

# Integrating Immigrants as a Tool for Broad Development\*

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## Abstract

International migration can importantly contribute to economic development in both countries of origin and destination. We hypothesize that the impact of migration depends on immigrant integration. A randomized controlled trial (RCT) was conducted to experimentally assess the effects of providing information and of implementing a role model intervention to promote integration of Cape Verdeans immigrants in Portugal. Providing immigrants with a low-cost, scalable information app was particularly effective promoting integration outcomes such as quality of employment, regular migrant status and contact with native residents. Additionally, it affected those left behind. Addressing migrant integration barriers in the destination country improved political participation and gender equality norms in the country of origin.

**Keywords:** International Migration, Immigrant Integration, Randomized Field Experiment, Employment Quality, Immigrant Regularization, Social Remittances, Voting, Gender Norms.

**JEL Codes:** O12, O15, F22.

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# 1. Introduction

International migration has the potential to be a driver of economic development as emigrants influence those left behind.<sup>1</sup> Our work hypothesizes and evaluates the extent to which these development impacts likely depend on the integration of immigrants in destination countries.

Immigrant integration is critical in determining the opportunities of immigrants themselves and of the economy and society at destination to make the most of migrants' full potential. And yet, even a substantial time after arrival, immigrants are often not effectively integrated.<sup>2</sup> While there is some evidence on the effectiveness of social inclusion programs, causal evidence on the impact of migrant integration programs remains limited.

An additional point that is less obvious and has not been, to the best of our knowledge, directly examined in prior economics literature is the fact that immigrant integration can also be an important determinant of the consequences of emigration for the country of origin. For example, existing evidence has shown how improved political norms are transmitted to origin countries of migration only when emigrants are based in destinations with better political institutions.<sup>3</sup> A logical implication, that is yet to be tested, is that political norms will be better learned and transmitted by immigrants who are better integrated in the destination country.

In this paper, we present evidence from a randomized control trial assessing how alleviating immigrant integration constraints at destination affects those left behind in the country of origin. Our experimental design allows us to answer two related research questions. Is the cost of accessing formal information in the destination country a relevant barrier to immigrant integration? Can integrating immigrants serve as a tool for origin country development?

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<sup>1</sup> Migration and financial remittances can foster firm creation and growth, serve as an important poverty alleviation tool, and improve health and education outcomes. Migrants also create business networks across borders, serve as information providers, and have the potential to change existing norms around e.g., democratic processes, gender equality and fertility norms. See Batista et al. (2025) for a review of literature on the impact of emigration in countries of migrant origin.

<sup>2</sup> Early studies pointed towards language skills and education to explain most of the observed labor market gaps and immigrant assimilation (Chiswick 1978, 1991; Borjas 1985, 1994; Dustmann 1994). But in terms of education, significant "brain waste" (the skill underutilization of immigrants that results in persistent underemployment or unemployment) seems to remain over time in a variety of settings (Kiker et al. 1997; Mattoo et al. 2008; Chiswick and Miller 2009; Bah 2018).

<sup>3</sup> Spilimbergo (2009), Batista and Vicente (2011), Barsbai et al (2017).

To examine the role of immigrant integration on the effects of international migration at both destination and origin, we conducted a randomized controlled trial evaluating two policy interventions aimed at removing barriers to immigrant integration. We measure the effects of these randomized policy interventions among both the targeted immigrants in the destination country and their closest contacts in the origin country over a period of 18 months.

Our experimental findings confirm the hypothesis that reducing integration barriers for immigrants in the destination country enhances their integration outcomes and also positively contributes to social remittances sent to those left behind at origin. In particular, we find that making an information phone application available to immigrants was particularly effective improving the quality of employment, as well as labor market aspirations and expectations. Migrants who received the information treatment reported increased job search efforts, as well as job changes to employment with more stability, closer to home and with a better work schedule. The information treatment also encourages migrants to take more actions to try to obtain documentation, and more treated migrants obtained a residence permit.

In addition, we report significant increases in *immaterial remittances* for households at the origin with treated migrants. We find that immigrants transmitted norms to their closest contacts in the home country that increased their participation in the elections that took place prior to the endline survey and that improved their views on gender equality in intrahousehold decision making. These treatment effects are concentrated among respondents who are younger than 30 years old, who presumably hold more malleable gender norms. Voting effects plausibly happened after a series of high-visibility elections in Portugal, and effects seem to be concentrated on Cape Verdean residents with treated immigrants that increased the fraction of native-born in their closest networks in the destination country.

Our work provides novel evidence on the development benefits of emigration for countries of origin. A substantial body of literature shows that emigration, even of highly educated individuals, can have a positive impact on the economic development of their home countries. This impact goes beyond financial remittances and includes improved incentives for investment in education and health, adoption of enhanced norms for political participation and gender equality, as well as

increased entrepreneurship, international trade and foreign direct investment (FDI).<sup>4</sup> Little research measuring the development impact of emigration and remittances in the country of origin is, however, experimental or quasi-experimental. Notable exceptions are given by Yang (2008), Clemens and Tiongson (2017), and Kanna et al. (2025) 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 the literature by implementing a randomized field experiment among immigrants, directly enhancing their integration in the destination country, and also by assessing its impact on development outcomes in their country of origin - an approach that extends beyond existing studies on migration and development. Our findings show that reducing barriers to immigrant integration promotes political participation, consistent with Barsbai et al (2017) and Batista et al. (2019), and enhances gender equality norms in the immigrants' country of origin, in line with Clemens and Tiongson (2017) and Mobarak et al (2023).

Our results also contribute to the still limited body of rigorous evidence on the effectiveness of immigrant integration policies in terms of labor market and social integration – as reviewed by Behaghel et al (2018). Recent experimental work by Barsbai et al (2024) and Barsbai et al (2025) provided important evidence on strategies for promoting Filipino immigrant integration in destination countries. We innovatively evaluate the effectiveness of 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 results contribute to broadening the understanding of the effects of international migration and the role of immigrant integration for the economic development of the countries of migrant origin, in addition to the effects of immigration policies in destination countries. This experimental evidence shows novel evidence of a causal impact of low-cost scalable migrant integration intervention on development outcomes in the country of origin.

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<sup>4</sup> Evidence of these positive impacts was provided, among others, by Gould (1994), Beine et al. (2001), Rauch and Trindade (2002), Mesnard and Ravallion (2006), 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) and Kanna et al. (2025). 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).

## 2. Background and Context

Portugal is a country with a long history of migration with large immigration flows from its former colonies in sub-Saharan Africa and, more recently, also from Eastern Europe.<sup>5</sup> As in other countries, immigrants in Portugal tend to perform worse than natives in the labor market in terms of unemployment rates, access to high-skilled employment, and wage levels. This is especially true for immigrants from African countries.<sup>6</sup>

Cape Verdeans are the second-largest group of immigrants in Portugal. Even though the official language and language of instruction in Cape Verde is Portuguese, which should decrease linguistic disadvantages relative to other immigrant groups, this immigrant group has experienced poor labor market integration outcomes. Cape Verdeans have one of the highest unemployment rates among non-Portuguese nationals: 27.8% according to the Census 2011, compared to 13.2% for the general population residing in Portugal. This figure is particularly pronounced for female Cape-Verdean immigrants: 36.6% of females were recorded as unemployed, relative to only 20.2% of men. The pattern of deficient integration outcomes for Cape Verdean nationals relative to native Portuguese is similar in terms of concentration in low-skilled jobs, job rotations, wages, and education results compared to native-born individuals.

## 3. Experimental Design

Immigrants in our sample were individually randomly assigned into one of four different groups:

- *Information Intervention:* individuals were offered a mobile phone app named *Morabeza*, a Cape Verdean creole term used to express hospitality and friendliness to newcomers. The app provided a mix of detailed information about strategies to access jobs, where to obtain further information regarding different integration matters and where to seek out personalized assistance, as well as migrant legal rights (including how to access public

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<sup>5</sup> In 2017, 880,188 individuals (or 8.5% of the resident population) were immigrants in Portugal according to United Nations data.

<sup>6</sup> See, for example, Kiker et al. (1997), or Bah (2018).

services, such as healthcare). This information was also conveyed by a complementary printed guide summarizing the same information.

- *Aspirational Intervention*: individuals were individually shown a short video documentary on a tablet, telling the story of three Cape Verdean immigrants that successfully built their life in Portugal. These success stories of immigrants were expected to potentially reduce immigrants' psychological barriers to successful integration - namely barriers created by an experience of immigrant segregation and discrimination. Individuals in this treatment group were also provided with a placebo mobile phone app and complementary printed guide.
- *Joint Intervention*: individuals were given both the informational and inspirational interventions. The order of the two interventions within this group was randomized.
- *Control/Placebo Intervention*: individuals were provided with information about things to do and see in Lisbon through a placebo version of the Morabeza mobile phone app and corresponding complementary summary printed guide.

The information intervention aimed at reducing the costs of access to information. It is reasonable to assume that immigrants have low quality information about how to obtain better jobs and housing, as well as about residency regularization procedures, and their legal rights to access public health care, as migrants largely rely on their limited social network to acquire this type of information. Although the information provided is publicly available online, provided by official government institutions, there is currently no platform that centralizes all this information. Additionally, the available information is often written in legal terminology that might not be appropriate for our study population. The information provided covered legalization processes to obtain residency and work permits, job and housing search strategies and platforms, as well as details on the right to access public health services.

