From Destination to Origin: Experimental Evidence on the International Spillovers of Migrant Integration*

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Abstract

International migration can promote development in both origin and destination countries. We hypothesize that migrant integration in destination countries is an important constraint on these gains. Using a randomized controlled trial, we study the effects of a low-cost, scalable digital intervention designed to reduce information frictions among Cape Verdean immigrants in Portugal. Access to the intervention improves migrants' labor market outcomes, legal status, social integration with native-born individuals, and aspirations. These integration gains generate international spillovers, increasing political participation and leading to more egalitarian gender norms in the migrants' origin-country. Leveraging variation in official destination country electoral data, we show that political participation transmits through increased exposure of better-integrated migrants to prevalent local norms at destination. These international turnout spillovers are weaker in localities with higher far-right support, consistent with a less migrant welcoming political climate attenuating norm diffusion.

Keywords: International Migration, Migrant Integration, Randomized Field Experiment, Employment, Immigrant Regularization, Remittances, Voting, Gender Norms.
JEL Codes: F22, J61, O15.

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1. Introduction

International migration can reshape economic development in migrants' countries of origin. A growing literature shows that emigration, traditionally viewed as a "brain drain", generates positive effects for origin countries through multiple channels, including financial remittances, higher investments in human capital, stronger international economic linkages and the transfer of political and social norms.[1] Little is known, however, about how these effects depend on migrant integration in destination countries. Integration could strengthen impacts by increasing migrants' resources and exposure to local institutions that they can transmit back home. But deeper integration could also weaken ties to origin communities and reduce international spillovers. Understanding this trade-off is necessary to assess the full consequences of migrant integration policies, not only in destination countries but also in migrants' countries of origin. To date, causal evidence on the impact of migrant integration on origin country outcomes remains limited.

This paper implements a randomized controlled trial (RCT) among Cape Verdean migrants in Portugal, providing the treatment group with access to a low-cost, scalable information application designed to reduce integration-related information frictions. To study how improved immigrant integration in the destination country affects development outcomes in migrants' countries of origin, the experiment was designed to answer two related questions. First, does reducing information frictions improve immigrants' economic and social integration in the destination country? Second, does improving immigrant integration in the destination country generate spillovers in migrants' countries of origin? To address these questions, we track outcomes for both migrants in the destination country and their closest contacts in the home country over an 18-month period.

We find that improving immigrants' integration in the destination country generates development gains for origin countries. Access to the information application substantially improved migrants' integration outcomes in the destination country. Specifically, by making information relevant for migrant integration more easily accessible, the intervention improved the migrants' labor market situation, driven primarily by increased job search and job switching, as well as labor market aspirations and expectations. The intervention also encouraged migrants to take steps to regularize

[1] See Batista et al. (2025) for a recent review of the literature on the impact of emigration in countries of migrant origin.

their migration status and to strengthen their social integration with native residents. These improvements extend beyond migrants themselves. Even though the app provided no information on destination-country social or political norms, better-integrated migrants exhibit stronger norm diffusion to their closest family members in Cape Verde, resulting in higher electoral participation and more egalitarian attitudes toward gender roles in the origin country.

We further document evidence on the mechanisms underlying these spillovers. Political participation among origin country contacts increased most when migrants resided in high-turnout areas in the destination country, consistent with stronger exposure to salient democratic norms. We also find that international spillovers of political participation depend on the political climate at destination: norm diffusion is weaker when migrants reside in areas with higher far-right support. We interpret this result as evidence that more hostile local environments may hamper the ability of migrants to learn local political norms and hence their transmission to the origin country. Changes in gender attitudes were concentrated among younger and male contacts, who plausibly hold more malleable beliefs. At the same time, we find no evidence that these effects operate through higher migrant earnings, increased financial remittances, or more frequent communication with contacts at home. Overall, the results suggest that changes in the content of communication, rather than its intensity or migrants' economic resources, are the primary channel through which integration at destination translates into social and political change in origin communities.

A potential concern in survey-based experimental work is that estimated effects may reflect experimenter demand, rather than actual behavioral change. Several features of our design mitigate this concern, including the use of a placebo intervention with similar salience as the treatment, and the absence of any content related to key outcomes, such as gender norms and political participation. The fact that we document substantial spillover effects on migrants' close contacts in Cape Verde (individuals who were not exposed to the intervention and were unaware of the migrants' treatment status) provides strong evidence that our results reflect real changes in behavior and norms rather than reporting bias.

Our findings contribute to the literature on international migration and development. A large body of work shows that emigration, even of highly educated individuals, can have positive effects in origin countries. These effects extend beyond financial remittances and include greater human capital investment, political participation and gender equality, and increased entrepreneurship,

international trade and foreign direct investment.[2] Despite this literature, credible causal evidence (especially experimental or quasi-experimental evidence) on the development impacts of emigration in origin countries remains limited. Notable exceptions are given by Yang (2008), Clemens and Tiongson (2017), and Khanna et al. (2026) which use quasi-experimental evidence for the Philippines, and Gibson et al. (2011), Mobarak et al (2023) and Batista and Vicente (2025) using randomized variation in Tonga, Bangladesh and Mozambique, respectively. We advance this literature by implementing a randomized field experiment that directly improves immigrant integration in the destination country and by measuring its causal effects on development outcomes in the country of origin. In doing so, we bridge research on immigrant integration with the migration and development literature. Our findings show that reducing barriers to immigrant integration promotes political participation and enhances gender equality norms in the immigrants' country of origin, consistent with prior evidence showing that migrants can transmit political attitudes and behavior (e.g., Batista and Vicente, 2011; Barsbai et al., 2017; Batista et al. 2019), and gender equality norms (e.g., Clemens and Tiongson, 2017; Tuccio and Wahba, 2018; Mobarak et al., 2023). We move this literature further by showing that immigrants residing in places with high far-right voting send less political remittances to their origin countries. This evidence is consistent with the results of Manacorda et al (2026) using non-experimental cross-country evidence. Our findings are differently obtained through an experiment using individual randomized variation in migrant integration – a novel contribution to the literature.

Our results also contribute to the still limited body of rigorous causal evidence on the effectiveness of policies aimed at integrating economic immigrants in destination countries, as reviewed by Behaghel et al (2018).[3] Sarvimaki and Hamalainen (2016) and Lochmann et al. (2019) are exceptions that use regression discontinuity designs to estimate the impact of immigrant integration programs in Finland and France, respectively. Alan et al. (2021) and Carlana et al.

[2] A summary of the evidence of the impact of highly educated immigrants in the economic development of countries of origin is provided by Batista et al. (2025) and Yang et al. (2026). Evidence of these positive impacts was provided, among others, by Beine et al. (2001), Yang (2008), Batista and Vicente (2011), Gibson et al. (2011), Javorcik et al. (2011), Batista et al. (2012), Gibson and McKenzie (2012), Bertoli and Marchetta (2015), Barsbai et al. (2017), Batista et al. (2017), Clemens and Tiongson (2017), Mobarak et al. (2023), Abarcar and Theoharides (2024), Melki et al. (2024), Godlonton and Theoharides (2025) and Khanna et al. (2026).

[3] A rigorous body of literature has emerged in recent years evaluating the impact of policies aimed at improving the integration of refugees in destination countries – for example, Battisti et al (2019), Bahar et al. (2021), Aksoy et al. (2023), or Foged et al. (2024, 2025). Rozo and Grossman (2025) provide a comprehensive literature review on this topic.

(2022) exploit experimental variation to assess the impact of polices promoting the educational success of immigrant children in countries of destination. Most related to our work, Barsbai et al. (2024, 2025) implemented randomized experiments to evaluate the effectiveness of strategies for promoting Filipino immigrant integration in destination countries. Differently from previous studies, we evaluate a novel, low-cost and easily replicable phone application providing a broad set of immigrant relevant information, including resources for job search, visa regularization and rights to access public services. Overall, our works provides causal evidence that information frictions represent a first-order constraint on immigrants' economic and social integration in destination countries.

In sum, our results deepen our understanding of how international migration affects economic development in migrants' countries of origin. Our experimental design provides novel causal evidence that a low-cost, scalable migrant information app affects development outcomes in origin countries. More broadly, our findings highlight immigrant integration policy as an important, yet overlooked, determinant of international migration's broader development impacts.

2. Background and Context

Our randomized intervention was implemented in Portugal, – a country with historically large immigration flows from Brazil and its former colonies in sub-Saharan Africa.[4] Cape Verdeans were the third-largest group of immigrants in Portugal in 2021, according to the census. Cape Verdean immigrants experienced poor labor market integration outcomes despite a large diaspora and reduced language barriers.[5] They had one of the highest unemployment rates among non-Portuguese nationals: 15.37% according to the Census 2021, compared to 8.13% for the general population residing in Portugal. Immigrants from African countries performed particularly poorly in the labor market – a pattern common across destination countries.[6]

[4] According to the 2021 Census for Portugal, 5.24% of the resident population was non-national. Portuguese-speaking immigrants represented more than 50% of the immigrant stock. https://tabulador.ine.pt/indicador/?id=0011627 [Last accessed on January 5, 2026.]
[5] While Portuguese is the official language in Cape Verde, the most widely spoken language among Cape Verdeans in their daily lives is Creole.
[6] See, for example, Kiker et al. (1997), or Bah (2018).

Cape Verde is a former Portuguese colony off the West African coast and was classified as a lower middle-income country with 3971$ GDPpc in 2021 (World Bank WDI 2022). The national census estimated its population as 491,233 in that year. The educational level of the population is among the largest in Sub-Saharan Africa with a literacy rate of 98% in 2024 (World Bank WDI 2025), and a net rate of primary schooling of 92.4% and net rate of secondary schooling of 61.2%. (UN 2021). Migration is a defining phenomenon in the country. The IOM estimates that the diaspora is almost double the size of the resident population.[7] Financial remittances in 2021 amounted to 15.3% of GDP according to the World Bank.[8]

3. Experimental Design

Immigrants in our sample were randomly assigned to one of two groups. The *information intervention* offered participants access to a mobile phone application named *Morabeza*, a Cape Verdean creole term used to express hospitality and friendliness toward newcomers. The app provided centralized practical information relevant for immigrant integration, including strategies to search for jobs, guidance on where to obtain further support, as well as information on migrant legal rights (including details on how to acquire regular migration status and access public services, such as healthcare). This information was also provided in a complementary printed guide. The *control (placebo) intervention* provided participants with a version of the app with information about cultural activities and places to visit in Lisbon designed to match the treatment in format and salience while excluding integration-relevant content.[9]

The intervention was designed to address information frictions. We hypothesize that immigrants in our sample have low quality information at baseline, as they largely rely on limited social networks to acquire information on labor market access and public services. Although the information provided in the app is publicly available online from government sources, there is currently no platform that centralizes it, and the official materials are dispersed across institutions and use legal terminology inaccessible to our study population. The information treatment was

[7] https://www.iom.int/countries/cabo-verde [Last accessed on January 5, 2026.]
[8] https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS?locations=CV [Last accessed on January 5, 2026.]
[9] In addition to the information intervention presented in this paper, additional groups of migrants were offered an aspirations intervention and a combined treatment. Additional details are presented in the Online Appendix available here: https://novafrica.org/wp-content/uploads/2026/02/OnlineAppendix_FullSpec_6Feb2026.pdf .

delivered to migrants by trained enumerators at the end of the baseline survey. Enumerators showed migrants how the app works and the different sections available but didn't go through the information provided itself. Appendix A provides a detailed description of the information intervention.

The precise design of the intervention was developed in collaboration with governmental officials, international organizations and local NGOs with experience working with our target population.[10] We pre-tested the content through focus groups and qualitative interviews before implementation.

Random assignment to treatment was conducted at the individual level, by computer, prior to the baseline survey, stratified by residence neighborhood and gender of the migrant to ensure balance along these dimensions.

Contamination between the treatment and control groups was unlikely by design. Each individual assigned to treatment received a unique app installation code, ensuring that neither control-group participants nor other acquaintances of the treated migrants could access the full content of the *Morabeza* application on their own. As a result, direct spillovers of the intervention were minimized. Even if some information were indirectly shared with control individuals, any such leakage would only attenuate the observed treatment-control differences. This implies that potential spillovers would make the estimated impacts conservative lower-bound estimates of the true program effects.

The design of our experiment is meant to limit the scope for experimenter demand effects. Both treatment and control groups received an application of similar format, interface, and enumerator interaction, differing only in the informational content provided. Importantly, the information treatment did not include any material related to several of our primary outcomes, including gender norms and political participation in the country of origin, making it unlikely that respondents could infer the study's hypotheses along these dimensions. To the extent that any residual demand effects remain, they would need to operate through indirect channels unrelated to the content of the intervention.

[10] The intervention is aligned with the International Organization for Migration's approach for immigrant integration but tailored to the Portuguese context. See https://www.iom.int/migrant-integration for further details.

4. Sampling Strategy, Data Collection, Balance, and Attrition Checks

4.1 Sampling strategy and data collection

Our study targets migrants who recently arrived in Portugal and are likely to have lower integration indicators than migrants that reside in the country for longer. We built our sample in several steps. In a first step, we recruited migrants and conducted a listing of recently arrived Cape Verdean immigrants in different neighborhoods of the Greater Lisbon area. Those areas were Cape Verdean diaspora clusters (with many *recently* arrived migrants) and were identified with the support of the Cape Verdean consulate and immigrant associations. Within those areas, enumerators of Cape Verdean descent approached individuals on the street and recorded those that met our eligibility criteria. Eligible individuals were required to have Cape Verdean nationality, not to have Portuguese nationality, to have arrived in Portugal within five years prior to the survey, and to have a close contact person in Cape Verde. Migrants who could not or did not want to provide a Cape Verdean contact were excluded from the study. Migrants were also asked if they would be willing to participate in a survey about migrants in Portugal and, if so, to share their contact details. In a second step, we re-contacted the listed migrants by phone, verified their sample eligibility characteristics, and scheduled the in-person baseline interview. The migrants interviewed at baseline were also invited to participate in five rounds of follow-up phone interviews, which took place over 18 months after the baseline. All surveys were conducted by Cape Verdean enumerators either in Cape Verdean Creole or in Portuguese, depending on the interviewees' preference. Figure A2 in the Appendix displays a timeline of the data collection.

