

# Fostering the benefits of international migration

## A randomized evaluation of pre-departure training for migrants from the Philippines to the US\*

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May 8, 2016

Project in progress - Preliminary draft

### Abstract

By providing migrants with the right information to succeed abroad, pre-departure orientation seminars (PDOS) for migrants have the potential to become a key policy tool for increasing the benefits of international migration for migrants, their families as well as their countries of destination and origin at large. There is currently no evidence on the effectiveness of PDOS and on what kind of training contents matter. We evaluate the effectiveness of PDOS by randomly assigning migrants departing from the Philippines to the US to new and different types of PDOS and tracking the impact on 1,273 migrants and their family members remaining in the Philippines over time. This paper summarizes the short-term effects of the new PDOS. We find that the new information provided in the PDOS (i) reduces travel-related problems, (ii) tends to speed up initial important steps for settlement, (iii) makes migrants less likely to have their Philippine qualification recognized and more likely to plan to study in the US, (iv) reduces the size of migrants' social network in the US, and (v) has no effect on subjective wellbeing. Preliminary evidence from ongoing fieldwork also suggests that the new PDOS may increase migration intentions of family members who stay behind.

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\*This project would not have been possible without the collaboration with the Commission on Filipinos Overseas (CFO). We are deeply indebted to Secretary Imelda M. Nicolas, Undersecretary Gertie A. Tirona and the whole CFO team for their incredible support. In particular, we would like to thank Regina Galias, Ivy Miravalles, and the PDOS officers for whom the project caused many extra working hours. We would also like to thank all contributors to the new PDOS modules and handbook. We are extremely grateful to local project manager Isabel Hernando for her excellent work. We also acknowledge funding from the International Initiative for Impact Evaluation (3ie). The usual disclaimer applies.

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# 1 Introduction

International migration allows individuals from developing countries to experience huge income gains. By migrating to the US, for instance, the average worker from a developing country triples her real annual income. These income gains easily exceed those from any development policy in the countries of origin (Clemens et al., 2009; McKenzie et al., 2010). By going abroad, migrants do not only help themselves. They typically share their income gains and send remittances to family members who stay behind. Remittances have become a very important source of income for many people in developing countries. In 2015, they amounted to US\$ 441 billion – equivalent to more than three times the amount of official development assistance (World Bank, 2015).

However, migrants’ socio-economic integration in the destination countries is often imperfect (OECD, 2015). All involved actors can therefore not fully reap the benefits of international migration. First, many migrants earn below their income potential. Second, lower migrant incomes potentially translate into lower remittances incomes for family members in the countries of origin. Third, lower levels of socio-economic integration reduce the fiscal benefits of migration for citizens of destination countries. They may also have adverse consequences for social cohesion and the willingness to accept additional migrants.

Many destination countries have designed policies to facilitate the socio-economic integration of migrants. Such policies typically include language training, assistance finding jobs, and information on the culture and norms of the destination country. In addition, active labor market policies often implicitly target migrants. So far, however, evidence on the effectiveness of these integration policies has been mixed, especially with regard to their cost effectiveness (see Rinne, 2013, for an overview and Joona and Nekby, 2012, and Sarvimäki and Hämäläinen, 2016, for insightful case studies).

This paper assesses an alternative, yet relatively unexplored policy: Pre-departure orientation seminars (PDOS) for migrants conducted in their countries of origin. PDOS build on the fact that many migrants face important knowledge gaps with respect to various aspects of their destination country upon arrival. These knowledge gaps are particularly large for individuals who move from a developing to a developed country and have to navigate a completely different system. Many migrants may hence not be able to make optimal decisions, or only after costly learning. The principal idea of pre-departure orientation seminars (PDOS) is to reduce these knowledge gaps early on. By providing migrants with relevant information, PDOS aim to generate changes in knowledge that lead to changes in behavior, which in turn lead to changes in relevant outcomes. PDOS are appealing because they are conducted before departure, i.e. at a very early stage in the migration process. PDOS therefore have the potential to shape migrants’ default behavior at the destination. Integration policies that take place after migrants’ arrival may be less effective as they would need to change already established behavior. PDOS

may thus be a cost-effective policy for increasing the benefits of migration for migrants, their families as well as their destination and origin countries at large.

This project evaluates the effectiveness of new PDOS using a randomized control trial for permanent migrants from the Philippines to the US. Together with the Commission on Filipinos Overseas (CFO), the key government agency tasked to manage permanent migration from the Philippines, we have developed new PDOS modules. The new PDOS aims to foster settlement and labor market integration and increase migrants' wellbeing more generally. It also aims to strengthen migrants' engagement in diaspora activities that contribute to development in the Philippines. We evaluate the effectiveness of PDOS by randomly assigning migrants to either the new PDOS (the treatment group) or the old PDOS (the control group) and tracking the impact on 1,273 migrants and their family members remaining in the Philippines over a period of two years after departure. This paper summarizes the short-term effects using data from the first round of follow-up interviews conducted about 200 days after migrants' arrival in the US.

Our project makes two contributions to the literature. First, we provide the first rigorous evidence on the effectiveness of PDOS and on what kind of training contents matter (McKenzie and Yang, 2015). Second, we are first to study the externalities of immigrant integration on those who stay behind in the countries of origin. Specifically, we analyze whether changes in the integration path of migrants, which have been exogenously induced by the PDOS, affect the amount of remittances and migration intentions of family members in the Philippines. We thus bridge the gap between the literature on immigrant integration, which has solely focused on destination countries, and the literature on the development impact of migration, which has solely focused on countries of origin.

The Philippines are a very relevant case. With a current stock of about five million permanent and five million temporary migrants, the Philippines are one of the world's top emigration countries. Before departure, every Filipino emigrant is legally required to register with the government and attend a PDOS. Hence, PDOS are a policy of considerable scale. The sheer size of migration and remittances in the Philippines implies that even small changes in the behavior of individual migrants may translate into large overall gains in relevant outcomes. The Philippines-US migration corridor is one of the largest migration corridors in the world and very important for both countries. The US is by far the most important destination of permanent migrants from the Philippines. At the same time, the Philippines are the fourth most important origin of migrants to the US (after Mexico, China and India).

## 2 Interventions

While the Philippines are much more active in migration management than other origin countries, most of the content of the destination-specific PDOS is still basic. The

standard version of the PDOS for permanent migrants from the Philippines to the US (henceforth *old PDOS*) covers various topics, but concentrates on issues related to travel and immigration procedures. It last about 90 minutes and touches only marginally on issues such as cultural differences, getting settled or finding a job and not at all on issues such as financial literacy and diaspora engagement. In collaboration with CFO and many other stakeholders, we have developed new PDOS modules that aim to improve migrants' socio-economic integration and increase their engagement in diaspora activities.