The information intervention was hypothesized to improve integration outcomes as it significantly reduced the cost of accessing relevant information. This is likely to happen because other sources of information are often too complex (e.g., online information from legal authorities using legal language) or costly to obtain (e.g., from legal support services). The information intervention is expected to have a positive effect on immigrant integration outcomes through the reduction of information barriers to successful integration. The information treatment was delivered to migrants

at the end of the baseline survey through a mobile phone app and a printed booklet by trained enumerators.<sup>7</sup>

We hypothesized that immigrants may also suffer from psychological constraints to successful integration because of an experience of immigrant segregation and discrimination. These barriers may lead them to invest less in their legalization and integration effort. The aspirational intervention is expected to have a positive effect on immigrant integration outcomes through exposure to role models that increases immigrants' aspirations and expectations for the future. This intervention was expected to improve psychometric outcomes of migrants by exposing them to migrant success stories through a short video documentary. Higher aspirations and resilience as well as forward-looking behavior were expected to improve migrant integration outcomes.

Appendix A provides a detailed description of the two interventions. Both migrant integration interventions are aligned with the International Organization for Migration's approach for immigrant integration and tailored to the Portuguese context.<sup>8</sup> The precise design of the treatments was decided in collaboration with governmental officials, international organizations and local NGOs with experience working with our target population. They were pre-tested and subject to focus groups and qualitative analysis before implementation. The intervention components were available in both Portuguese and Cape Verdean Creole and were all implemented by teams of Cape Verdean enumerators.

Randomization into one of the four treatment conditions was conducted at the individual level, stratified by residence neighborhood and gender of the migrant to ensure balance along those dimensions. Randomization was done by computer assignment before the baseline survey.

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<sup>7</sup> Although the smartphone penetration among Cape Verdean immigrants is relatively high there is a small number of immigrants that received the booklet only because the mobile phone application could not be installed at the time of the intervention.

<sup>8</sup> 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**

We built our sample in several steps and exploited different methodologies. 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 that were documented to have many recently arrived migrants. These neighborhoods were identified with the help of the Cape Verdean consulate and of Cape Verdean immigrant associations. We focused our recruitment efforts on neighborhoods with a higher proportion of Cape Verdean immigrants. 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 have Portuguese nationality, and have arrived in Portugal within the previous five years. They were asked if they would be willing to participate in a survey about migrants in Portugal and, in this event, asked to share their contact details. In a second step, these individuals are re-contacted again by phone, their sample inclusion characteristics get verified, and a date to conduct the baseline survey is scheduled.

The random listing described above included approximately 2.300 migrants in the greater Lisbon area. Given the onset of the pandemic and restrictions related to COVID-19, our success rate in collecting baseline data with individuals from this listing exercise was about 35%, leading to a final sample size of around 800 immigrants. The success rate was a result of individuals' willingness to participate in the face-to-face baseline survey with an enumerator who has wide availability in terms of hours of the day and days of the week. The migrants were also invited to participate in five rounds of follow-up phone interviews.

Figure A6 in the Appendix displays a timeline of the data collection in Portugal and Cape Verde. The baseline data collection in Portugal and the interventions were delivered by trained enumerators in-person. Follow-up surveys in Portugal and data for the experimental sample in Cape Verde were collected through phone surveys. All interviews in both countries were conducted by a team of Cape Verdean enumerators either in Cape Verdean Creole or in Portuguese, depending on the interviewees' preference.



## 4.2 Descriptive statistics, balance and attrition checks

Table A1 in Appendix shows the characteristics of the baseline survey sample in Portugal. Overall, 57% of respondents are female, with an average age of 28 years. 66% of the sample work for pay, but only 16% of the sample have a permanent work contract. The average monthly income was 510 EUR at baseline. 68% percent of the sample sent remittances at least once in the previous year, with an average amount of 597 EUR per year. The characteristics of individuals who took the baseline survey are well balanced across experimental arms. The only statistically significant difference is related to the value of remittances sent in the year prior to the survey. Our results are robust to the inclusion of this variable as a control.

During the baseline interview, each migrant was asked to provide contact details of their closest family member in Cape Verde, i.e. the family member with whom they were in closest contact with. The relationship between the migrants in Portugal and the persons they identified as their closest contact in Cape Verde is shown in Appendix Table A2. Family members were contacted and informed about the study while the enumerators were still with the migrant (during the baseline survey but before treatment implementation). Both the migrant and the family member in Cape Verde were informed about the confidentiality of their responses and assured that none of the information they provide will be passed on. The same individuals in Cape Verde were then contacted and interviewed via phone after the survey with the migrant was completed on a different day as soon as their availability allowed, and again about 18 months later for an endline survey.

Out of 813 contacts, 672 were successfully interviewed at baseline. Table A3 in Appendix shows balance checks for the different treatment arms for the sample in Cape Verde. 65% of respondents are female, with an average age of 45 years. The average years of education are 10 years, as opposed to 12 years for our migrant sample. 56% of the sample have daily contact with the migrant. The average intrahousehold violence index is low,<sup>9</sup> indicating that the large majority of respondents indicated never finding intimate partner violence acceptable at baseline.<sup>10</sup> On

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<sup>9</sup> The intrahousehold violence index is an index composed of various questions about whether a respondent considers it acceptable for the husband to beat the wife. Responses of each component of the index are coded as 1 if the respondent considers violence acceptable in a certain situation, and 0 otherwise. The components are then added to form the index.

<sup>10</sup> We also find this pattern at endline, where all respondents indicate they never find intimate partner violence acceptable.

average, respondents favor sharing responsibilities in the household equally between husband and wife, as can be seen by an average equality index of 0.85 on a scale from 0 to 1, where 1 reflects total equality in decision making.

Tables A4 and A5 show attrition analysis for all follow-up surveys in Portugal and Cape Verde. We find no evidence of differential attrition for either the Portuguese or the Cape Verdean sample.

## 5. Econometric strategy and estimation results

### 5.1 Econometric strategy

Our identification strategy allows us to estimate ITT effects of our migrant integration interventions on our outcomes of interest. The empirical analysis uses an ANCOVA specification, following McKenzie (2012), including strata fixed effects and robust standard errors:

$$Y_{it} = \beta_0 + \beta_1 \cdot \text{MigrantTreatment}_i + \beta_2 \cdot Y_{i0} + \beta_3 \cdot \gamma_i + \beta_4 \cdot \delta_i + \varepsilon_{it}$$

where  $Y_{it}$  denotes outcome of interest  $Y$  for individual  $i$  at post-baseline time  $t$ ;  $\text{MigrantTreatment}_i$  is the integration treatment that was randomly assigned to migrant  $i$ ;  $Y_{i0}$  is the baseline value of outcome variable  $Y$  for individual  $i$ ;  $\gamma_i$  corresponds to randomization strata fixed effects for individual  $i$ ; and  $\beta_1$  denotes the estimated ITT coefficient of interest. Regressions for the migrant sample in Portugal, for which several rounds of follow-up surveys were conducted, also include round fixed effects,  $\delta_i$ , whenever more than one round of follow-up survey data is used.

### 5.2 Empirical results

We summarize the results from our experiment in two stages. First, we examine how the randomized interventions affected the pre-registered outcomes related to immigrant integration in the destination country. Second, we analyze the pre-registered outcomes of the migrants'

closest contacts in the country, and add an exploratory analysis of underlying mechanisms. We finalize with a brief discussion summarizing the main findings and mechanisms.

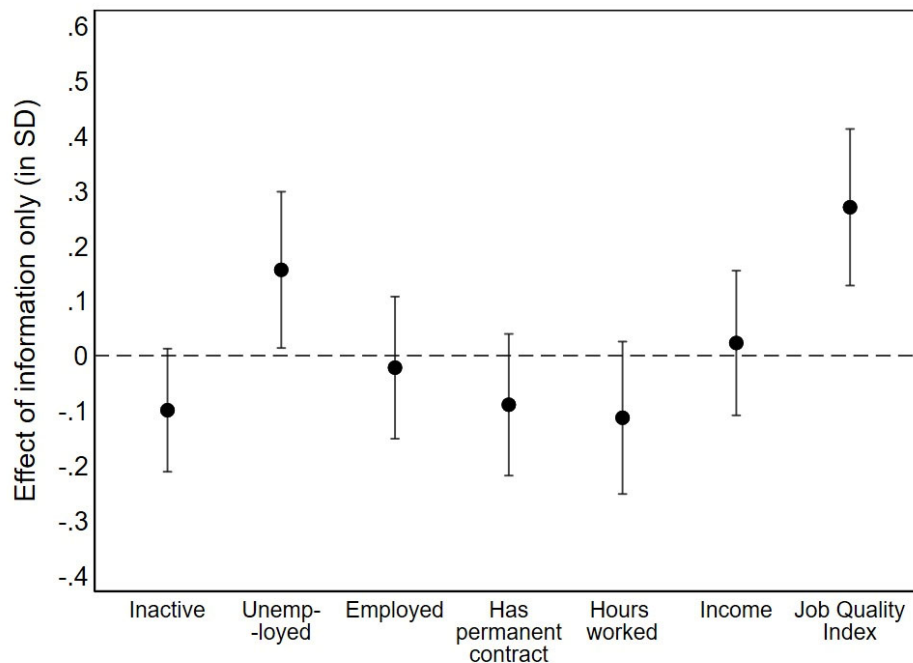
### **Immigrant integration in the destination labor market**

Figure 1 shows how providing access to the Morabeza information app changed immigrants labor market integration. In terms of labor market status, immigrants became 0.1 standard deviations (SD) marginally less likely to be inactive and 0.16 SD more likely to be unemployed. The probability that an immigrant becomes employed after the intervention is not significantly affected. We interpret these results as evidence that treated immigrants become more active looking for jobs. Indeed, decreased inactivity is achieved without changes in the probability that immigrants are studying or in training (Appendix Table A8) implying that the information app intervention achieved a reduction in the probability that immigrants were inactive NEET (*Not in Education, Employment, or Training*).

