

## A Subsample robustness

This appendix reports subsample estimates of the sequential selection model. The purpose of this analysis is to assess whether the main association between food insecurity and migration aspirations is driven by specific demographic or socio-economic groups. We re-estimate the model separately by gender, employment status, residence type, and education level. In each specification, the full set of baseline controls and country fixed effects is included, excluding the variable used to define the relevant subsample.

Table A1: Subsample robustness: food insecurity and migration aspirations

|                                                                  | Male               | Female             | Employed          | Unemployed          | Urban             | Rural             | Low education       | Secondary/Tertiary  |
|------------------------------------------------------------------|--------------------|--------------------|-------------------|---------------------|-------------------|-------------------|---------------------|---------------------|
|                                                                  | (1)                | (2)                | (3)               | (4)                 | (5)               | (6)               | (7)                 | (8)                 |
| <i>Panel A. Outcome equation: irregular migration aspiration</i> |                    |                    |                   |                     |                   |                   |                     |                     |
| Food Insecurity Index                                            | 0.445**<br>(0.199) | 0.664*<br>(0.339)  | 0.576*<br>(0.299) | 1.007**<br>(0.492)  | 0.440*<br>(0.248) | 0.482<br>(0.303)  | 0.491*<br>(0.273)   | 0.508***<br>(0.193) |
| FI Index Squared                                                 | -0.121<br>(0.197)  | -0.127<br>(0.317)  | -0.197<br>(0.293) | -0.948**<br>(0.469) | -0.073<br>(0.240) | -0.109<br>(0.289) | -0.031<br>(0.252)   | -0.141<br>(0.190)   |
| <i>Panel B. Selection equation: overall migration aspiration</i> |                    |                    |                   |                     |                   |                   |                     |                     |
| Food Insecurity Index                                            | 0.389**<br>(0.172) | 0.676**<br>(0.339) | 0.481*<br>(0.287) | 0.863*<br>(0.514)   | 0.439*<br>(0.247) | 0.418<br>(0.266)  | 0.635***<br>(0.233) | 0.382**<br>(0.174)  |
| FI Index Squared                                                 | -0.091<br>(0.166)  | 0.057<br>(0.173)   | -0.250<br>(0.193) | -0.600*<br>(0.323)  | -0.005<br>(0.145) | -0.095<br>(0.223) | 0.200<br>(0.198)    | -0.223<br>(0.152)   |
| Observations                                                     | 6,977              | 6,894              | 5,527             | 1,730               | 9,399             | 4,164             | 5,279               | 8,592               |
| Selected observations                                            | 2,553              | 1,958              | 1,847             | 810                 | 3,229             | 1,201             | 1,413               | 3,098               |
| Wald test $\rho = 0$ : p-value                                   | < 0.001            | 0.436              | 0.029             | 0.360               | 0.265             | 0.827             | < 0.001             | < 0.001             |
| Country FE                                                       | Yes                | Yes                | Yes               | Yes                 | Yes               | Yes               | Yes                 | Yes                 |
| Controls                                                         | Yes                | Yes                | Yes               | Yes                 | Yes               | Yes               | Yes                 | Yes                 |

*Notes:* The table reports subsample estimates from sequential selection probit models. Panel A reports the outcome equation for willingness to consider irregular migration among respondents selected into migration aspirations. Panel B reports the selection equation for overall migration aspirations. All specifications include country fixed effects and the full set of baseline controls, excluding the variable used to define the relevant subsample. Robust standard errors are reported in parentheses. Significance codes: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## B Food insecurity intensity

This appendix examines whether the main results are robust to an alternative specification of food insecurity intensity. Instead of using the continuous Food Insecurity Index, we divide respondents into quintiles of food insecurity and re-estimate the sequential selection model. The lowest quintile of food insecurity is used as the reference category. This specification allows us to assess whether the association between food insecurity and migration aspirations is concentrated among moderately exposed individuals or whether it persists across the distribution.

Table A2: Food insecurity intensity and migration aspirations: quintile specification

|                                  | Overall migration<br>aspiration<br>Selection equation | Irregular migration<br>aspiration<br>Outcome equation |
|----------------------------------|-------------------------------------------------------|-------------------------------------------------------|
| <i>Food insecurity quintiles</i> |                                                       |                                                       |
| Q2                               | 0.114***<br>(0.037)                                   | 0.173***<br>(0.064)                                   |
| Q3                               | 0.149***<br>(0.029)                                   | 0.260***<br>(0.051)                                   |
| Q4                               | 0.292***<br>(0.035)                                   | 0.453***<br>(0.059)                                   |
| Q5                               | 0.310***<br>(0.034)                                   | 0.327***<br>(0.060)                                   |
| Observations                     |                                                       | 13,871                                                |
| Selected observations            |                                                       | 4,511                                                 |
| $\rho$                           |                                                       | 0.305**                                               |
| Wald test $\rho = 0$ : p-value   |                                                       | 0.022                                                 |
| Country FE                       | Yes                                                   | Yes                                                   |
| Controls                         | Yes                                                   | Yes                                                   |