To identify relevant knowledge gaps and assess migrants' needs and expectations, the design of the new PDOS has been based on extensive interviews with 283 recent and 51 prospective migrants (both before and after they had attended the PDOS). For most migrants, finding a job in the US constituted the single most important challenge. In general, the interviews revealed large demand for additional information in the PDOS, in particular on topics related to employment, institutions for post-arrival support, cultural differences, health care, education, and housing.

The new PDOS is a complete overhaul and significant extension of the old PDOS. We test two versions of the new PDOS, each of which lasts about 150 minutes. The core version (henceforth *new PDOS without employment module*) consists of the following components.

*Settlement:* This is the broadest of all modules and covers general issues related to migration and to migration to the US in particular. The module addresses topics such as cultural differences and culture shock, rights and obligations of US permanent residents, important things to take care of after arrival (such as obtaining a social security number, health insurance, a driver's license, etc.) as well as information about health care, education, and housing.

*Financial literacy:* This module is based on the fact that migrants often experience a substantial increase in income when starting a job abroad. The module teaches basic rules of thumb on opening a bank account, financial planning, savings, sending remittances, and making a joint financial plan with the family in the Philippines on the amount and use of remittances.

*Associations in the US:* Filipino associations, but also non-Filipino associations such as neighborhood associations, may be an important provider of post-arrival support for migrants. The module informs migrants about the potential benefits of associations for expanding their social network. Such contacts may ultimately help migrants to integrate into the US and find a decent job.

*Diaspora engagement:* This module aims to strengthen the links between Filipino migrants and the Philippines. It covers Filipino culture and values, overseas voting rights, the right to re-acquire Filipino citizenship and government programs such as BalinkBayan and Linkapil, which help migrants to stay in touch with their home country and give them the possibility to contribute to development causes in the Philippines.

The other version of the new PDOS contains all the modules mentioned above plus an additional module that covers employment-related topics (henceforth *new PDOS with employment module*). The employment module aims to help migrants to find a decent job in the US, which our preparatory interviews identified as the most important challenge. The module informs about the US labor market and addresses important issues such as the recognition of certificates and diplomas, job search strategies, how to prepare a CV and cover letter, and behave in a job interview.

We use the term *new PDOS* to refer to either version of the new PDOS (with or without employment module). All migrants who attend the new PDOS also receive a *comprehensive handbook* that covers the above topics in detail and provides checklists. The presentation during the new PDOS gives an overview of the handbook and shows migrants where to find which information. The handbook is a very important part of the new PDOS as it gives migrants the possibility to look for information when they actually need it. To some extent, the handbook can therefore be conceptualized as a travel guide for (Filipino) migrants to the US. There are two versions of the handbook, one with and one without the chapter corresponding to the employment module.

In addition to the two versions of the new PDOS, the project also evaluates a third intervention. This intervention is an email intervention (henceforth *association email*) and addresses migrants' demand for post-arrival support in the US. About one month after arrival in the US, randomly selected migrants who have attended the new PDOS receive an encouragement to reach out to Filipino associations in the US via email. The email contains contact details of Filipino associations that are located in the same US state as the migrant (see 1 for a sample email). About two months after arrival, migrants receive a second email with the same content.

## 3 Research design

### 3.1 Randomization and treatment arms

To identify causal effects, migrants were randomly assigned to the different versions of the PDOS. Randomization ensures that initial observable and unobservable characteristics of migrants who were assigned to the old PDOS or one of the new PDOS are on average the same. Any average differences in migrants' knowledge, behavior and outcomes after the PDOS can then be attributed to the PDOS version.

Figure 2 summarizes the treatment arms of the study. Randomization of the PDOS versions took place at the day level. During the implementation period from April 21 to October 3 2014, the PDOS session of each day (112 sessions in total) was randomly assigned to either one of the new PDOS or the old PDOS. Two days of each week (40 percent of the sessions) were randomly assigned to the old PDOS, three days of each week (60 percent of the sessions) to the new PDOS, half of these (30%) without employment

module and half of these (30%) with employment module. Hence, depending on the day migrants registered with CFO and attended their pre-departure training, they happened to attend one of the new PDOS or the old PDOS.

Randomization of the association email took place at the migrant level and only among those migrants who attended the new PDOS. In principle, half of the migrants who attended either version of the new PDOS were randomly selected to receive the association email. In practice, however, randomization could only take place among those migrants who provided a valid email address and migrated to a US state with active and CFO-approved Filipino associations.

Attending a PDOS is mandatory for all migrants. Departure from the Philippines is not possible without documentation of registration and the PDOS attendance certificate. Hence, non-compliance with the assigned treatment status is of no concern.

Spillover effects and control group contamination may arise if migrants who attended the new PDOS shared information with migrants who attended the old PDOS. To avoid such effects, new and old PDOS sessions were scheduled on different days of the week, thus minimizing the possibility of interaction between the two groups. To avoid control group contamination through instructors, different groups of instructors conducted the new and old PDOS. Instructors of the old PDOS were not informed about the content of the new PDOS and had no access to the new training materials including the handbook. To assign instructors to the new or old PDOS and balance their characteristics, we ranked them by instruction quality and used paired random assignment. To avoid control group contamination through the handbook, only the version corresponding to the PDOS version of each day was available and no handbooks were available for download in the internet.

To rule out John-Henry or Hawthorne effects, migrants were not informed about the evaluation and the different PDOS versions.

## **3.2 Baseline interviews and characteristics**

Baseline interviews with migrants were conducted just before the PDOS took place, while migrants were waiting for the PDOS. To make our sample more homogenous, we only interviewed migrants (i) who were between 20 and 50 years old, (ii) who had never lived in the US for at least three months before, (iii) whose planned departure date was within three months after the interview date, and (iv) who did not migrate to the US as partner of foreign nationals (marriage migrants). In addition, no more than one member per family was included in the survey. The selected subgroup of migrants is most likely to become active on the labor market in the US and could potentially benefit most from the interventions. To track the impact of the new PDOS on those who stay behind, baseline interviews were also conducted with family members in the Philippines, based on the contact details provided by the migrant.

In total, 1,273 migrants, on average eleven migrants per PDOS session, were success-

fully interviewed. The rate of refusal was relatively low. In total, only 324 migrants refused to be interviewed. Our sample should therefore be largely representative of the target population.

