Returning from Greener Pastures?

How Exposure to Returnees Affects Migration Plans[*]

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Abstract

Information and networks have long been hypothesized to be crucial elements of the formation of emigration intentions. Returnees are a prime source of information about life as a migrant. In this study, we contribute to an emerging literature on the influence of returnees on the formation of migration decisions using representative geolocated data from 5,000 respondents and more than 47,000 family members and relatives from Senegal and The Gambia, two countries with high emigration rates in the past. We demonstrate that the presence of return migrants in a respondent's vicinity is exogenously conditional on the current number of emigrants. This allows us to circumvent the endogeneity of personal networks and to estimate the effect of returnees on individual emigration intentions. Migration intentions are substantially lower when emigrants who returned from Europe are present in the area. This does not apply to returnees from another African country. Further analyses reveal that migrants who returned from another African country improve the economic situation of families, while non-family returnees from Europe have no lasting economic impact but instead salter people's negative perceptions of migration. We infer that exposure to returnees depresses emigration plans because potential migrants become more aware of the risks of the migration journey and the stigma attached to returning unsuccessfully.

Keywords: international migration, emigration plans, return migration, networks, information

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1 Introduction

With increasing migratory movements and unprecedented numbers of displaced persons, the issue of the return of migrants to their places of origin has gained prominence in both scientific and political debates. After the recent surge in asylum-related migration, this question becomes particularly important, because many migrants return involuntarily—either because their asylum claim was rejected or because they had to return while en route for various reasons, including violence and exploitation. According to recent estimates, about every fourth migratory movement is a return to the person's country of birth (Azose and Raftery 2019, see also Wahba 2014; Hagan and Wassink 2020). This would make almost 70 million returnees around the world (McAuliffe and Khadria 2020). How the stories of these returnees, the customs they bring with them, and their socioeconomic reintegration affect the local population is part of a growing research agenda. Yet, data constraints continue to limit grounded empirical evidence (cf. Hagan and Wassink 2020).

We analyze the role of return migration on subsequent migration plans of stayers in The Gambia and Senegal, two West African countries with traditionally high emigration rates.[1] The main destinations of Senegalese migrants are Europe, especially France, Italy, and Spain (50% of all migrants), and West Africa, especially The Gambia (38% of all migrants, indicating a high degree of interregional migration). Gambians predominantly migrate to the United States (26%), Spain

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[1] Senegal has been a migrant-sending country since the 1970s, consistently featuring negative net migration rates. As of 2020, the country had 16.2 million Senegalese living in Senegal, with 694,000 (4.1%) of its citizens living abroad (UN DESA 2021). The Gambia only turned into a country of emigration in the mid-1990s, when the country's notorious dictator Yahya Jammeh began his brutal reign (which ended in 2017). Ever since Jammeh's takeover, the country had been among those with the highest annual emigration rates in Africa (Kebbeh 2013). As of 2020, the country had 2.4 million citizens, with 139,000 (5.6%) Gambians residing abroad. These figures put the two countries in the midrange of migrant-sending countries, behind high-emigration countries such as Albania (31.0%), El Salvador (20.4%), or Lebanon (17.8%), but comparable to well-studied cases such as Mexico (8.2%), the Philippines (5.2%), and Turkey (4.2%) (UN DESA 2022; World Bank 2022b; Pew Research Center 2019). In both countries, remittances form an important contribution to the economy. In Senegal in 2021, personal remittances made up 10.5% of the country's GDP in 2017, while in The Gambia, this figure stood at a staggering 26.8% (World Bank 2022a).

(19%), and the United Kingdom (11%) (Urso et al. 2019). Hidden beneath these aggregate figures is a highly dynamic situation, with steady flows of migrants leaving the country and returning. For example, while in 2017, the net migration rate for Senegal was a mere 10,000 people (i.e., 0.06% relative to the population), that same year no fewer than 3 million Senegalese (19% relative to population) left and returned to the country (Ndione 2018).

Interregional migration within West Africa is typically fully legal due to the Economic Community of West African States (ECOWAS), which facilitates the cross-border circulation of people and goods within the area. The situation is more complicated regarding overseas destinations, notably Europe, where limited legal paths for migration are available. Here, Senegalese and Gambian migrants resort to a variety of pathways, including family-sponsored migration, applying for asylum, or entering illegally and working in the shadow economy. Beauchemin et al. (2022) estimate that around two-thirds of Senegalese migrants in Europe entered legally, and one-third did so illegally.

Migrating with the aim to enter Europe illegally is locally referred to as "back way" migration. This so-called back way to Europe runs either along the Atlantic coast to Spain or across the Saharan Desert to Libya or Tunisia and then onward to Italy. While undocumented migration journeys, if concluded successfully, often serve to improve migrants' livelihoods (Beauchemin et al. 2022), the back way routes bear serious threats to life and belongings (Mbaye 2014). What is more, many undocumented migration journeys end in involuntary return upon arrival in Europe or even before migrants manage to reach European soil. Figure 1 plots the number of emigrants from 16 West African countries with pending asylum claims against the number of return migrants who have been relocated to their origin country by international organizations (International Organization for Migration (IOM), "Assisted Voluntary Return and Reintegration" (AVRR) 2021). Importantly, such return programs only capture a small part of the actual numbers of return migrants, which include people who had to return from transit countries such as Niger,

Libya, or Tunisia. For them, no reliable numbers are available. Nonetheless, official statistics show that return migration is on the rise.

Figure 1: WEST AFRICAN ASYLUM SEEKERS AND RETURNEES
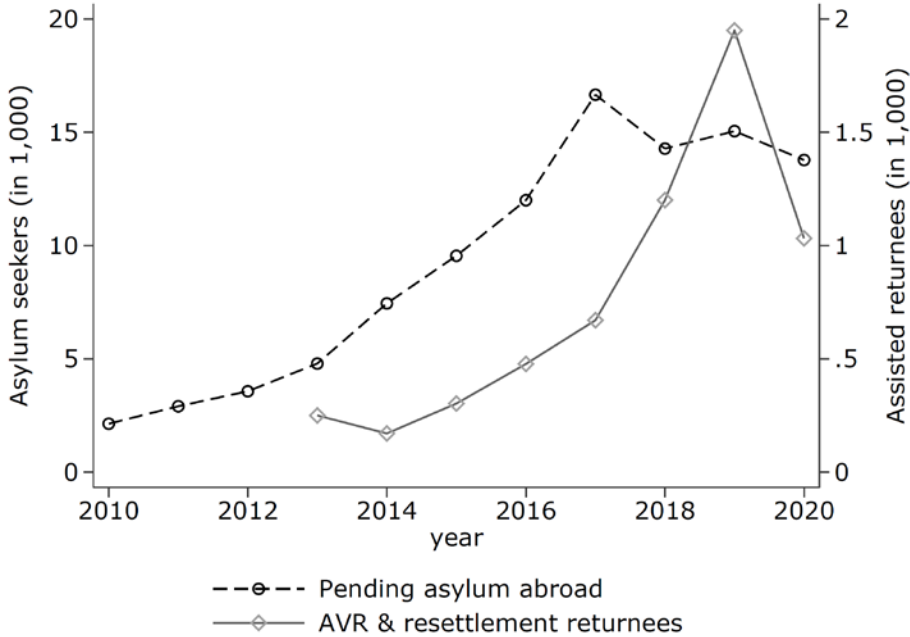
Note: The figure shows the number of West African nationals (in 1,000) with a pending asylum claim abroad and the number of officially registered returnees (in 1,000), comprising return migrants through IOM assisted voluntary return (AVR) and resettlement programs. *Covered countries:* Benin, Burkina Faso, Cabo Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo. *Source:* IOM (2021).

Information and networks are crucial for the formation of emigration intentions. However, most studies interested in the role of information in the migration process focus on migrant networks abroad, that is, how weak ties (contacts from the same origin living abroad) or strong ties (close relatives and friends) influence the migration propensity of stayers (e.g., McKenzie and Rapoport 2010).[2] Here, we shed light on how return migrants affect migration intentions among their local

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[2] Based on the assumption that past migration patterns explain subsequent migration—through networks or, broadly, information flows—an entire strand of research has emerged using shift-share instrumental variable approaches to estimate immigration effects (cf. Jaeger et al. 2018).

community using original representative survey data collected in the Senegambia region (The Gambia plus Senegal's Casamance region) in 2019 (N = 5,050). By systematically collecting information on respondents' relatives and friends, we gain unique insight into the past and present migration histories of more than 47,000 additional individuals in the region. Geolocating the responses allows us to map the number of return migrants at an exceptionally fine-grained spatial level. In doing so, we address an important caveat that most studies on the role of returnees face: who leaves and subsequently who returns is not random but typically an intentional choice influenced by the family and socioeconomic situation of individuals in the origin country (e.g., Wahba 2015). Analyzing the effect of returnees on other members of the household is thus challenged by endogenous migration decisions in the past. Therefore, we propose a less ambiguous measure of exposure to return migration—namely, the number of non-family returnees who live in the respondent's vicinity. Conditional on community characteristics and the current number of migrants (Hausmann and Nedelkoska 2018), how many migrants return is plausibly exogenous.

By leveraging variation in the number of return migrants in the individuals' immediate surroundings (census district of approximately 100 households in predominantly rural Senegambia), we investigate how people are affected by the stories of returnees, by their reintegration and well-being, and by how other community members think about them. We observe a substantial negative effect of returnees from Europe on individual emigration plans, while returnees from African countries do not alter emigration plans. It seems that the effect, on the one hand,, is driven by an increased perception of the riskiness of the journey, and, on the other hand, a widespread perception of returnees as failures, which leads them to be stigmatized and turns them into negative role models. Remittances from current migrants in Europe improve the economic situation of household members at home. However, households are not economically better off than their local peers once their family members return from Europe. In addition, people become aware of the dangers associated with undocumented migration to Europe through the back way.