During the baseline survey, we asked migrants to provide contact information for their closest contact in Cape Verde.[11] For these close contacts, we collected phone numbers and social media profiles. Phone interviews with contacts were scheduled as soon as possible after the baseline and endline survey with migrants in Portugal, respectively. The relationship between the migrants in

[11] The translated script says: "We would like to contact your closest adult relative in Cape Verde (the person with whom you have the most contact) to interview them as part of this study. The answers given by your relative, like yours, are anonymous and confidential. We will next call your relative to introduce us to them. The telephone interview with them will be conducted at a later date by another interviewer when your relative is available.". Close contacts in Cape Verde were contacted and informed about the study while the enumerators were still with the migrant (during the baseline survey but before the treatment or placebo implementation).

Portugal and the persons they identified as their closest contact in Cape Verde is shown in Appendix Table A1.

4.2 Descriptive statistics, balance and attrition checks

Appendix Table A2 presents the characteristics of the 405 immigrants in Portugal included in the baseline survey sample. Overall, 57% of respondents are female, with an average age of 28 years. 65% of the sample work for pay, but only 16% hold a permanent work contract. The average monthly income at baseline was 501 EUR. 68% of respondents sent remittances at least once in the previous year, with an average annual amount of 597 EUR, which is approximately 20% above average monthly income. Baseline characteristics are well balanced across experimental arms. We detect almost no statistically significant differences between the treatment and the control groups, with the exception of the share of native-born individuals in the migrant's 5 closest contacts.[12]

Out of the 405 migrants, 339 contacts in Cape Verde were successfully interviewed at baseline – with no statistically significant difference in interview rates across treatment groups (p=0.50). Appendix Table A3 shows balance checks for the different treatment arms for the sample in Cape Verde. 63% of respondents are female. Contacts are slightly older than migrants with an average age of 37 years, which is consistent with 36% of them being parents or older relatives of the migrants. The average years of education are 10 years, compared to 12 years for our migrant sample. The average respondent speaks to the migrant in Portugal every other day or more often. Political participation is relatively high with 74% of the respondents reporting to have voted in the previous election. On average, respondents express strong support for equal decision-making power in the household between husband and wife, as reflected in a mean equality index of 0.85 on a scale from 0 to 1, where 1 reflects total equality in decision making. Overall, the characteristics of the migrants' closest contacts in the origin country are well balanced across treatment arms. We do not detect any statistically significant imbalances.

Appendix Table A4 shows attrition analysis for all follow-up surveys in Portugal and Cape Verde. We find no evidence of differential attrition by treatment status for either the Portuguese or the

[12] We ran all our regressions controlling for the social network at baseline, and the magnitude and statistical significance of estimates did not change.

Cape Verdean sample. In Portugal, overall attrition was 29%. Attrition for the endline survey in Cape Verde was 15%.

5. Econometric Strategy

Our identification strategy allows us to estimate Intent-to-Treat (ITT) effects of the migrant information intervention on the outcomes of interest. The empirical analysis uses an ANCOVA specification, following McKenzie (2012), including strata fixed effects and clustered standard errors for pooled regressions:

$$Y_{it} = \beta_0 + \beta_1 \, MigrantTreatment_i \; + \beta_2 \, Y_{i0} + \gamma_s + \delta_t + \varepsilon_{it} \qquad (1)$$

where Y_{it} denotes the pooled outcome of interest Y for migrant i at follow-up time t; $MigrantTreatment_i$ is the treatment that was randomly assigned to migrant i; Y_{i0} is the baseline value of outcome variable Y for individual i; γ_s corresponds to randomization strata fixed effects for strata s; and β_1 denotes the estimated ITT coefficient of interest. Regressions for the migrant sample in the destination country, for which several rounds of follow-up surveys were conducted, also include survey round fixed effects, δ_t. Standard errors are clustered at the individual level in those regressions. For outcomes from the origin country sample, we estimate a simplified version of Equation (1) without round fixed effects, as we have a single endline observation per contact, where Y_i denotes the outcome of interest Y for contact i; $MigrantTreatment_i$ is the treatment status of the migrant associated with contact i. When only endline and baseline data are available we compute robust standard errors. We compute q-values adjusting for multiple hypothesis testing by families of outcomes following Romano and Wolf (2016) (reported in all Appendix Tables).

6. Results

We present the results from our experiment in three stages. First, we describe usage patterns of the information application provided to migrants as part of the intervention. Second, we examine the effects of the randomized intervention on the pre-registered outcomes related to immigrant integration in the destination country. Finally, we analyze the pre-registered outcomes of migrants' closest contacts in the origin country and present exploratory evidence on underlying mechanisms.

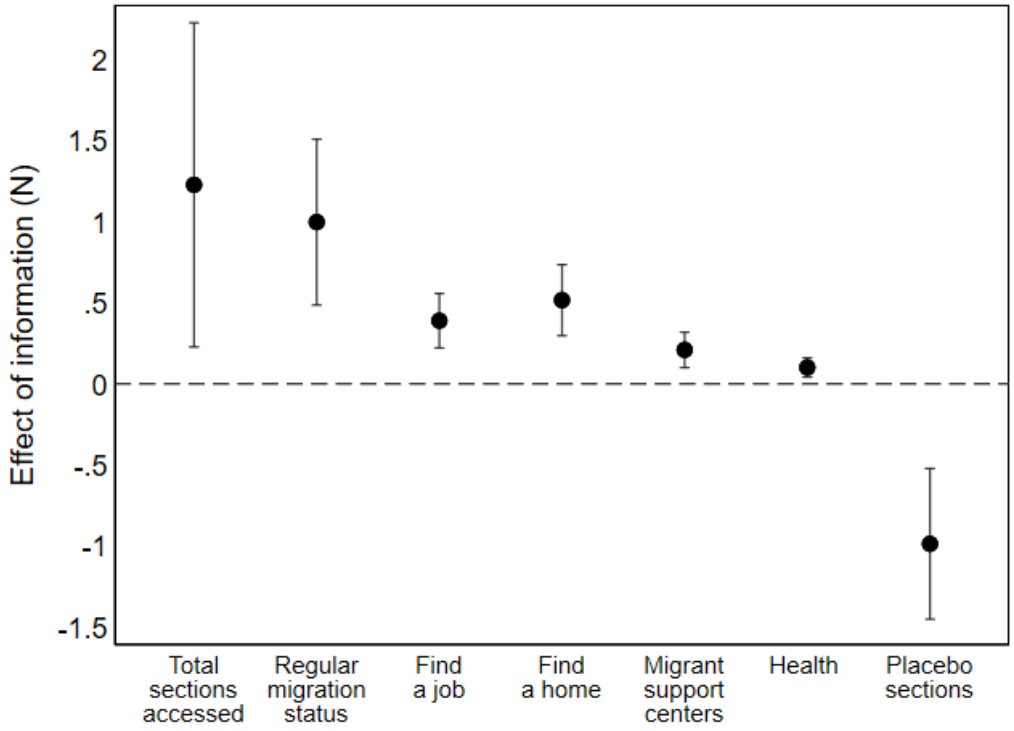
6.1 Take-up of the Information App

Administrative data on the *Morabeza* app usage shows that its availability substantially increased migrants' engagement with integration-relevant content, especially the sections on regularizing migration status and finding employment, while reducing their usage of unrelated placebo leisure content.

Figure 1 shows app usage for the information treatment group relative to the control group. The most accessed section provided information on the legal requirements and administrative procedures to request residency status, followed by the sections providing resources for job search and to find housing. Engagement also rose, though more modestly, for information on migrant support centers and health services, indicating broad-based interest across multiple integration domains. In contrast, access to placebo sections is lower among treated individuals compared to control, suggesting that increased usage of the information sections reflects a reallocation of attention toward relevant information rather than higher app use per se. Appendix Table A5 further provides estimates for all sections.

Overall, these usage patterns show that the intervention effectively directed migrants' information-seeking behavior toward content directly related to legal status and economic integration. This response reveals a strong underlying demand for information on migrant integration – particularly on procedures to obtain regular migration status, which are typically dispersed across multiple official sources and presented in complex legal language.

Figure 1 – Treatment Effects of Intervention on App Usage



Notes: This figure presents ITT estimates of the information treatment on the number of times a section was accessed on the *Morabeza information app*, relative to the control group. The estimates are from an OLS regression with strata dummies, round fixed effects and robust standard errors. Confidence intervals are at the 95 percent level. For more details on variables and estimation, see Appendix Table A5.

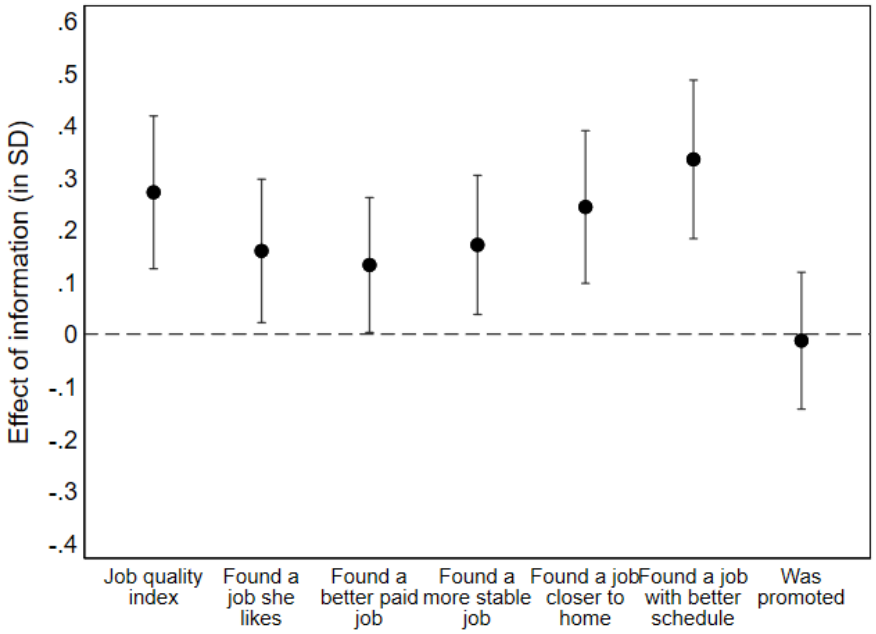
6.2 Destination Country Effects

Immigrant labor market integration

Figure 2 shows how the availability of the *Morabeza* information app improved an index of immigrant job quality by almost 0.3 Standard Deviations (SD) (p-value < 0.01) relative to the control group. This index includes a variety of dimensions, namely finding a preferred job, securing better pay, achieving more stability, finding employment closer to home, obtaining a job with a better schedule, and being promoted. The effects were particularly large on increasing immigrants' ability to find a job with a better schedule and closer to home, but all other job quality dimensions were also significantly improved by access to the information app (with all p-values <0.05), except for promotions which would likely only happen for migrants that kept the same

job.[13] These results show that reducing information frictions improves job quality by enabling immigrants to switch to jobs they prefer, which implies a 0.3 SD improvement at near-zero implementation cost.

Figure 2 – Treatment Effects of Information App on Immigrants' Job Quality



Notes: This figure presents ITT estimates of the *Morabeza* information app treatment in standard deviation units on the job quality of immigrants, relative to the control group. The *Job Quality Index* varies between 0 and 1 and averages six items related to job quality the respondent achieved in the labor market since baseline: finding a preferred job, securing better pay, achieving more stability, finding employment closer to home, obtaining a job with a better schedule, and being promoted. The estimates are from OLS regressions with strata dummies, round fixed effects, and standard errors clustered at the individual level. Confidence intervals are for 95 percent level. For more details on variables and estimation, see Appendix Table A6.

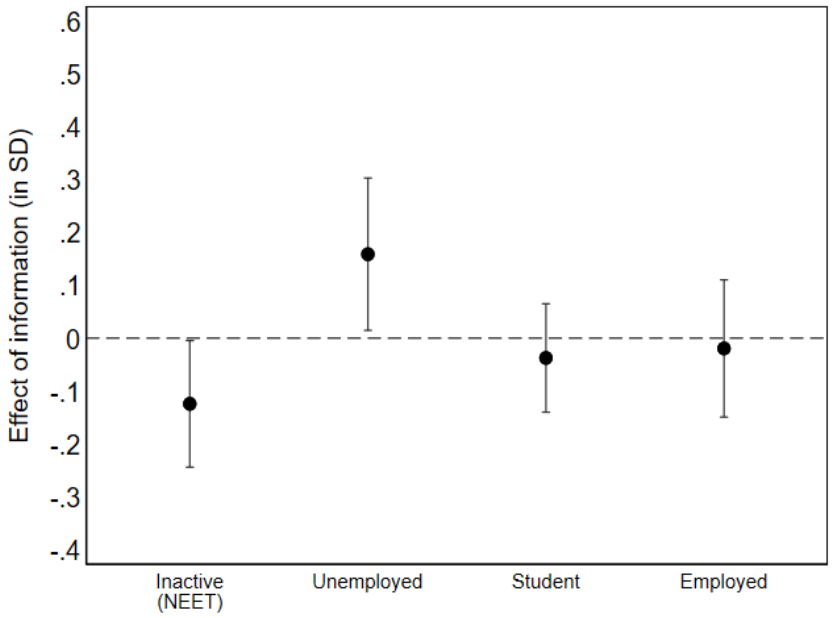
The *Morabeza* information app also increased labor market engagement. Figure 3 shows that treated immigrants are less likely to be inactive (a 0.15 SD reduction in NEET (*Not in Education, Employment, or Training*) status, $p < 0.05$) and more likely to be actively searching for work (0.16 SD increase in unemployment, $p < 0.05$). Student and employment status are not affected. When examining the characteristics of immigrant employment, we also do not find significant changes

[13] Appendix Table A6 presents the estimates corresponding to these results in detail.

in the likelihood of holding a permanent contract, weekly hours worked, or monthly income earned. All estimates are also provided in Appendix Table A7.

Overall, our results show that reducing information frictions helps to activate previously disengaged immigrants and, as shown in Figure 2, improves job matching, with no adverse effects on those already employed or studying.

Figure 3 – Treatment Effects of Information App on Immigrants' Labor Market Outcomes



Notes: This figure presents ITT estimates of the *Morabeza* information app treatment in standard deviation units on labor market outcomes of immigrants, relative to the control group. Inactive (NEET): A person who is not working and not actively seeking work, nor studying – it includes retirees and other individuals who are not currently looking for a job. Unemployed: A person who is not working but is actively looking for a job. This includes individuals who are looking for jobs, are available to work, and have taken specific steps to find employment. Employed: A person who is currently working for pay or profit. This includes full-time and part-time workers, as well as those who are self-employed. Estimates are from ANCOVA regressions with strata dummies, round fixed effects, and standard errors clustered at the individual level. Confidence intervals are for 95 percent level. For more details on variables and estimation, see Appendix Table A7.