When examining the characteristics of immigrant employment, we do not find significant changes in the likelihood of holding a permanent contract, weekly hours worked, or monthly income earned. However, the index of job quality improved by almost 0.3 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. As shown in Appendix Table A9, all of these dimensions were significantly improved by access to the information app (with p-values at least <0.05), except for promotions which would likely only happen for migrants that kept the same job.

Combining the effects on decreased inactivity and increased job search by unemployed, together with the estimated increase in job quality dimensions related to job switching implies that the Morabeza information app promoted not only job search but actual job changes that resulted in immigrants finding jobs that aligned more closely with their own preferences.

Figure 1 – Treatment effects of Information App on Immigrants’ Labor Market Outcomes



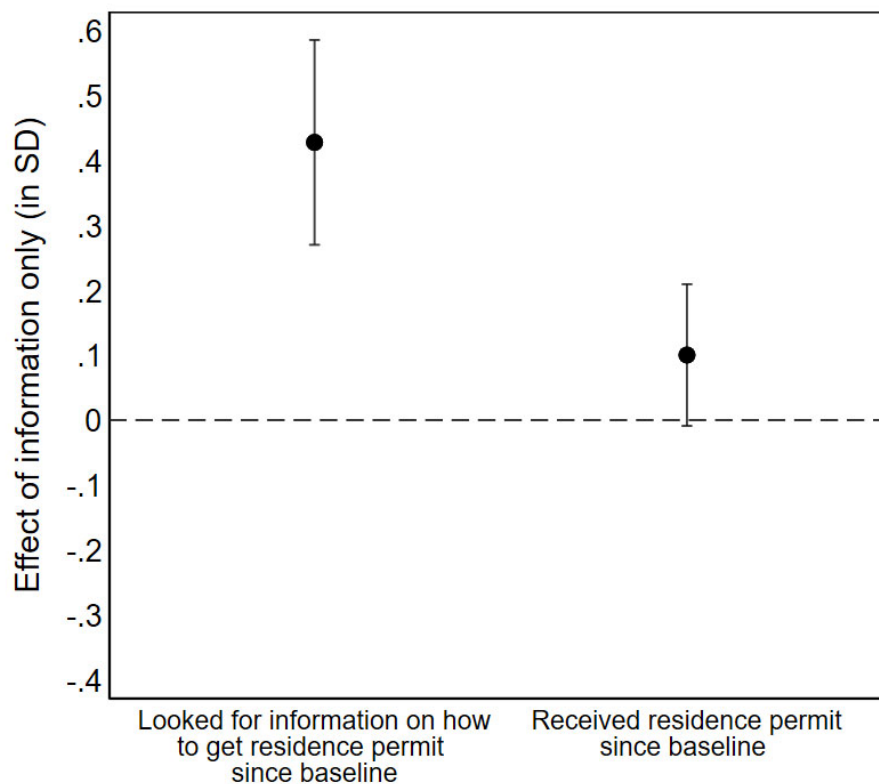
**Notes:** This figure presents ITT estimates of the *Morabeza* information app treatment in standard deviation units on labor market outcomes of immigrants, relative to the control group. Employed: A person who is currently working for pay or profit. This includes full-time and part-time workers, as well as those who are self-employed. 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. Inactive: A person who is not working and not actively seeking work, including students, retirees, or individuals who are not currently looking for a job. Monthly income and hours worked have been winsorized at the 99th percentile. Hours worked include zeroes. Job Quality Index varies between 0 and 1 and is based on six items related to job quality the respondent achieved in the labor market since baseline. The first five estimates are from ANCOVA regressions with strata dummies, round fixed effects, and robust standard errors. Monthly income coefficients are from Poisson regression with strata dummies, round fixed effects, and robust standard errors. Job quality index shows coefficients from an OLS regression with strata dummies, round fixed effects and robust standard errors. Confidence intervals are for 95 percent level. For more details on variables and estimation, see Appendix Table A8.

### Immigrant residency status and social networks

Figure 2 illustrates the impact of offering the *Morabeza* information app on immigrants’ efforts to obtain a residence permit and actual possession of it. The probability that treated migrants search for information on how to acquire a residence permit increased very significantly by 0.43 SD (p-value <0.05) relative to those in the control group. The probability of actually holding a residence permit also increased, although less strongly, by 0.1 SD (p-value <0.1).

These results indicate that the availability of an easy-to-use information application was very effective in facilitating migrants' search for immigration regulations. However, this is only partially translated to migrants actually obtaining residence permits.

Figure 2 – 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 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 robust standard errors. Confidence intervals are for 95 percent level. For more details on variables and estimation, see Appendix Table A10.

The treatment effects of accessing the information app on migrants' closest social networks (defined as up to 5 individuals) including more individuals born in Portugal is positive but

imprecisely measured: there is 3.9 percentage point (pp) increase in the probability of having a new individual born in Portugal in the closest network in Portugal at endline, which is not statistically significant, and a 3.1 increase in the ratio of individuals born in Portugal relative to the total, although this is only marginally significant as shown in Appendix Tables A11.

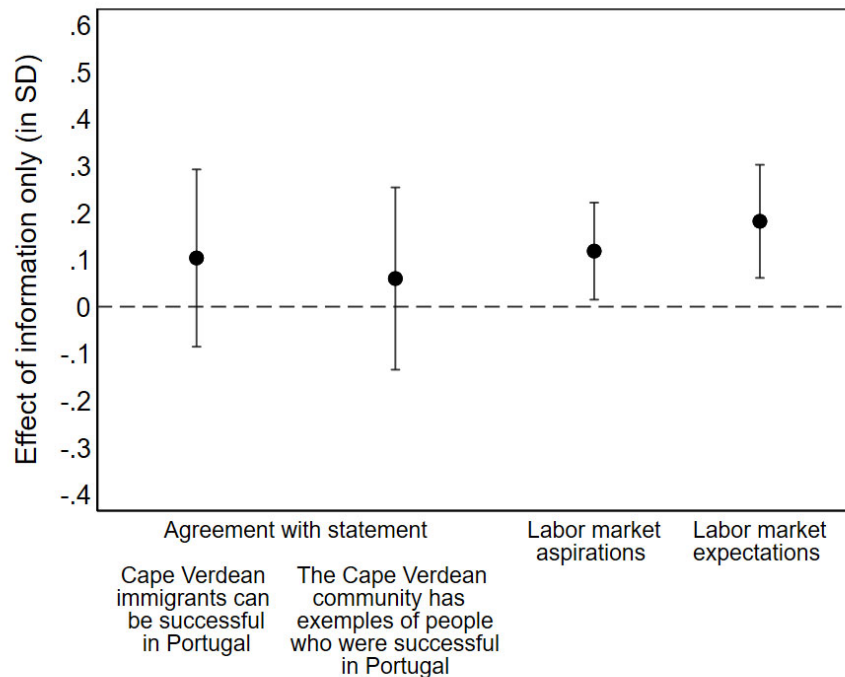
These results are suggestive that access to the information app may have promoted closer relationships of the migrants with individuals born in Portugal, but our strict measure of close network including only up to 5 individuals does not provide us with enough statistical power to clearly measure this treatment effect.

### **Psychological characteristics of migrants**

Figure 3 displays the treatment effects of providing the Morabeza information app to immigrants on their aspirations and expectations. The simple availability of the information app to migrants does not generate significant changes in short-run measures of beliefs in the possibility of success by Cape Verdean immigrants, obtained after but on the same day of the intervention. However, both aspirations and expectations on labor market occupation and job conditions were significantly improved. In particular, aspirations improved by 0.12 SD and expectations increased by 0.18 SD.

This result is consistent with the idea that as migrants get easier access to relevant information in the destination country, they feel more motivated to improve their labor market situation and job quality – a result consistent with the estimated improvement in job switching and job quality.

Figure 3 – 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 first two dependent variables were collected shortly after the delivery of the interventions. The corresponding estimates were obtained from OLS regressions with strata dummies and robust standard errors. The last two dependent variables are count variables indicating the number of achievements the respondent aspires or expects to achieve in the labor market, respectively. The corresponding estimates are from ANCOVA regressions with strata dummies, round fixed effects, and robust standard errors. Confidence intervals are for 95 percent level. For more details on variables and estimation, see Appendix Table A12.

When we look at the impact of the information app on measures of self-efficacy, grit or depression, the estimated treatment effects are all negligible and not statistically significant, as shown in Appendix Table A13. This result leads us to believe that the positive labor market and regularization improvements observed as a consequence of the information treatment were not driven by changes in these psychological characteristics.