Our study contributes to the relevant literature in three main ways: first, we shed light on the role of information flows through weak ties. Despite applying a coarse measure of mere spatial exposure, we observe that returnees, especially those returning from Europe, have substantial influence on their local surroundings. Second, our main findings contribute to the literature on the effect of return migration on sending communities. Here, studies have found that migrants influence their origin country upon return in various domains, such as the economy (e.g., Mayr and Peri 2008; Marchetta 2012; Hirvonen and Lilleør 2015), politics (e.g., Mercier 2016; Escribà-Folch et al. 2022), or crime (e.g., Bucheli et al. 2019).Whether and in which way they affect migration plans of stayers have hardly been investigated so far.[3] Third, we find considerable heterogeneity in the economic situation of households with return migrants depending on the region the migrants returned from. Information on these differential economic effects subsequently spreads within communities, with lasting effects on migration plans of other individuals. In that sense, our study also touches on the role of information campaigns and migration policy (e.g., Tjaden and Dunsch 2021).

2   Return Migrants in Origin Communities

Ample evidence indicates that return migrants influence their origin communities across various economic, societal, and political domains (see Hagan and Wassink 2020, for an overview). Return migration has been theorized to be one of the main channels through which migration can spur local development (de Haas 2005). Indeed, empirical work has linked return migration to various positive outcomes for both individuals and communities. These benefits include occupational upward mobility (Carletto and Kilic 2011; El-Mallakh and Wahba 2021), entrepreneurial

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[3] Among the few exceptions, Zhao (2003) and Giulietti et al. (2018) investigate rural-urban migration within China.

activity (Ammassari 2004; Piracha and Vadean 2010; Démurger and Xu 2011; Marchetta 2012; Wassink 2020; Bensassi and Jabbour 2022), lower crime rates (Bucheli et al. 2019), increased political participation (Batista and Vicente 2011; Waddell and Fontenla 2015; Escribà-Folch et al. 2022), and better governance (Mercier 2016). However, return is not uniformly associated with positive development outcomes. In severely resource-deprived contexts like rural Tanzania, Vietnam, or Burundi, return migration is sometimes driven by a failure to succeed elsewhere and does not lead to increased economic performance (Hirvonen and Lilleør 2015; Junge et al. 2015; Fransen et al. 2017). In line with this more sober view, Mezger Kveder and Flahaux (2013) show that in Senegal, self-employment upon return is often more a strategy of "last resort" than an expression of success.

Regarding migration plans of those who did not leave in the first place, however, almost no empirical accounts exist. Attanasio and Krutikova (2020) have recently demonstrated the importance of information sharing between households in Tanzanian communities that are roughly comparable to our case. Such information transmission has substantial effects on risky behavior—including migration—such that returnees can be assumed to affect these information flows in the origin communities. Relatedly, Levitt and Lamba-Nieves (2011) argue that "social remittances" (ideas, values) not only influence immediate family members and friends but also extend to neighborhoods and possibly even regions. Thus, we hypothesize that—besides someone's own family and friends—returnees in a person's vicinity, families of returnees, and families of current migrants also exert influence on a person's emigration calculus.

A study by Giulietti et al. (2018) on domestic migration within China is close to ours in terms of identification. The authors measure the number of return migrants in a municipality using data from the Chinese Rural Household Survey and find that exposure lowers first-time migration among stayers. Zhao (2003), in turn, finds no effect of returnees in a person's network on rural-urban migration propensity—again analyzing intra-China labor migration as the outcome.

Another related study by Manchin and Orazbayev (2018) uses cross-country Gallup data. They find not only that networks abroad promote individual migration intentions but also that close local networks (relatives, friends) reduce them. We interpret these findings as a strong case for the importance of information flows (i.e., networks) and that surrounding people affect a person's emigration intentions through direct contact and mere exposure. Importantly, while this study highlights the influence of information flows, it does not specifically address the role of returnees. Moreover, the data used imposes a coarse definition of networks, measured as the number of persons with domestic or international migration intentions from the same country. We overcome this limitation using fine-grained geocoded data at the local level (census districts).

Of course, the influence of current and return migrants is closely linked, which may bear important implications for locals who ponder a move. While many emigrate from economically poorer countries to provide for their families by means of remittances, return migration implies the petering out of this benefit. That is, locals who observe large numbers of people returning to their communities might be discouraged from emigration in anticipation of economically failed return. Saguin (2020), for instance, finds that overseas Filipino workers often return home broke, not least because most of their savings from abroad were already sent back as remittances (see also Wolff 2015, who finds that remittances of French migrants increase prior to return). Similarly, networks abroad constitute a key migration driver (Manchin and Orazbayev 2018; Stuart and Taylor 2021), which disappears once the anchor person returns from abroad.

Apart from the previously mentioned, mainly economic effects of returnees on their families and local communities, reintegration in the place of origin constitutes another key channel through which return migration may affect the subsequent emigration of exposed individuals. That is, migration plans should decrease if stayers perceive that the social and economic reintegration of return migrants in their neighborhood turns out to be challenging. In contrast, if returnees convey success, in the West African context for instance through a refurbished home, a satellite dish, or

simply word of mouth, return migrants may act as positive role models and encourage others'

plans. For mostly work-related return migration between developing or developed countries, sev-

eral studies find a wage premium and higher employment propensity among returnees (e.g.,

Wahba 2015). In the context of poorer countries from which most people emigrate as refugees

and are undocumented, reintegration appears to be much more of an uphill battle. In that case,

return often is challenging for those who need to reintegrate in their communities, from both an

economic and societal perspective. According to Nisrane et al. (2017), most Ethiopian women

who return from the Middle East struggle to secure a livelihood, and institutionalized reintegration

assistance seems of little help (Ruben et al. 2009; Martin and Radu 2012; Kleist 2017; Hirvonen

and Lilleør 2015; Junge et al. 2015; Fransen et al. 2017 provide similar findings in other contexts).

More recently, Bermudez and Paraschivescu (2021) have highlighted that the fear of failure con-

stitutes an important factor among Colombian migrants, and Arowolo (2000:73) even called re-

turn migration to sub-Saharan Africa a "nightmare for potential returnees trying to reintegrate."

Based on these accounts, we formulate a simple model of migration plans that captures standard

gravity model factors (Grogger and Hanson 2011; Ortega and Peri 2013) and the role of returnees:

$$M_{iod} = (u_d - \delta_{od}) \times w_{iod} - v_o \tag{1}$$

where the emigration desire M of individual i from origin o to destination d is determined by the

utility u in the destination (expected employment opportunities, social aspects, etc.) minus the

local utility v (employment opportunities, family ties, etc.) and a general term for the cost of

migration δ (monetary costs, risk of exploitation and abuse, etc.). Note that utility is not confined

to monetary aspects but includes a complex set of personal social influences. If utility in the des-

tination country is positive after discounting the utility at home and the cost of migration, the

individual will attempt to migrate. Importantly, both the expected utility abroad and the expected

costs of migration are influenced by a factor w, which captures information flows to the individual

from a destination (contact with current migrants or family members of current migrants) and

within the local community (including interaction with and information from return migrants, but also mere exposure). Therefore, *w* is our term of interest. Depending on the size of the discount factor—that is, how influential this information is and if it promotes or impedes migration—the perceived utility of migration can turn higher or lower than the benefits of staying. We will show that our empirical approach allows us to keep local idiosyncrasies and information from abroad constant, so that we can isolate the part that comes from return migrants. Information thereby does not only mean direct personal relationships but also weak ties and more general exposure (passing by a home, word of mouth, etc.), which are particularly relevant in smaller rural communities. We return to this point below when we provide an out-of-sample sensitivity analysis in Senegambia's metropolitan center Dakar.

In the following, we describe our data and identification strategy before we assess whether return migrants increase or decrease local migration plans. We will return later to the monetary versus non-monetary dichotomy and provide mechanisms that are likely to explain our main findings.

3 Data and Identification

We use original data from in-person interviews conducted in Senegal's Casamance region and The Gambia in 2019 (Figure 2). The Gambia is surrounded by Senegal on three sides and forms a coherent region with the Casamance in Senegal's south, which is marked by similar climatic conditions and a close economic and cultural exchange (CIA World Fact Book 2022). For instance, the dominant Mandinka and Djola tribes live on both sides of the border.[4] At the same time, being former British colonists, Gambians are English speakers (in addition to their local languages), in contrast to Senegal, which, as a former French colony, is predominantly French speaking. Moreover, while Senegal has enjoyed economic growth and relative institutional stability in recent years, The Gambia transitioned from dictatorship to multi-party

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[4] We also collected data in Dakar, Senegal's capital and the metropolitan hub for both Gambians and Senegalese. We introduce these additional data for sensitivity analyses in the robustness checks section below.

democracy in 2017, and ranks among the world's poorest countries. Collecting large-N survey data on migration plans in both regions is not only unique in that level of detail but also allows us to provide empirical evidence based on two relatively distinct settings within West Africa.