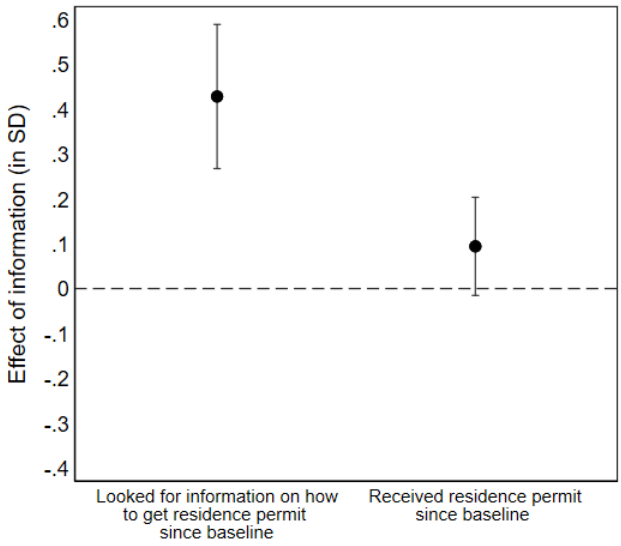
Immigrant resident status and social integration

Figure 4 illustrates the impact of offering the *Morabeza* information app on immigrants' efforts to obtain and hold a residence permit. The probability that treated migrants search for information on how to acquire a residence permit increased significantly by 0.43 SD (p-value < 0.001) relative to

the control group. The probability of holding a residence permit also increased, although less strongly, by 0.1 SD (p-value < 0.1).

These results indicate that access to an easy-to-use information application substantially increased migrants' search for immigration regulations. This finding is consistent with evidence from a list experiment conducted at baseline, which indicates that 39.4% of the respondents did not hold a valid residence permit – implying that a large fraction of the sample could benefit from this information. The results are also consistent with the administrative data on app usage, which show strong engagement by treated respondents with content related to regularizing migration status. However, the increase in information search translated only partially into actual residence permits, which may reflect administrative capacity constraints in processing applications.

Figure 4 – Treatment Effects of Information App on Efforts to Obtain and Actual Migrant Residency Status



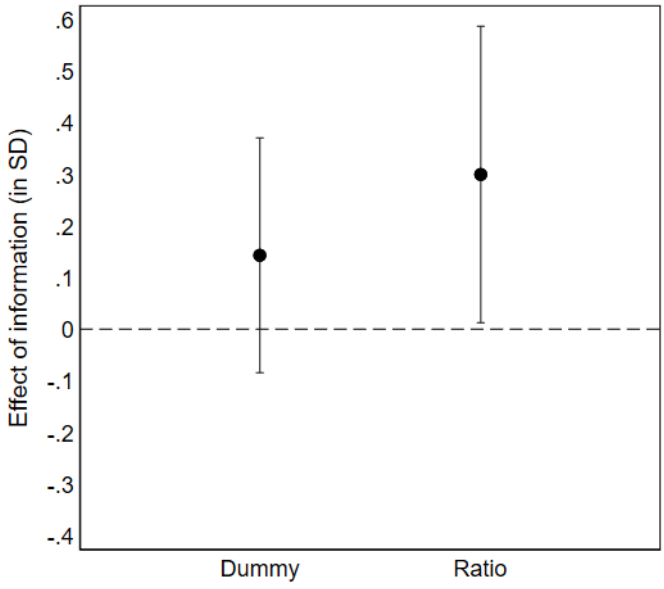
Notes: This figure presents ITT estimates of the *Morabeza* information app treatment in standard deviation units on efforts to obtain a residence permit and actual migrant residency status, relative to the control group. In the baseline, respondents were asked whether they had looked for information on how to get a residence permit and whether they had received a permit since they arrived in Portugal. In the follow-up interviews, the reference time frame was the time between the baseline and the current interview. The estimates are from ANCOVA regressions with strata dummies, round fixed effects, and standard errors clustered at the individual level. Confidence intervals are for 95 percent level. For more details on variables and estimation, see Appendix Table A8.

We also examine whether treated immigrants became more socially integrated, measured by changes in their social network structures. Social integration is captured using information on

migrants' networks in the destination country, defined as up to five closest individuals reported at baseline and endline. The endline closest network incorporates both baseline individuals at destination who remain in close contact with the migrant, and all new close contacts formed since baseline. We estimate treatment effects of access to the information app on two outcomes: (i) an indicator for whether the migrant's close social network includes any native-born individual; and (ii) the ratio of native-born individuals to total network members.

Figure 5 presents the results. Treated migrants are 3.8 percentage points (pp) more likely to include a native-born individual in their close network (a 0.14 SD increase), although this is only significant at the 10% level [q-value=0.092]. In contrast, the ratio of native-born individuals relative to the total contacts increases by 3.3pp for treated immigrants, more than doubling the control mean. This represents a 0.32 SD increase. This estimate is statistically significant with a q-value of 0.02. Detailed estimates are reported in Appendix Table A9.

Figure 5 – Treatment Effects of Information App on Native-Born Contacts in Migrants' Social Network



Notes: This figure presents ITT estimates of the *Morabeza* information app treatment in standard deviation units on extensive and intensive margins of native-born contacts in migrants' close social networks (defined to include 5 closest residents at destination), relative to the control group. The binary variable takes value 1 if the endline migrants' network includes any individual born in destination country. The ratio is between the number of individuals born in

the destination country and the total number of members in the endline network. Estimates are from OLS regressions with strata dummies, and robust standard errors. Confidence intervals are for 95 percent level. For more details on variables and estimation, see Appendix Table A9.

Overall, these results suggest that access to the information app may have promoted closer relationships of the migrants with individuals born in Portugal. While the intervention did not substantially increase the probability of having *any* native-born contacts, it did shift the composition of migrants' social network towards a higher proportion of native-born contacts.

Psychological characteristics of migrants

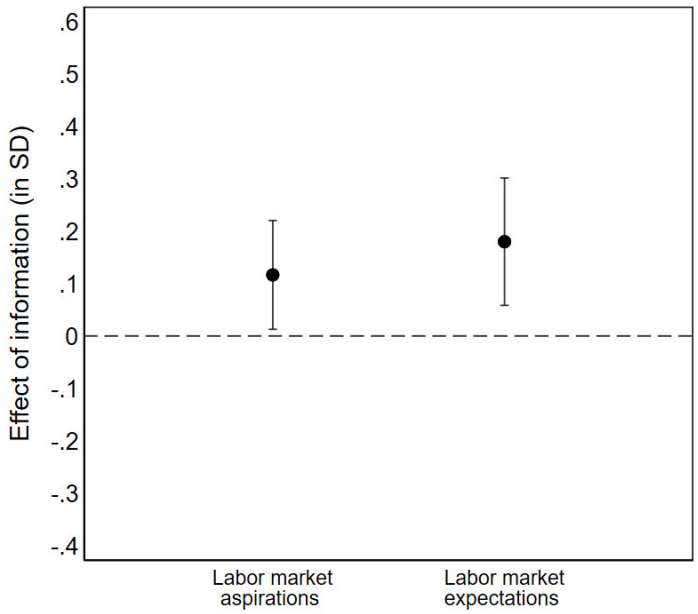
Access to the *Morabeza* information app led to substantial, statistically significant increases in both migrants' labor market aspirations and expectations. Figure 6 displays the estimated treatment effects. Both aspirations and expectations on labor market occupation and job conditions were significantly improved in the 18 months after immigrants were provided with the *Morabeza* information app. In particular, aspirations improved by 0.12 SD (p-value < 0.05) and expectations increased by 0.18 SD (p-value < 0.01). Appendix Table A10 reports the full set of results. The larger effect on expectations suggests that access to the information app raised not only migrants' desired labor market outcomes, but also improved their beliefs about what is attainable in the destination labor market.

These results suggest that improved access to relevant information in the destination country may increase migrants' sense of agency and motivation to improve their labor market situation and job quality – a result consistent with the job switching and job quality gains documented above.[14] While our intervention did not directly target aspirations, its effects are broadly in line with direct hope- or aspiration-based interventions in the literature, but appear to persist longer than some of the effects documented elsewhere.[15]

[14] The impact of the information app on measures of self-efficacy, grit or depression is negligible and not statistically significant, as shown in Appendix Table A11. These null results suggest that the positive labor market and regularization improvements observed did not operate through changes in these dimensions.

[15] For instance, Lybbert and Wydick (2017) show that a hope-focused intervention among indigenous women in Mexico increased aspirations by about 0.25 SD in the short run and by 0.17 SD after one year. Bernard, Dercon, Orkin, and Taffesse (2014), in contrast, study an intervention featuring short documentaries with success stories and find a short-run effect of around 0.12 standard deviations on aspirations, which fades rapidly, declining to roughly 0.05 standard deviations after six months.

Figure 6 – Treatment effects of Information App on Aspirations and Expectations



Notes: This figure presents ITT estimates of the Morabeza information app treatment in standard deviation units on labor market aspirations and expectations, relative to the control group. The dependent variables are count variables indicating the number of achievements the respondent aspires or expects to achieve in the labor market, respectively. The estimates are from ANCOVA regressions with strata dummies, round fixed effects, and standard errors clustered at the individual level. Confidence intervals are for 95 percent level. For more details on variables and estimation, see Appendix Table A10.

6.3 Origin Country Effects

Our destination country results show that access to a low-cost, scalable information app improved integration outcomes across multiple dimensions: job quality, labor market engagement, steps taken toward regularization, social ties with native-born individuals, and aspirations. We next examine whether these integration gains spill over to the migrants' origin country through their closest contacts back home. Our hypothesis is that better-integrated immigrants are more exposed to destination country norms, institutions, and social dynamics, and that this exposure is transmitted to their closest contacts in the origin country.

Attitudes towards gender equality

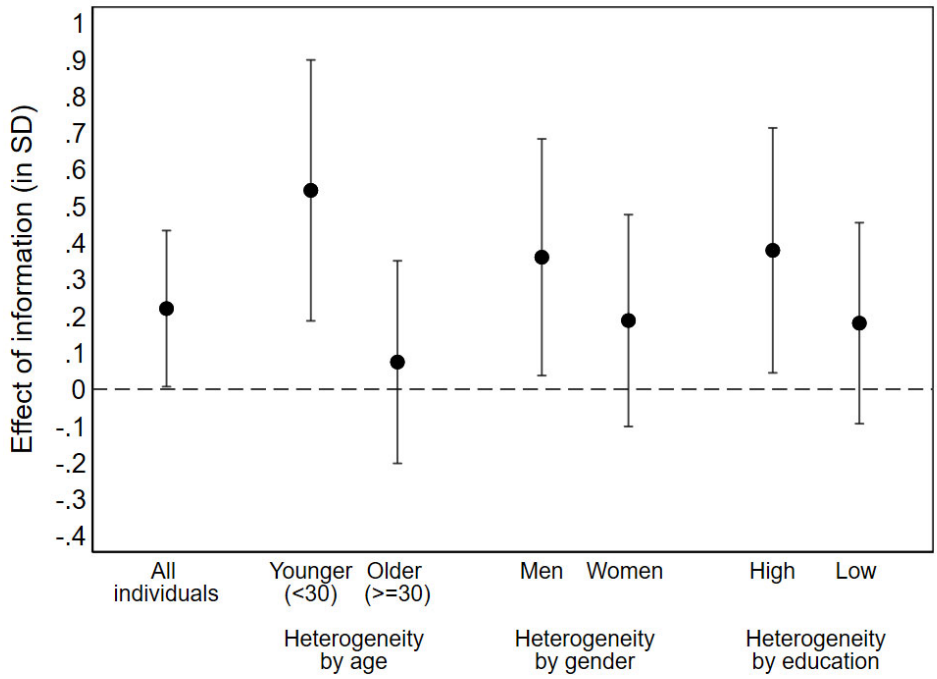
We first examine whether providing immigrants with access to the *Morabeza* app changed gender equality norms on intra-household decision making in the country of origin. Importantly, the app did not provide any content related to gender norms. All information delivered to migrants was gender neutral. The gender norm transmission hypothesis we test is informed by prior evidence that migrants' exposure to local gender norms at destination can transmit those norms to their social networks in origin countries (e.g., Clemens and Tiongson, 2017; Tuccio and Wahba, 2018; Mobarak et al., 2023). Consistent with this premise, gender norms in Portugal tend to be more egalitarian than in Cape Verde, as reflected, for example, in substantially higher female labor force participation.[16]

Figure 7 reports estimated treatment effects on a standardized gender-equality index. This index aggregates attitudes across a variety of dimensions related to intrahousehold decision making, including career decisions, financial spending and savings, social contacts and daily activities. The intervention significantly increased the index by 0.24 SD (p-value < 0.05), indicating a shift toward more egalitarian norms, as detailed in Appendix Table A12. The magnitude of our treatment effect is similar to effects found in interventions directly targeting attitudes towards gender equality. For example, Dhar, Jain and Jayachandran (2022) find that an intervention featuring classroom discussions about gender equality increases attitudes in support of gender equality by 0.18 SD.

Our results are consistent with the intervention increasing migrants' exposure to and/or salience of destination-country norms, and with migrants subsequently transmitting more egalitarian gender norms to their closest network members in the origin country.

[16] According to the World Bank, the labor force participation in 2021 for women aged 24-64 years old was 73% in Portugal compared to 54% in Cape Verde.

Figure 7 – Treatment effects of Information App on Gender Equality Norms in Origin Country



Notes: This figure presents ITT estimates of the *Morabeza* information app treatment in standard deviation units on gender equality norms on household decision making, relative to the control group. The gender equality index dependent variable corresponds to an index ranging from 0 to 1, where 1 corresponds to respondents who think that husband and wife should share equal responsibility in household decision making and 0 corresponds to individuals who believe that only either one of the two is fully responsible over ten different decision scenarios. The figure displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. Confidence intervals are for 95 percent level. For more details on variables and estimation, see Appendix Tables A13, A14 and A15.