### Effects on financial remittances sent to the country of origin

Appendix Table A14 shows the estimated treatment effects induced by providing the information app to migrants on their financial remittances to the main contact person in the country of origin,

as reported by this person. The estimated coefficients on the probability of receiving remittances and the value of those remittances are negative, but non-significant at conventional levels. This result is consistent with the fact that we do not observe any significant change in the income earned by treated immigrants in the destination country.

### **Effects on social remittances sent to the country of origin**

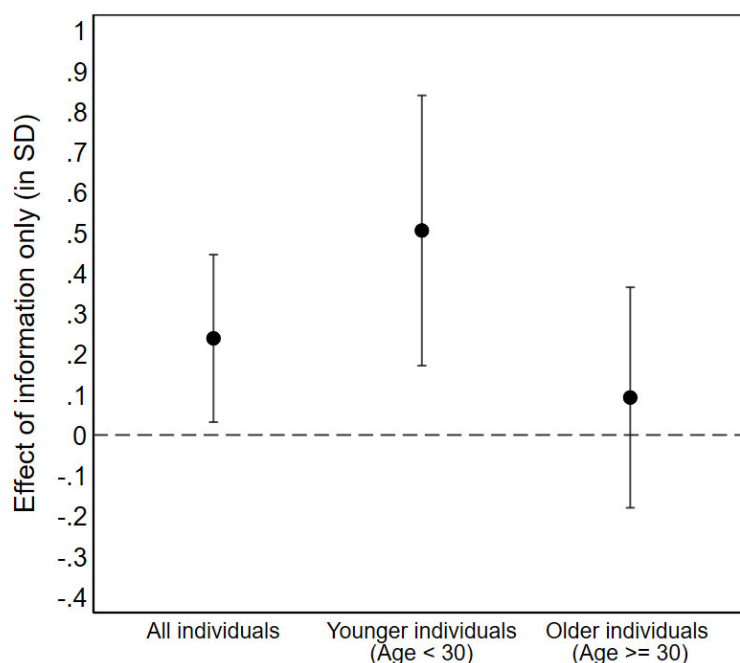
The impact of offering the Morabeza information application to migrants in Portugal translated into more egalitarian gender norms with respect to intra household decision making in the country of origin, as shown in Figure 4. Indeed, our gender equality index is significantly increased by 0.24 SD. This implies that easing access to information by migrants at the destination transmitted more egalitarian gender norms 18 months after to their closest network members in the country of origin.

To better understand the mechanism underlying this gender norm transmission effect, we conducted exploratory analysis. In particular, we run the same regression on a sample restricted to family members aged less than 30 years old, which could arguably have more malleable gender norms and hence be more prone to changing beliefs as a result of transmission by migrants.

As illustrated by Figure 4, we find indeed stronger positive effects for the immigrants' closest contacts at home that were younger than 30 years of age, which amount to 0.51 SD statistically significant at the 1% level. This treatment effect is not statistically significant when focusing only on contacts aged more than 30 years old. This evidence confirms our hypothesis that gender norms are only transmitted to the closest contacts whose beliefs are likely more malleable.



Figure 4 – 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 then different decision scenarios. The table 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 A15 and A16.

We also investigate the impact of providing the Morabeza information application to immigrants at destination on the political attitudes and behavior in the country of origin. As shown in Figure 5, we find a significant increase in the probability of voting in the election held prior to the survey in the country of origin, relative to the control group – a significant effect of 0.24 SD.<sup>11</sup>

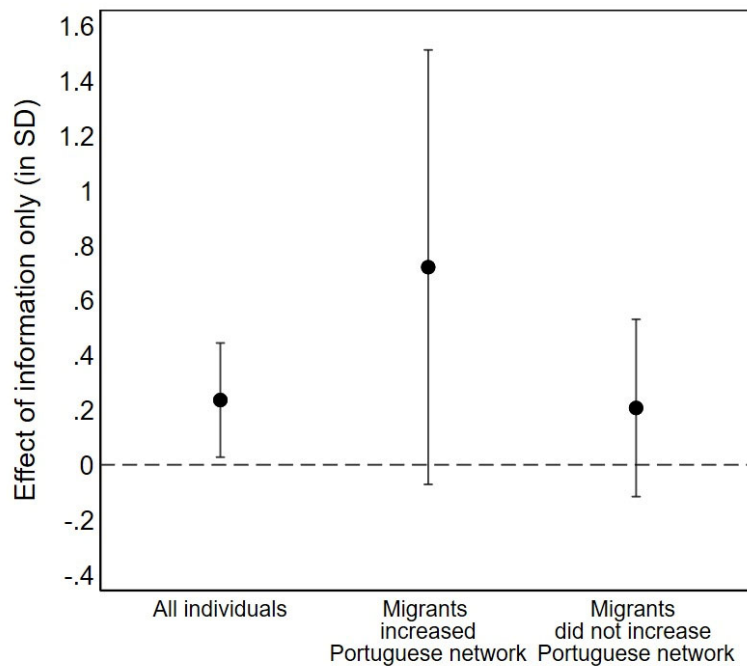
To better understand this mechanism, we conducted a piece of exploratory analysis. Specifically, we estimated the same regression on a subsample restricted to the closest contacts of migrants whose close network at destination has the same or a higher share of individuals born in the destination country. We find that effects are magnified in this subsample reaching a magnitude

<sup>11</sup> The presidential election was held in Cape Verde on October 17, 2021.

of 0.72 SD, although this effect is only marginally significant likely due to the reduced size of this subsample.

The finding that treated migrants who extend their Portuguese-born network are the ones transmitting more active voting behavior norms is consistent with the fact that between baseline and endline surveys there was a major election in the destination country, which are likely to have made them salient to migrants.<sup>12</sup> This election took place about one month before the presidential election in Cape Verde, which served as the reference for voting behavior in the endline survey. In addition, the fact that Cape Verdeans abroad have the right to vote in the Cape Verdean presidential elections was also likely to enhance transmission of more intense political engagement and voting behavior from migrants to their closest contacts in Cape Verde.

Figure 5 – 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 Cape Verde, 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 table 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 and A18.

<sup>12</sup> This was the municipal elections held in Portugal on September 26, 2021.

The treatment effects on other more generic measures of political participation, namely a measure of demand for public service quality and a political participation index, were not statistically significant as shown in Appendix Table A17.

### **Effects on frequency of contacts**

We estimated the treatment effects of the availability of the Morabeza information app on the frequency of contact between migrants and their closest contacts in the home country. There were no significant changes in the frequency of contact, as shown in Appendix Table A19. This is a plausible result since the baseline frequency of contact was almost daily - 214 contacts per year, on average, as shown in Appendix Table A1.

Given this high frequency of contacts between migrants and their counterparts in the home country was kept between baseline and endline, we conclude that social remittances are likely to have been conveyed by a change in the contents of these communication.

### **Summary and discussion of main findings and mechanisms**

Overall, we find that providing an information app to migrants in the destination country improved their labor market integration, namely by promoting job searching and job switches that increased the quality of jobs held by migrants – although it did not significantly change income earned.

In addition, we find evidence that immigrants who were offered the information app increased significantly their transmission of social norms relative to the migrants in the control group. Indeed, the main contacts in the country of origin improved their gender equality norms and their voting behavior. The mechanisms underlying this transmission of norms seem to be related to the plasticity of beliefs of individuals who are the immigrants' closest contacts in the home country and the salience of events such as elections for migrants that became more closely connected to natives in the country of destination. We exclude increased frequency of contact between migrants and their closest contacts, as well as income effects (given immigrants' labor income

does not significantly change, and there is also no significant increase in remittances received by the closest contacts in the home country) as the source of this transmission of social norms.

## **6. Concluding Remarks**

This study hypothesizes that immigrant integration in countries of destination is an important determinant of the development impact of emigration in countries of origin. We provide novel experimental evidence to support this hypothesis.

In particular, we find that providing immigrants with a low-cost, scalable information app in the destination country was particularly effective promoting integration outcomes such as quality of employment, regular migrant status and contact with native residents. Additionally, it affected those left behind. Addressing migrant integration barriers in the destination country improved political participation and gender equality norms in the country of origin.

This evidence opens new avenues of impact that can be taken into account when designing immigrant integration policies.

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## Appendix A - Policy Interventions

### Information 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.

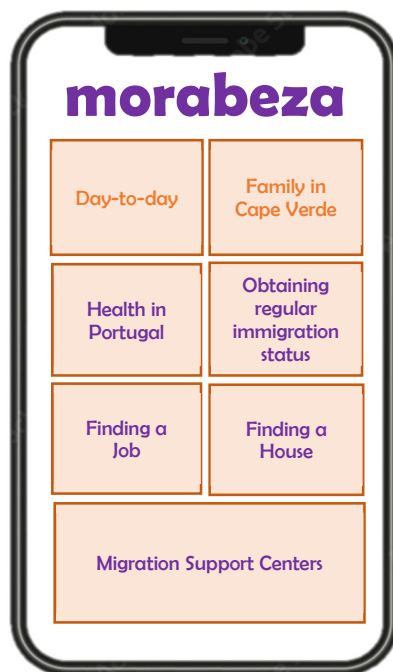


Figure A1 – APP's welcome page.



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 ducation 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 immigrant, it was possible to restrict the search to local support centers.