To collect our data, we first drew a random sample of census districts within eight spatial strata: one urban and one rural stratum each for The Gambia as one region ($\approx$ 2.2 million inhabitants) and Kolda, Sedhiou, and Ziguinchor as the three administrative bodies in the Casamance ($\approx$ 1.6mio inhabitants). Each region is divided into census districts (2,045 in the Casamance and 2,053 in The Gambia), composed of between 500 and 1,000 inhabitants each or approximately 100 households. Figure A.1 in the Appendix shows the population distribution across regions. These census districts are used by the respective statistical offices and function as our primary sampling units and later as our main identifying measure of exposure to returnees. Both regions are marked by rural settlement characteristics, with The Gambia's capital Banjul and Ziguinchor in the south as the only relevant urban centers. Accordingly, these census districts typically capture one small settlement or village. This is also why the fieldwork took place in the fall of 2019, after the harvesting season, to avoid seasonal bias. Within each of the eight strata, we randomly selected a population-proportional number of census districts, in which we conducted interviews with either 12 or 24 individuals.[5] Individuals were selected based on simple random selection. We recruited only young people aged 15 to 35 and oversampled male subjects because our interest was in understanding migration—a behavior that in West Africa is most common among young males. In total, we collected 5,050 interviews (average duration was 70 minutes) across 495 census districts. As a unique characteristic of our dataset, we asked respondents in exceptional detail about close family members and relatives, including their demographics, relationship to the respondent, and current and past whereabouts. Respondents were asked to answer this part of the interview with the help of household members, who were present at the time of the interview. On

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[5] These numbers were fixed for logistical reasons: enumerators (4 + 1 supervisor) had to travel to very remote villages together in a jeep. Two census districts had to be replaced because of security concerns.

average, respondents provided information on nine relatives ($f_{min} = 2$; $f_{max} = 50$), providing 47,517 additional observations.[6] We present detailed summary statistics at the respondent, family, and district levels in Table A.1 in the Appendix. In Figure A.2, we plot the unadjusted correlations between current migrants, returnees, and migration plans.

Figure 2: INTERVIEW LOCATIONS
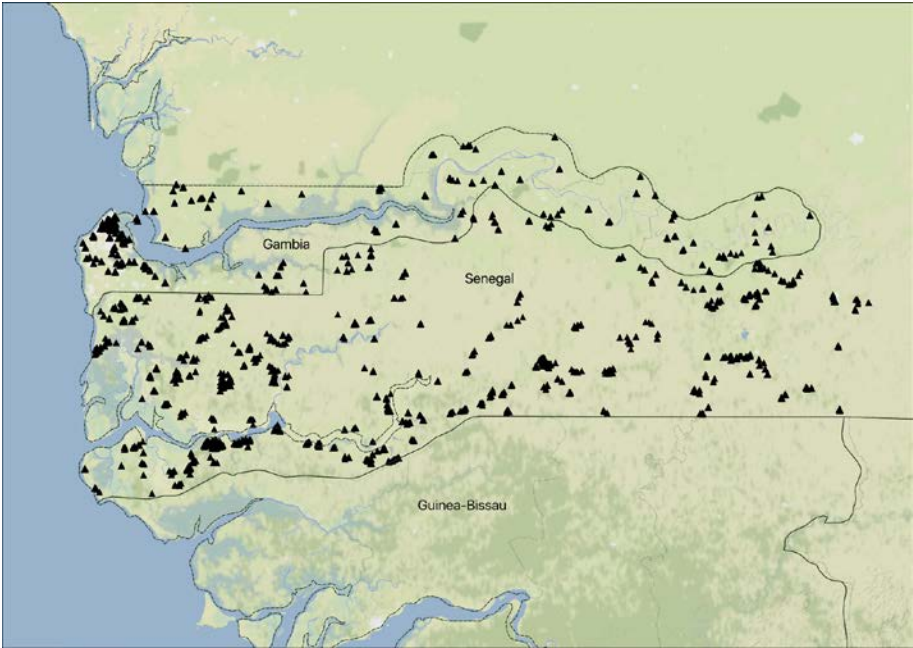
Note: The map shows the random interview locations within population-, age-, gender-, and religion-sampled enumeration districts in Senegal's Casamance region and The Gambia.

With this exceptionally rich and fine-grained spatial data, we attempt to solve the fundamental identification issue in migration research: migration does not occur at random (e.g., Campos-Vazquez and Lara 2012; Batista et al. 2017). The same applies to return migration. In fact, a related literature focuses on migrants abroad and their decision to stay or return (e.g., Dustmann 1997, 2003). Among the studies that identify endogenous return as an issue in the first place, most

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[6] We cannot entirely rule out that some of the 47,517 observations refer to the same individual (e.g., two young men in a locality mentioning the same friend). To test for possible double-counting, we make use of the names of each of the respondents' friends. Within a district 93% of names mentioned are unique and 97% among friends who are former migrants (4 friends who are returnees have been stated by two respondents in the same district). Hence, we do not consider double counting an issue for our analysis.

apply instrumental variables approaches.[7] Hausmann and Nedelkoska (2018), for instance, use the share of return migrants who were born in the district of return and the distance to the Greek border to instrument endogenous return migration from Greece to Albania. They find that returnees positively affect employment and wages of stayers. Bertoli and Marchetta (2015) use fluctuations in the real price of oil to instrument endogenous individual emigration choices, while others use classical shift-share approaches to instrument current with historical migration/return patterns (e.g., Chauvet and Mercier 2014).

Our approach to recover causal effects differs from previous studies in two ways: first, in contrast to most studies that investigate the decision-making process of return migrants from an economic utility maximization perspective (e.g., Dustmann 1997), return to West Africa from overseas is predominately involuntary. Among respondents in our sample who returned while being in or on the way to Europe, 29% returned because they achieved their goals (voluntary return), while 71% were forced to return, mainly because of danger to their lives (16%), lack of financial resources (10%), or family reasons (29%, including financial constraints or hardship of those left behind). We return to heterogeneous effects depending on the destination (Europe vs. Africa) below. Second, our measure of exposure to return migrants allows us to differentiate between strong ties (relatives) and weak ties (non-family members). We define the level of exposure to return migrants as the number of individuals in a person's vicinity who returned from abroad and who are not related to the person. Conditional on observed current migrants and location effects, the number of these non-family returnees is exogenous (as opposed to endogenous returnees from one's family), allowing us to isolate the causal effect of exposure to return migration on emigration aspirations.

For our preferred identification, we exploit conditionally random return migration in combination

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[7] Related literature uses exogenous shocks for causal identification, such as agricultural plagues (Batista et al. 2017) or changes in hiring rules in a firm (Choudhury 2016).
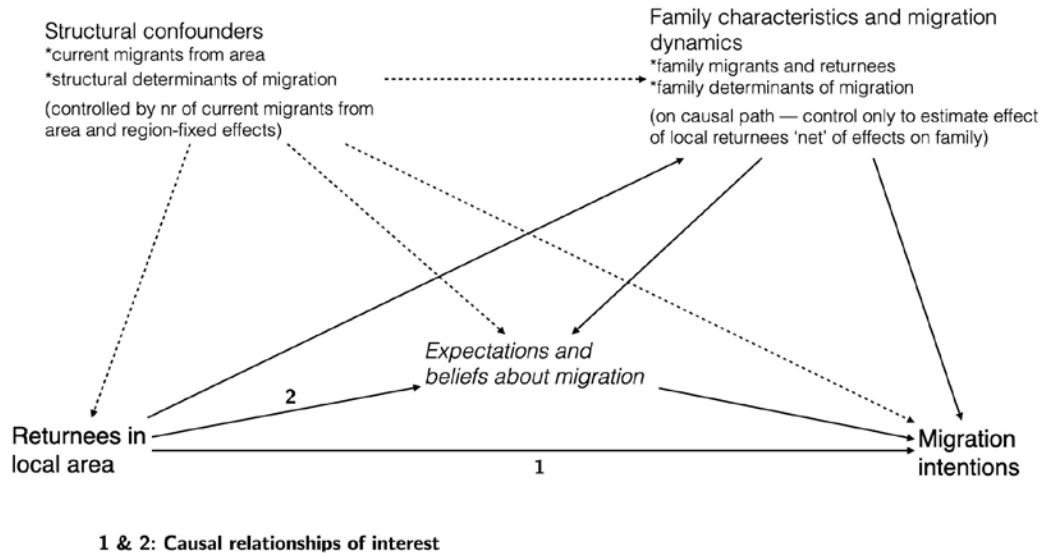
with exceptionally fine-grained population-representative spatial data. Our main variable of interest is the number of returnees in the area. We take endogenous emigration as a given. That is, whether people leave and to which destination do not occur at random but depend on a plethora of characteristics inherent to the individual and the surroundings. Therefore, we need to allow for baseline differences in emigration and return propensity across census districts. Conditional on local factors and the number of current migrants from a census district—the population from which returnees can emerge—variation in the number of return migrants is plausibly exogenous (cf. Hausmann and Nedelkoska 2018).[8] Hence, we can estimate its effect on migration plans among stayers.

Our data further allows us to distinguish between strong and weak ties to returnees. To avoid our estimates being biased by endogenous family migration propensity, we exclude direct strong ties of a respondent (current and return migrants in respondents' family trees, including up to three friends) from our measure of local exposure to returnees. Hence, our measure of respondent's i exposure to returnees R (weak or absent ties) is defined as the total number of return migrants in a given census district o minus the number of current family migrants f (strong ties)[9]: $R_{iof} = r_o - r_{if}$. Returnees and current migrants within the respondent's family r_{if} can themselves be affected by exposure to local non-family returnees, so we do not want to control for these strong ties when we want to estimate general effects (cf. de Coulon and Piracha 2005; Rooth and Saarela 2007; Dustmann et al. 2011). We only add r_{if} to our model when estimating the effect of non-related returnees on individual migration plans net of its effects on the number of returnees within the respondent's family. Figure 3 summarizes our identification argument.

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[8] Note that the number of current migrants from and returnees in a district is not the total number in the area, which is unobserved but based on our survey. However, assuming random sampling went well and we obtained a representative sample, this number should be proportional to the total number of migrants/returnees in districts.