To better understand the estimated effect on gender norms, we assess whether these results are concentrated among individuals in the origin country whose norms we would expect to be more malleable. In line with the literature on gender norm transmission, we expect greater responsiveness among young, male and more educated individuals.[17]

To test this hypothesis, we re-estimate our baseline specification on the subsample of contacts under 30 years old, who are likely to hold more malleable norms. As shown in Figure 7, the treatment effect is substantially larger for contacts under age 30: we estimate an increase in the gender equality index of 0.54 SD ($p < 0.01$) for contacts under age 30, and no statistically

[17] Evidence of this gender norms malleability is provided, for example, by Fernandez et al. (2004), Bertrand (2019) and Farre et al. (2023).

significant effect for contacts aged 30 and above. The difference in coefficients is statistically significant at the 5% level. Figure 7 also reports heterogeneity of treatment effects by gender and education of the closest origin-country contact. We find that treatment effects are concentrated among male and high school graduates with estimated increases of 0.36 SD ($p < 0.05$) and 0.38 SD ($p < 0.05$), respectively. While the age-based difference is statistically significant, the gender and education-based differences are estimated less precisely. Detailed results are provided in Appendix Tables A13, A14 and A15.

The estimated patterns are consistent with destination-country norms diffusing through treated migrants' close ties, with effects concentrated among subgroups for whom norms are likely more malleable.

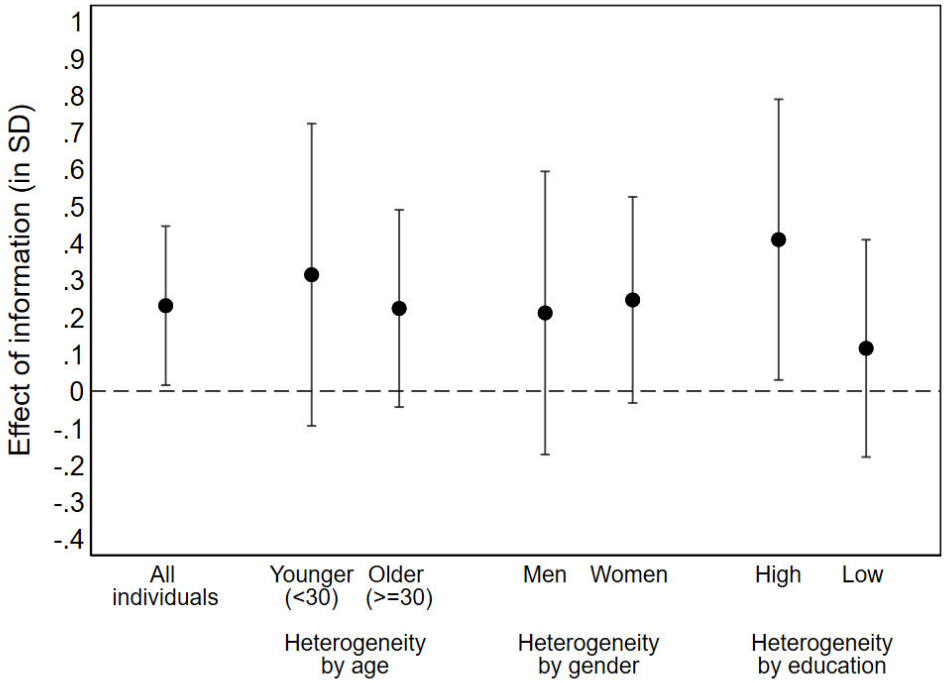
Political attitudes and participation

We next examine whether providing the *Morabeza* application to immigrants at destination affected political attitudes and behavior among their closest contacts in the country of origin. Importantly, the app did not provide any content related to political participation rights, duties or any other related norms. Our hypothesis that political norms are transmitted by migrants abroad to their communities at origin is based on prior supportive evidence by Batista and Vicente (2011), Barsbai et al (2017) and Batista et al. (2019).

As shown in Figure 7, we find that contacts of treated migrants are more likely to have voted in the election held prior to the endline survey by 0.23 SD (p-value < 0.05) relative to the control mean, a significant increase of 15%.[18] Access to the app by migrants did not significantly increase more generic measures of political participation in Cape Verde, namely demand for public service quality and a political participation index, as shown in Appendix Table A16. Our treatment effect on voter turnout is sizeable, but in line with other effective interventions leveraging social contacts in the literature. For example, a peer-pressure intervention in Gerber et al. (2008) increased turnout by 8.1 percentage points, corresponding to a 27% increase over the control mean, compared to a relative increase of 15% in our setting.

[18] The presidential election was held in Cape Verde on October 17, 2021. See Figure A2 for a timeline.

Figure 7 – Treatment effects of Information App on Voting Behavior in Origin Country



Notes: This figure presents ITT estimates of the Morabeza information app treatment in standard deviation units on voting behavior in the origin country, relative to the control group. The dependent variable is binary taking value 1 if the respondent voted in the election prior to the survey. The figure displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. Confidence intervals are for 95 percent level. For more details on variables and estimation, see Appendix Tables A17, A18, and A19.

We examine treatment effect heterogeneity by characteristics of the contacts in Cape Verde, namely age, gender and education. The results, displayed in Figure 7, do not show striking heterogeneity patterns, except for the fact that impacts seem to be concentrated among the contacts of treated migrants that completed high school, for whom the intervention increased political participation by 0.41 SD (p-value < 0.05). The difference between the estimated impacts across subgroups is, however, not statistically significant. Tables A17, A18, and A19 provide detailed results.

Explaining the transmission of norms from migrants to their contacts in the origin country

Based on existing evidence in the related literature, a natural conjecture for how voting norms are transmitted is that migrants' exposure to higher local electoral participation at destination

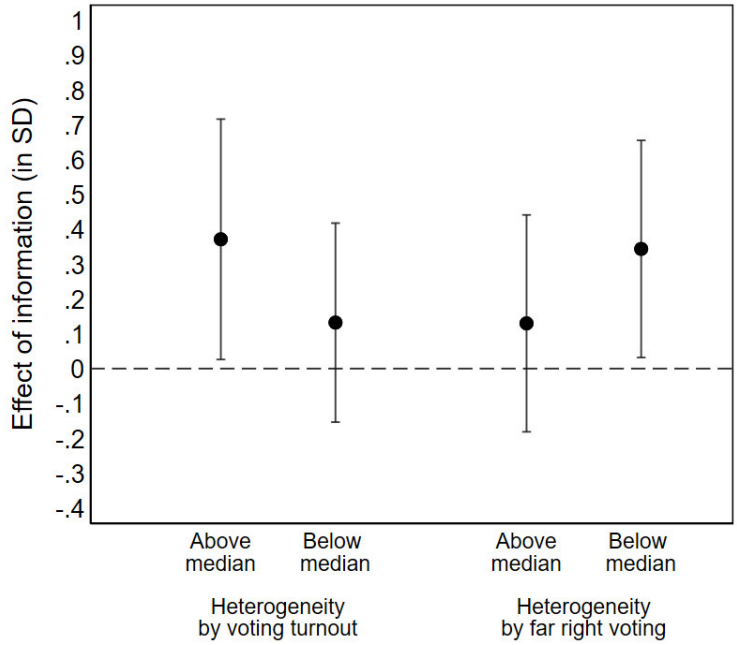
strengthens the diffusion of electoral-participation norms to their origin-country contacts. We test this mechanism by examining whether treatment effects are larger among contacts of migrants living in high-turnout areas.

Using administrative voting records at the parish council level, we classify migrants' areas of residence as above or below the median turnout in the Portuguese elections that took place prior to the endline survey. Based on this split, we re-estimate the baseline specification separately for each group. The results are shown in Figure 9. We find that the treatment effects are particularly large among contacts of migrants in high-turnout areas: 0.37 SD (p-value < 0.05) compared to non-significant effects in low-turnout areas. Detailed results are provided in Appendix Table A20.

This pattern is consistent with our hypothesis of stronger transmission of electoral participation norms among migrants exposed to higher local turnout. The timing of elections reinforces this interpretation: a major Portuguese election took place between the baseline and endline surveys, potentially increasing the salience of local voting behavior for migrants.[19] This election happened about one month before the presidential election in Cape Verde, which served as the reference for voting behavior in the endline survey. In addition, Cape Verdeans residing in Portugal have the right to vote in the Cape Verdean presidential elections from abroad, providing an opportunity for migrants to engage politically and discuss the elections with their closest contacts. These conditions plausibly facilitated the transmission of more political engagement and voting behavior from treated migrants to their closest contacts in Cape Verde.

[19] Portugal's local elections (September 26, 2021) had a turnout of about 54%, while Cape Verde's presidential election (October 17, 2021) had a turnout of about 48%. These figures are not directly comparable because the eligible electorates differ. Cape Verde's presidential turnout is computed among citizens who actively register, whereas Portugal's local turnout is computed over an automatically registered citizen roll (which also includes some registered noncitizen residents). Restricting Portugal's eligible electorate to registered Portuguese citizens under rules more similar to those in Cape Verde would therefore imply a higher turnout rate.

Figure 9 – Treatment effects of Information App on Voting Behavior in Origin Country



Notes: This figure presents ITT estimates of the Morabeza information app treatment in standard deviation units on voting behavior in the origin country, relative to the control group. The dependent variable is binary taking value 1 if the respondent voted in the election prior to the survey. The figure displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. Confidence intervals are for 95 percent level. For more details on variables and estimation, see Appendix Tables A20 and A21.

We also assess whether the destination's local political climate conditions norm diffusion. In particular, we examine the voting patterns of natives, namely local support for the far right in the migrants' area of residence as a proxy for local anti-immigrant sentiment. Prior evidence shows that local support for far-right parties captures a broader anti-immigrant climate, often associated with weaker immigrant integration and greater harassment (Schilling and Stillman, 2024). Recent work also emphasizes that anti-immigrant rhetoric and right-wing populism can reinforce exclusionary local norms, potentially limiting migrants' exposure to, and engagement with, mainstream participatory behavior (Zonszein and Grossman, 2025). In this setting, we hypothesize that the diffusion of electoral participation norms is attenuated when migrants reside in politically hostile environments.

We test this hypothesis by examining whether treatment effects are larger among contacts of migrants living in areas with relatively low far-right vote shares, relative to areas with high far-

right support. Specifically, we examine treatment effect heterogeneity between areas with above and below median voting for the far-right party using administrative data on voting patterns at the parish council level.

Treatment effects are concentrated among contacts of migrants residing in low voting for far-right areas: the probability of voting by contacts of treated migrants in the origin country increases by 0.34 SD ($p < 0.05$), while effects are not statistically distinguishable from zero in high far-right areas. Detailed results are provided in Appendix Table A21.

Interpreting far-right vote shares as a proxy for local anti-immigrant sentiment, these patterns are consistent with stronger norm diffusion in more welcoming environments. This interpretation aligns with evidence that support for anti-immigrant parties is associated with worse economic immigrant integration, increased harassment, and fewer positive interactions with locals (Schilling and Stillman, 2024; Jaschke et al., 2026).[20] These channels can plausibly reduce migrants' exposure to, and engagement with, local participatory norms. Related work in political science, such as Zonszein and Grossman (2025), similarly emphasizes that immigrant-origin political incorporation can trigger backlash, e.g., increases in hate crimes and exclusionary attitudes. Manacorda et al. (2026) provide complementary evidence using non-experimental methods, showing that exposure to high levels of anti-immigrant sentiment in European destination countries reduces democratic support in African countries of migrant origin. This evidence suggests that hostile local contexts may dampen political engagement at destination and the scope for norm transmission to origin countries. Recent political economy work also highlights a self-reinforcing relationship between immigration and right-wing populism, reinforcing the relevance of local political climates for immigrants' self-selection and experiences at destination (Docquier and Rapoport, 2025). More generally, evidence on the political consequences of immigration underscores the importance of local exposure and context for political responses and backlash dynamics (Mayda, Peri, and Steingress, 2022; Campo et al., 2025).

[20] Interestingly, Jaschke et al. (2026) find that refugees assigned to more hostile regions in Germany converge more quickly to local social norms, although they experience worse economic integration outcomes amidst heighted local discrimination and hostility.

6.4 Alternative Channels and Additional Outcomes

Effects on financial remittances sent to the country of origin

Appendix Table A22 reports treatment effects of providing access to the information app on financial remittances sent to the migrants' main contact person in the country of origin. We find no statistically significant effect on either the probability of sending remittances, or the value of remittances sent.

This result is consistent with the fact that we do not find significant changes in the income earned by treated immigrants in the destination country. It therefore rules out income channels for the political and social norm changes in the country of origin documented above.

Effects on frequency of contacts

We examine whether access to the *Morabeza* information app affected how frequently migrants communicate with their closest contact at home. We do not find statistically significant changes in the frequency of contact, as shown in Appendix Table A23. This null is unsurprising given that baseline frequency of contact was already very high, with contacts reporting nearly daily contact - 221 contacts per year, on average, as shown in Appendix Table A3.

This result is consistent with the absence of an increase in financial remittances. Batista and Narciso (2018) found that an increase in the frequency of contact between migrants and their networks in the origin country diminished information asymmetries, thereby increasing financial remittances sent. Our results suggest that there were no important informational asymmetries that could drive changes in remittance sending behavior.

Given that the high frequency of contact persisted throughout the study period, we conclude that international norm transmission between migrants at destination and their closest contacts in the origin country is more likely to have occurred through changes in communication content rather than communication frequency.

Effects on migration decisions

Finally, we examine whether fostering integration in the destination country affects migration decisions of contacts in the origin country. We do not find any evidence that improved migrant integration in the destination country increases migration intentions of contacts in the origin country. We explore three measures: (i) whether the contact reports an intention to emigrate to Portugal at any point in the future, (ii) whether the contact has made plans to move to Portugal in the next 12 months, and (iii) whether the contact has left Cape Verde. In the control group, approximately half of the contacts report an intention to move to Portugal at some point, fewer than 30% have made concrete plans to move, and only 2% have left the country at endline. We do not find any statistically significant effects of the information treatment on any of these outcomes, suggesting that while information provision in the destination country can affect immaterial remittances, it does not seem to impact emigration decisions. Results are presented in Appendix Table A24.

