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Development aid and migration in Senegal: How local employment projects shape mobility

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Donors often view development aid as a tool to address the root causes of emigration from recipient locations. For example, Europe's Emergency Trust Fund for Africa, launched in 2015 by the EU, allocated e5.5 billion specifically to tackle the root causes of emigration from Africa (European-Commission, 2015). Similarly, in 2021, the U.S. National Security Council committed about $240 million to address the factors driving families and unaccompanied minors migrating from Central America (National-Security-Council, 2021). While these policies primarily target international migration, they also target internal migration. Development aid is also used as a tool to curb rural exodus, a phenomenon often linked to increased international migration. The central question remains: Does development aid influence migration decisions, both internal and international?

Providing a convincing answer to this question is challenging due to three key issues. First, data on aid lack sectoral and geographical disaggregation, which limits our understanding of their economic impact. Different forms of aid affect different population groups differently (Lanati & Thiele, 2018, a,b) and create different migration incentives, especially for vulnerable groups (Clemens & Postel, 2018). Second, geographically disaggregated data on internal and international migration remain scarce (Berthelemy et al., 2009; Marchal et al., 2022; Menard & Gary, 2018). Third, when analyzing the link

between aid and migration, the spatial distribution of aid is endogenous, making the identification of the causal effect challenging. Indeed, (i) the spatial allocation of development aid projects is non-random, which is often correlated with migration push factors, and (ii) the timing of disbursements is likely affected by economic shocks that also influence migration decisions.

This study focuses on Senegal and addresses the challenges outlined above by combining data on aid-funded projects at the subnational level with data on local internal and international migration. It focuses on employment-related aid projects for four main reasons. First, these projects often target young adults aged 18-35 (McKenzie, 2017), who are the most mobile demographic group. Second, such projects have a direct impact on the economic conditions of the target group by creating jobs and promoting income-generating activities, making them highly relevant to migration decisions. Third, employment-related development aid projects are likely to have a consistent impact over time, avoiding the potential contradictions that can arise between short-term and long-term impacts in other forms of development aid. For example, infrastructure projects such as bridges or paved roads take years to materialize. These projects may reduce migration during their construction phase by creating local employment opportunities. However, they may increase migration later by improving

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connectivity between locations. In contrast, employment aid tends to maintain a clear and consistent trajectory of benefits. Fourth, employment-related projects generate significant impacts in a relatively short period of time. Unlike aid to sectors such as education and health, which often take several years to produce measurable results, employment aid produces tangible economic improvements in a relatively short period of time.

To address the endogeneity concerns, an instrumental variable approach is applied. I use the political proximity of departments to the national leader at the time of aid commitments and a synthetic disbursement profile, thereby, isolating exogenous variations in the spatial allocation of aid and the timing of the disbursement to estimate the causal effect of employment aid on migration decisions more credibly.

Individuals aged 18-35 are the most mobile in Senegal

Migration data used for estimation are extracted from the 2013 Senegalese General Population Census. As shown in Panel 1a of Figure 1, individuals aged 18–35 are, by far, the most mobile group in Senegal. This is observed for both internal and international migration. Indeed, while the overall five-year migration rate in Senegal in 2013 was about 8.1% —comprising 6.7% for internal migration and 1.4% for international migration— the migration rate for individuals aged 18–35 significantly higher than these averages. This likely reflects their higher propensity to respond to economic opportunities elsewhere, lower opportunity costs of leaving, and the fragility of their local economic conditions. When broken down by gender, as depicted in Panel 1b of the same Figure, men are on average significantly more mobile than women, especially for international migration. For internal

migration, however, women aged under 20 at the time of departure are slightly more mobile than men, possibly reflecting gender-specific migration motives within this age group (family motives).

I complement these data with the 2023 General Population Census, which explicitly documents the legal status of Senegalese who have migrated internationally in the five years prior to the Census. As shown in Figure 1, undocumented international migrants from Senegal, especially those migrating to richer destinations, are also heavily concentrated in the 18-35 age group. More than 20% of Senegalese aged 18-35 who migrated to the OECD (panel 1c) or Europe (panel 1d) between 2019 and 2023 did so illegally. Moreover, this phenomenon is strongly gender-biased, with young men accounting for the bulk of this figure. Indeed, young Senegalese men aged 18-35 are about four times more likely to migrate illegally, eight times more likely to migrate illegally to the OECD, and 9.2 times more likely to migrate illegally to Europe than young women of the same age. This underscores the critical importance of targeting this specific age group in any policy aimed at influencing migration decisions in Senegal.