[9] We use the same specification to calculate local exposure to current migrants abroad.

Figure 3: CAUSAL PATH

Structural confounders
*current migrants from area
*structural determinants of migration

(controlled by nr of current migrants from
area and region-fixed effects)

Family characteristics and migration
dynamics
*family migrants and returnees
*family determinants of migration

(on causal path — control only to estimate effect
of local returnees 'net' of effects on family)

Expectations and
beliefs about migration

Returnees in
local area

Migration
intentions

2

1

1 & 2: Causal relationships of interest

Note: The figure shows the causal relationship between return migration and individual emigration plans.

As shown in Table A.1 in the Appendix, we observe 0.8 returnees from Europe or from another African country in a given district, on average ($R_{iof_{min}} = 0$; $R_{iof_{max}} = 12$, which is capped by the maximum number of interviews per district). Relative to the sampled population in a district ($\bar{N} = 110$), the average emigration rate is approximately 7.5% and the average return migration rate relative to current migrants is roughly 10% (i.e., one returnee for every ten current migrants) and less than 1% relative to the sampled population (i.e., among 100 persons observed in a district, about 0.7 are return migrants). We observe somewhat higher return migration rates in Dakar, Senegal's capital and the region's migration hub. These figures are plausible for the Senegambia region and correspond to related studies. For instance, Chauvet and Mercier (2014) use census data from neighboring Mali and find that approximately 3% of the population were return migrants (self-reported in 2009).

To capture migration plans, we use an indicator variable that takes on the value one if the respondent stated "concrete emigration plans within the next 12 months" and zero otherwise. In addition, we asked about the aspired destination in broad terms (e.g., Europe). This allows us to

identify people with manifest emigration intentions and to differentiate between destinations. To avoid small sample issues, we only distinguish between emigration intentions to Europe (risky, high expectations) and emigration intentions to another African country (relatively safe, established destinations).

We specify individual emigration plans M of individual i in family f as a function of local, non-family return migrants R in district o, which is our proxy for w_{iod} introduced in Equation 1; τ thus is our coefficient of interest. To account for selection, as discussed above, we adjust for current migrants m from the area, the district population n, and region fixed effects λ_l. We also add a set of individual controls X'_i (gender, age, marital status, education).

$$M_{ifol} = \alpha + \tau\,R_{iof} + \psi m_o + \delta n_o + \lambda_l + \beta\mathbf{X'}_i + \varepsilon_{ifol} \qquad (2)$$

In the second main specification, we are interested in the effect of returnees on individual emigration plans net of family effects (Figure 3). Therefore, we add individual past migration experience k, current family migrants p, and family returnees to the vector $\mathbf{H'_i}$
as well as economic individual and household characteristics (respondent employment, household economic situation, land ownership), which may be influenced by return migration effects.

$$M_{ifol} = \alpha + \tau\,R_{iof} + \psi m_o + \psi k_i + \psi p_{if} + \delta n_o + \lambda_l + \beta\mathbf{X'}_i + \beta\mathbf{H'}_i + \varepsilon_{ifol} \qquad (3)$$

As a first step, we assess whether our model specification accommodates endogenous return migration. As described, we assume that the number of non-family returnees in a census district is exogenous once we condition on the number of current migrants. One way to test this is to regress relevant census district and respondent characteristics on the presence of returnees. That is, we define a binary indicator that equals one if any return migrants outside the respondent's family

are present in the area and zero otherwise. Figure 4 shows no correlation between the number of current migrants and any of the district characteristics even before adjusting for current migrants from the district. We use official census data (female share, young residents, Muslim share) and our own survey data (below the horizontal line in Figure 4). Still, most coefficients converge even closer toward zero after adjustment.

Figure 4: ASSOCIATION OF DISTRICT DEMOGRAPHICS WITH THE PROBABILITY OF RETURNEES IN THE AREA

◇ Before adjustment
○ After adjusting for current migrants
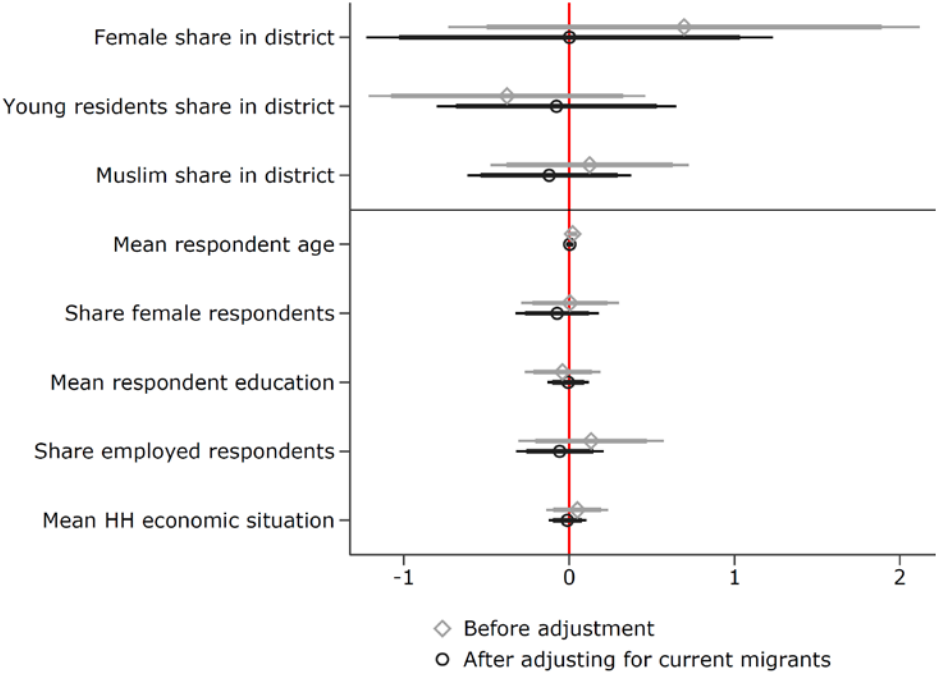
Note: The figure shows the effect of district-level demographics and economic outcomes on the probability of observing any return migrants (binary indicator) in the same area using separate OLS regressions. Young residents are defined as residents aged 15 to 35. Muslim share is only available for The Gambia. Data based on 2013 national census in Senegal and The Gambia. Standard errors clustered at the region level; 90% and 95% confidence intervals shown.

We further test for individual sorting among our respondent sample. Similar to district characteristics, Figure 5 shows that the presence of return migrants is fairly balanced across respondent characteristics, even before adjusting for current migrants. Only singles and respondents without paid work seem to concentrate in locations with return migrants, which is plausible given that

urban centers are likely associated with both more unemployed/singles and more return migrants.

These differences disappear after adjusting for the number of current migrants in a census district.

Thus, we infer that the number of local returnees is indeed conditionally exogenous.

Figure 5: ASSOCIATION OF RESPONDENT CHARACTERISTICS WITH THE PROBABILITY OF RETURN-
EES IN THE AREA
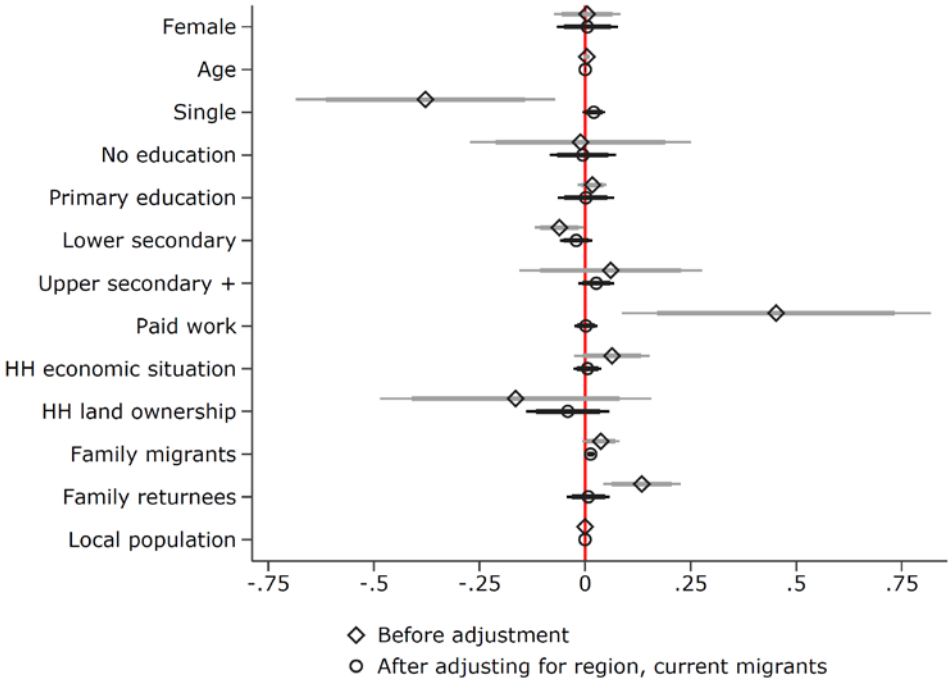
Note: The figure shows the effect of individual respondent characteristics on the probability of observing any return migrants (binary indicator) in the same area using separate OLS regressions. Standard errors clustered at region level; 90% and 95% confidence intervals shown. Figure A.4 in the Appendix shows the balancing for district-level characteristics.