7. Concluding Remarks

This paper provides the first experimental evidence that improving migrant integration at destination generates development spillovers to migrants' origin communities. We show that access to a low-cost and scalable information application by migrants in the destination country improved a broad set of migrant integration outcomes, including migrants' labor market situation (mainly through increased job search and job switching), efforts to regularize migration status, social integration with native residents, and migrant aspirations. Importantly, these integration gains extend beyond migrants themselves. Even though the app provided no information on destination-country social or political norms, access to the information app strengthened norm diffusion from migrants to their closest origin-country contacts, improving voting behavior and gender-equality attitudes. The presence of these cross-country spillover effects among untreated individuals strengthens the credibility of our findings, indicating that the observed effects reflect actual change rather than experimenter demand effects.

We document evidence on the conditions under which these spillovers are most pronounced, offering insight into the underlying mechanisms. Norm transmission is strongest among recipients

when destination-country norms are particularly salient, as in high-turnout electoral contexts, and among recipients with more malleable beliefs, namely younger contacts. We also find that international spillovers depend on the political climate at destination: norm diffusion is weaker when migrants reside in areas with higher far-right support, consistent with more hostile local environments attenuating exposure to local norms. At the same time, we rule out several alternative channels. The observed effects arise despite no immediate increases in migrants' earnings or financial remittances, and despite no changes in the frequency of contact between migrants and their origin-country contacts. These findings suggest that changes in the content of communication, rather than its intensity or increased economic resources, are the primary mechanism through which social norms are transmitted across borders. This evidence is consistent with the concept of "social remittances" whereby migrants transmit norms and practices learned abroad to their home societies.

From a policy perspective, the intervention we evaluated is highly cost-effective and scalable. Providing information via a smartphone app entails a near-zero marginal cost per additional user. Once developed, the information app requires little technical infrastructure to operate, and the main costs of adaptation to new contexts stem from translating content and keeping information up to date. This means that such a migrant integration support program can be scaled up to reach larger migrant populations at minimal cost. These features substantially strengthen the policy relevance of our findings. By generating benefits both at destination and at origin, migrant integration policies such as the one we study yield cross-border returns that are typically not accounted for in standard cost-effectiveness calculations. Our results therefore suggest that destination and origin countries have aligned interests in migrant integration and that these complementarities can be leveraged through relatively simple information-based tools. Our findings demonstrate that migrant integration policy can serve as a tool for shared development, yielding "win-win" outcomes for both sides of the migration relationship.

While our experiment focused on a single migration corridor with favorable conditions, including a shared language, cultural ties, and an established immigrant community, the underlying mechanisms are likely relevant in many other settings. Although these features may reduce information frictions relative to other contexts, they are not unique: similar conditions characterize migration corridors involving former colonies of Portugal, France, or Spain, as well as migration from countries where English is widely spoken to English-speaking destinations. If anything,

relatively low language barriers in our setting suggest that the effects we document may represent a lower bound. In contexts where migrants face greater difficulty accessing or interpreting official information, or where origin and destination country norms diverge more sharply, improvements in information access and migrant integration could plausibly generate larger effects. At the same time, differences in language, digital access, and education may pose challenges to the effectiveness of such interventions, underscoring the importance of context-specific evaluation. These considerations point to the need for future research to test similar approaches across other migration corridors and institutional environments to better understand how easing integration at the destination can generate broader developmental gains in countries of origin.

Ultimately, this study's findings highlight an underappreciated channel through which international migration can promote economic development, showing that when migrants thrive abroad, their home communities can thrive as well. By providing experimental evidence on how integration policies affect social and political outcomes beyond migrants themselves, our findings open new avenues for research and policy design.

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Appendix A - Information App Intervention

Morabeza App Description

The name of the information app is Morabeza, a Cape Verdean creole word that expresses hospitality and friendliness to newcomers. Morabeza was the main platform for information intervention. Besides providing information for the immigrant's integration, conditional on each respondent's consent, it also allowed to collect data on the content migrants had accessed.

There were two levels of access in the app: the control group and the treatment group.

The information was divided into 7 categories. All users had access to the first two: A - Day-to-Day and B- Family in Cape Verde. The remaining categories formed the information treatment and were only visible for participants in the information treatment group. These categories were: C - Health in Portugal, D – Obtaining regular immigration status in Portugal, E- Finding a Job and F - Finding a House and G - Migration Support Centers.

Figure A1 – APP's welcome page.

The categories contain the following information:

A – Day-to-day

a.1. Important Contacts

This section includes important contacts such as emergency numbers, health support, police, support and advisory, and immigrant support lines.

a.2. Public Transports

The Public Transports section explains how to use both transports within and outside of Lisbon. Within Lisbon, it explains how to use the bus, metro, train, tram, and boat services, as well as the best ways to buy tickets for different uses and how to obtain discounts.

a.3. Money

The Money section has information about the euro, where to exchange and withdraw money (also mentioning some functionalities of ATMs), how to open a bank account (starting by referring to existing banks, informing them about their schedule and the existence of a bank app and lastly, describing the needed documentation).

a.4. Education

The Education section explains the education system in Portugal, how to enroll in schools (including timing and necessary documentation), and some support the government provides to students.

B – Family in Cape Verde

b.1. Family Reunification

In Portugal, foreign residents have the right to have their family with them. The Family Reunification section explains who is eligible for family reunification and describes the process.

b.2. Contact with Family

The Contact with Family section describes the easiest ways to keep in touch with family in Cape Verde. It advises on how to contact them with and without internet, and how to send remittances and goods.

C – Health in Portugal

The health section advises about the healthcare rights of foreigners in Portugal and describes the healthcare system, how to access it (including how to get vaccinated) and its cost in different situations.

D – Regular immigration status in Portugal

d.1. Obtaining the Documents

This section explains the two most important aspects of regularization in Portugal: the laws regarding immigration and how immigration services work.

d.2. Residence Permit

This section informs users about the different types of residence permits, how to obtain them, what is the needed documentation, and how to renew them.

d.3. NIF

This section is about the taxpayer's number, how to obtain it, and about how taxes work in Portugal.

d.4. Social Security

This section explains social security services, their importance, the benefits and costs of the system and how to register.

d.5. Document Authentications

This section explains where and how to obtain document authentications.

E – Finding a Job

This section teaches how to create a CV, provides a list of websites that post jobs and recruitment agencies. It explains how to get foreign degrees recognized in Portugal, and how to obtain support for starting a business.

F – Finding a House

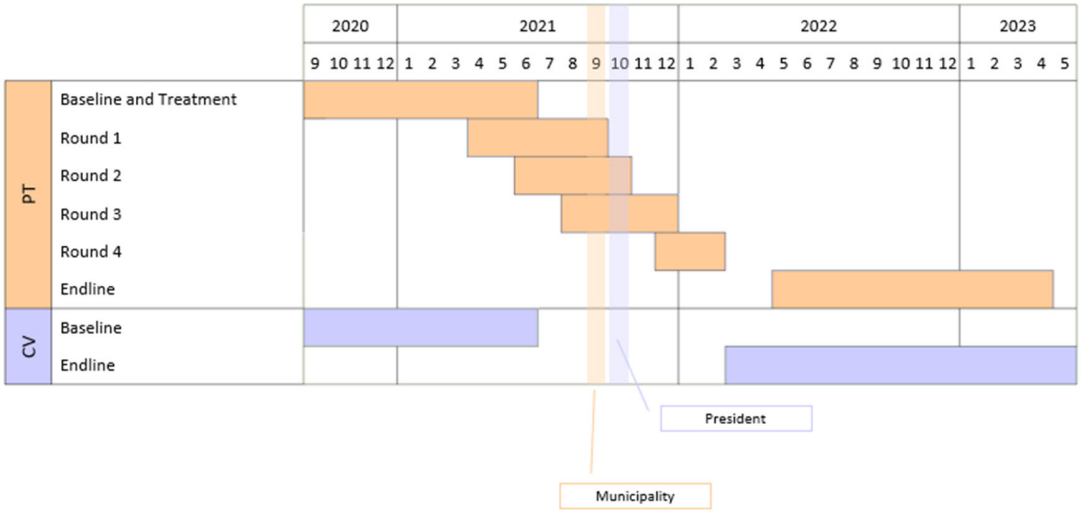
This section explains how to find a house in Portugal, starting with where to look and then explaining legal issues and how to acquire services like gas, water, and electricity.

G – Migration Support Centre

This section provides a description of different types of support centers for migrants in and around Lisbon, the kind of help they can provide, and how to contact them. The section could be personalized according to the residence of the migrant; it was possible to restrict the search to local support centers.

Appendix B – Timeline

Figure A2: Timeline of the data collection and of elections in origin and destination countries



Appendix C - Empirical Results

Table A1: Relationship with contact person in Cape Verde

	All	
	N	Percent
Husband/Wife or Boyfriend/Girlfriend	32	7.9
Parent or Parent in Law	132	32.6
Sibling or Sibling in Law	129	31.9
Children	14	3.5
Friend	46	11.4
Cousin	25	6.2
Niece/ Nephew	8	2.0
Uncle/Aunt	8	2.0
Grandparent	5	1.2
Other	6	1.5
Total	405	100.0

Notes: The relationships are described from the point of view of the migrant, e.g. a relationship of parent means that the contact in Cape Verde is the migrant's parent.

Table A2: Balance Checks - Portugal

	(1) Full sample	(2) Control	(3) Information	(4) P-value
Individual characteristics				
Female	0.573	0.559	0.586	0.23
	(0.495)	(0.498)	(0.494)	
Age	27.664	28.069	27.261	0.13
	(7.088)	(7.087)	(7.083)	
Married	0.126	0.104	0.148	0.23
	(0.332)	(0.306)	(0.356)	
Years of schooling	11.937	11.884	11.99	0.75
	(3.17)	(3.211)	(3.136)	
Year of arrival in Portugal	2018.109	2018.069	2018.148	0.29
	(1.424)	(1.505)	(1.342)	
Speaks Creole at home	0.901	0.896	0.906	0.78
	(0.299)	(0.306)	(0.292)	
Works for pay	0.647	0.639	0.655	0.73
	(0.479)	(0.482)	(0.476)	
Has a permanent work contract	0.158	0.183	0.133	0.15
	(0.365)	(0.388)	(0.34)	
Is a student	0.151	0.163	0.138	0.41
	(0.358)	(0.371)	(0.346)	
Number of hours worked (last week)	24.18	24.094	24.266	0.92
	(21.215)	(21.576)	(20.901)	
Monthly income (in Euros)	500.731	525.426	476.158	0.13
	(326.179)	(338.827)	(311.982)	
Expected monthly income in 10 years (in Euros)	1960.014	2014.565	1906.048	0.78
	(1437.946)	(1442.8)	(1434.973)	
Aspired monthly income in 10 years (in Euros)	5197.692	5013.918	5379.592	0.66
	(6830.6)	(6133.984)	(7467.811)	
Received residence permit since arriving in Portugal	0.701	0.728	0.675	0.22
	(0.458)	(0.446)	(0.47)	
Share of individuals born in Portugal in 5 closest contacts	0.055	0.039	0.07	0.05
	(0.154)	(0.126)	(0.176)	
Dummy for having Portuguese people in 5 closest contacts	0.151	0.114	0.187	0.05
	(0.358)	(0.318)	(0.391)	
Plans to ever return to Cape Verde	0.454	0.436	0.473	0.73
	(0.499)	(0.497)	(0.5)	
Sent money to Cape Verde at least once in the previous year	0.681	0.688	0.675	0.83
	(0.466)	(0.464)	(0.47)	
Amount sent to Cape Verde in money in the previous year (in EUR)	596.902	647.131	546.921	0.23
	(768.615)	(790.265)	(745.036)	
Household characteristics				
Household size	3.136	3.109	3.163	0.61
	(1.645)	(1.675)	(1.619)	
Number of adults (18-60)	2.452	2.475	2.429	0.89
	(1.207)	(1.247)	(1.168)	
Number of children (<18)	0.578	0.55	0.606	0.47
	(0.36)	(0.296)	(0.414)	
Household income (in Euros)	1206.933	1212.879	1201.017	0.936
	(766.034)	(793.911)	(739.18)	
Observations	405	202	203	405

Notes: Works for pay is set to 1 if the respondent reports being employed or self-employed or a working student with positive income. Remittances sent refer to remittances sent to anyone in Cape Verde in the previous year. Actual monthly income, remittances and number of hours worked are winsorized at the 99th percentile. Expected and aspired monthly income are winsorized at the 95th percentile. Share of individuals born in Portugal in 5 closest contacts and the corresponding dummy variable are zero if the migrant reports having zero contacts. Column 4 reports the p-value of the coefficient on treatment in a regression of treatment on the variable of interest at baseline, including a dummy if the variable is missing at baseline, strata fixed effects, and robust standard errors. Standard deviations in parentheses.

Table A3: Balance Checks - Cape Verde

	(1)	(2)	(3)	(4)
	Full sample	Control	Information	P-value
Female	0.634	0.613	0.653	0.47
	(0.482)	(0.488)	(0.477)	
Age	37.188	37.217	37.16	0.88
	(13.213)	(12.571)	(13.813)	
Years of education	10.359	10.081	10.618	0.31
	(4.454)	(4.529)	(4.379)	
Married	0.198	0.19	0.206	0.93
	(0.399)	(0.394)	(0.405)	
Works for pay	0.591	0.578	0.602	0.84
	(0.492)	(0.495)	(0.491)	
Employee	0.383	0.398	0.369	0.46
	(0.487)	(0.491)	(0.484)	
Self-employed	0.205	0.205	0.205	0.93
	(0.404)	(0.405)	(0.405)	
Student	0.125	0.112	0.136	0.56
	(0.331)	(0.316)	(0.344)	
Unemployed	0.142	0.161	0.125	0.48
	(0.35)	(0.369)	(0.332)	
Has permanent contract	0.142	0.129	0.153	0.73
	(0.349)	(0.336)	(0.361)	
Hours worked (previous week)	26.343	26.722	26	0.84
	(23.268)	(23.336)	(23.271)	
After-tax monthly income (in CV Contos)	23.744	23.488	23.989	0.81
	(32.943)	(33.135)	(32.855)	
Number of times in contact with migrant (past year)	220.871	235.109	207.867	0.17
	(160.152)	(159.599)	(160.079)	
Infrequent contact with migrant (less than monthly)	0.012	0.012	0.011	0.87
	(0.108)	(0.11)	(0.106)	
Received remittances from migrant in previous year	0.454	0.472	0.438	0.45
	(0.499)	(0.501)	(0.497)	
Value of remittances received from migrant in previous year in	147.83	138.635	156.233	0.50
	(343.053)	(326.87)	(357.936)	
Voted in 2016	0.741	0.75	0.732	0.64
	(0.439)	(0.434)	(0.444)	
Intrahousehold gender equality index (0-1 scale)	0.853	0.858	0.848	0.63
	(0.172)	(0.164)	(0.179)	
Would ever emigrate from CV	0.723	0.742	0.705	0.58
	(0.448)	(0.439)	(0.457)	
Would ever move to PT	0.542	0.535	0.549	0.59
	(0.499)	(0.5)	(0.499)	
Plans to move to PT within 12 months	0.401	0.403	0.399	0.87
	(0.491)	(0.493)	(0.491)	
Income expectations in PT (monthly salary in EUR)	256.034	274.699	239.731	0.46
	(563.897)	(749.118)	(327.435)	
Observations	339	163	176	339

Notes: Hours worked, after-tax income, and remittances received are winsorized at the 99th percentile. Value of remittances refers to remittances received from the migrant in Portugal. 1 CV Conto ≈ 9 EUR. Infrequent contact is defined as less than monthly contact. Column 4 reports the p-value of a test for imbalance at baseline. We report the p-value corresponding to the coefficient of the treatment dummy in a regression of treatment on the variable of interest, controlling for strata fixed effects, including a dummy indicating if the variable of interest is missing and using robust standard errors. Standard deviations in parentheses.