Table 1 presents summary statistics and a balance test for the most important migrant variables measured at baseline. Migrants are on average 33 years old. 45 percent are male, 55 percent female. The average education level is relatively high. 47 percent have completed college education or higher. About half of the migrants migrate alone, the other half together with family members. The two most important destination states in the US are California and Hawaii, where 41 and 17 percent of the migrants are bound for. 62 percent of migrants use the internet daily. Self-reported English skills are relatively high. On an index that summarizes listening, speaking, reading and writing skills on a scale from 4 to 16, migrants report an average score of 12.74. Only one in five migrants reports in the baseline interview to have a job waiting in the US. The vast majority of migrants are sponsored by family members who already live in the United States.

If randomization was successful, there should be no differences in average characteristics of migrants who were assigned to the old PDOS or one of the new PDOS. Out of the eleven baseline variables in Table 1, only gender differs significantly between migrants in the old and new PDOS. The share of male migrants is somewhat lower in the old PDOS (42%) than in the two versions of the new PDOS (49% and 47%). None of the other variables is significantly different between the various PDOS versions. We are therefore confident that randomization was successful. Nonetheless, we control for baseline characteristics in our analysis to address small imbalances and improve the precision of the estimates.

The left panel of Figure 3 shows the number of interviewed migrants by province of origin in the Philippines. The distribution is highly concentrated. Most migrants come from Metro Manila (261 or 21%). Sizeable numbers also come from Ilocos Norte (126 or 10%), Pampanga (101 or 8%), Pangasinan (90 or 7%), Cavite (73 or 6%), Ilocos Sur (56 or 4%), and Zambales (51 or 4%). The large majority therefore comes from Luzon, which is the main island of the Philippines.

The right panel of Figure 3 shows the number of interviewed migrants by destination states in the US. Again, the distribution is highly concentrated. Most migrants go to California (523 or 41%) and Hawaii (212 or 17%). These US states already have large Filipino communities and thus attract many new migrants through networks and family reunification. More than 50 migrants also go to Florida (62 or 5%) and Nevada (53 or 4%). The map does not show migrants who go to US overseas territories such as Guam (33 or 3%).

### 3.3 Follow-up interviews and attrition

Our analysis is based on the first round of follow-up interviews with migrants, which took place about 200 days after migrants had arrived in the US. The interviews were generally conducted via phone and aimed to contact migrants in the order of their baseline interviews.

Minimizing attrition is a serious challenge for this project that follows migrants over space and time. We have employed the following strategies to keep attrition as low as possible. First, to ensure a sustained willingness to participate in all survey rounds, migrants were already informed before the baseline interview that their participation in future rounds was highly desired. Migrants also confirmed their willingness to participate in follow-up interviews when signing the consent form. Second, as an incentive to take part in the various rounds of the survey, migrants and their families receive a token after each interview. Third, the baseline interview collected contact details in the US (if already known), an email address as well as contact details of family members who remained in the Philippines. In case we could not re-contact a migrant in the US, we could then contact her via her family members who provided us with updated contact details. Fourth, in case we could not re-contact a migrant despite updated contact details, a knowledgeable family member in the Philippines was interviewed instead to provide proxy information on the most important indicators. Families had been prepared for this possibility during their baseline interviews. They had received a list of topics to be covered in proxy interviews and been asked to discuss these topics with the migrant when they had the opportunity to do so.

We managed to collect information on 1,080 out of the 1,273 migrants interviewed at baseline (85%). 578 interviews (54% of the 1,080 re-interviewed cases) were direct phone interviews with migrants, 502 interviews (46%) were proxy interviews with family members in the Philippines. Most proxy interviews were conducted via phone. A few proxy interviews were conducted face-to-face. For 193 migrants no information could be collected in the first follow-up interviews. Most often, migrants or their family members refused to be re-interviewed. In other cases, migrants or their family members could not be re-contacted. In addition, households that refused to be interviewed at baseline were not contacted for proxy interviews. This was done to reduce their dropout from future rounds of interviews.

Proxy interviews were generally well-informed. For outcome domains that were systematically covered in proxy interviews, the left panel of Figure 12 shows that results based on information from all interviews (direct and proxy interviews) are similar to those based on information from direct interviews only.

Overall, the level of attrition is low. Importantly, as Table 2 shows, there is no evidence of selective attrition. Treatment status cannot explain attrition. An F-test of joint significance of the treatment variables cannot reject the null of no effects at

conventional significance levels. Likewise, treatment status cannot explain whether an interview was conducted directly with the migrant or indirectly with a family member in the Philippines.

The focus of the analysis is on the initial migration experience of the migrant and adaptation to life in the US. As migrants were still at an early stage of their integration process, the analysis can only draw an interim picture. Longer-term outcomes, which will be collected in subsequent rounds of follow-up interviews one and two years after each migrant's departure, may well look different from the presented short-term outcomes.

## 4 Estimation

Our analysis mostly follows a pre-analysis plan that was archived with the International Initiative for Impact Evaluation (3ie) on September 17, 2014. We use the following specification to estimate treatment effects:

$$Y_i = \alpha + \beta newPDOS_i + \lambda proxy_i + X_i' \theta + \epsilon_i$$

$Y_i$  is the outcome measured in wave 2 and  $proxy_i$  is a dummy indicating whether the outcome was collected in a proxy interview.  $newPDOS_i$  is a dummy for migrants who attended either version of the new PDOS (with or without employment module).  $\beta$  therefore captures the treatment effect. As some of the migrants who attended the new PDOS also received the association email,  $\beta$  captures the overall effect. In another specification below we estimate the separate effect of the association email.  $X_i$  is a vector of baseline control variables that we expect to be strongly correlated with the outcome. Their inclusion in the model should reduce the signal-to-noise ratio and also improve balance. The standard set of baseline control variables includes age, age squared, gender, level of education, time since arrival in the US (in log days), a dummy indicating whether the person migrates alone or with family members, dummies for migrants going to Hawaii and California, a dummy for daily internet use, self-assessed English skills, and a dummy indicating whether a person already had a job waiting in the US at the time of the baseline interview. Additional outcome-specific control variables are described in the pre-analysis plan.

To estimate the additional effect of the employment module, we use the following equation:

$$Y_i = \alpha + \beta newPDOS_i + \gamma employmentmodule_i + \lambda proxy_i + X_i' \theta + \epsilon_i$$

Again,  $newPDOS_i$  is a dummy for migrants who attended either version of the new PDOS.  $employmentmodule_i$  is a dummy for having attended the new PDOS with employment module. Hence,  $\gamma$  captures the additional effect of the employment module.

$\beta + \gamma$  then capture the total effect of the new PDOS including the employment module.

Finally, to estimate the additional effect of the association email, we use the following equation:

$$Y_i = \alpha + \beta_{newPDOS_i} + \delta_{associationemail_i} + \lambda_{proxy_i} + X_i'\theta + \epsilon_i$$

$associationemail_i$  is a dummy for having been put on the mailing list of the association email.  $\delta$  captures the additional effect of the association email.  $\beta + \delta$  then capture the total effect of the new PDOS including the association email.