## Aspirational Intervention

### Description of the Video "Three Stories of Hope and Inspiration from Cape Verde to Portugal"



Figure A2 – Three Stories of Hope and Inspiration from Cape Verde to Portugal



Figure A3 - Adilson

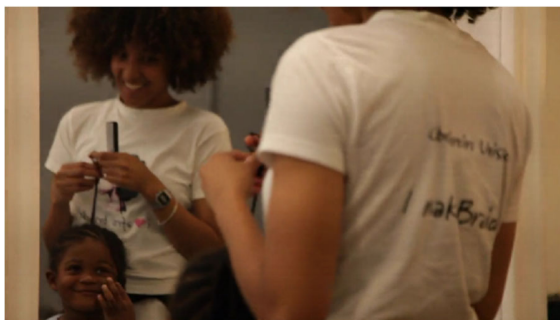


Figure A4 - Nádia



Figure A5 - Fernandinho

The video takes the listeners through the experiences of Adilson, Fernandinho, and Nádia, three immigrants from Cape Verde who arrived in Portugal with few resources but a steady determination to build a better future.

First, the narrator introduces Adilson, a team coordinator at a shopping center which has been living in Portugal for 14 years. Adilson arrived in Portugal in 2005, when he was 19 years old. He had few resources and little support from his family. He immigrated with the goal of studying and ended up building a life that he is proud of. Adilson is now a Portuguese citizen, married with two children, and happy at his job. He faced challenges such as not finding a job in his area of study, discrimination and language barriers. With time, perseverance, hard work, and a positive perspective about the challenges at hand, he surpassed these obstacles. Currently, he helps immigrants from Cape Verde in Portugal to pursue their dreams and he is considered an example to follow by his friends, family and colleagues.

The second story is about Nádia, an entrepreneur who owns afro hair salons in the Portuguese cities of Lisbon and Porto. When Nádia arrived in Portugal in 2008, 11 years ago, she was 18 years old, alone and facing health problems. Regardless, she came with the intention of studying and pursuing a better future. Initially, she worked as a domestic helper in the mornings, studied in the afternoons, and worked at a hair salon on weekends. Alongside managing the high workload and financial constraints, Nádia also struggled with being far from her family. During her weekend job, she found her passion for hairstyling and recognized the lack of salons specialized in Afro hair. In 2017, she successfully opened her first salon, Afrobraids, in Lisbon. She had to independently seek for information about how to start a business in Portugal. Her employees attest to her aptitude and patience for entrepreneurship. Nádia is another example which highlights the importance of determination, patience and hard work. Nowadays, she contributes to the community through initiatives that empower children to embrace their natural Afro hair. As a Portuguese citizen, she considers Portugal her home.

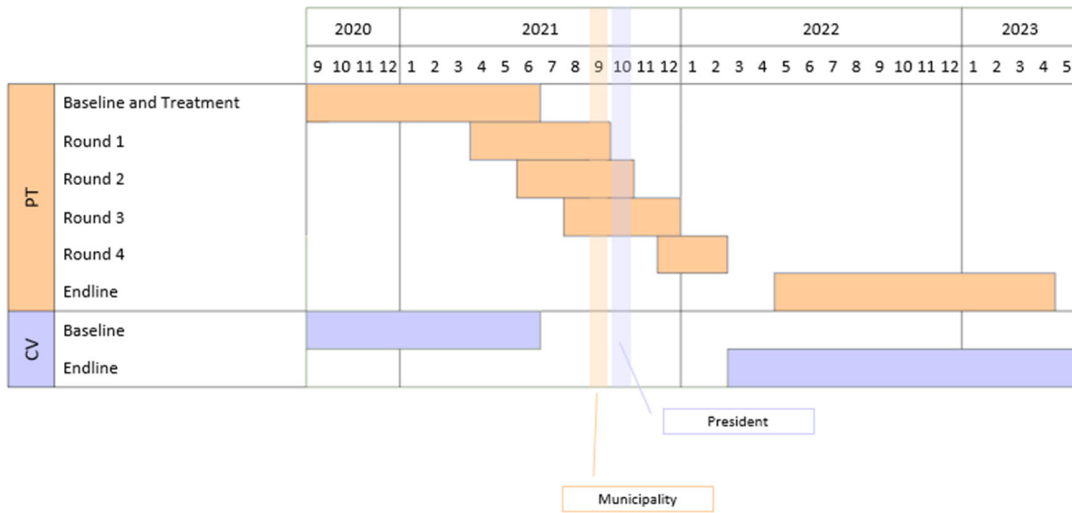
Lastly, Fernandinho is introduced. He arrived in Portugal in 1998, 21 years ago, at the age of 39, accompanied by his wife and three children. They came from Guinea-Bissau which was at war at the time. Fernandinho faced complications in regularizing his legal status, but he did not give up on finding a solution with the migration services. After 7 years he gained a residence permit and is now on track to obtain Portuguese citizenship. Using his previous experience in commerce and baking, Fernandinho balanced his daytime construction job with nighttime baking experiences in a small home oven. His homemade Cape Verdean biscuits quickly gained popularity. Fernandinho became the owner of a factory producing traditional Cape Verdean biscuits. This allowed him to ensure both a stable future for his family and to contribute to his community. Employees underline his strong work ethic and leadership. Ultimately, Fernandinho and his family have found happiness and success in Portugal, grateful for the opportunities the country has provided them.

In sum, the video highlights the importance of persistence, initiative, and community support in the success of Cape Verdean immigrants, with personal stories and words from acquaintances. It illustrates that despite facing discrimination, loneliness, and legal challenges, they had the power to transform their lives.

Music: "[Vapor di Imigrason](#)" - Mayra Andrade  
Duration: around 11 minutes  
Language: Portuguese and Cape Verdean Creole  
Production: NOVAFRICA, 2019

## Appendix B – Timeline

Figure A6: Timeline of the data collection and of elections in origin and destination countries



## Appendix C - Empirical Results

Table A1: Balance Checks - Portugal

	(1) Full sample	(2) Control	(3) Information only	(4) Video only	(5) Information & Video	(6) Joint Orthogonality F-test (RI p- value)
<b>Individual characteristics</b>						
Female	0.571 (0.495)	0.559 (0.498)	0.586 (0.494)	0.563 (0.497)	0.574 (0.496)	0.946
Age	27.573 (7.314)	28.069 (7.087)	27.261 (7.083)	27.598 (7.114)	27.373 (7.939)	0.700
Married	0.127 (0.333)	0.104 (0.306)	0.148 (0.356)	0.136 (0.343)	0.120 (0.325)	0.550
Years of schooling	12.105 (3.070)	11.884 (3.211)	11.990 (3.136)	12.219 (2.877)	12.321 (3.047)	0.453
Year of arrival in Portugal	2018.207 (1.399)	2018.069 (1.505)	2018.148 (1.342)	2018.352 (1.358)	2018.258 (1.380)	0.201
Speaks Creole at home	0.913 (0.282)	0.896 (0.306)	0.906 (0.292)	0.925 (0.265)	0.923 (0.267)	0.681
Works for pay	0.661 (0.474)	0.639 (0.482)	0.655 (0.476)	0.693 (0.462)	0.656 (0.476)	0.707
Has a permanent work contract	0.160 (0.367)	0.183 (0.388)	0.133 (0.340)	0.186 (0.390)	0.139 (0.347)	0.305
Is a student	0.157 (0.364)	0.163 (0.371)	0.138 (0.346)	0.166 (0.373)	0.163 (0.370)	0.857
Number of hours worked (last week)	25.354 (21.119)	24.104 (21.598)	24.276 (20.923)	28.181 (20.342)	24.919 (21.466)	0.186
Monthly income (in Euros)	510.902 (332.041)	526.762 (342.490)	476.158 (311.982)	540.869 (349.575)	500.785 (322.204)	0.226
Expected monthly income in 10 years (in Euros)	1977.272 (1462.280)	2014.565 (1442.800)	1906.048 (1434.973)	2019.368 (1569.796)	1972.356 (1413.781)	0.763
Aspired monthly income in 10 years (in Euros)	4181.115 (3888.293)	4343.814 (3759.808)	4282.653 (4130.674)	4207.826 (4165.627)	3894.924 (3489.865)	0.476
Received residence permit since arriving in Portugal	0.694 (0.461)	0.728 (0.446)	0.675 (0.470)	0.668 (0.472)	0.703 (0.458)	0.566
Share of individuals born in Portugal in 5 closest contacts	0.049 (0.137)	0.039 (0.126)	0.070 (0.176)	0.046 (0.124)	0.041 (0.114)	0.111
Plans to return to Cape Verde	0.475 (0.500)	0.436 (0.497)	0.473 (0.500)	0.467 (0.500)	0.522 (0.501)	0.397
Sent money to Cape Verde at least once in the previous year	0.675 (0.469)	0.688 (0.464)	0.675 (0.470)	0.709 (0.456)	0.630 (0.484)	0.364
Amount sent to Cape Verde in money in the previous year (in EUR)	596.885 (770.280)	647.131 (790.265)	546.921 (745.036)	731.538 (853.003)	468.641 (665.066)	0.000
<b>Household characteristics</b>						
Household size	3.031 (1.595)	3.109 (1.675)	3.163 (1.619)	2.980 (1.567)	2.876 (1.514)	0.253
Number of adults (18-60)	2.387 (1.195)	2.475 (1.247)	2.429 (1.168)	2.387 (1.200)	2.387 (1.161)	0.297
Number of children (<18)	0.533 (0.811)	0.550 (0.798)	0.606 (0.869)	0.457 (0.757)	0.517 (0.815)	0.329
Number of elders (>60)	0.111 (900.503)	0.084 (793.911)	0.128 (739.180)	0.136 (1112.487)	0.096 (917.480)	0.476
Observations	813	202	203	199	209	813
Randomization inference p-value						0.345

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, expected and aspired monthly income, remittances and number of hours worked are winsorized at the 99th percentile. Share of individuals born in Portugal in 5 closest contacts is zero if the migrant reports having zero contacts. Column 6 reports the p-value from a multinomial logit specification that tests balance between each group using randomization inference. The last row of Column 6 reports the p-value from a multinomial logit specification that tests balance between each group across all variables using randomization inference (Kerwin et al., 2024). Standard deviations in parentheses.