Table A4: Attrition checks

	(1)	(2)	(3)	(4)
	Full sample	Control	Information	Differential attrition rate (P-value)
Portugal	0.292	0.274	0.31	0.27
	(0.455)	(0.446)	(0.463)	
Observations	2025	1010	1015	
Cape Verde	0.153	0.16	0.148	0.899
	(0.361)	(0.367)	(0.356)	
Observations	339	163	176	

Notes: We show the share of unsuccessful interviews across follow-up rounds in Portugal, and for the endline in Cape Verde. The numbers in column (1) for Portugal, for example, means that out of 2,025 potential interviews, 29.3% were not successfully completed. The same reasoning applies to columns (2) and (3). Column (4) reports the p-value of a test for differential attrition. For the Portuguese sample, we report the p-value of the treatment coefficient in a regression on attrition with strata dummies, round fixed effects, and robust standard errors. For the Cape Verdean sample, we report the p-value of the treatment coefficient in a regression on attrition with strata dummies, controlling for baseline attrition, and robust standard errors.

Table A5: Treatment effects on usage data from the App

				Sections accessed:					
	(1) Downloaded the App	(2) Usage data available	(3) Number of sections accessed	(4) Regular migration status	(5) Find a job	(6) Find a home	(7) Migrant support centers	(8) Health	(9) Placebo sections
Information App	0.056	0.088*	1.228**	0.998***	0.390***	0.517***	0.210***	0.101***	-0.987***
	(0.044)	(0.05)	(0.509)	(0.26)	(0.085)	(0.111)	(0.056)	(0.03)	(0.236)
Control mean	0.703	0.490	1.748	0.000	0.000	0.000	0.000	0.000	1.748
Control SD	0.458	0.501	2.741	0.000	0.000	0.000	0.000	0.000	2.741
Observations	405	405	405	405	405	405	405	405	405

Notes: This table shows usage data from the App by treatment status. Individuals with no usage data are those who did not download the App, never used it, or had a device who did not allow sharing of usage data.

Table A6: Treatment effects on Job Quality Index Components

	(1) Job Quality Index	(2) Found a job she likes	(3) Found a better paid job	(4) Found a more stable job	(5) Found a job closer to home	(6) Found a work with better schedule	(7) Was promoted
Information App	0.046***	0.048**	0.049**	0.053**	0.054***	0.076***	-0.003
	(0.013)	(0.021)	(0.024)	(0.021)	(0.017)	(0.018)	(0.015)
	[0.001]	[0.001]	[0.003]	[0.001]	[0.001]	[0.001]	[0.764]
Control mean	0.088	0.1	0.16	0.107	0.052	0.055	0.055
Control SD	0.17	0.3	0.367	0.309	0.222	0.228	0.228
Observations	1403	1403	1403	1403	1403	1403	1403
Number of individuals	380	380	380	380	380	380	380

Notes: Job Quality Index is an average of the binary items related to job quality achieved since the baseline survey. These items included: found a job better liked, found a better paid job, found a more stable job, found a job closer to home, found a job with a better schedule, was promoted. Columns (2)-(7) display as dependent variables the binary variables corresponding to these achievements. If respondents did not select an achievement, a zero is imputed unless the respondent aswered "Do not know/Do not respond" to the whole section, in which case both the index and the component is missing. The table displays coefficients from an OLS regression with strata dummies, round fixed effects, and robust standard errors. The control mean refers to the control mean in all rounds after the baseline. Standard errors clustered at the migrant level in parenthesis. Q-values adjusted for multiple hypothesis testing following Romano and Wolf (2016) are presented in brackets.* p<0.1, ** p<0.05, *** p<0.01

Table A7: Treatment effects on labor market outcomes

	(1) Inactive NEET	(2) Unemployed	(3) Student	(4) Employed	(5) Permanent contract	(6) Weekly hours worked	(7) Monthly income (EUR)
Information App	-0.018**	0.044**	-0.013	-0.008	-0.04	-2.094	0.008
	(0.009)	(0.02)	(0.018)	(0.028)	(0.028)	(1.327)	(0.037)
	[0.016]	[0.011]	[0.526]	[0.837]	[0.067]	[0.042]	[0.837]
Control mean	0.021	0.083	0.14	0.761	0.246	30.476	607.364
Control SD	0.142	0.277	0.347	0.427	0.431	18.867	328.255
Observations	1429	1429	1429	1429	1399	1323	1381
Number of individuals	381	381	381	381	380	362	373

Notes: Dependent variables are defined as follows. Inactive NEET: A person who is not working and not actively seeking work, nor a student or trainee. This includes retirees and other individuals not currently in training or looking for a job. Unemployed: A person who is not working but is actively looking for a job. This includes individuals who are looking for jobs, are available to work, and have taken specific steps to find employment. Student: A person who reports studying as their main occupation. Employed: A person who is currently working for pay or profit. This includes full-time and part-time workers, as well as those who are self-employed. Monthly income and Hours worked have been winsorized at the 99th percentile. Hours worked include zeroes. Job Quality Index is an average of the binary items related to job quality achieved since the baseline survey. These items included: found a job better liked, found a better paid job, found a more stable job, found a job closer to home, found a job with a better schedule, was promoted. Columns (1)-(6) display coefficients from ANCOVA regressions with strata dummies, round fixed effects, and robust standard errors. Column (7) displays coefficients from Poisson regressions with stata dummies, round fixed effects, and robust standard errors. Column (8) displays coefficients from an OLS regression with strata dummies, round fixed effects and robust standard errors. The control mean refers to the control mean in all rounds after the baseline. Standard errors clustered at the migrant level in parenthesis. Q-values adjusted for multiple hypothesis testing following Romano and Wolf (2016) are presented in brackets.* p<0.1, ** p<0.05, *** p<0.01

Table A8: Treatment effects on residence permit

	(1) Looked for information on how to get residence permit since baseline	(2) Received residence permit since baseline
Information App	0.197***	0.043*
	(0.038)	(0.025)
	[0.001]	[0.007]
Control mean	0.302	0.291
Control SD	0.459	0.454
Observations	1433	1433
Number of individuals	381	381

Notes: In the baseline, respondents were asked whether they had looked for information on how to get a residence permit or whether they had received a permit since they arrived in Portugal. In the follow-up interviews, the reference time frame was the time between the baseline and the current interview. The table displays coefficients from ANCOVA regressions with strata dummies, round fixed effects, and robust standard errors. The control mean refers to the control mean in all rounds after the baseline. Standard errors clustered at the migrant level in parenthesis. Q-values adjusted for multiple hypothesis testing following Romano and Wolf (2016) are presented in brackets.* p<0.1, ** p<0.05, *** p<0.01

Table A9: Treatment effects on share of individuals born in Portugal as share of migrants' closest social network in Portugal

	(1) Binary	(2) Ratio
Information App	0.038	0.033**
	(0.031)	(0.016)
	[0.092]	[0.02]
Control mean	0.075	0.027
Control SD	0.265	0.109
Observations	220	220

Notes: The dependent variables in columns (1) and (2) are measures of the migrants' network in Portugal at endline. The endline network is measured as the up to 5 closest members who were migrants' contacts in Portugal at baseline or are new contacts in Portugal, both reported at endline. Column (1) is a binary variable taking value 1 if this endline measure of migrants' network includes any individual born in Portugal. Column (2) is a ratio between the number of individuals born in Portugal and the total number of members in the endline network. Coefficients displayed are from OLS regressions with strata dummies, and robust standard errors. The baseline network is included as a control. A binary error variable taking value 1 whenever more than 5 contacts were recorded at endline by mistake was added to all regressions. The control mean refers to the control mean in all rounds after the baseline. Standard errors clustered at the migrant level in parenthesis. Q-values adjusted for multiple hypothesis testing following Romano and Wolf (2016) are presented in brackets.* p<0.1, ** p<0.05, *** p<0.01

Table A10: Treatment effects on aspirations and expectations

	(1) Labor market aspirations	(2) Labor market expectations
Information App	0.272**	0.411***
	(0.123)	(0.141)
	[0.001]	[0.001]
Control mean	2.622	2.303
Control SD	2.333	2.284
Observations	1367	1004
Number of individuals	373	333

Notes: Dependent variables in columns (1) and (2) are count variables indicating the number of achievements (up to 10) the respondent aspires or expects to achieve in the labor market, respectively. Data for these two variables are from the follow-up surveys. The question on labor market expectations was not included in round 1, hence the smaller number of observations. The table displays coefficients from ANCOVA regressions with strata dummies, round fixed effects, and robust standard errors. The control mean refers to the control mean in all rounds after the baseline. Standard errors clustered at the migrant level in parenthesis. Q-values adjusted for multiple hypothesis testing following Romano and Wolf (2016) are presented in brackets.* p<0.1, ** p<0.05, *** p<0.01

Table A11: Treatment effects on self-efficacy, grit, depression and job quality

	(1) Self-efficacy (Likert Scale)	(2) Self-efficacy (Index)	(3) Grit (Likert Scale)	(4) Depression (Likert Scale)	(5) Depression (Index)
Information App	-0.047	-0.157	0.101	0.166	0.257
	(0.142)	(0.169)	(0.142)	(0.134)	(0.215)
	[0.656]	[0.495]	[0.543]	[0.376]	[0.376]
Control mean	0.039	6.844	-0.024	-0.04	2.345
Control SD	1.046	1.911	0.991	0.986	2.111
Observations	219	492	206	189	456
Number of individuals	303	303	206	189	291

Notes: Questions on self-efficacy were asked in round 4 (using a dummy variable and in round 5 using a Likert scale. Self-efficacy is a count variable composed of 8 items. Grit is a count variable composed of 12 items. Depression is a count variable composed of 8 items. Questions on grit were asked only in round 5 using a Likert scale. Questions on depression asked in round 3 (dummy) and 5 (Likert scale). For outcomes using the Likert scale (columns 1, 3 and 4) , the numbers on the scale were added across items. The scale is then normalized to have a mean of 0 and a standard deviation of 1. For outcomes using the dummies (columns 2 and 5), the Likert scale outcomes were converted into a dummy and dummies were added across items to create an index. The table displays coefficients from an OLS regression with strata dummies, round fixed effects, and robust standard errors. The control mean refers to the control mean in all rounds after the baseline. Standard errors clustered at the migrant level in parenthesis. Q-values adjusted for multiple hypothesis testing following Romano and Wolf (2016) are presented in brackets.* p<0.1, ** p<0.05, *** p<0.01

Table A12: Treatment effects on preferences on intrahousehold equality

	In a family who do you think should….										
	(1) Intrahousehold Decision Making Gender Equality Index	(2) Have the most important job/occupation	(3) Take the initiative in resolving conflicts or arguments	(4) Provide emotional support to family members	(5) Have the responsibility of earning money to support the family	(6) Make decisions about major purchases for the house or family	(7) Make decisions about daily purchases for the house or family	(8) Make decisions about visits to family and friends	(9) Make decisions about the healthcare of the wife	(10) Make decisions about what food is cooked every day	(11) Make decisions about the family savings
Information App	0.037**	0.044*	0.041*	0.034	0.036	0.062*	0.024	0.052***	0.021	0.062	0.003
	(0.018)	(0.023)	(0.024)	(0.023)	(0.023)	(0.032)	(0.037)	(0.02)	(0.048)	(0.04)	(0.019)
	[0.074]	[0.957]	[0.486]	[0.572]	[0.505]	[0.031]	[0.964]	[0.874]	[0.505]	[0.571]	[0.163]
Control mean	0.852	0.905	0.897	0.904	0.898	0.83	0.796	0.932	0.664	0.724	0.952
Control SD	0.17	0.222	0.227	0.222	0.234	0.284	0.319	0.2	0.394	0.347	0.158
Observations	292	305	301	303	306	306	306	305	304	303	306

Notes: Equality Index (1) corresponds to an index ranging from 0 to 1, where 1 corresponds to respondents who think that husband and wife share equal responsibility for all the scenarios proposed and 0 corresponds to individuals who believe that only either one of the two is fully responsible in each scenario. If the individual component is missing (= NS/NR), it is assumed to be missing information and the observation has no overall index associated. The outcomes from (2) to (11) are the individual components of the index. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A13 - Panel A: Treatment effects on preferences on intrahousehold equality, respondent is young

		In a family who do you think should….									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Intrahousehold Decision Making Gender Equality Index	Have the most important job/occupation	Take the initiative in resolving conflicts or arguments	Provide emotional support to family members	Have the responsibility of earning money to support the family	Make decisions about major purchases for the house or family	Make decisions about daily purchases for the house or family	Make decisions about visits to family and friends	Make decisions about the healthcare of the wife	Make decisions about what food is cooked every day	Make decisions about the family savings
Information App	0.100***	0.041	0.080*	0.077	0.098**	0.165***	0.127*	0.029	0.180**	0.178**	0.037
	(0.033)	(0.035)	(0.046)	(0.052)	(0.048)	(0.06)	(0.072)	(0.024)	(0.082)	(0.069)	(0.033)
	[0.047]	[0.672]	[0.361]	[0.447]	[0.22]	[0.098]	[0.662]	[0.447]	[0.367]	[0.073]	[0.447]
Control mean	0.825	0.898	0.886	0.864	0.852	0.773	0.75	0.955	0.648	0.682	0.943
Control SD	0.185	0.277	0.283	0.272	0.297	0.332	0.366	0.181	0.397	0.343	0.193
Observations	101	102	101	102	102	102	102	102	102	102	102