We also re-estimate all equations only for the sample of migrants who were interviewed directly, excluding proxy interviews from the sample.

As we explain in detail in the pre-analysis plan, we do not expect intra-class correlation in the outcomes as migrants are allocated to the different PDOS only on the basis of the day they register with CFO. We therefore use heteroscedasticity robust Huber-White standard errors.

To account for problems related to multiple hypotheses testing, we follow the approaches by Finkelstein et al. (2010) and Almeida et al. (2012). Specifically, we group our outcomes into domains and estimate the effects on an overall index within each domain or we estimate standardized treatment effects within each domain. To estimate the standardized treatment effects, we follow Kling et al. (2007) and normalize each outcome within a domain by subtracting the mean of the control group and dividing by the standard deviation of the control group. We reverse the sign for adverse outcomes, so that higher values indicate more beneficial outcomes. These additional estimates capture the overall effect of the interventions on each outcome domain. They are summarized in Figure 12.

## 5 Results

The figures in this section show the mean values of the different outcomes for migrants in the old and new PDOS as bars. They also show the 90 percent confidence intervals for migrants in the new PDOS as pink spikes. The effect is statistically significant if these confidence intervals do not include the mean value for migrants in the old PDOS.

### 5.1 Immediate feedback

Immediately after each PDOS, attendees were asked to complete a feedback form. These feedback forms were given to all attendees, not only to those with whom baseline interviews were conducted. The feedback form asked attendees to rate various aspects of the PDOS on a scale from 1 (very poor) to 5 (excellent). In general, the feedback received was very positive for both the old and new PDOS. It therefore makes sense to focus on

the extent to which migrants gave the best possible rating in their feedback.

Figure 4 shows the share of attendees who gave the best possible feedback by old and new PDOS and for several aspects of the PDOS. As the figure shows, the new PDOS was rated better on every aspect. Only when it comes to “discussion and interaction” did the old PDOS receive a slightly better rating. Since the new PDOS covers many more topics in only a slightly extended time slot, this result is not surprising. The new PDOS received particularly favorable feedback for the usefulness of various topics and the quality of the slides and the written material.

## 5.2 Travel and settlement

For the first two outcomes domains, travel and settlement, we do not distinguish between the two versions of the new PDOS (with and without employment module). Both versions covered exactly the same material on topics related to these domains. We therefore do not expect any differential effects. The first outcome domain concerns problems during the travel to the US such as having missed a flight, overweight luggage, or problems with authorities in the Philippines or the US (left panel of Figure 5). Migrants in the new PDOS were considerably less likely to experience travel-related problems. While more than six percent of migrants in the old PDOS reported any travel-related problems, only about three percent of migrants in the new PDOS did so. The level of travel-related problems is lower for every single indicator. This result is interesting as the new PDOS features considerably less travel-related content than the old PDOS. However, much more travel-related information is provided in the handbook that migrants receive in the new PDOS. The finding therefore points to the importance of written material as part of the PDOS.

The second outcome domain concerns settlement issues such as having a social security number, health insurance, a driver’s license (an important document for identification in the US), or a bank account (right panel of Figure 5). These administrative matters are important first steps in the integration process. 94 percent of migrants in the old PDOS had a social security number. The share is slightly higher for migrants in the new PDOS. Only 54 percent of migrants in the old PDOS reported to have health insurance. The share is a bit higher for migrants in the new PDOS (57%), but still relatively low. This finding requires further attention in the future since the Affordable Care Act requires every permanent resident in the US to have health insurance. Migrants in the new PDOS were also more likely to have a driver’s license (36% vs. 32%) and a bank account (67% vs. 63%). Overall, differences between migrants in the old and new PDOS for the individual indicators are small and not significant, but they all go into the same direction. An index that combines the individual indicators shows a small and significantly positive overall effect of the new PDOS on settlement issues (also see Figure 12).

### 5.3 Employment

Integration into the US labor market is one of the biggest challenges for Filipino migrants. For employment-related outcomes, the analysis thus pays particular attention to the role of the employment module. Employment-related information should be most relevant for migrants who still need to find a job in the US. Therefore, we focus on the sub-sample of migrants who did not have a job in the US before their departure.

Overall, the new PDOS did not have significant effects on the labor market status of migrants (left panel of Figure 6 for individual indicators and right panel of Figure 12 for the overall index). About two in three migrants in the old PDOS had found a job and were employed at the time of the follow-up interview. The employment rate is similar for migrants in the new PDOS without employment module and slightly lower for migrants in the new PDOS with employment module (63%). However, among migrants who were not employed, the new PDOS increased the probability to be looking for a job and decreased the probability to be inactive. But the differences are small and not statistically significant. Likewise, there are no significant differences in the expected chances of having any job or having a job that matches the initial qualification in nine months from the time of the interview.

41 percent of migrants in the old PDOS had initiated the formal recognition of their qualifications in the US. The share was markedly and significantly lower for migrants in the new PDOS. Only about 32 percent of migrants in the new PDOS had done so, irrespective of whether they had attended the version with or without employment module. At the same time, migrants in the new PDOS, but particularly those who had attended the version with employment module, were much more likely to plan to study in the US. About 43 percent of migrants in the new PDOS with employment module stated such plans, but only 32 percent of migrants in the new PDOS without employment module and 29 percent of migrants in the old PDOS. At this point, we can only hypothesize that the employment module changed migrants' labor market expectations and motivated them to obtain a degree in the US with potentially higher returns on the labor market than their original degree. Future rounds of interviews will reveal whether migrants will be successful in obtaining additional educational credentials and subsequently get better jobs. They will also collect information on why migrants in the new PDOS were less likely to have their qualifications recognized.

The right panel of Figure 6 shows the average level of monthly income for migrants in the different PDOS. In case a migrant is not employed, we assume zero income. It should be noted that income is unreported for many migrants because family members who provide proxy information did not know it or migrants refused to report it. On average, migrants in the old PDOS earned about 520 USD per month. Migrants from either version of the new PDOS earned less (about 440 USD), but the difference is not significant. One should keep in mind that these are short-term effects and migrants were

still integrating into the labor market.

As a next step, we focus on the sub-sample of migrants who left the Philippines without a job in the US, but were employed at the time of the follow-up interview. Average earnings were about 1,200 USD, with no significant differences across the different PDOS versions (left panel of Figure 7). There is some evidence that migrants in the new PDOS with or without employment module had better jobs than migrants in the old PDOS. Slightly more migrants in the new PDOS reported that their jobs matched their qualification and that they were not looking for another job, which indicates relative satisfaction with the current job (right panel of Figure 7). But the differences are relatively small and not significant. An index that combines the individual indicators, however, shows a small and significantly positive overall effect of the new PDOS without employment module on job quality (also see Figure 12).