The number and the volume of employment related aid projects are low

The aid data analyzed comes from the Senegalese Aid Management Platform (AMP), which covers almost all projects reported between 2002 and 2017. AMP provides detailed information on donor(s), target sectors, funding amounts (committed and disbursed), project timelines, and more. This information is used to calculate aid per person aged 18-35 for each Senegalese department, excluding projects initiated after 2012. The data is further categorized by sector,
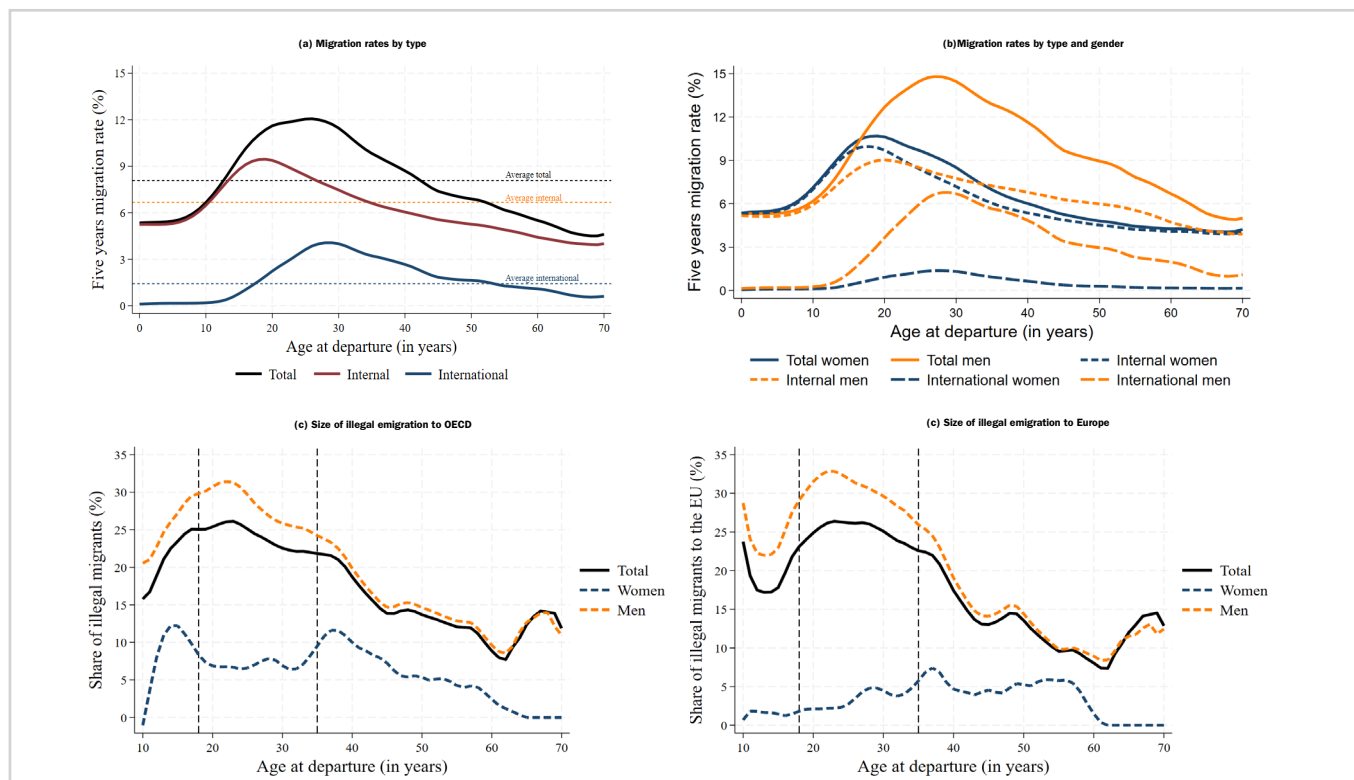
allowing for a more granular analysis of aid distribution and its effects on migration. The final dataset includes 406 geo-localized projects, representing $7.3 Bn in commitments and $3.4 Bn in disbursements. These projects span 1,124 locations with seven levels of geographic accuracy, ranging from exact project locations (Level 1) to country-level coordinates (Level 6) or administrative division headquarters (Level 7). Poorly geo-referenced projects (91 locations) are excluded, leaving 1,033 accurately identified locations for the analysis. As described in Cha'ngom (2024), both commitments and disbursements are dominated by infrastructure-related projects, accounting for 38.8% of total disbursements. Employment projects, however, account for the smallest share of disbursed aid (4.2%).

Migration and aid projects display spatial disparities

The spatial distribution of five-year migration intensities across Senegal's departments varies considerably, as shown in panel 2a of Figure 2, and this heterogeneity holds regardless of the type of migration, whether internal (panel 2b) or international (panel 2c). However, the distribution of migration rates is negatively correlated with the type of migration. On average, departments with high internal migration rates (darker colors on Figure 2b) tend to be departments with low international migration rates (lighter colors on Figure 2c). International migration rates are higher in departments along the Senegal River, which may be explained by the strong network due to the ancient migratory routes used by Senegalese

Figure 1: Migration rates across migration type and gender

Source: Author's calculations from the 2013 and 2023 General Population and Housing Censuses.