Notes: All regressions are run for respondents below the age of 30. Equality Index (1) corresponds to an index ranging from 0 to 1, where 1 corresponds to respondents who think that husband and wife share equal responsibility for all the scenarios proposed and 0 corresponds to individuals who believe that only either one of the two is fully responsible in each scenario. If the individual component is missing (= NS/NR), it is assumed to be missing information and the observation has no overall index associated. The outcomes from (2) to (11) are the individual components of the index. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A13 - Panel B: Treatment effects on preferences on intrahousehold equality, respondent is not young

		In a family who do you think should….									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Intrahousehold Decision Making Gender Equality Index	Have the most important job/occupation	Take the initiative in resolving conflicts or arguments	Provide emotional support to family members	Have the responsibility of earning money to support the family	Make decisions about major purchases for the house or family	Make decisions about daily purchases for the house or family	Make decisions about visits to family and friends	Make decisions about the healthcare of the wife	Make decisions about what food is cooked every day	Make decisions about the family savings
Information App	0.012	0.034	0.037	0.021	0.012	0.022	-0.027	0.064**	-0.052	0.007	-0.012
	(0.023)	(0.028)	(0.029)	(0.025)	(0.027)	(0.038)	(0.045)	(0.026)	(0.058)	(0.051)	(0.025)
	[0.984]	[0.759]	[0.855]	[0.759]	[1]	[0.993]	[0.999]	[0.043]	[0.97]	[0.999]	[1]
Control mean	0.863	0.908	0.902	0.922	0.917	0.854	0.816	0.922	0.672	0.743	0.956
Control SD	0.163	0.195	0.199	0.196	0.199	0.258	0.297	0.208	0.395	0.349	0.142
Observations	191	203	200	201	204	204	204	203	202	201	204

Notes: All regressions are run for respondents above the age of 30. Equality Index (1) corresponds to an index ranging from 0 to 1, where 1 corresponds to respondents who think that husband and wife share equal responsibility for all the scenarios proposed and 0 corresponds to individuals who believe that only either one of the two is fully responsible in each scenario. If the individual component is missing (= NS/NR), it is assumed to be missing information and the observation has no overall index associated. The outcomes from (2) to (11) are the individual components of the index. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A14 - Panel A: Treatment effects on preferences on intrahousehold equality, respondent is male

	In a family who do you think should….										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Intrahousehold Decision Making Gender Equality Index	Have the most important job/occupation	Take the initiative in resolving conflicts or arguments	Provide emotional support to family members	Have the responsibility of earning money to support the family	Make decisions about major purchases for the house or family	Make decisions about daily purchases for the house or family	Make decisions about visits to family and friends	Make decisions about the healthcare of the wife	Make decisions about what food is cooked every day	Make decisions about the family savings
Information App	0.063**	0.031	0.069	0.049	0.069	0.117***	0.059	0.022	0.121	0.074	0.052**
	(0.028)	(0.043)	(0.047)	(0.034)	(0.046)	(0.042)	(0.052)	(0.019)	(0.08)	(0.06)	(0.024)
	[0.074]	[0.957]	[0.486]	[0.572]	[0.505]	[0.031]	[0.964]	[0.874]	[0.505]	[0.571]	[0.163]
Control mean	0.84	0.877	0.86	0.904	0.851	0.825	0.816	0.956	0.632	0.754	0.93
Control SD	0.175	0.272	0.28	0.24	0.283	0.275	0.308	0.171	0.396	0.329	0.199
Observations	105	111	109	112	112	112	112	112	111	110	112

Notes: All regressions are run with only male respondents in the sample. Equality Index (1) corresponds to an index ranging from 0 to 1, where 1 corresponds to respondents who think that husband and wife share equal responsibility for all the scenarios proposed and 0 corresponds to individuals who believe that only either one of the two is fully responsible in each scenario. If the individual component is missing (= NS/NR), it is assumed to be missing information and the observation has no overall index associated. The outcomes from (2) to (11) are the individual components of the index. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A14 - Panel B: Treatment effects on preferences on intrahousehold equality, respondent is female

	In a family who do you think should….										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Intrahousehold Decision Making Gender Equality Index	Have the most important job/occupation	Take the initiative in resolving conflicts or arguments	Provide emotional support to family members	Have the responsibility of earning money to support the family	Make decisions about major purchases for the house or family	Make decisions about daily purchases for the house or family	Make decisions about visits to family and friends	Make decisions about the healthcare of the wife	Make decisions about what food is cooked every day	Make decisions about the family savings
Information App	0.031	0.034	0.022	0.025	0.014	0.036	0.029	0.080***	0.001	0.072	-0.023
	(0.025)	(0.024)	(0.028)	(0.031)	(0.028)	(0.045)	(0.049)	(0.029)	(0.063)	(0.054)	(0.025)
	[0.814]	[0.622]	[0.873]	[0.827]	[0.994]	[0.975]	[0.998]	[0.011]	[0.998]	[0.631]	[0.994]
Control mean	0.859	0.922	0.921	0.904	0.928	0.833	0.783	0.916	0.685	0.706	0.967
Control SD	0.168	0.182	0.183	0.212	0.192	0.29	0.327	0.216	0.394	0.359	0.125
Observations	187	194	192	191	194	194	194	193	193	193	194

Notes: All regressions are run with only female respondents in the sample. Equality Index (1) corresponds to an index ranging from 0 to 1, where 1 corresponds to respondents who think that husband and wife share equal responsibility for all the scenarios proposed and 0 corresponds to individuals who believe that only either one of the two is fully responsible in each scenario. If the individual component is missing (= NS/NR), it is assumed to be missing information and the observation has no overall index associated. The outcomes from (2) to (11) are the individual components of the index. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A15 - Panel A: Treatment effects on preferences on intrahousehold equality, respondent has at least high school education

		In a family who do you think should….									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Intrahousehold Decision Making Gender Equality Index	Have the most important job/occupation	Take the initiative in resolving conflicts or arguments	Provide emotional support to family members	Have the responsibility of earning money to support the family	Make decisions about major purchases for the house or family	Make decisions about daily purchases for the house or family	Make decisions about visits to family and friends	Make decisions about the healthcare of the wife	Make decisions about what food is cooked every day	Make decisions about the family savings
T1:Information	0.068**	0.052	-0.009	0.031	0.023	0.075	0.094	0.079*	0.135	0.156**	0.019
	(0.03)	(0.04)	(0.045)	(0.039)	(0.037)	(0.06)	(0.065)	(0.047)	(0.091)	(0.072)	(0.027)
	[0.135]	[0.348]	[0.789]	[0.722]	[0.748]	[0.356]	[0.28]	[0.244]	[0.27]	[0.136]	[0.748]
Control mean	0.85	0.895	0.895	0.895	0.886	0.851	0.798	0.921	0.693	0.719	0.947
Control SD	0.18	0.263	0.263	0.245	0.268	0.298	0.325	0.246	0.409	0.354	0.181
Observations	108	112	109	111	112	112	112	112	112	112	112

Notes: All regressions are run for respondents with at least highschool education. Equality Index (1) corresponds to an index ranging from 0 to 1, where 1 corresponds to respondents who think that husband and wife share equal responsibility for all the scenarios proposed and 0 corresponds to individuals who believe that only either one of the two is fully responsible in each scenario. If the individual component is missing (= NS/NR), it is assumed to be missing information and the observation has no overall index associated. The outcomes from (2) to (11) are the individual components of the index. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression.Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A15 - Panel B: Treatment effects on preferences on intrahousehold equality, respondent has less than high school education

		In a family who do you think should….									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Intrahousehold Decision Making Gender Equality Index	Have the most important job/occupation	Take the initiative in resolving conflicts or arguments	Provide emotional support to family members	Have the responsibility of earning money to support the family	Make decisions about major purchases for the house or family	Make decisions about daily purchases for the house or family	Make decisions about visits to family and friends	Make decisions about the healthcare of the wife	Make decisions about what food is cooked every day	Make decisions about the family savings
T1:Information	0.03	0.034	0.053*	0.026	0.031	0.063	0.008	0.047**	0.014	0.032	-0.004
	(0.023)	(0.028)	(0.029)	(0.03)	(0.028)	(0.04)	(0.049)	(0.021)	(0.059)	(0.052)	(0.026)
	[0.416]	[0.464]	[0.104]	[0.718]	[0.59]	[0.227]	[0.988]	[0.034]	[0.988]	[0.859]	[0.988]
Control mean	0.853	0.911	0.899	0.91	0.906	0.817	0.794	0.938	0.646	0.728	0.956
Control SD	0.165	0.192	0.202	0.207	0.211	0.275	0.317	0.165	0.386	0.345	0.143
Observations	184	193	192	192	194	194	194	193	192	191	194

Notes: All regressions are run for respondents with less than highschool education. Equality Index (1) corresponds to an index ranging from 0 to 1, where 1 corresponds to respondents who think that husband and wife share equal responsibility for all the scenarios proposed and 0 corresponds to individuals who believe that only either one of the two is fully responsible in each scenario. If the individual component is missing (= NS/NR), it is assumed to be missing information and the observation has no overall index associated. The outcomes from (2) to (11) are the individual components of the index. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A16: Treatment effects on political outcomes in origin country

	(1) Voted in previous elections	(2) Demand for public service quality	(3) Political participation index
Information App	0.105**	0.083	0.007
	(0.05)	(0.12)	(0.119)
	[0.01]	[0.568]	[0.932]
Control mean	0.707	6.021	0.612
Control SD	0.456	1.048	0.996
Observations	297	301	306

Notes: Voted in previous elections is a binary variable equal to 1 if the respondent voted in the election prior to the survey. Demand for public service quality ranges from 1 to 7, where 1 corresponds to support of a completely passive role of the citizen with respect to government action and 7 corresponds to the citizen being as active as possible. If the individual component is missing (= NS/NR), it is assumed to be missing information. Political participation index ranges from 0 to 5, where 0 corresponds to no political involvement in actions that citizens take when they are unhappy with the government and 5 corresponds to great involvement. If the individual component is missing (= NS/NR), it is assumed to be zero. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. To keep the sample size when adding controls, missing controls were set to the median value of the control group. Dummies for whether the control was imputed were then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * $p<0.1$, ** $p<0.05$, *** $p<0.01$

Table 17 - Panel A: Treatment effects on politics - Respondent is Young

	(1) Voted	(2) Demand for public service quality	(3) Political Participation Index
T1:Information	0.157	0.253	-0.211
	(0.102)	(0.208)	(0.186)
	[0.092]	[0.297]	[0.72]
Control mean	0.591	5.909	0.636
Control SD	0.497	1.007	1.01
Observations	99	103	102

Notes: All regressions are run on a subsample of the original sample, i.e. on a subsample of respondents who are below 30 years old. Voted is a binary variable equal to 1 if the respondent voted in the election prior to the survey. Demand for public service quality ranges from 1 to 7, where 1 corresponds to support of a completely passive role of the citizen with respect to government action and 7 corresponds to the citizen being as active as possible. If the individual component is missing (= NS/NR), it is assumed to be missing information. Political participation index ranges from 0 to 5, where 0 corresponds to no political involvement in actions that citizens take when they are unhappy with the government and 5 corresponds to great involvement. If the individual component is missing (= NS/NR), it is assumed to be zero. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. To keep the sample size when adding controls, missing controls were set to the median value of the control group. Dummies for whether the control was imputed were then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table 17 - Panel B: Treatment effects on politics - Respondent is Not Young

	(1) Voted	(2) Demand for public service quality	(3) Political Participation Index
T1:Information	0.096*	0.006	0.158
	(0.058)	(0.143)	(0.156)
	[0.081]	[0.836]	[0.697]
Control mean	0.757	6.07	0.602
Control SD	0.431	1.066	0.994
Observations	198	198	204

Notes: All regressions are run on a subsample of the original sample, i.e. on a subsample of respondents who are above 30 years old. Voted is a binary variable equal to 1 if the respondent voted in the election prior to the survey. Demand for public service quality ranges from 1 to 7, where 1 corresponds to support of a completely passive role of the citizen with respect to government action and 7 corresponds to the citizen being as active as possible. If the individual component is missing (= NS/NR), it is assumed to be missing information. Political participation index ranges from 0 to 5, where 0 corresponds to no political involvement in actions that citizens take when they are unhappy with the government and 5 corresponds to great involvement. If the individual component is missing (= NS/NR), it is assumed to be zero. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. To keep the sample size when adding controls, missing controls were set to the median value of the control group. Dummies for whether the control was imputed were then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A18 - Panel A: Treatment effects on politics - Respondent is Female

	(1) Voted	(2) Demand for public service quality	(3) Political Participation Index
T1:Information	0.108*	0.075	0.014
	(0.062)	(0.154)	(0.149)
	[0.084]	[0.984]	[0.984]
Control mean	0.744	6.034	0.567
Control SD	0.439	1.119	0.96
Observations	190	191	194

Notes: All regressions are run on a subsample of the original sample, i.e. on a subsample of female respondents Outcome (2) is equal to a question ranging from 1 to 7, where 1 corresponds to support of a completely passive role of the citizen with respect to government action and 7 corresponds to the citizen being as active as possible. If the individual component is missing (= NS/NR), it is assumed to be missing information. Political participation (3) is equal to an index ranging from 0 to 5, where 0 corresponds to no political involvement in the form of actions that citizens take when they are unhappy with the government and 5 corresponds to great involvement. If the individual component is missing (= NS/NR), it is assumed to be zero. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. To maintain the sample size when adding controls, missing controls were set to the median value of the control group. Dummies for whether the control was imputed were then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A18 - Panel B: Treatment effects on politics - Respondent is Male

	(1) Voted	(2) Demand for public service quality	(3) Political Participation Index
T1:Information	0.102	0.06	0.049
	(0.093)	(0.199)	(0.226)
	[0.383]	[0.968]	[0.968]
Control mean	0.649	6	0.684
Control SD	0.481	0.934	1.055
Observations	107	110	112