Table A2: Relationship with contact person in Cape Verde

	All	
	N	Percent
Husband/Wife or Boyfriend/Girlfriend	60	7.4
Parent or Parent in Law	263	32.3
Sibling or Sibling in Law	266	32.6
Children	28	3.4
Friend	84	10.3
Cousin	62	7.6
Niece/ Nephew	11	1.3
Uncle/Aunt	21	2.6
Grandparent	8	1.0
Other	10	1.2
Total	813	100

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 parents.



Table A3: Balance Checks - Cape Verde

	(1)	(2)	(3)	(4)	(5)	(6)
	Full sample	Control	Information only	Video only	Information & Video	Orthogonality F-test (RI p-value)
Female	0.652 (0.477)	0.613 (0.488)	0.653 (0.477)	0.709 (0.456)	0.631 (0.484)	0.276
Age	44.719 (123.015)	48.858 (148.690)	47.875 (142.816)	47.988 (147.366)	35.863 (12.523)	0.620
Years of education	10.274 (4.525)	10.081 (4.529)	10.618 (4.379)	9.718 (4.609)	10.652 (4.561)	0.488
Married	0.204 (0.403)	0.190 (0.394)	0.206 (0.405)	0.224 (0.418)	0.196 (0.398)	0.817
Works for pay	0.580 (0.494)	0.578 (0.495)	0.602 (0.491)	0.634 (0.483)	0.643 (0.481)	0.432
Employee	0.398 (0.490)	0.398 (0.491)	0.369 (0.484)	0.372 (0.485)	0.452 (0.499)	0.271
Self-employed	0.212 (0.409)	0.205 (0.405)	0.205 (0.405)	0.256 (0.438)	0.185 (0.389)	0.317
Student	0.112 (0.316)	0.112 (0.316)	0.136 (0.344)	0.091 (0.289)	0.107 (0.310)	0.430
Unemployed	0.151 (0.358)	0.161 (0.369)	0.125 (0.332)	0.165 (0.372)	0.155 (0.363)	0.512
Has permanent contract	0.162 (0.369)	0.129 (0.336)	0.153 (0.361)	0.152 (0.360)	0.214 (0.412)	0.206
Hours worked (previous week)	27.257 (23.300)	26.722 (23.336)	26.000 (23.271)	27.184 (23.425)	29.144 (23.281)	0.722
After-tax monthly income (in CV Contos)	23.603 (33.360)	23.488 (33.135)	23.989 (32.855)	22.159 (28.739)	30.684 (39.544)	0.033
Number of times in contact with migrant (past year)	214.143 (163.341)	235.109 (159.599)	207.867 (160.079)	222.551 (158.767)	253.364 (152.929)	0.349
Infrequent contact with migrant	0.007 (0.084)	0.012 (0.110)	0.011 (0.106)	0.000 (0.000)	0.006 (0.077)	0.503
Received remittances from migrant in previous year	0.435 (0.496)	0.472 (0.501)	0.438 (0.497)	0.509 (0.501)	0.429 (0.496)	0.429
Value of remittances received from migrant in previous year in	142.432 (339.730)	138.635 (326.870)	156.233 (357.936)	159.611 (343.903)	149.073 (363.879)	0.705
Voted in 2016	0.681 (0.467)	0.750 (0.434)	0.732 (0.444)	0.690 (0.464)	0.717 (0.452)	0.343
Intrahousehold gender equality index (0-1 scale)	0.796 (0.264)	0.858 (0.164)	0.848 (0.179)	0.826 (0.199)	0.851 (0.179)	0.140
Wants to emigrate from CV	0.690 (0.463)	0.742 (0.439)	0.705 (0.457)	0.752 (0.433)	0.731 (0.445)	0.752
Wants to move to PT	0.524 (0.500)	0.535 (0.500)	0.549 (0.499)	0.615 (0.488)	0.524 (0.501)	0.164
Made specific plans to move to PT	0.393 (0.489)	0.403 (0.493)	0.399 (0.491)	0.452 (0.500)	0.440 (0.498)	0.454
Income expectations in PT (monthly salary in EUR)	231.711 (463.128)	274.699 (749.118)	239.731 (327.435)	245.092 (404.293)	232.384 (324.073)	0.786
Observations	672	163	176	165	168	672
Randomization inference p-value						0.447

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  $\approx$  9 EUR. Infrequent contact is defined as less than monthly contact. Column 6 reports the p-value from a multinomial logit specification that tests balance between each group using randomization inference. The last row of Column 6 reports the p-value from a multinomial logit specification that tests balance between each group across all variables using randomization inference (Kerwin et al., 2024). Standard deviations in parentheses.

Table A4: Attrition checks - Portugal

	(1) Full sample	(2) Control	(3) Information only	(4) Video only	(5) Information & Video	(6) Differential attrition rate F-test (p- value)
All rounds	0.293 (0.455)	0.274 (0.446)	0.310 (0.463)	0.280 (0.449)	0.307 (0.462)	0.481
<b>By survey round:</b>						
Round 1	0.166 (0.372)	0.139 (0.346)	0.177 (0.383)	0.161 (0.368)	0.187 (0.391)	0.529
Round 2	0.245 (0.430)	0.262 (0.441)	0.251 (0.435)	0.231 (0.423)	0.234 (0.425)	0.789
Round 3	0.276 (0.447)	0.208 (0.407)	0.320 (0.468)	0.296 (0.458)	0.278 (0.449)	0.156
Round 4	0.325 (0.469)	0.287 (0.454)	0.365 (0.482)	0.286 (0.453)	0.359 (0.481)	0.157
Round 5	0.455 (0.498)	0.475 (0.501)	0.438 (0.497)	0.427 (0.496)	0.478 (0.501)	0.677
Observations	4065	1010	1015	995	1045	4065

Notes: The first row (attrition, all rounds) displays the share of unsuccessful follow-up and endline interviews. If we had interviewed all 813 baseline participants for all 4 follow-up rounds and the endline, the number of interviews would have been 4,065 (813\*5). The number in column (1) means that of these 4,065 potential interviews, 29.3% were not successfully completed. The remaining rows display this statistic for each survey round. For example, in the first round, of 813 potential interviews, 16.6% were not successfully completed. Column (6) displays results of an F-test for differential attrition by treatment group. Standard deviations are reported in parentheses.

Table A5: Attrition Checks - Cape Verde

	(1) Full sample	(2) Control	(3) Information only	(4) Video only	(5) Information & Video	(6) Differential attrition rate F-test (RI p- value)
Baseline	0.173 (0.379)	0.193 (0.396)	0.133 (0.340)	0.171 (0.377)	0.196 (0.398)	0.294
Endline	0.257 (0.437)	0.272 (0.446)	0.212 (0.410)	0.261 (0.440)	0.282 (0.451)	0.354
Observations	813	202	203	199	209	
Endline (if BL_attrition=0)	0.161 (0.368)	0.160 (0.367)	0.148 (0.356)	0.176 (0.382)	0.161 (0.368)	0.906
Observations	672	163	176	165	168	

Notes: The first row displays the share of unsuccessful baseline interviews. If we had interviewed all 819 baseline participants contact person for the baseline, the number of interviews would have been 819. The number in column (1) means that of these 819 potential interviews, 17.9% were not successfully completed. The remaining row displays this number for endline. Column (6) displays the p-value of an F-test for differential attrition by treatment group using randomization inference. Standard deviations are reported in parentheses.

Table A6: Treatment effects on usage data from the App

	(1) Downloaded the App	(2) Usage data available	(3) Number of sections accessed	Sections accessed:					
				(4) Regular migration status	(5) Find a job	(6) Find a home	(7) Migrant support centers	(8) Health	(9) Placebo sections
T1: Information	0.066 (0.044)	0.097* (0.049)	1.257** (0.500)	0.995*** (0.254)	0.394*** (0.085)	0.517*** (0.109)	0.217*** (0.058)	0.108*** (0.032)	-0.974*** (0.234)
T2: Video	-0.027 (0.046)	-0.044 (0.050)	-0.298 (0.264)	0.018 (0.026)	0.005 (0.014)	-0.008 (0.019)	-0.005 (0.007)	0.004 (0.010)	-0.312 (0.261)
T3: Information & Video	-0.001 (0.045)	-0.011 (0.050)	0.329 (0.331)	0.678*** (0.125)	0.345*** (0.070)	0.394*** (0.080)	0.071*** (0.023)	0.188** (0.091)	-1.348*** (0.215)
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	813	813	813	813	813	813	813	813	813

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 A7: Share of sample without documentation in Portugal

	(1)	(2)
	At baseline	At endline
Share undocumented	0.394	0.231
N	752	445

Notes: The share of the sample who is undocumented is calculated through a listing experiment. Half of the sample was asked to pick how many of three statements about them are true, without a statement on residence permit. The other half was asked how many of four statements are true, including the former three statements and a statement about their residence permit. The rate of undocumented respondents is calculated as the difference in the mean number of statements people reported to be true in the case of three vs four statements.