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sailors, traders and soldiers in the early 20th century.[1] International migration is also important in departments in the Dakar region, which are characterized by their high connectivity, incidentally the richest in the country and the main source of international emigrants to rich countries.

Employment aid projects shape migration decisions

Panel 2d of Figure 2 shows that development aid is not only unevenly distributed over space but also tends to be negatively correlated with migration rates (see Panels 2a, 2b, and 2c). This suggests, a priori, that development projects have not been predominantly implemented in departments with the highest migration rates relative to the local population, i.e., departments with the largest share of migrants. However, in absolute terms, the bulk of project aid has been directed to large migrant-sending departments. Indeed, the conditional correlation between the share of emigrants in a department relative to the national number of migrants and the share of local development aid relative to the national envelope of project aid is 0.66 which is substantial. This indicates that large migrant-sending areas tend to be the primary geographical targets of development aid projects. This pattern holds for both large internal migrant-sending departments (conditional correlation of 0.67) and large international migrant-sending departments (conditional correlation of 0.60). Additionally, these departments stand out as the most populated, both in terms of total and target populations.

To explore how local exposure to development aid projects influences migration decisions, both internal and international over the period 2003 - 2013, a gravity-based econometric approach is used, focusing on employment-related aid projects. The model estimates the ratio of the probability of migrating to a destination—either another Senegalese department or a foreign country—to the probability of staying in the home department. It incorporates a rich structure of fixed effects that controls for all potential origin-destination pairs and destination-time factors likely to affect migration. The model includes local employment aid per young adult as the main explanatory variable, and controls for origin-time variables such as night-time light intensity, climatic hazards, and conflict-related deaths.

Figure 3 presents the estimation results obtained using the instrumental variable approach. The results suggest that employment aid per young adult significantly reduces internal migration by approximately 21.3% (Panel 3a) and that magnitude increases with the education level of the young adults. However, the intervention has no statistically significant effect on overall international migration (Panel 3b). It does lead to a substantial decrease—around 14.3%—in migration to transit countries (Panel 3c), with the effect being particularly pronounced among young men aged 18 to 25. Knowing that migration to transit countries (Libya and Morocco) is the common route for illegal migration to Europe, these results highlight the potential role of employment aid projects in mitigating illegal migration from Senegal.
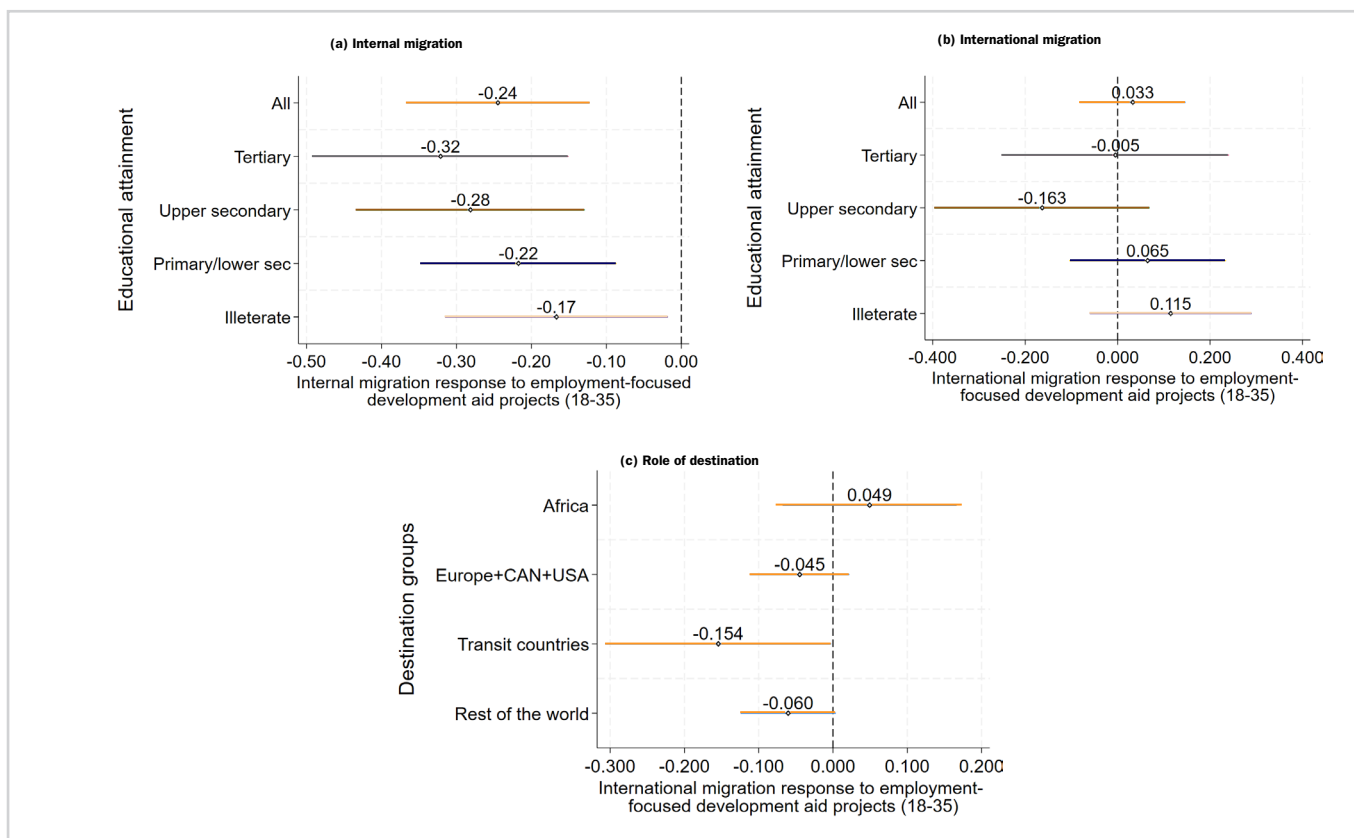
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[1] See Bocquier et al. (2023) for more details.