Notes: All regressions are run on a subsample of the original sample, i.e. on a subsample of male respondents. Outcome (2) is equal to a question ranging from 1 to 7, where 1 corresponds to support of a completely passive role of the citizen with respect to government action and 7 corresponds to the citizen being as active as possible. If the individual component is missing (= NS/NR), it is assumed to be missing information. Political participation (3) is equal to an index ranging from 0 to 5, where 0 corresponds to no political involvement in the form of actions that citizens take when they are unhappy with the government and 5 corresponds to great involvement. If the individual component is missing (= NS/NR), it is assumed to be zero. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. To maintain the sample size when adding controls, missing controls were set to the median value of the control group. Dummies for whether the control was imputed were then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A19 - Treatment effects on political outcomes
Panel A: Respondent has at least high school education

	(1) Voted in previous elections	(2) Demand for public service quality	(3) Political Participation Index
Information App	0.201**	0.422**	0.411**
	(0.094)	(0.202)	(0.195)
	[0.018]	[0.018]	[0.018]
Control mean	0.614	5.768	0.333
Control SD	0.491	1.175	0.69
Observations	112	110	112

Notes: All regressions are run on a subsample of the original sample, i.e. only on those who have at least high school education. Voted in previous elections is a binary variable equal to 1 if the respondent voted in the election prior to the survey. Demand for public service quality ranges from 1 to 7, where 1 corresponds to support of a completely passive role of the citizen with respect to government action and 7 corresponds to the citizen being as active as possible. If the individual component is missing (= NS/NR), it is assumed to be missing information. Political participation index ranges from 0 to 5, where 0 corresponds to no political involvement in actions that citizens take when they are unhappy with the government and 5 corresponds to great involvement. If the individual component is missing (= NS/NR), it is assumed to be zero. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. To keep the sample size when adding controls, missing controls were set to the median value of the control group. Dummies for whether the control was imputed were then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A19 - Treatment effects on political outcomes
Panel B: Respondent has below high school education

	(1) Voted in previous election	(2) Demand for public service quality	(3) Political Participation Index
Information App	0.049	-0.102	-0.204
	(0.063)	(0.145)	(0.162)
	[0.52]	[0.52]	[0.254]
Control mean	0.767	6.182	0.789
Control SD	0.425	0.929	1.117
Observations	185	191	194

Notes: All regressions are run on a subsample of the original sample, i.e. only on those who do not have completed highschool education. Voted in previous elections is a binary variable equal to 1 if the respondent voted in the election prior to the survey. Demand for public service quality ranges from 1 to 7, where 1 corresponds to support of a completely passive role of the citizen with respect to government action and 7 corresponds to the citizen being as active as possible. If the individual component is missing (= NS/NR), it is assumed to be missing information. Political participation index ranges from 0 to 5, where 0 corresponds to no political involvement in actions that citizens take when they are unhappy with the government and 5 corresponds to great involvement. If the individual component is missing (= NS/NR), it is assumed to be zero. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. To keep the sample size when adding controls, missing controls were set to the median value of the control group. Dummies for whether the control was imputed were then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A20 - Treatment effects on political outcomes
Panel A: Migrant lives in above median voting turnout parish

	(1) Voted in previous elections	(2) Demand for public service quality	(3) Political Participation Index
Information App	0.177**	0.101	-0.159
	(0.083)	(0.21)	(0.186)
	[0.022]	[0.536]	[0.473]
Control mean	0.661	5.964	0.61
Control SD	0.477	1.206	0.965
Observations	128	126	131

Notes: All regressions are run on a subsample of the original sample, i.e. only on those whose migrant in Portugal lives in a parish with above median voting turnout. The median is defined as the median observed in our sample of migrants. We observe migrants in 37 different parishes. Voted in previous elections is a binary variable equal to 1 if the respondent voted in the election prior to the survey. Demand for public service quality ranges from 1 to 7, where 1 corresponds to support of a completely passive role of the citizen with respect to government action and 7 corresponds to the citizen being as active as possible. If the individual component is missing (= NS/NR), it is assumed to be missing information. Political participation index ranges from 0 to 5, where 0 corresponds to no political involvement in actions that citizens take when they are unhappy with the government and 5 corresponds to great involvement. If the individual component is missing (= NS/NR), it is assumed to be zero. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. To keep the sample size when adding controls, missing controls were set to the median value of the control group. Dummies for whether the control was imputed were then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A20 - Treatment effects on political outcomes
Panel B: Migrant lives in below median voting turnout parish

	(1) Voted in previous election	(2) Demand for public service quality	(3) Political Participation Index
Information App	0.058	0.02	0.131
	(0.064)	(0.154)	(0.158)
	[0.518]	[0.856]	[0.518]
Control mean	0.739	6.057	0.614
Control SD	0.442	0.939	1.022
Observations	169	175	175

Notes: All regressions are run on a subsample of the original sample, i.e. only on those whose contact in Portugal lives in a parish with below (or at) median voter turnout. The median is defined as the median observed in our sample of migrants.We observe migrants in 37 different parishes. Voted in previous elections is a binary variable equal to 1 if the respondent voted in the election prior to the survey. Demand for public service quality ranges from 1 to 7, where 1 corresponds to support of a completely passive role of the citizen with respect to government action and 7 corresponds to the citizen being as active as possible. If the individual component is missing (= NS/NR), it is assumed to be missing information. Political participation index ranges from 0 to 5, where 0 corresponds to no political involvement in actions that citizens take when they are unhappy with the government and 5 corresponds to great involvement. If the individual component is missing (= NS/NR), it is assumed to be zero. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. To keep the sample size when adding controls, missing controls were set to the median value of the control group. Dummies for whether the control was imputed were then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A21 - Treatment effects on political outcomes
Panel A: Migrant lives in above median far right votes parish

	(1) Voted in previous elections	(2) Demand for public service quality	(3) Political Participation Index
Information App	0.056	0.098	0.118
	(0.068)	(0.172)	(0.168)
	[0.581]	[0.581]	[0.581]
Control mean	0.76	6.027	0.52
Control SD	0.43	0.986	0.935
Observations	146	152	152

Notes: All regressions are run on a subsample of the original sample, i.e. only on those whose migrant in Portugal lives in a parish with an above median vote share of the far right. The median is defined as the median observed in our sample of migrants. We observe migrants in 37 different parishes. The median migrant was exposed to a far right vote share of 7.6%, with the minimum being 3.4% and the maximum 10.8%. Voted in previous elections is a binary variable equal to 1 if the respondent voted in the election prior to the survey. Demand for public service quality ranges from 1 to 7, where 1 corresponds to support of a completely passive role of the citizen with respect to government action and 7 corresponds to the citizen being as active as possible. If the individual component is missing (= NS/NR), it is assumed to be missing information. Political participation index ranges from 0 to 5, where 0 corresponds to no political involvement in actions that citizens take when they are unhappy with the government and 5 corresponds to great involvement. If the individual component is missing (= NS/NR), it is assumed to be zero. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. To keep the sample size when adding controls, missing controls were set to the median value of the control group. Dummies for whether the control was imputed were then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A21 - Treatment effects on political outcomes
Panel B: Migrant lives in below median far right votes parish

	(1) Voted in previous election	(2) Demand for public service quality	(3) Political Participation Index
Information App	0.165**	0.053	-0.155
	(0.076)	(0.179)	(0.176)
	[0.011]	[0.716]	[0.444]
Control mean	0.653	6.014	0.708
Control SD	0.479	1.118	1.054
Observations	151	149	154

Notes: All regressions are run on a subsample of the original sample, i.e. only on those whose contact in Portugal lives in a parish with a below (or at) the median vote share of the far right. The median is defined as the median observed in our sample of migrants.We observe migrants in 37 different parishes. The median migrant was exposed to a far right vote share of 7.6%, with the minimum being 3.4% and the maximum 10.8%. Voted in previous elections is a binary variable equal to 1 if the respondent voted in the election prior to the survey. Demand for public service quality ranges from 1 to 7, where 1 corresponds to support of a completely passive role of the citizen with respect to government action and 7 corresponds to the citizen being as active as possible. If the individual component is missing (= NS/NR), it is assumed to be missing information. Political participation index ranges from 0 to 5, where 0 corresponds to no political involvement in actions that citizens take when they are unhappy with the government and 5 corresponds to great involvement. If the individual component is missing (= NS/NR), it is assumed to be zero. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. To keep the sample size when adding controls, missing controls were set to the median value of the control group. Dummies for whether the control was imputed were then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A22: Treatment effects on remittances

	(1) Probability of receiving remittances	(2) Value of remittances received
Information App	-0.065	-65.488
	(0.054)	(41.937)
	[0.5]	[0.5]
Control mean	0.476	222.622
Control SD	0.501	411.716
Observations	307	293

Notes: Received remittances (1) is a binary variable which is equal to 1 if the respondent received remittances from the migrant in Portugal over the previous year. Value of remittances (2) corresponds to the value of remittances received from the migrant over the previous year in euros. This variable was winsorized at the 99th percentile. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A23: Treatment effects on contact with migrant

	(1) Contacts per year	(2) Infrequent Contact
Information App	-11.189	-0.008
	(16.597)	(0.01)
	(0.575)	(0.575)
Control mean	181.095	0.014
Control SD	160.329	0.116
Observations	307	307

Notes: Number of contacts in last year (1) is equal to the number of times the migrant had contact with the respondent in Cape Verde in the last year. Infrequent contact (2) is a binary variable which is equal to 1 if respondent and migrant contact each other less frequenly than monthly. The table displays coefficients from an ANCOVA regression with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * p<0.1, ** p<0.05, *** p<0.01

Table A24: Treatment effects on migration decisions

	(1) Intention to Emigrate to PT	(2) Made plans to move to PT	(3) Actual emigration
Information App	0.04	0.081	0.000
	(0.057)	(0.057)	(0.018)
Control mean	0.538	0.285	0.02
Control SD	0.5	0.453	0.142
Observations	293	240	307

Notes: Intention to Emigrate to PT in column (1) is a binary variable taking value 1 if the respondent intends to move to Portugal. No time horizon was given in the question. Value 1 is imputed for those who had already moved to Portugal and value 0 if the person already migrated to somewhere else. Made plans to move to PT in column (2) is a binary variable taking value 1 if the respondent has made plans to move to Portugal in the next 12 months. This question was only asked to those not yet living in Portugal at endline who expressed an intention to emigrate. Value 0 was imputed to those who do not express an intention to emigrate. Actual emigration in column (3) is a binary variable taking value 1 if the respondent was living outside of Cape Verde at the time of the endline survey. The regression specification is ANCOVA and it is run with strata dummies and robust standard errors. The baseline outcomes of respondents who were interviewed at endline but not at baseline were set to zero. A dummy for whether the baseline value of the outcome was set to zero was then added to the RHS of the regression. Robust standard errors in parenthesis. Q-values adjusted for multiple hyothesis testing following Romano and Wolf (2016) are presented in brackets. * $p<0.1$, ** $p<0.05$, *** $p<0.01$

Appendix D – Deviations from Pre-Analysis Plan

This study was pre-registered in December 2019 (AEARCTR-0005188) with outcomes specified for both migrants in Portugal and their closest contact in Cape Verde. Primary outcomes included immigrant integration measures (psychometric, employment, and legal status indicators) and origin country outcomes (material remittances, contact frequency, social preferences, and political attitudes). We outline all deviations from the pre-registered design and analysis below. Where analysis was not detailed in either pre-registration, we clearly identify it as exploratory.

A. Experimental Design and Reporting

The pre-analysis plan specified four treatment arms: a control group that received a placebo intervention; an information treatment group; an aspirations intervention (in the PAP described as "inspirational"); and a group combining both treatments. We analyzed all treatment arms and present complete results in the main paper for the information treatment and the remaining analyses in the supplementary Online Appendix to ensure full transparency.[1] The main paper focuses on comparing the information treatment group to the control group. This focus emphasizes results that are relevant for policy design. The aspirations intervention is described in Appendix E. The aspirations intervention changes aspirations but has no significant effects on primary integration outcomes. We emphasize that this focus was determined after analyzing treatment effects for all treatment arms.

The COVID-19 pandemic severely impacted our project timeline. While our original plan was to start implementing the experiment in January 2020, the pandemic forced us to delay implementation until September of that year. Given the aftermath of the pandemic and ongoing movement restrictions we additionally had to stretch out data collection over a larger period than we expected. As a result, we finished all data collection in April 2023 rather than December 2021. The pandemic also impacted our planned sample size. Instead of 1,500 migrants as pre-specified, our final sample included 802 migrants.

[1] The supplementary Online Appendix is available here: https://novafrica.org/wp-content/uploads/2026/02/OnlineAppendix_FullSpec_6Feb2026.pdf .

B. Analysis Changes

Analyzing treatment effects of integration on origin country social contacts – including financial and immaterial remittances such as political attitudes and social preferences – was pre-registered. The specific outcomes we defined during survey instrument development are gender equality norms and voting behavior. Our reported heterogeneity analyses by age, gender, and local voter turnout are exploratory as these analyses were not pre-specified.

In the main paper, we now report take-up and app usage treatment effects that we did not pre-register. We added these analyses to document intervention implementation and compliance.

We report exploratory analyses of job quality outcomes that were not pre-specified. After observing treatment effects on employment characteristics in our analysis, we constructed a job quality index to better understand the nature of these changes. The index aggregates six survey items about job characteristics (preferred job, better pay, stability, location, schedule, promotions) using standardized effects. We also report effects on individual components. These analyses are exploratory and should be interpreted as hypothesis-generating for future research.

The pandemic forced us to shift the endline survey to a phone survey, which implied shortening the survey instrument. We collected labor market aspirations and expectations rather than aspirations on income, wealth, and social status as pre-specified. Similarly, we decided not to collect data on locus of control effects as this specific survey module is long and difficult to administer through phone interviews. Treatment effects on other psychometric indicators that we pre-specified (self-efficacy, grit, and depression) are reported in Appendix Table A11.

We furthermore report exploratory analysis results on migration decision effects in Appendix Table A19. This outcome was not pre-registered.

Our pre-registered econometric model proposed to estimate treatment effects for all interventions separately. Given the streamlined focus of the paper on the information treatment only, we estimate treatment effects from the information treatment only against the control group – excluding

observations from other treatment arms. For pooled analyses we include round fixed effects, something we did not specify in the pre-analysis plan. We furthermore report Romano-Wolf q-values following current standards in the literature.

All pre-registered primary outcomes are reported either in the main text or supplementary materials to ensure complete transparency.