Table A8: Treatment effects on labor market outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Inactive NEET	Student	Unemployed	Employed	Permanent contract	Weekly hours worked	Monthly income (EUR)	Job Quality Index
T1: Information	-0.021** (0.009)	-0.012 (0.018)	0.043** (0.020)	-0.009 (0.028)	-0.039 (0.028)	-2.140 (1.337)	0.017 (0.026)	0.046*** (0.012)
T2: Video	-0.005 (0.011)	-0.009 (0.017)	0.025 (0.018)	-0.015 (0.026)	-0.032 (0.029)	-1.827 (1.250)	0.013 (0.025)	0.023** (0.012)
T3: Information & Video	-0.003 (0.013)	-0.009 (0.019)	0.027 (0.018)	-0.018 (0.027)	-0.019 (0.029)	-1.709 (1.332)	-0.013 (0.025)	0.024** (0.011)
p-values:								
T1=T2	0.054	0.855	0.365	0.834	0.826	0.806	0.872	0.074
T1=T3	0.121	0.886	0.430	0.746	0.479	0.750	0.235	0.088
T2=T3	0.824	0.986	0.907	0.894	0.632	0.926	0.283	0.927
T1+T2=T3	0.133	0.656	0.135	0.874	0.200	0.218	0.220	0.010
T1=T2=T3=0	0.045	0.922	0.162	0.917	0.551	0.360	0.614	0.003
Control mean	0.021	0.140	0.083	0.761	0.246	30.456	601.595	0.088
Control SD	0.142	0.347	0.277	0.427	0.431	18.918	316.597	0.170
Observations	2867	2867	2867	2867	2795	2670	2765	2810
Number of individuals	771	771	771	771	770	737	756	769

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. Student: A person who reports studying as their main occupation. 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. Monthly income and Hours worked have been winsorized at the 99th percentile. Hours worked include zeroes. Job Quality Index is normalized between 0 and 1, and reflects the number of items related to job quality achieved since the baseline. These items included: found a job she 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)-(5) display coefficients from ANCOVA regressions with strata dummies, round fixed effects, and robust standard errors. Column (6) displays coefficients from Poisson regressions with stata dummies, round fixed effects, and robust standard errors. Column (7) 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. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01

Table A9: 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
T1:Information	0.046*** (0.012)	0.052** (0.021)	0.048** (0.024)	0.051** (0.020)	0.050*** (0.016)	0.074*** (0.017)	0.000 (0.015)
T2:Video	0.023** (0.012)	0.035* (0.019)	0.031 (0.022)	0.033 (0.021)	0.012 (0.013)	0.025* (0.014)	0.002 (0.014)
T3:Information&Video	0.024** (0.011)	0.035* (0.019)	0.001 (0.022)	0.045** (0.020)	0.029** (0.014)	0.034** (0.015)	0.002 (0.013)
p-values:							
T1=T2	0.074	0.450	0.452	0.431	0.020	0.006	0.905
T1=T3	0.088	0.435	0.041	0.810	0.228	0.031	0.908
T2=T3	0.927	0.986	0.176	0.583	0.242	0.597	0.990
T1+T2=T3	0.010	0.077	0.016	0.201	0.123	0.005	0.994
T1=T2=T3=0	0.003	0.058	0.107	0.048	0.012	0.000	0.999
Control mean	0.088	0.100	0.160	0.107	0.052	0.055	0.055
Control SD	0.170	0.300	0.367	0.309	0.222	0.228	0.228
Observations	2810	2810	2810	2810	2810	2810	2810
Number of individuals	769	769	769	769	769	769	769

Notes: Job Quality Index is normalized between 0 and 1, and reflects the number of items related to job quality achieved since the baseline. These items included: found a job she 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) include the components of these achievements. For the components of the index, the respondents could select each component. If they did not select a component, a zero is imputed unless the respondent answered 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. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01

Table A10: Treatment effects on residency status

	(1)	(2)
	Looked for information on how to get residence permit since baseline	Received residence permit since baseline
T1:Information	0.197*** (0.037)	0.046* (0.025)
T2:Video	0.048 (0.030)	0.033 (0.025)
T3:Information & Video	0.159*** (0.036)	0.000 (0.023)
p-values:		
T1=T2	0.000	0.632
T1=T3	0.363	0.068
T2=T3	0.002	0.188
T1+T2=T3	0.095	0.028
T1=T2=T3=0	0.000	0.166
Control mean	0.302	0.291
Control SD	0.459	0.454
Observations	2873	2873
Number of individuals	771	771

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. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table A11: Treatment effects on share of individuals born in Portugal as share of migrants' closest social network in Portugal

	(1)	(2)
	Dummy	Ratio
T1:Information	0.036 (0.031)	0.031* (0.017)
T2:Video	0.001 (0.026)	0.008 (0.013)
T3:Information & Video	0.045 (0.033)	0.017 (0.013)
p-values:		
T1=T2	0.294	0.203
T1=T3	0.825	0.429
T2=T3	0.211	0.552
T1+T2=T3	0.867	0.313
T1=T2=T3=0	0.380	0.235
Control mean	0.075	0.027
Control SD	0.265	0.109
Observations	443	443

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. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A12: Treatment effects on aspirations and expectations

	Do you agree with the following statements...			
	(1)	(2)	(3)	(4)
	Cape Verdean immigrants can be successful in Portugal	The Cape Verdean community has examples of people who were successful in Portugal	Labor market aspirations	Labor market expectations
T1:Information	0.077 (0.072)	0.041 (0.067)	0.276** (0.123)	0.416*** (0.140)
T2:Video	0.187*** (0.068)	0.199*** (0.062)	0.214* (0.126)	0.286** (0.141)
T3:Information & Video	0.159** (0.071)	0.185*** (0.064)	0.171 (0.121)	0.297** (0.141)
p-values:				
T1=T2	0.091	0.011	0.632	0.361
T1=T3	0.233	0.025	0.399	0.412
T2=T3	0.653	0.810	0.736	0.938
T1+T2=T3	0.269	0.538	0.073	0.048
T1=T2=T3=0	0.029	0.002	0.131	0.022
Control mean	4.094	4.104	2.622	2.303
Control SD	0.744	0.680	2.333	2.284
Observations	813	813	2754	2065
Number of individuals	813	813	756	687

Notes: Dependent variables in columns (1) and (2) use Likert scales (1: totally disagree; 5: totally agree). Data for these two variables was collected shortly after the delivery of the interventions at the end of the baseline survey. Dependent variables in columns (3) and (4) 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. Columns (1) and (2) display coefficients from OLS regressions with strata dummies and robust standard errors. Columns (3) and (4) display 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. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01



Table A13: Treatment effects on self-efficacy, grit, depression and job quality

	(1)	(2)	(3)	(4)	(5)
	Self-efficacy (Likert Scale)	Self-efficacy (Dummy)	Grit (Likert Scale)	Depression (Likert Scale)	Depression (Dummy)
T1:Information	-0.052 (0.141)	-0.129 (0.167)	0.054 (0.141)	0.208 (0.132)	0.335 (0.212)
T2:Video	-0.024 (0.134)	-0.184 (0.170)	0.054 (0.138)	-0.018 (0.128)	0.249 (0.205)
T3:Information&Video	0.040 (0.149)	-0.180 (0.176)	0.040 (0.140)	0.022 (0.134)	0.207 (0.200)
p-values:					
T1=T2	0.828	0.750	0.998	0.066	0.691
T1=T3	0.519	0.775	0.918	0.147	0.537
T2=T3	0.627	0.981	0.915	0.744	0.835
T1+T2=T3	0.545	0.586	0.727	0.359	0.195
T1=T2=T3=0	0.927	0.675	0.977	0.249	0.423
Control mean	0.039	6.844	-0.024	-0.040	2.345
Control SD	1.046	1.911	0.991	0.986	2.111
Observations	441	990	417	377	904
Number of individuals	441	441	417	377	580

Notes: Questions on self-efficacy asked in round 4 (dummy) and 5 (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 asked in round 5 (Likert scale). Questions on depression asked in round 3 (dummy) and 5 (Likert scale). For outcomes using the Likert scale, 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, the Likert scale outcomes were converted into a dummy and dummies were added across items. 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. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table A14: Treatment effects on material remittances

	(1) Probability of receiving remittances	(2) Value of remittances received
T1:Information	-0.063 (0.053)	-74.313* (42.100)
T2:Video	0.052 (0.057)	2.457 (45.731)
T3:Information & Video	-0.036 (0.053)	-46.662 (44.133)
p-values:		
T1=T2	0.040	0.050
T1=T3	0.606	0.472
T2=T3	0.116	0.235
T1+T2=T3	0.746	0.674
T1=T2=T3=0	0.196	0.148
Control mean	0.476	222.622
Control SD	0.501	411.716
Observations	603	573

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. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01

Table A15: Treatment effects on preferences on intrahousehold equality

	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	0.041** (0.018)	0.049** (0.022)	0.047* (0.024)	0.042* (0.023)	0.040* (0.023)	0.063** (0.031)	0.020 (0.036)	0.055*** (0.019)	0.016 (0.046)	0.075* (0.039)	0.012 (0.019)
T2:Video	0.019 (0.019)	0.011 (0.025)	0.037 (0.025)	0.034 (0.024)	0.025 (0.027)	0.020 (0.034)	0.009 (0.037)	0.026 (0.022)	0.002 (0.048)	0.015 (0.040)	-0.027 (0.022)
T3:Information & Video	0.052*** (0.017)	0.035 (0.023)	0.058** (0.023)	0.047** (0.023)	0.040* (0.024)	0.062** (0.030)	0.042 (0.035)	0.037* (0.020)	0.088* (0.045)	0.069* (0.038)	-0.004 (0.020)
p-values:											
T1=T2	0.215	0.095	0.679	0.705	0.523	0.186	0.772	0.109	0.763	0.133	0.098
T1=T3	0.447	0.481	0.599	0.782	0.970	0.991	0.524	0.208	0.100	0.891	0.435
T2=T3	0.043	0.285	0.333	0.507	0.507	0.176	0.365	0.566	0.057	0.165	0.337
T1+T2=T3	0.778	0.436	0.415	0.351	0.476	0.650	0.797	0.097	0.280	0.720	0.732
T1=T2=T3=0	0.011	0.114	0.089	0.194	0.317	0.108	0.660	0.025	0.145	0.133	0.426
Control mean	0.852	0.905	0.897	0.904	0.898	0.830	0.796	0.932	0.664	0.724	0.952
Control SD	0.170	0.222	0.227	0.222	0.234	0.284	0.319	0.200	0.394	0.347	0.158
Observations	579	599	595	597	601	602	602	599	599	599	599

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. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01

Table A16 - 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	
T1:Information	0.093*** (0.031)	0.046 (0.035)	0.079* (0.043)	0.082* (0.048)	0.097** (0.047)	0.143** (0.057)	0.089 (0.066)	0.042* (0.025)	0.142* (0.079)	0.170*** (0.063)	0.052 (0.032)
T2:Video	0.030 (0.034)	0.010 (0.044)	0.049 (0.049)	0.061 (0.052)	0.038 (0.053)	0.037 (0.063)	0.035 (0.070)	-0.021 (0.038)	0.005 (0.080)	0.079 (0.066)	-0.009 (0.038)
T3:Information & Video	0.077** (0.030)	0.039 (0.038)	0.065 (0.044)	0.084* (0.048)	0.094* (0.048)	0.128** (0.058)	0.085 (0.067)	0.006 (0.031)	0.090 (0.079)	0.136** (0.060)	0.012 (0.030)
p-values:											
T1=T2	0.024	0.287	0.335	0.598	0.130	0.054	0.377	0.082	0.063	0.125	0.088
T1=T3	0.493	0.802	0.611	0.936	0.910	0.743	0.946	0.176	0.464	0.513	0.210
T2=T3	0.083	0.415	0.603	0.526	0.167	0.115	0.433	0.477	0.257	0.330	0.568
T1+T2=T3	0.265	0.740	0.260	0.347	0.497	0.517	0.671	0.734	0.596	0.183	0.550
T1=T2=T3=0	0.009	0.460	0.279	0.311	0.110	0.034	0.485	0.164	0.181	0.041	0.250
Control mean	0.833	0.902	0.891	0.870	0.859	0.783	0.761	0.957	0.663	0.696	0.946
Control SD	0.184	0.271	0.277	0.267	0.292	0.327	0.361	0.177	0.395	0.341	0.189
Observations	223	226	225	226	226	226	226	225	225	226	226

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. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01

Table A16 - 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	
T1:Information	0.015 (0.023)	0.035 (0.028)	0.033 (0.030)	0.030 (0.025)	0.008 (0.027)	0.023 (0.038)	-0.018 (0.045)	0.062** (0.026)	-0.046 (0.058)	0.019 (0.051)	-0.007 (0.026)
T2:Video	0.021 (0.024)	-0.001 (0.031)	0.032 (0.029)	0.033 (0.026)	0.033 (0.032)	0.030 (0.039)	-0.002 (0.047)	0.057** (0.026)	0.008 (0.062)	-0.015 (0.053)	-0.030 (0.029)
T3:Information & Video	0.043** (0.021)	0.036 (0.028)	0.053* (0.027)	0.037 (0.026)	0.014 (0.028)	0.027 (0.037)	0.022 (0.043)	0.044* (0.026)	0.088 (0.056)	0.061 (0.051)	-0.007 (0.023)
p-values:											
T1=T3	0.794	0.238	0.978	0.921	0.392	0.868	0.745	0.816	0.384	0.526	0.498
T2=T3	0.179	0.960	0.504	0.766	0.800	0.919	0.368	0.356	0.020	0.424	0.994
T1+T2=T3	0.318	0.215	0.460	0.858	0.544	0.941	0.598	0.492	0.186	0.164	0.466
T1=T2=T3=0	0.831	0.955	0.759	0.453	0.527	0.636	0.512	0.022	0.139	0.448	0.467
Control mean	0.861	0.906	0.900	0.920	0.916	0.851	0.812	0.920	0.665	0.738	0.955
Control SD	0.163	0.196	0.201	0.197	0.201	0.260	0.299	0.210	0.396	0.351	0.143
Observations	356	373	370	371	375	376	376	374	374	373	373

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. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01

Table A17: Treatment effects on politics

	(1)	(2)	(3)
	Voted	Demand for public service quality	Political Participation Index
T1:Information	0.108** (0.048)	0.098 (0.116)	0.034 (0.116)
T2:Video	0.074 (0.050)	0.068 (0.124)	-0.015 (0.110)
T3:Information & Video	0.079 (0.049)	0.167 (0.121)	0.037 (0.111)
p-values:			
T1=T2	0.467	0.795	0.679
T1=T3	0.531	0.544	0.982
T2=T3	0.910	0.418	0.650
T1+T2=T3	0.133	0.997	0.911
T1=T2=T3=0	0.159	0.582	0.962
Control mean	0.707	6.021	0.612
Control SD	0.456	1.048	0.996
Observations	589	594	601

Notes: Voted is a binary variable equal to 1 if the respondent voted in the previous election. 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 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. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01

Table A18 - Panel A: Treatment effects on politics - Migrant increased their Portuguese network

	(1)	(2)	(3)
	Voted	Demand for public service quality	Political Participation Index
T1:Information	0.395* (0.213)	-0.168 (0.445)	0.276 (0.375)
T2:Video	0.361 (0.219)	-0.115 (0.588)	-0.131 (0.391)
T3:Information & Video	0.407* (0.209)	-0.024 (0.494)	0.288 (0.321)
p-values:			
T1=T2	0.784	0.926	0.294
T1=T3	0.922	0.782	0.971
T2=T3	0.727	0.895	0.298
T1+T2=T3	0.186	0.760	0.800
T1=T2=T3=0	0.039	0.046	0.033
Control mean	0.500	6.000	0.333
Control SD	0.548	0.894	0.516
Observations	50	51	52

Notes: All regressions are run on a subsample of the original sample, i.e. on a subsample of respondents for whom the migrant in Portugal has a higher share of Portuguese born people among their 5 closest contacts at endline than at baseline, or has maintained their (positive) share at baseline. Voted (1) is a binary variable equal to 1 if respondent has voted in last election. 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

Table A18 - Panel B: Treatment effects on politics - Migrant did not increase their Portuguese network

	(1)	(2)	(3)
	Voted	Demand for public service quality	Political Participation Index
T1:Information	0.091 (0.072)	0.089 (0.165)	-0.048 (0.181)
T2:Video	0.048 (0.072)	-0.029 (0.183)	0.018 (0.174)
T3:Information & Video	0.048 (0.076)	0.214 (0.172)	-0.155 (0.174)
p-values:			
!	0.518	0.501	0.718
T1=T3	0.542	0.441	0.547
T2=T3	1.000	0.182	0.312
T1+T2=T3	0.364	0.529	0.611
T1=T2=T3=0	0.658	0.514	0.745
Control mean	0.746	6.029	0.761
Control SD	0.438	0.946	1.140
Observations	279	280	284

Notes: All regressions are run on a subsample of the original sample, i.e. on a subsample of respondents for whom the migrant in Portugal does not have a higher share of Portuguese born people among their 5 closest contacts at endline than at baseline, or has not maintained their (positive) share at baseline. At endline, only contacts that were mentioned at baseline as 5 closest contacts, and new people are counted. Voted (1) is a binary variable equal to 1 if respondent has voted in last election. 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. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01

Table 19: Treatment effects on contact with migrant

	(1)	(2)
	Contacts per year	Infrequent Contact
T1:Information	-10.350 (16.133)	-0.005 (0.011)
T2:Video	10.078 (16.976)	-0.005 (0.011)
T3:Information & Video	9.189 (16.998)	0.002 (0.013)
p-values:		
T1=T2	0.205	0.944
T1=T3	0.227	0.452
T2=T3	0.958	0.496
T1+T2=T3	0.687	0.406
T1=T2=T3=0	0.540	0.855
Control mean	181.095	0.014
Control SD	160.329	0.116
Observations	603	603

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 frequently 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. \*  $n < 0.1$ . \*\*  $n < 0.05$ . \*\*\*  $n < 0.01$