## 5.4 Social networks

Figure 8 summarizes the effects of the new PDOS and the association email on different contacts of migrants in the US. The left panel shows whether migrants had contact with a Filipino or US association or received support from them. 15 percent of migrants in the old PDOS had contact with either type of association in the US, 11 percent with a Filipino association and 6 percent with a US association. The new PDOS has a negative and significant effect on the probability to have contact with an association. Only 7 percent of the migrants in the new PDOS who did not receive the association email had contact with either type of association, 6 percent with a Filipino association and 2 percent with a US association. The association email with information on nearby Filipino associations and an encouragement to reach out to them had a positive effect. However, the probability to be in contact with a Filipino association was still lower than for migrants in the old PDOS. Since migrants in the new PDOS were less likely to have contact with associations, they were also less likely to receive support from them.

The right panel shows the effects of the new PDOS on the number of new friendships migrants had made in the US. Migrants were asked how many new people they got to know on a personal basis since their arrival in the US. The new PDOS has a strong and negative effect on the number of new friendships. On average, migrants in the old PDOS got to know about 13 new people in the US, migrants in the new PDOS only about 9.

At first sight, the finding that migrants in the new PDOS were less likely to contact associations and form new friendships may appear counterintuitive since the new PDOS explicitly encouraged migrants to make new contacts. However, one reason why migrants make contacts with people or associations could be the need for information. If the new PDOS and the accompanying handbook were successful in providing migrants with the needed information, migrants may have had fewer incentives to make new contacts. This finding suggests that information and social networks are substitutes. To shed more

light on this finding, future rounds of interviews will collect detailed information on the characteristics of migrants' social networks in the US.

## 5.5 Subjective wellbeing

Figure 9 summarizes the effects of the new PDOS on subjective wellbeing. In general, the level of subjective wellbeing was high. On an index of mental wellbeing that goes from 1 (person does not feel well at all) to 5 (person feels very well), migrants in the old and new PDOS scored 4.2 (left panel), without any differences between the groups. The same is true for migrant-related wellbeing, such as being homesick or feeling overwhelmed by the challenges in the US. Again, there are no systematic differences between migrants in the old and new PDOS.

## 5.6 Knowledge and PDOS rating

The left panel of Figure 10 shows the effects on knowledge-related outcomes. Compared to migrants in the old PDOS, migrants in the new PDOS without employment module had a lower share of correct answers on the question which items to include in a CV in the US. By contrast, migrants in the new PDOS with employment module had a slightly higher share of correct answers. This result is in line with the fact that writing a CV was one part of the employment module. However, differences are relatively small and not statistically significant. Migrants in either version of the new PDOS also reported a higher share of correct answers on general questions about the US. But they knew fewer internet job portals on average. Again, all of these differences are small and not statistically significant.

The right panel of Figure 10 shows how migrants assessed the usefulness of the PDOS at the time of the follow-up interview. Feedback was generally very positive. Across the different PDOS versions, more than 85 percent of migrants gave the highest rating for the usefulness of the PDOS. There are no significant differences between migrants in the old and new PDOS. This result is not surprising as the old PDOS already received very positive feedback.

## 5.7 Spillovers on family members in the Philippines

As documented above, the new PDOS changed the integration paths of migrants. Our research design allows us to assess whether the new PDOS also affected family members who stay behind through changes in remittances flows or different feedback from the migrant about life in the US. Follow-up interviews with households in the Philippines are still ongoing. Only about half the sample has been re-interviewed so far. Our analysis is therefore highly preliminary. Figure 10 summarizes the results, which merely illustrate our approach and should not be interpreted at face value. They suggest that the PDOS

may indeed create spillovers in terms of remittances flows, perception of a migrant's life in the US, and migration intentions of family members in the Philippines. However, as fieldwork is still ongoing, we do not try to make sense of the results at this stage.

## 6 Conclusion

Overall, the information provided in the PDOS appears to affect migrants' behavior when they arrive in the US. We find that the new PDOS (i) reduces travel-related problems, (ii) tends to speed up initial important steps for settlement, (iii) makes migrants less likely to have their Philippine qualification recognized and more likely to plan to study in the US, (iv) reduces the size of migrants' social network in the US, and (v) has no effect on subjective wellbeing. These findings are notable as the PDOS is a very inexpensive intervention that merely provides information. Our results suggest that a well-designed PDOS may indeed have the potential to improve migrants' welfare and the overall benefits of migration.

While the short-term effects are suggestive, it is too early to draw firm conclusions on the effectiveness of the new PDOS for outcomes that are still in the making and only stabilize in the medium or longer term. As a next step, we will therefore extend the analysis using data from the ongoing second round and planned third round of follow-up interviews. Particular focus will be on the labor market integration of migrants. Will migrants who attended the new PDOS be successful in obtaining additional educational credentials and subsequently get better jobs?

With the Philippines as a global model for migration management, the evaluation results may be useful for other migrant-sending countries. Indeed, several developing countries have shown interest in offering PDOS for their migrants. As regards external validity, our results are likely lower-bound estimates of the effectiveness of PDOS in other migration corridors. This is because Filipino migrants to the US can draw on large and well-established networks of Filipino migrants in the US. The vast majority of migrants in our sample join family members who already live in the US. In such a setting, the marginal value of information is arguably lower as PDOS are less likely to convey new information. PDOS may therefore be particularly effective for migrants from countries with less developed migrant networks. Our finding that information and social networks are substitutes supports this conclusion.

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## Tables and figures

Table 1: Baseline characteristics of interviewed migrants in old and new PDOS

	Old PDOS	New PDOS w/o em- ployment module	New PDOS w/ employ- ment module	All migrants	p-value
Age	33.07	33.62	33.19	33.27	0.70
Male (0/1)	0.42	0.49	0.47	0.45	0.07
Vocational education (0/1)	0.07	0.09	0.07	0.08	0.37
College education (0/1)	0.47	0.44	0.50	0.47	0.18
Days in US at re-interview	195	194	199	196	0.65
Migrates alone (0/1)	0.51	0.46	0.52	0.50	0.16
California (0/1)	0.38	0.43	0.42	0.41	0.26
Hawaii (0/1)	0.19	0.17	0.14	0.17	0.23
Daily internet use (0/1)	0.64	0.60	0.60	0.62	0.36
English skills	12.74	12.62	12.83	12.74	0.35
Has job in US (0/1)	0.20	0.16	0.17	0.18	0.33

P-values from an F-test on equality of means in the three groups.

Table 2: Attrition and mode of re-interview

	(1) Successful re-interview	(2) Direct re-interview	(3) Proxy re-interview
New PDOS (either version)	0.025 (0.024)	-0.031 (0.035)	0.056 (0.034)
New PDOS with emp. module	-0.041 (0.025)	0.002 (0.036)	-0.043 (0.036)
Age	0.003 (0.009)	0.005 (0.013)	-0.003 (0.012)
Age squared	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
Male	0.002 (0.021)	-0.005 (0.028)	0.007 (0.028)
Vocational education	0.077** (0.030)	0.049 (0.054)	0.028 (0.053)
College education	0.013 (0.024)	0.006 (0.032)	0.006 (0.031)
Migrates alone	-0.022 (0.020)	-0.029 (0.028)	0.007 (0.028)
California	-0.009 (0.022)	0.013 (0.031)	-0.021 (0.031)
Hawaii	-0.001 (0.030)	0.124*** (0.043)	-0.124*** (0.040)
Daily internet use	-0.002 (0.022)	0.003 (0.032)	-0.005 (0.031)
English skills	-0.016*** (0.006)	-0.014* (0.008)	-0.001 (0.008)
Has job in US	0.030 (0.026)	-0.038 (0.037)	0.067* (0.037)
Constant	0.981*** (0.170)	0.541** (0.229)	0.440** (0.220)
F-statistic treatment variables=0	1.32	0.54	1.39
R2	0.02	0.02	0.01
Observations	1273	1273	1273

\*/\*\*/\*\*\* significant at the 10/5/1 percent level.



Figure 2: Treatment arms

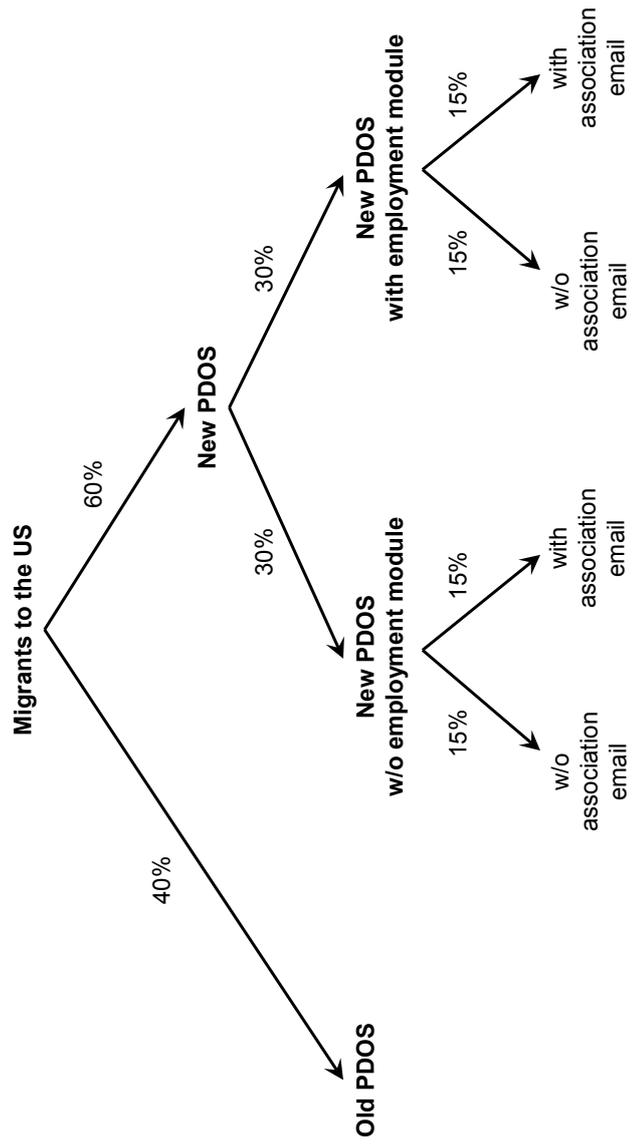
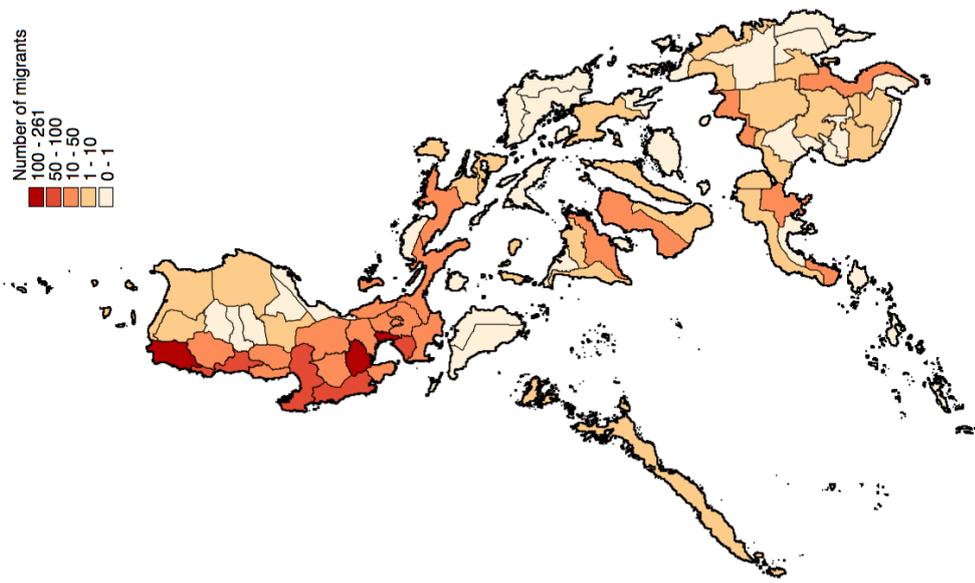