4 Results

Our main results are shown in Table 1. In Models 1 and 2, the dependent variable is the propensity to express emigration intentions to an African country other than the country of residence, and the main explanatory variable is the number of returnees from other African countries. Model 2 additionally adjusts for individual and family migration patterns to derive the returnee effect net

of family effects. Neither specification shows a statistically significant coefficient for the number of returnees in the location. We infer that the intention to migrate within Africa (predominantly within ECOWAS)—which follows established routes, is relatively safe, and is typically temporary—is not affected by the presence of returnees in the location. Model 3 shows that there are also no cross effects from returnees from destinations beyond Africa. In other words, neither exposure to returnees from Africa nor exposure to migrants from other destinations seems to have any bearing on migration intentions to destinations within Africa.

The picture changes considerably when we look at the effect of returnees from Europe on migration plans to Europe (Models 4 to 6). Here, we observe a clear negative relationship, meaning that with the presence of return migrants from Europe, people are discouraged to migrate to Europe themselves. The effects are not only statistically significant but also sizeable. For every additional returnee in the area, the probability to express emigration plans decreases by approximately 1 percentage point. Emigration plans range from 0 to 100, such that the reduction in emigration plans to Europe amounts to approximately 12% at the sample mean of 8.297. The coefficient only changes marginally when looking at net-of-family-effects (Model 5). Model 6 again tests for cross effects, showing that returnees from other African countries do not affect migration plans to Europe. The effect sizes are comparable to related studies in the region. Tjaden (2022: 8), for instance, shows that among respondents in Senegal and Guinea the perception of "a very high risk for life or violence reduces the likelihood of wanting to migrate irregularly by 20 percentage points" (from the sample mean of 30.8%).

Table 1: EFFECT OF LOCAL RETURNEES ON MIGRATION PLANS

	within Africa			to Europe		
	(1)	(2)	(3)	(4)	(5)	(6)
Local returnees (Africa)	-0.140	-0.109	-0.111			-0.410
	(0.302)	(0.307)	(0.308)			(0.436)
Local returnees (Europe)			-0.333	-1.001**	-0.998**	-1.001**
			(0.237)	(0.449)	(0.449)	(0.449)
Female	0.270	0.124	0.140	-1.329	-0.393	-0.372
	(0.404)	(0.430)	(0.429)	(0.821)	(0.850)	(0.848)
Age	-0.085***	-0.065**	-0.065**	0.045	-0.047	-0.046
	(0.030)	(0.031)	(0.031)	(0.076)	(0.081)	(0.081)
Single	-0.318	-0.223	-0.209	-0.755	-0.275	-0.266
	(0.455)	(0.449)	(0.448)	(1.113)	(1.116)	(1.116)
[2]Primary education	1.749***	1.837***	1.849***	-0.815	-0.747	-0.745
Refcat: [1]no education	(0.645)	(0.647)	(0.647)	(1.117)	(1.110)	(1.109)
[3]Lower secondary	0.926*	1.229**	1.248**	-0.301	0.162	0.135
	(0.539)	(0.556)	(0.553)	(1.074)	(1.083)	(1.085)
[4]Upper secondary or higher	0.668	1.069**	1.098**	2.239*	2.883**	2.871**
	(0.516)	(0.539)	(0.537)	(1.223)	(1.240)	(1.241)
Paid work		-0.775**	-0.768**		4.395***	4.395***
		(0.358)	(0.358)		(1.103)	(1.103)
[1]Money insufficient for food		2.226***	2.207***		4.507***	4.499***
Refcat: [3]Money enough for basics		(0.438)	(0.438)		(1.121)	(1.121)
[2]Money insufficient for basics		0.866**	0.853**		1.428	1.445
		(0.373)	(0.373)		(1.112)	(1.115)
[4]Money enough for durables		0.189	0.199		-0.108	-0.144
		(0.481)	(0.482)		(1.651)	(1.649)
[5]Can afford most		0.589	0.624		3.367	3.272
		(1.003)	(1.004)		(2.523)	(2.507)
Land owner		0.172	0.166		1.359*	1.335*
		(0.378)	(0.378)		(0.782)	(0.782)
Respondent returnee (Europe)		4.939*	4.950*		5.178	5.187
		(2.615)	(2.614)		(4.447)	(4.441)
Respondent returnee (Africa)		0.835	0.805		0.679	0.660
		(0.851)	(0.853)		(2.327)	(2.326)
Current family migrants		0.089	0.093		0.347*	0.352*
		(0.112)	(0.112)		(0.197)	(0.197)
Family returnees		-0.969***	-0.973***		2.010	2.070
		(0.331)	(0.332)		(1.394)	(1.394)
Current local migrants	0.041*	0.045**	0.059**	0.070*	0.053	0.071
	(0.022)	(0.022)	(0.024)	(0.041)	(0.042)	(0.045)
Local population in district	0.001	0.001	0.001	0.007***	0.007***	0.007***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
Constant	0.923	-0.895	-0.982	0.349	-3.518	-3.685
	(1.073)	(1.129)	(1.127)	(2.817)	(3.022)	(3.027)
Region FE	✓	✓	✓	✓	✓	✓
R2	0.058	0.065	0.065	0.029	0.039	0.039
Observations	5050	5050	5050	5050	5050	5050
Mean DV	1.899	1.899	1.899	8.297	8.297	8.297

Notes: The Table presents the effects of exogenous returnees in the respondents' area (from African countries or Europe) on individual emigration plans (binary DV "Have you made concrete plans to move within the next 12 months?" 100). Migrants/returnees from/in area calculated as sum in geographical region minus respondent's own family. Additionally adjusted for region fixed effects (The Gambia, Kolda, Sedhiou, Ziguinchor). OLS, Robust SE in parentheses. * p< 0.10 ** p< 0.05 *** p< 0.01.

The coefficients of the remaining covariates have the expected signs (e.g., poverty unanimously increases emigration desire); yet, there is relevant heterogeneity between the aspired

destinations.[10] While the emigration desire to another African country decreases with age (which, in our sample, is between 15 and 35), age has no effect on plans to migrate to Europe. In addition, individuals with lower levels of education are more attracted to within-African migration, whereas Europe is the desired destination for individuals with higher levels of education. This can be explained by the nature of both types of migration: temporary relocation within Africa is often driven by seasonal work, for instance, harvesting in neighboring Guinea-Bissau, whereas migration to Europe is mainly attractive for the highly skilled who can benefit from higher returns to education.

4.1   Sensitivity analyses

Before we turn to likely mechanisms for these effects, we perform several sensitivity checks to assess the robustness of our results.

Measurement error: First, we replace economic indicators by a more general measure of life satisfaction. This alternative specification addresses possible measurement error of our economic variables (employment and income situation). Our main specification already uses an intuitive question on what goods a household can afford instead of a monetary income measure. However, the perception of what is affordable may be biased as well. As shown in Table A.2 in the Appendix, Models 1 and 2, the results do not change when estimating this alternative model of general life satisfaction. In Models 3 and 4, we standardize the number of returnees, showing that one standard deviation increase in the number of returnees from Europe is associated with a 0.82 percentage point decrease in emigration plans to Europe (minus 9.4% at the sample mean). As in our main specification, we observe no effect of the standardized number of returnees from another African country on within-African emigration plans.

Local idiosyncrasies: Second, in our main specification, we adjust for region fixed effects.

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[10] Note that we sampled only locals aged 15 to 35 and that respondents who expressed emigration plans could subsequently indicate only one target destination.

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To further rule out the omission of structural confounders as a potential endogeneity source (e.g., local shocks that simultaneously affect return migration and emigration plans), we define a series of fine-grained geographical grids based on the geolocated responses and introduce them as alternative fixed effects specifications. Table A.3 in the Appendix shows that our results are robust to these more demanding estimations. In fact, the effect sizes of exposure to returnees from Europe on emigration plans are slightly higher when controlling for idiosyncrasies in smaller grids, which plausibly indicates that networks are better reflected by smaller grids. Eventually, we estimate the main specification using 495 unique census districts as geo fixed effects (Model 6). While we continue to observe no effect of returnees from another African country, the effect of returnees from Europe increases sharply and remains statistically significant at the 10% level.

Unobserved heterogeneity: Third, we assess whether unobserved individual confounders could affect our results. For instance, we did not ask sensitive questions about the respondents' health condition, pregnancies, or local rebel threat in Senegal (cf. Schaub and Auer 2022). Such unobserved factors might also affect emigration plans. We quantify the omitted variable bias potential by estimating coefficient bounds under the assumption of proportional selection (Altonji et al. 2005; Oster 2019). The test assumes that observed and unobserved variables proportionally predict exposure to the local number of return migrants and analyzes the movement of the R-squared in unadjusted and controlled specifications. According to Panel A of Table A.4 in the Appendix, assuming a maximum $R^2 = 0.051$ ($R^2_{max} = 1.3 \times R^2$), unobserved confounders would need to be more than 16 times more informative than all observed factors to reduce the coefficient of local return migrants to zero. Even in a very conservative scenario of a $R^2 = 0.250$ (almost 10 times the main model's R^2), unobserved variables would need to explain as much of the residual variance as all observed confounders to produce $\tau = 0$.

Omitted variable bias: Fourth, following Cinelli and Hazlett (2020), we take the partial R-

squared of local return migrants with emigration plans to estimate how strong the relationship between returnees and an unobserved confounder would need to be to reduce the returnee coefficient to zero. Figure A.3 in the Appendix shows that an unobserved variable that is more than 20 times the variation in emigration plans than the respondent's employment situation (variable "job") would still not yield a zero effect of local return migrants (local returnees coefficient in main model: –1.397; assuming confounder 20xjob variable: –0.52). Hence, we infer from both tests that our results are highly unlikely to suffer from omitted variables bias.

