somalia, Ethiopia, Eritrea, and other surrounding countries in recent years. Furthermore, economic migrants originate from Kenya, Rwanda, Burundi, and Tanzania, drawn to the country's relatively stable economy and work prospects. The findings confirm what is reported in literature which suggests that sub-Saharan Africa has the highest number of inter-continental displaced people due to conflict (Ferris, 2012; Naudé, 2008). IOM (2015) and Hovil (2001) point out that Uganda is one of the popular destinations for refugees due to its location in a region experiencing long term instability and conflict. But the popularity of Uganda as a destination is also related to the refugee reception policy in addition to a relatively attractive economic stability for businesses. Citizens of the neighboring nations have been compelled to emigrate to neighboring countries due to the hostilities (Clark-Kazak, 2011; Sjögren, 2015). The legislative structure that permits the local integration of refugees creates a welcoming climate for refugees in Uganda, drawing immigrant refugees from as far as Somalia, Ethiopia, and Eritrea. Many immigrants have been inspired to establish independently in urban areas owing to Uganda's welcoming refugee policies, which stress self-reliance by giving access to resources (Kreibaum, 2016; Sebba & Zanker, 2022). Additionally, Kampala and Kasese have higher concentration of migrants from western side of Uganda, while Gulu City from the north. These results are consistent with conflict being a major driver that has been happening in these countries.

While conflict is a primary cause of international migration, people leave their native nations for various reasons, conflict accounts for half of the driving force of immigration to Uganda. Seeking economic opportunities, family reunions, pursuing education, group influence, and searching for better medical care and personal aspirations are increasingly key in driving migration. Though this is known, in the case of Ugandan cities, these new drivers are an important finding aligning with other studies (Robert & Brown, 2022; Riddervold, 2011, Rutarremwa, 2009, Schewel, 2020; Castelli, 2018; de Haas et al., 2019; Bernzen et al., 2019) to

underscore economic opportunities and business environment as drivers of international migration. Although economic migrants primarily come from the East African nations of Rwanda, Kenya, Tanzania, and Burundi, some economic migrants also come from Zambia, Nigeria and the Democratic Republic of Congo. Some Nigerian migrants travel to Dubai first before arriving in Uganda. Only an economic explanation can account for this migratory wave, which again is less explained in migration behavior literature. Migrants from Asia, India, China, and even the United States have made up most of Uganda's labour migrants in recent years although the International Labour Organization in 2020 disagrees on which group of international economic migrants leads. It is essential to note that recent years have seen an increase in the number of economic migrants choosing Uganda as their destination.

Understanding migration behavior between countries requires examining the drivers that influence migration waves. In this study several factors are important in influencing migration. Despite the importance of all drivers analyzed in this paper for migration into Ugandan cities, the factors taken into account do not fully account for migration motivations to Uganda. At a global level, only 20% is explained by these factors however at the local level with the GWR model, the factors improve to 50%. This significantly shows that the local model gives better results of explaining migration drivers and waves than the global model. According to a number of researchers, the local GWR model is superior at determining relationships, underscoring economic and business opportunities as the recently surging drivers of migration to cities (Comber et al., 2022; Azua et al., 2020; Jivraj, 2011). Furthermore, when we performed measures of association, this supports the drivers of conflict and violence, persecution, educational need, and group influence as significant in affecting migration. The results for independent cities showed that these factors explain between strong and moderate influence. In this case, other factors that were not considered in this study for example loss of head of the family, destruction of properties, loss of jobs due to conflicts could further improve the model. The analysis establishes an increasing importance of economic, business motivations compared to conflict and violence, which literature does not treat extensively.

5. Conclusion

Understanding the motivations and processes of international migration into Ugandan cities is complex, and it requires the use of multiple analytical approaches to test the drivers of movement. Analysis of migration into Ugandan cities shows that multiple drivers interact based on conditions at origin and destination. Conflict and violence are the primary drivers of migration from countries but economic and business opportunities, which can be associated with Uganda's refugee policy are increasingly becoming important. Economic drivers include job opportunities businesses, employability and are better predictors in influencing international migration. Despite the insights from the analysis in paper, the multiple factors assessed do not comprehensively explain migratory patterns to the cities. City-specific analysis helps to differentiate the nature of international migration into Uganda and illustrates city-specific unique pull factors. These findings contribute to broader debates on international and urban migration in sub-Saharan Africa, helping to reveal that migration into African cities needs to be analyzed through economic lenses. These findings suggest that urban policies should treat migrants as active economic and social contributors and plan for the fact that migration into cities may be flexible, multi-stage, and not necessarily permanent. While this study provides important analytical insights, its reliance on a non-probabilistic sample limits

the ability to generalize the finding. Future research should therefore use probabilistic data, include additional contextual determinants, and use longitudinal design to enhance the understanding of drivers and behavior of migrants into cities.

Ethics approval Acknowledgments

The project got ethics approval from University of Sheffield which approval was also applied to Uganda. In due course we shall request for the ethics approval number from Sheffield so that it is supplied during the revision should the manuscript move to the next level. Thanks for your understanding.

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Use of generative AI

The authors declare that they have not used any form of artificial intelligence tools to produce the results of this research.

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Conflicts of interest

The authors confirm that there is no known conflict of interest from the process of collecting data, its analysis and writing of this manuscript.

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