Figure 3: Origin provinces and destination states of interviewed migrants

(a) Number of migrants by Philippine provinces



(b) Number of migrants by US states

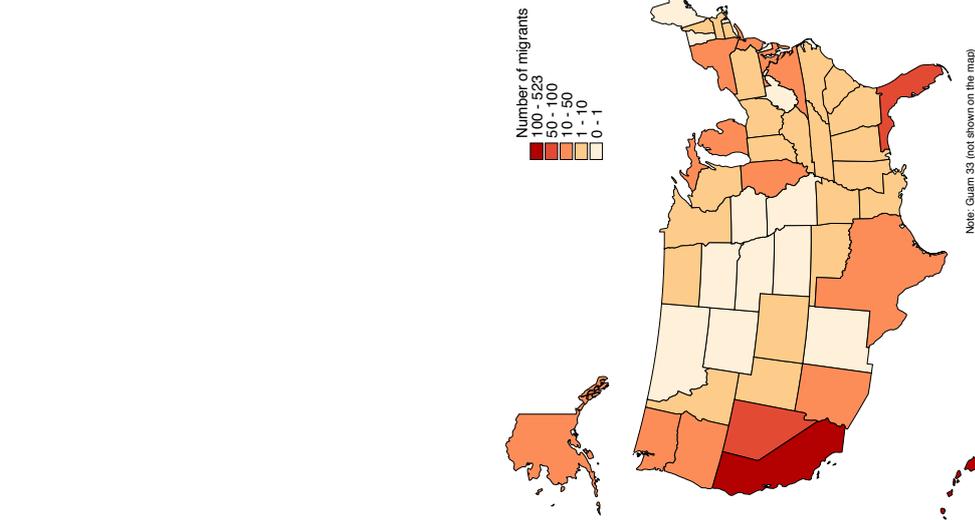


Figure 4: Share of migrants giving best possible feedback right after PDOS

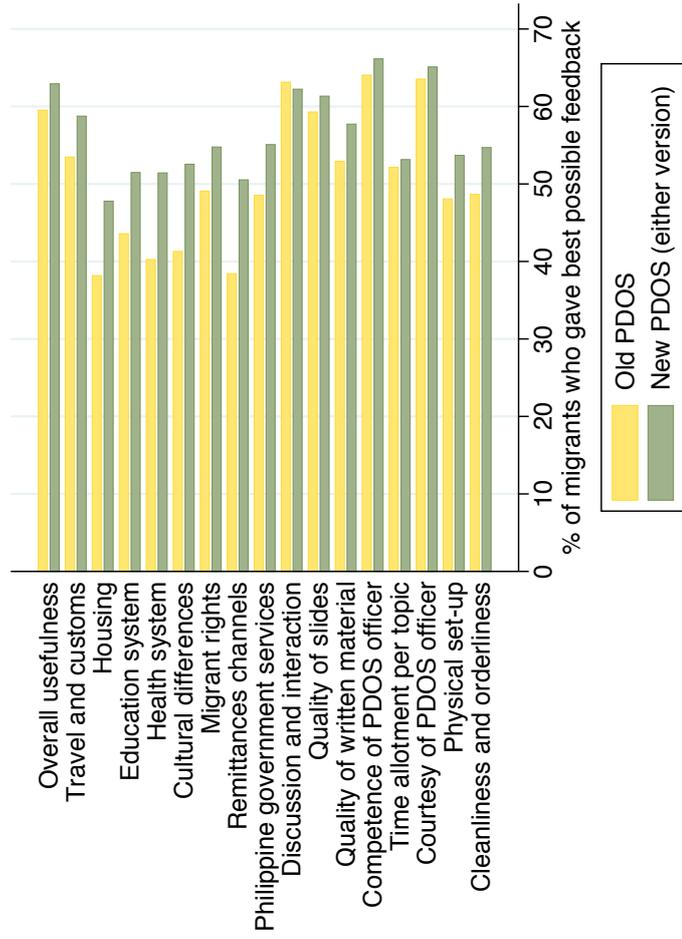
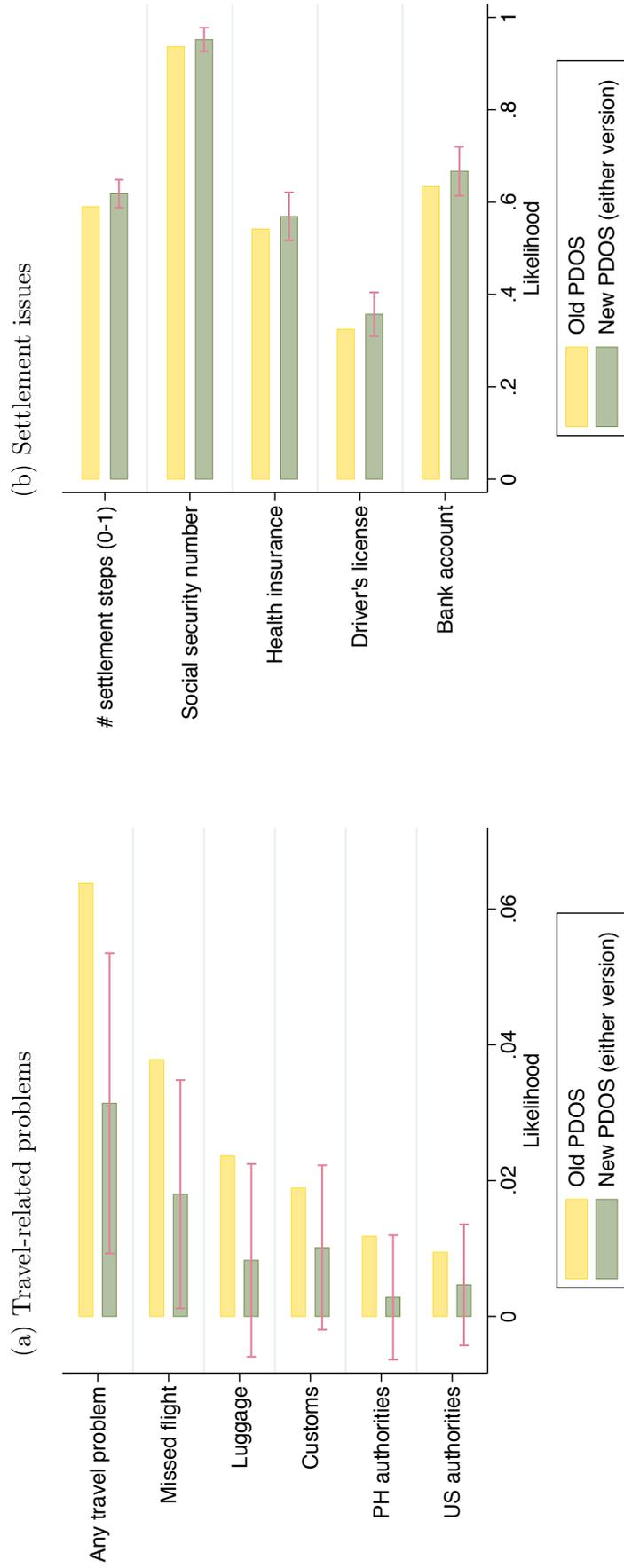
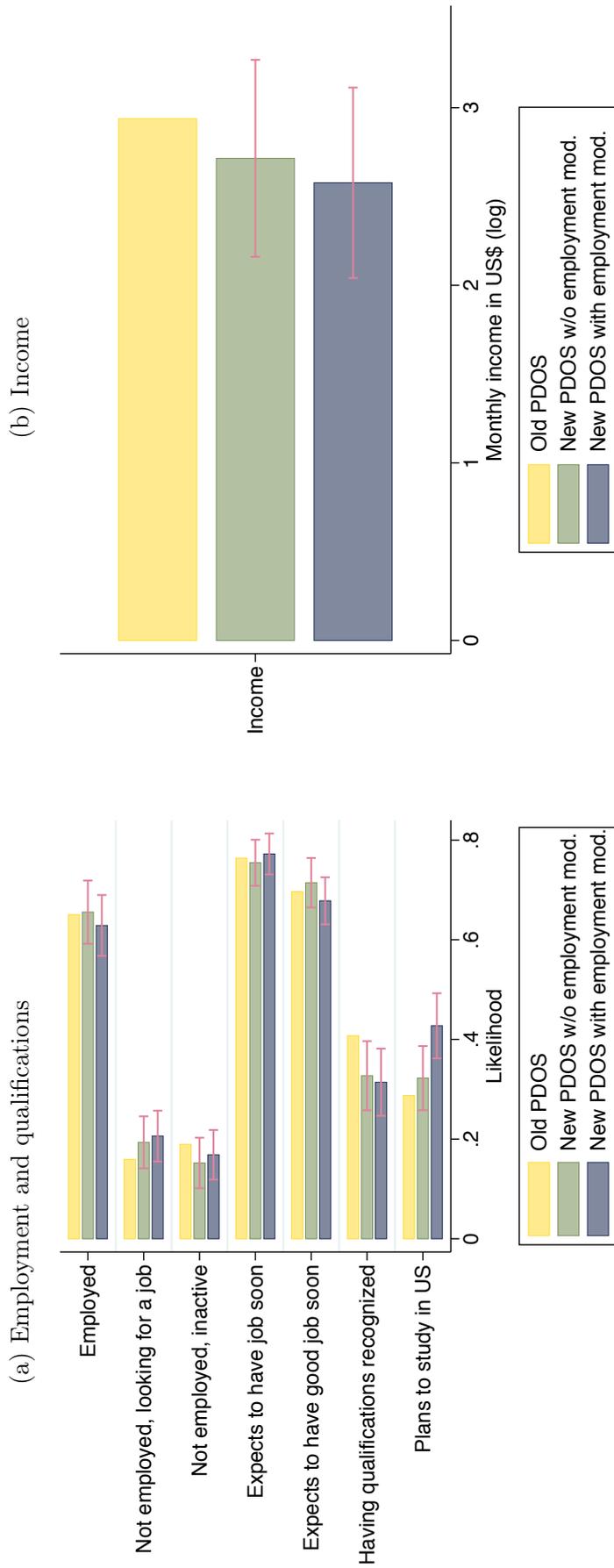