*Notes:* The table reports estimates from a sequential selection probit model in which the continuous Food Insecurity Index is replaced by quintiles of food insecurity. The reference category is Q1, corresponding to the lowest level of food insecurity. The first column reports the selection equation for overall migration aspirations. The second column reports the outcome equation for willingness to consider irregular migration among respondents selected into migration aspirations. All specifications include the full set of baseline controls and country fixed effects. Robust standard errors are reported in parentheses. Significance codes: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## C Instrumental-variable robustness

This appendix reports supplementary instrumental-variable probit estimations for irregular migration aspirations. The purpose is to assess whether the positive association between food insecurity and irregular migration aspirations persists under an alternative specification using Covid-related assistance as an instrument for food insecurity.

We consider two instruments. The first is a binary indicator equal to one if the respondent’s household received food assistance during the Covid-19 period. The rationale is that Covid food assistance was closely related to household vulnerability and short-term subsistence constraints during the pandemic, and is therefore expected to predict variation in food insecurity. The second instrument is a binary indicator equal to one if the respondent’s household received assistance from non-governmental actors, including NGOs, religious institutions, or non-profit organizations. This alternative instrument is intended to reduce the concern that aid receipt operates primarily through perceptions of state responsiveness or confidence in the public safety net.

The exclusion restriction remains demanding in both cases, since aid receipt may also affect migration aspirations through other channels, including perceptions of social protection, institutional responsiveness, or local support networks. We mitigate part of this concern by including country fixed effects, residence type, logged household income, perceived household income, and trust in government, which absorb some of the cross-country, territorial, economic, and institutional heterogeneity associated with the allocation and perception of Covid-related assistance.

The magnitude of the IV-probit estimates is also larger than that of the baseline probit estimates. This pattern should be interpreted with caution for several reasons. First, probit and IV-probit coefficients are not directly comparable in a simple mechanical way, especially in nonlinear models. Second, larger IV estimates may partly reflect attenuation in the baseline estimates due to measurement error in the Food Insecurity Index. Third, the IV estimates identify variation among respondents whose measured food insecurity is shifted

by the instrument, and may therefore capture a more vulnerable subgroup rather than an average association for the full population.

For these reasons, we interpret the IV estimates as suggestive robustness evidence rather than as the core identification strategy or as the main estimate of the magnitude of the relationship.

Table A3: Instrumental-variable robustness: food insecurity and irregular migration aspirations

|                                   | Covid food assistance                |                                                | Non-governmental Covid assistance    |                                                |
|-----------------------------------|--------------------------------------|------------------------------------------------|--------------------------------------|------------------------------------------------|
|                                   | First stage<br>Food Insecurity Index | IV-probit<br>Irregular migration<br>aspiration | First stage<br>Food Insecurity Index | IV-probit<br>Irregular migration<br>aspiration |
| Covid food assistance             | 0.033***<br>(0.011)                  |                                                |                                      |                                                |
| Non-governmental Covid assistance |                                      |                                                | 0.034***<br>(0.012)                  |                                                |
| Food Insecurity Index             |                                      | 2.396***<br>(0.707)                            |                                      | 2.576***<br>(0.510)                            |
| Excluded-instrument F-statistic   | 10.89                                |                                                | 8.53                                 |                                                |
| Wald test of exogeneity: p-value  |                                      | 0.097                                          |                                      | 0.036                                          |
| Observations                      | 12,367                               | 12,367                                         | 12,638                               | 12,638                                         |
| Country FE                        | Yes                                  | Yes                                            | Yes                                  | Yes                                            |
| Controls                          | Yes                                  | Yes                                            | Yes                                  | Yes                                            |

*Notes:* The table reports supplementary instrumental-variable probit analysis for irregular migration aspirations. Columns 1 and 3 report first-stage estimates in which the dependent variable is the Food Insecurity Index. Columns 2 and 4 report IV-probit estimates in which the Food Insecurity Index is instrumented by the corresponding Covid-related assistance variable. The dependent variable in the IV-probit models is irregular migration aspiration measured in the full population. Covid food assistance is coded as one if the respondent's household received food-related assistance during the Covid-19 period. Non-governmental Covid assistance is coded as one if the respondent's household received assistance from non-governmental actors, including NGOs, religious institutions, or non-profit organizations. All specifications include the full set of baseline controls and country fixed effects. Robust standard errors are reported in parentheses. The excluded-instrument F-statistic is computed from the first-stage linear regression estimated on the corresponding IV-probit sample. Significance codes: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .