

# Is Internal Migration in Yemen Driven by Climate or Socio-Economic Factors? Results from a Gravity Model

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## *Abstract*

Identifying the impact of climate on migration is a difficult undertaking because migration is a multi-causal phenomenon, with a wide range of physical, climatic, cultural, and socio-economic factors influencing decisions made by individuals and households. Combining data from the latest census in Yemen with a weather database as well as other geographic information, we assess the push and pull factors that drive migration. These factors include climatic factors such as temperature and rainfall and their variability, socio-economic factors such as the attractiveness of the areas of origin and destination among others in terms of employment, education, and irrigation, and cost factors as proxied by the distance between the places of origin and destination. The results suggest that climate does affect migration, but in a limited way, with socio-economic and cost factors playing a much more prominent role.

JEL Classification: R25, J61

Keywords: Migration; Climate Change; Gravity Model

# Do Remittances Reach Households Living in Unfavorable Climate Areas? Evidence from Yemen

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## *Abstract*

There is evidence in the literature that migration and remittances tend to increase in response to climate shocks, so that both may function as coping mechanisms. It is not clear however whether remittances in particular are likely to be higher in areas that suffer from poor climate more generally, in the absence of specific weather shocks. This paper uses a nationally representative household survey for Yemen combined with weather data to measure remittance flows, both domestic and international, and assess the likelihood of households receiving remittances as well as the amounts received. We are interested in testing whether households living in less favorable areas in terms of climate (as measured through higher temperatures, lower rainfalls, more variability or seasonality in both, and larger differences in a given year between extreme temperatures) are more likely to benefit from remittances. The results suggest that this does not seem to be the case in Yemen.

JEL Categories: R25, J61

Keywords: Migration; Climate Change; Remittances

# Is the Impact of Domestic and International Remittances on Poverty and Human Development Different in Various Areas Depending on their Climate?

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## *Abstract*

This paper uses matching techniques and a recent nationally representative household survey for Yemen combined with weather data to measure the impact of remittances, both domestic and international, on poverty and human development outcomes (school enrolment, immunization, and malnutrition). The estimations are carried both nationally and in areas with favorable and unfavorable climate. Remittances are found to have a statistically significant impact on many of the indicators, and this is especially the case for international remittances which tend to provide more resources to their beneficiaries. The impact of remittances on measures of poverty and malnutrition is also found to be stronger in districts that are affected by unfavorable climate (as measured through higher temperatures or lower levels of rainfall), while the impact of remittances on school enrollment is found to be stronger in areas with better climate. The results are consistent with households in the least favorable areas using their remittances to meet basic needs first, while households in better areas can use remittances flows for education investments.

JEL Categories: R25, J61, I20

Keywords: Migration; Remittances; Climate Change; Education; Poverty; Nutrition

# Is Climate Change Likely to Lead to Higher Net Internal Migration in Yemen?

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## *Abstract*

There is substantial concern about the potential impact of climate change on future migration, especially in the Middle East and North Africa, one of the regions that is likely to suffer the most from climate change. At the same time, it is not clear whether so far climate patterns have been a key driver of internal migration in countries such as Yemen, despite the pressures created by water scarcity. By combining data from Yemen's latest census and a weather database as well as other geographic information, we analyze the determinants of past net internal migration rates. Next, using future climate change scenarios, we predict the potential impact of rising temperatures on future net internal migration rates. The results suggest that while climate does have an impact on net internal migration rates, this impact is limited, so that on the basis of past patterns of climate and migration, rising temperature may not have a large impact on future net internal migration.

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