Figure 2: Geography of migration and development

Source: Author's calculations from the 2013 General Population and Housing Censuses and AidData.
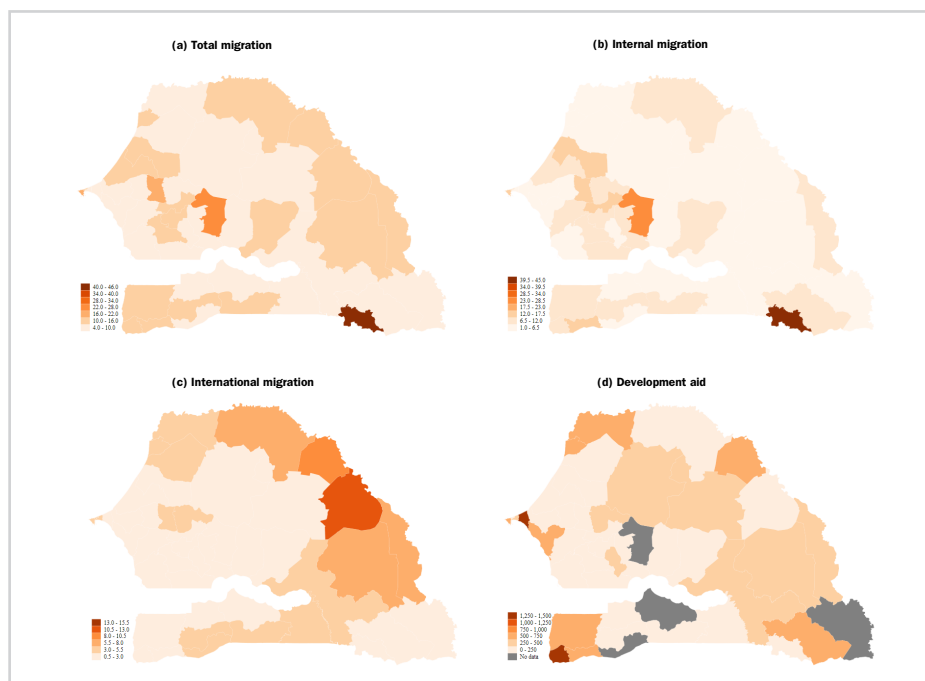
Figure 3: Estimated impact of employment aid projects on migration decisions

Potential policy implications

This study highlights shows that employment-related aid projects significantly reduce internal migration among young adults (18-35 years) by improving local economic opportunities, with a 21.3% reduction observed when aid is doubled. While overall international migration remains unaffected, these projects help reduce migration to transit countries, the usual route of illegal migration to Europe, by 14.3%, particularly among young men aged 18-25. This is attributed to an increased opportunity cost of risky migration routes.

This suggests that there are at least two areas for policy improvement: *(i) Prioritize employment-focused initiatives:* Donors and policymakers should allocate resources to projects that have a potentially direct and significant impact on youth. For instance, youth employment projects would increase the deterrent effect on both internal and irregular migration. *(ii) Improve the spatial targeting of aid:* Improve the targeting of development aid to areas with high levels of migration, both in absolute and relative terms, to maximize impact and more effectively address migration pressures. By refining aid allocation strategies and focusing on employment-oriented initiatives, development aid can play a crucial role in curbing irregular migration and promoting sustainable local economic development.

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