Out-of-sample test: Fifth, we perform an out-of-sample test based on respondents from the same survey located in Dakar (additional $N = 1{,}008$). Dakar, with more than 1 million inhabitants, is the dominant metropolitan center for both Senegal and The Gambia, with significant urban anonymity and fluid district borders. We hypothesize that local returnees have less of an influence on migration plans in large urban conglomeration as compared to small rural villages because network formation differs. Information flows are hence less driven by spatial vicinity. Panel B in Table A.4 in the Appendix corroborates this hypothesis, as we do not find any effect of local returnees on individual emigration plans among respondents in Dakar using the main specification of Equation 2.

4.2   Mechanisms

There are two main explanations that may explain why return migration should affect individual emigration plans. A first possibility is that migrants may have succeeded economically, which would render subsequent individual emigration obsolete. While this channel should be particularly relevant within a family or household, local returnees may also affect local economic outcomes (Démurger and Xu 2011; Marchetta 2012; Hagan and Wassink 2020; Wassink 2020). A second possibility is that exposure to unsuccessful returnees—by word of mouth or visual awareness in small communities—might affect the perceptions of the

expected gains from migrating. Successful returnees may be role models encouraging young people in the area to migrate However, when economic benefits fail to materialize or remittances peter out after return, the perception of suffering during migration and social punishment upon return may gain importance.

Table 2: ASSOCIATION BETWEEN (RETURN) MIGRANTS AND ECONOMIC WELL-BEING

Panel A.: Household economic situation

| | Local/family migrants/returnees | | | |
| | in/from Africa | | in/from Europe | |
	(1)	(2)	(3)	(4)
Local returnees, std.	0.000	-0.001	0.008	0.008
	(0.003)	(0.003)	(0.007)	(0.007)
Current family migrants, std.		0.001		0.040***
		(0.004)		(0.005)
Family returnees, std.		0.009**		0.007
		(0.004)		(0.006)
Respondent X	✓	✓	✓	✓
Region FE	✓	✓	✓	✓
Local migrants	✓	✓	✓	✓
R2	0.136	0.137	0.136	0.161
Observations	5050	5050	5050	5050
Mean DV	0.914	0.914	0.914	0.914

Panel B.: Remittances as main source of HH income

| | Local/family migrants/returnees | | | |
| | in/from Africa | | in/from Europe | |
	(5)	(6)	(7)	(8)
Local returnees, std.	0.002	0.001	-0.004	-0.005
	(0.004)	(0.004)	(0.008)	(0.007)
Current family migrants, std.		-0.003		0.063***
		(0.004)		(0.007)
Family returnees, std.		0.003		-0.003
		(0.004)		(0.008)
Respondent X	✓	✓	✓	✓
Region FE	✓	✓	✓	✓
Local migrants	✓	✓	✓	✓
R2	0.066	0.067	0.066	0.132
Observations	5050	5050	5050	5050
Mean DV	0.052	0.052	0.052	0.052

Notes: The table presents the effects of exogenous migrants/returnees in respondents' area (from African countries or Europe) and endogenous family migrants/returnees on respondents' household economic situation. Migrants/returnees standardized for coefficient comparability. In Panel A. the household economic situation (5 categories from "Money is not enough for food" to "Can afford almost everything") is standardized. Panel B. estimates to probability that the household main income source is remittances (indicator variable). Migrants/returnees from/in area calculated as sum in geographical region minus the respondent's own family. Individual controls include gender, age, family status, education, land ownership, past migration. Additionally adjusted for region fixed effects (The Gambia, Kolda, Sedhiou, Ziguinchor). OLS, robust SE in parentheses. * p< 0.10 ** p< 0.05 *** p< 0.01.

In Table 2, we first estimate the effect of current local and family migrants on the economic situation of the respondents' households (Panel A). We estimate the same Equations 2 and 3 as above but replace the dependent variable of individual migration plans with the economic situation of the household (five-point scale standardized to range from zero to one). Neither non-family returnees from Africa nor those from Europe affect the economic situation of other households in the area. Regarding (endogenous) family migration, current family migrants in Europe increase the household's economic situation (Model 4 in Table 2) by 0.04 percentage points, while there is no association between current migrants in another African country (Model 2). In contrast, family returnees improve the household's economic situation only when returning from another African country but not from Europe.

In Panel B of Table 2, we assess whether remittances constitute a household's main source of income. Again, we find no effect of local non-family returnees. Similarly, the remittances reception propensity remains unaffected when the family members reside in another African country but increases when family members live in Europe. This allows us to confirm some assumptions about the nature of migration. Migration within West Africa is typically temporary with the purpose of seasonal work or trading and follows established and relatively safe routes. This form of mobility typically does not provide remittances during a family member's stay abroad but is able to improve the economic situation upon return. Migration to Europe, in turn, being more expensive and considerably riskier, comes with the short-run promise of money sent back to the families. However, after remittances have petered out, households no longer seem to benefit.

Table 3: EFFECT OF RETURNEES ON MIGRATION PERCEPTIONS

Panel A.: Negative experiences on route or abroad

| | Local/family migrants/returnees | | | |
| | in/from Africa | | in/from Europe | |
	(1)	(2)	(3)	(4)
Local returnees, std.	-0.016**	-0.016**	0.030**	0.031**
	(0.008)	(0.008)	(0.015)	(0.015)
Current family migrants, std.		0.013*		-0.015*
		(0.007)		(0.008)
Family returnees, std.		-0.004		0.007
		(0.008)		(0.010)
Respondent X	✓	✓	✓	✓
Region FE	✓	✓	✓	✓
Local migrants	✓	✓	✓	✓
R2	0.070	0.071	0.070	0.071
Observations	5050	5050	5050	5050
Mean DV	0.360	0.360	0.360	0.360

Panel B.: Involuntary returnees are seen as failure

| | Local/family migrants/returnees | | | |
| | in/from Africa | | in/from Europe | |
	(5)	(6)	(7)	(8)
Local returnees, std.	-0.007	-0.009	0.021*	0.021*
	(0.007)	(0.007)	(0.013)	(0.013)
Current family migrants, std.		0.007		-0.020**
		(0.007)		(0.009)
Family returnees, std.		0.014**		0.016*
		(0.006)		(0.009)
Respondent X	✓	✓	✓	✓
Region FE	✓	✓	✓	✓
Local migrants	✓	✓	✓	✓
R2	0.127	0.129	0.128	0.120
Observations	5050	5050	5050	5050
Mean DV	0.727	0.727	0.727	0.727

Notes: The table presents the effects of exogenous migrants/returnees in respondents' area (from African countries or Europe) and endogenous family migrants/returnees on respondents' perceptions about migration. Migrants/returnees standardized for coefficient comparability. Panel A. uses an indicator variable based on the questions "Have migrants who returned had many negative experiences, such as violence, danger for life, loss of property?" and "What was the quality of life abroad for migrants before they returned?", which takes the value one if the respondent states on average that the majority have made negative experiences on route/abroad and zero otherwise. Panel B. creates an indicator variable that takes the value one if the respondent thinks that migrants who involuntarily had to return are seen as a failure in their community and zero otherwise. Individual controls include gender, age, family status, education, employment, financial resources, land ownership, past migration. Additionally adjusted for region fixed effects (The Gambia, Kolda, Sedhiou, Ziguinchor). OLS, robust SE in parentheses. * $p< 0.10$ ** $p< 0.05$ *** $p< 0.01$.

Having shown that the presence of non-family returnees does not change the local economic situation and thus is an unlikely explanation for the negative effect of returnees on migration plans, we assess whether returnees alter the perception of the migration process among respondents. In doing so, we focus on two important determinants when people form their migration plans: the manifold threats of undocumented migration (e.g., Al Tamimi et al. 2020) and the fear of being branded as a failure in case of unsuccessful/early return (e.g., Kleist

2017; Bermudez and Paraschivescu 2021). Panel A of Table 3 first shows that local non-family returnees from another African country have a significant negative effect on respondents' perception that migrants had negative experiences en route or abroad (Models 1 and 2).[11] This perception, however, increases significantly with returnees from Europe in the census district (Models 3 and 4). Both effects remain robust to the inclusion of family migrants and returnees. A similar pattern emerges in Panel B of Table 3, in which we estimate the probability that involuntary returnees are seen as failures.[12] Again, returnees from Africa do not alter respondents' perceptions, while non-family returnees from Europe significantly increase the probability of returnees being branded as failures. Together, Tables 2 and 3 allow us to shed light on the mechanisms that likely explain the detrimental effect of European return migration on the emigration propensity. Arguably because they tend to return without savings, returnees are widely seen as failures; therefore, they likely serve as negative role models (i.e., role models as to how *not* to behave), thereby discouraging other aspiring migrants. Further, exposure to returnees from Europe raises awareness of the threats undocumented migration poses to their life and belongings.

5   Conclusion

Return migration is a growing phenomenon in times of fast increasing mobility and displacement (McAuliffe and Khadria 2020). Recent estimates suggest that every fourth migratory movement is a return to the person's country of birth (Azose and Raftery 2019). The extant literature has mainly focused on the aggregate-level, economic impacts of returnees on their sending communities, either while abroad (e.g., Wolff 2015) or upon return (Hagan and Wassink 2020).

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[11] The question was intentionally formulated in general terms ("negative experiences") to avoid discomfort among the respondents who may have family members who suffered from violence and abuse during migration or may have experienced such traumatic events themselves.
[12] Here, too, we chose a general term that includes deportation, early return from the destination, or failed migration attempts and return from transit countries.

Here, we address one important question: How do return migrants affect the migration plans of people in their vicinity? Conceptually, our findings highlight the importance of weak ties in migration decision-making. Politicians and bureaucrats are very involved in migration management, and chain migration has become a conservative talking point (Lind 2018), while the question has so far received little attention in the scientific literature. Among the few exceptions, Tjaden and Dunsch (2021) conducted a randomized control trial in Dakar and found that information campaigns raise awareness about risks, and reduce intentions to migrate irregularly (see also Beber and Scacco 2020). We take these results one step further and argue that information flows through weak ties exert considerable influence, such that mere exposure by means of spatial vicinity can change the perceptions of and intentions to migrate.

We conducted an original geolocated representative survey in Senegal and The Gambia among 5,050 respondents with additional information on the migration patterns of more than 47,000 family members and friends. This allows us to establish a detailed picture of exposure to return migrants that is exogenous conditional on current migrants from the same area. Our results show that migration plans decrease with increasing numbers of returnees in the area, but only when these migrants returned from Europe. Return migration from another African country (mostly within ECOWAS), in turn, does not alter respondents' plans.

Our study also contributes to the previously-mentioned literature on the economic effects of returnees on their surroundings. Our results suggest that non-family returnees do not alter the economic situation in the area, but family migrants and returnees do in their peer network. While migrants within Africa improve the household economic situation upon their return, migration to Europe improves the economic situation through remittances. However, returnees typically seem to return without savings and are hence stigmatized as failures. This finding stands in contrast to the dominant finding in the literature that returnees often improve local economic performance, and returnees are hence seen as role models to be imitated (e.g., Hausmann and Nedelkoska 2018; Wassink 2020). What is more, the perception of stayers that

return migrants from Europe had negative experiences increases with the number of local returnees and further deflates migration plans among stayers.

Our study does not come without limitations. First and foremost, we focus on two countries with traditionally high emigration rates. This setting creates a gap in the heterogeneous perception of migration depending on the destination that allows us to credibly identify different mechanisms at play. At the same time, generalizability beyond lesser developed countries might be limited, not least because in our case, return migration is typically associated with deportation or early return while in transit. Within developed countries, in turn, return migration is rather a question of optimal timing (Dustmann 1997), and most studies find that return migration is accompanied by economic benefits (e.g., Wahba 2014). Second, we cannot estimate heterogeneous effects across single destination countries and time spent abroad due to sample sizes and the inability of respondents to verify the exact duration of migration spells of up to 50 family members in the questionnaire. Third, we only measure how people perceived return migrants, but not which stories exactly spread through networks. For instance, in the case of The Gambia 2019, it could be that return migrants provide information on more restrictive European immigration policies, such that emigration plans would decrease. While we regard failure because of deportation a negative story as well, the policy implications might differ from stories about dangerous routes, for instance. Future research should investigate the return motives and reasons in more detail to provide more targeted policy recommendations. Fourth, our identification strategy does not allow us to assess the relative importance of strong ties. We adjust for family migration to estimate effects net of family effects but acknowledge its endogeneity. To compare strong with weak ties, experimental approaches would be necessary (e.g., Giulietti et al. 2018). Future research should address whether return migrants have similar effects on their surroundings in different geographical and sociopolitical contexts.

In sum, our study is among the first to look at the role of return migrants in future migration

plans of locally exposed people. While several studies find that diasporas constitute one of the strongest pull factors (e.g., Manchin and Orazbayev 2018), we argue that returnees—who convey firsthand information and stories through weak ties—also play a decisive role in migratory behavior.

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Online supplement

Returning from Greener Pastures?

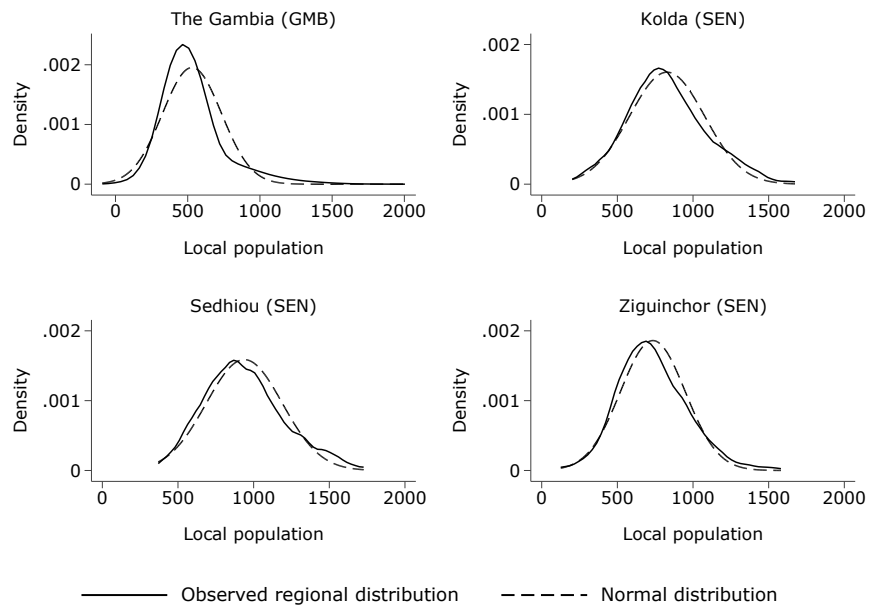**How Exposure to Returnees Affects Migration Plans**

Figure A.1: POPULATION SIZE IN ENUMERATION DISTRICTS ACROSS
REGIONS

Note: The figure shows population size distribution across enumeration districts within the four
main regions of The Gambia and the Casamance in Senegal.

2

Table A.1: SUMMARY STATISTICS

Panel A.: *Respondent characteristics*

	Mean (1)	SD (2)	Min (3)	Max (4)
Age in years	22.887	5.817	15.000	35.000
Female	0.353	0.478	0.000	1.000
Single	0.761	0.426	0.000	1.000
No education	0.253	0.435	0.000	1.000
Primary education	0.200	0.400	0.000	1.000
Lower secondary education	0.311	0.463	0.000	1.000
Upper secondary education or higher	0.235	0.424	0.000	1.000
Paid work	0.249	0.432	0.000	1.000
Household economic situation[†]	0.916	0.974	0.000	4.000
Land owner	0.524	0.499	0.000	1.000
Respondent returnee (Europe)	0.017	0.130	0.000	1.000
Respondent returnee (Africa)	0.048	0.213	0.000	1.000
Family size	8.934	4.897	2	50
Current family migrants	0.919	2.111	0.000	28.000
Family returnees	0.083	0.352	0.000	5.000
Respondents	5050			

Panel B.: *Family members' characteristics*

	Mean (5)	SD (6)	Min (7)	Max (8)
Female	0.462	0.499	0.000	1.000
Age in years	33.218	15.519	0.000	90.000
School attendance	0.526	0.499	0.000	1.000
Current migrant (Africa)	0.052	0.222	0.000	1.000
Returnee (Africa)	0.003	0.057	0.000	1.000
Current migrant (Europe)	0.039	0.194	0.000	1.000
Returnee (Europe)	0.005	0.067	0.000	1.000
Observations	47517			

Panel C.: *District characteristics*

	Mean (9)	SD (10)	Min (11)	Max (12)
Local population in district	680.113	260.760	128.000	1627.000
Female population	0.507	0.040	0.364	0.628
Population aged 15 to 35	0.369	0.061	0.246	0.527
Muslim population	0.958	0.097	0.128	1.000
of which				
Observed in family tree	110.036	36.677	5.000	275.000
Current local migrants (Africa)	4.760	7.163	0.000	53.000
Current local migrants (Europe)	3.482	5.200	0.000	42.000
Local returnees (Africa)	0.335	0.968	0.000	12.000
Local returnees (Europe)	0.432	0.818	0.000	6.000
Districts	495			

Notes: Table presents summary statistics for the respondents *(Panel A)*, their family members and relatives *(Panel B)*, and enumeration district characteristics *(Panel C)*. [†] Household economic situation is measured on a 5-point scale from "money is not enough to buy food" to "we can afford to buy almost everything". *Source:* 2013 national census in Senegal and The Gambia and own data.
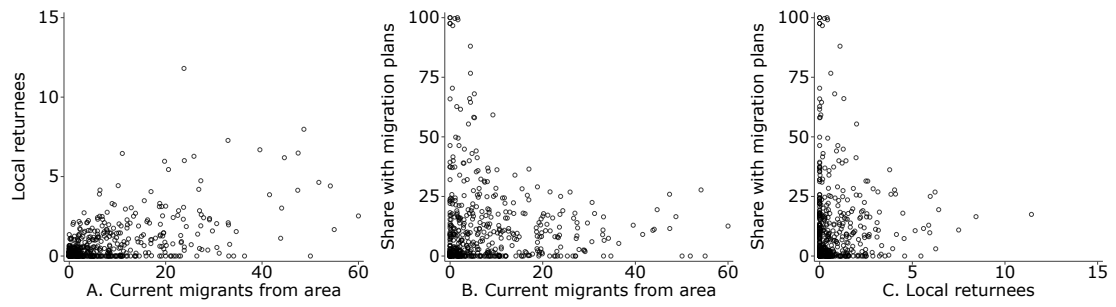
Figure A.2: CORRELATIONS BETWEEN CURRENT MIGRANTS, LOCAL RETURNEES, AND EMIGRATION PLANS

Note: The figure shows the descriptive association between current migrants from a given enumeration district and the number of return migrants in the same area (**Panel A.**). In **Panel B.** the number of current migrants is plotted against the share of individuals with concrete emigration plans in the area (% of all respondents in the location). **Panel C.** plots the number of local returnees against the share of individuals with concrete emigration plans in the area. $N_{\text{census districts}}$=495.

Table A.2: ROBUSTNESS: GENERAL LIFE SATISFACTION INSTEAD OF ECONOMIC INDICATORS

	Emigration plans		Emigration plans standardized	
	within Africa (1)	to Europe (2)	within Africa (3)	to Europe (4)
Local returnees (Africa)	-0.085 (0.303)		-0.107 (0.195)	
Local returnees (Europe)		-1.167*** (0.449)		-0.816** (0.367)
Female	0.132 (0.411)	-0.785 (0.824)	0.124 (0.419)	-0.393 (0.850)
Age	-0.085*** (0.029)	0.022 (0.075)	-0.065* (0.037)	-0.047 (0.081)
Single	-0.258 (0.445)	-1.093 (1.093)	-0.223 (0.399)	-0.275 (1.116)
[2]Primary education	1.316** (0.631)	-0.242 (1.092)	1.837** (0.794)	-0.747 (1.110)
[3]Lower secondary	0.705 (0.539)	-0.065 (1.049)	1.229** (0.585)	0.162 (1.083)
[4]Upper secondary or higher	0.388 (0.527)	2.409** (1.209)	1.069* (0.610)	2.883** (1.240)
[1]Very Satisfied	5.292*** (1.452)	7.661*** (1.782)		
[2]Satisfied	0.458 (0.607)	3.705*** (0.947)		
[4]Dissatisfied	-0.709 (0.502)	3.296*** (0.968)		
[5]Very Dissatisfied	-3.034*** (0.551)	20.200*** (1.877)		
Paid work			-0.775** (0.369)	4.395*** (1.103)
[1]Money insufficient for food			2.226*** (0.500)	4.507*** (1.121)
Refcat: [3]Money enough for basics				
[2]Money insufficient for basics			0.866** (0.385)	1.428 (1.112)
[4]Money enough for durables			0.189 (0.500)	-0.108 (1.651)
[5]Can afford most			0.589 (1.010)	3.367 (2.523)
Land owner			0.172 (0.363)	1.359* (0.782)
Respondent returnee (Europe)	4.657* (2.596)	7.051 (4.380)	4.939* (2.688)	5.178 (4.447)
Respondent returnee (Africa)	1.017 (0.851)	0.218 (2.306)	0.835 (0.871)	0.679 (2.327)
Current family migrants	0.039 (0.111)	0.438** (0.193)	0.089 (0.113)	0.347* (0.197)
Family returnees	-1.267*** (0.353)	2.160 (1.404)	-0.969*** (0.330)	2.010 (1.394)
Current local migrants	0.050** (0.023)	0.050 (0.042)	0.045* (0.024)	0.053 (0.042)
Local population in district	0.001 (0.001)	0.007*** (0.002)	0.001 (0.001)	0.007*** (0.002)
Constant	0.714 (1.122)	-5.330* (2.879)	-0.931 (1.358)	-3.950 (3.041)
Region FE	✓	✓	✓	✓
R2	0.077	0.071	0.065	0.039
Observations	5050	5050	5050	5050
Mean DV	1.899	8.657	1.899	8.657

Notes: Table presents effect of exogenous returnees in the respondent's area (from African countries or Europe) on individual emigration plans (binary DV "Have you made concrete plans to move within the next 12 months?" $\times100$). Migrants/Returnees from/in area calculated as sum in geographical region minus respondent's own family. Models 3 and 4 use standardized values of the number of local returnees as main explanatory variable. Additionally adjusted for region fixed effects (The Gambia, Kolda, Sedhiou, Ziguinchor). OLS, Robust SE in parentheses. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$.

Table A.3: ALTERNATIVE FIXED EFFECTS SPECIFICATIONS

| | Latitude × longitude grid size | | | | | Census districts |
	40×40km (1)	35×35km (2)	30×30km (3)	25×25km (4)	20×20km (5)	(6)
Panel A.: *Emigration plans within Africa*						
Local returnees (Africa)	0.172	0.173	0.190	0.151	0.167	0.229
	(0.291)	(0.304)	(0.310)	(0.313)	(0.316)	(0.828)
Controls	✓	✓	✓	✓	✓	✓
Geo fixed effects	40	44	55	68	99	495
R2	0.086	0.099	0.140	0.098	0.132	0.222
Observations	5017	5017	5017	5017	5017	5050
Panel B.: *Emigration plans to Europe*						
Local returnees (Europe)	-0.900*	-0.901**	-0.864*	-1.009**	-1.155**	-5.276*
	(0.462)	(0.451)	(0.450)	(0.490)	(0.503)	(2.766)
Controls	✓	✓	✓	✓	✓	✓
Geo fixed effects	40	44	55	68	99	495
R2	0.057	0.063	0.060	0.065	0.073	0.164
Observations	5017	5017	5017	5017	5017	5050

Notes: The Table presents the effects of exogenous returnees in the respondents' area (from African countries or Europe) on individual emigration plans (binary DV "Have you made concrete plans to move within the next 12 months?" ×100). Migrants/returnees from/in area calculated as sum in geographical region minus respondent's own family. Geo fixed effects are constructed using longitude–latitude information to create geographical layers from 40×40km to 20×20km. Model 6 uses census districts as geo fixed effects. The number of unique grids/districts in the sample is indicated. All models include additional control variables as specified inf Table 1 (not shown). OLS, Robust SE in parentheses. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$.

Table A.4: UNOBSERVED SELECTION AND OUT-OF-SAMPLE TEST

Panel A.: Oster test for unobserved selection

| | Specification | | δ for $\tau=0$ | |
| | baseline | controlled | $\mathbf{R_{max}} = 0.051$ | $\mathbf{R} = 0.250$ |
	(1)	(2)	(3)	(4)
Local returnees	-0.703	-1.396	-16.763	-1.036
	(0.408)	(0.487)		

Panel B.: Dakar out-of-sample test

| | Emigration plans | | | |
| | within Africa | | to Europe | |
	(1)	(2)	(3)	(4)
Local returnees (Africa)	-0.301	-0.361		
	(0.211)	(0.236)		
Local returnees (Europe)			0.098	0.078
			(0.612)	(0.627)
Respondent $\boldsymbol{X}$	✓	✓	✓	✓
Endogenous $\boldsymbol{X}$		✓		✓
Local migrants	✓	✓	✓	✓
R2	0.010	0.024	0.020	0.023
Observations	1008	1008	1008	1008
Mean DV	1.793	1.793	12.500	12.500

Notes: *Panel A.* presents results of the Oster test for unobservable selection and coefficient stability. Model 1 shows the uncontrolled effect of local return migrants (from Europe) on emigration plans to Europe; Model 2 shows the main model's controlled effect. Model 3 shows the estimated δ of proportional selection that would reduce the returnee coefficient to zero for a recommended R_{max} of 1.3×R and for Model 4 for the most conservative assumption of R_{max}=1. *Panel B.:* Dakar sample. The table presents the effects of exogenous returnees in respondents' area (from African countries or Europe) on individual emigration plans (binary DV "Have you made concrete plans to move within the next 12 months?" ×100). Migrants/returnees from/in area calculated as sum in geographical region minus respondents' own family. OLS, robust SE in parentheses. * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$.
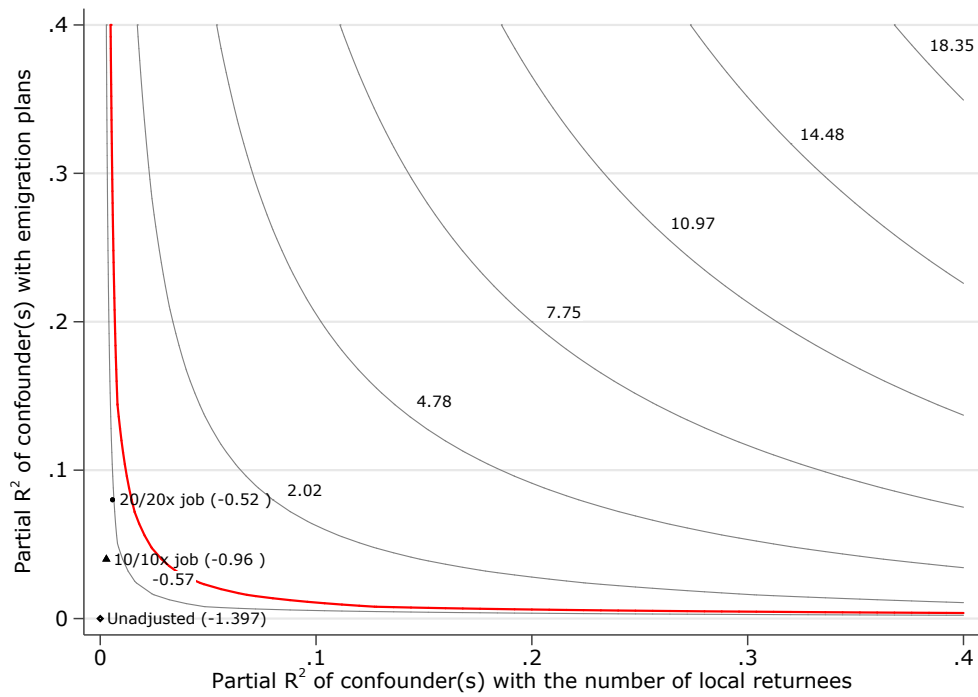
Figure A.3: IMPORTANCE OF UNOBSERVED VS. OBSERVED CONFOUNDERS

Note: The Figure visualizes the sensitivity analysis bounding the strength of unobserved confounders with the explanatory power of an observed variable (c.f. Cinelli and Hazlett 2020)—in our case "job" (indicator for being employed or not). The red line indicates the critical contour at which an unobserved confounder would flip the estimated sign (negative) of the relationship between local returnees and emigration plans. The black triangle and dot indicate the maximum strength of a confounder if it were 10 and 20 times as strong as our observed variables "job", respectively. Even with an omitted variable 20 times as strong as employment, we would still observe a negative effect of local returnees on emigration plans.

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