Figure 5: Travel-related problems and settlement issues



Panel (a): Any travel problem indicates whether a migrant experienced any of the problems listed below. Panel (b): # settlement steps (0-1) is the sum of completed settlement steps listed below, normalized to the range [0-1]. Pink spikes indicate the 90 percent confidence interval.

Figure 6: Employment-related outcomes for migrants who did not have a job in the US before departure



Pink spikes indicate the 90 percent confidence interval.

Figure 7: Income and job quality of migrants who were employed at the time of the follow-up interview and did not have a job in the US before departure

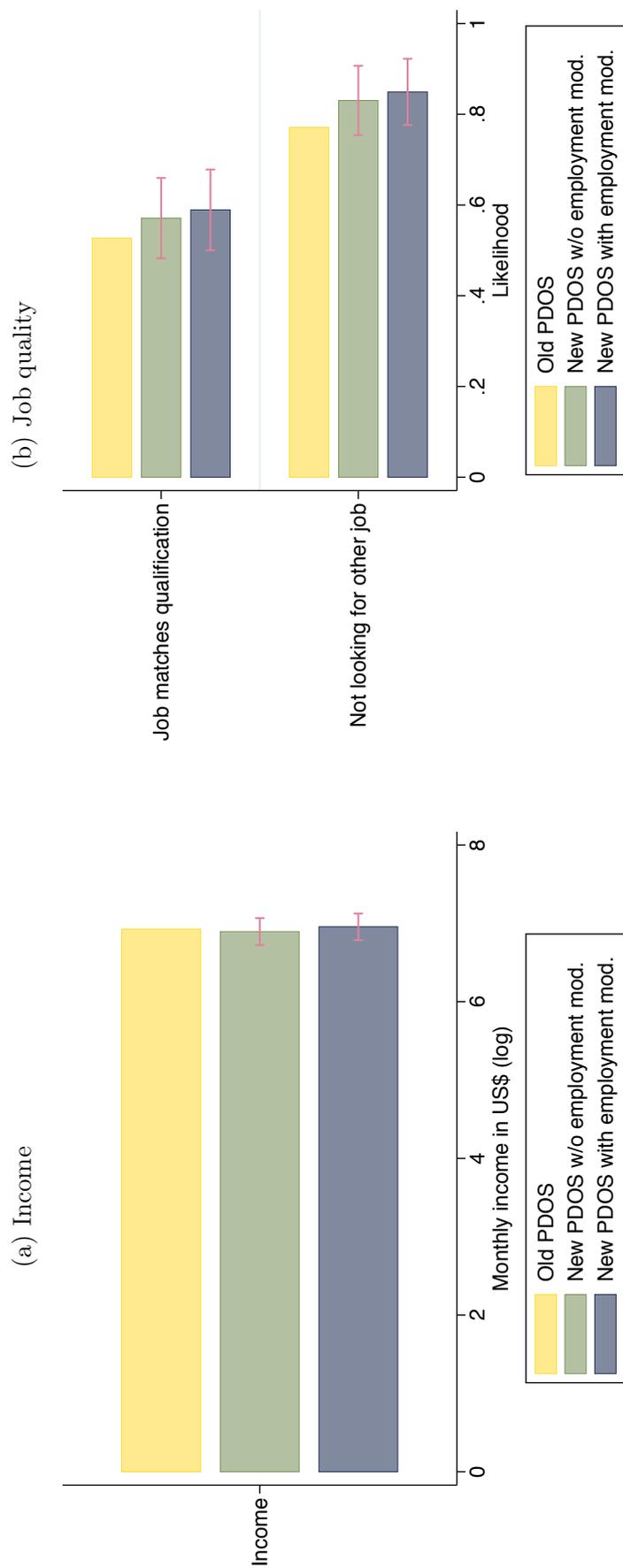
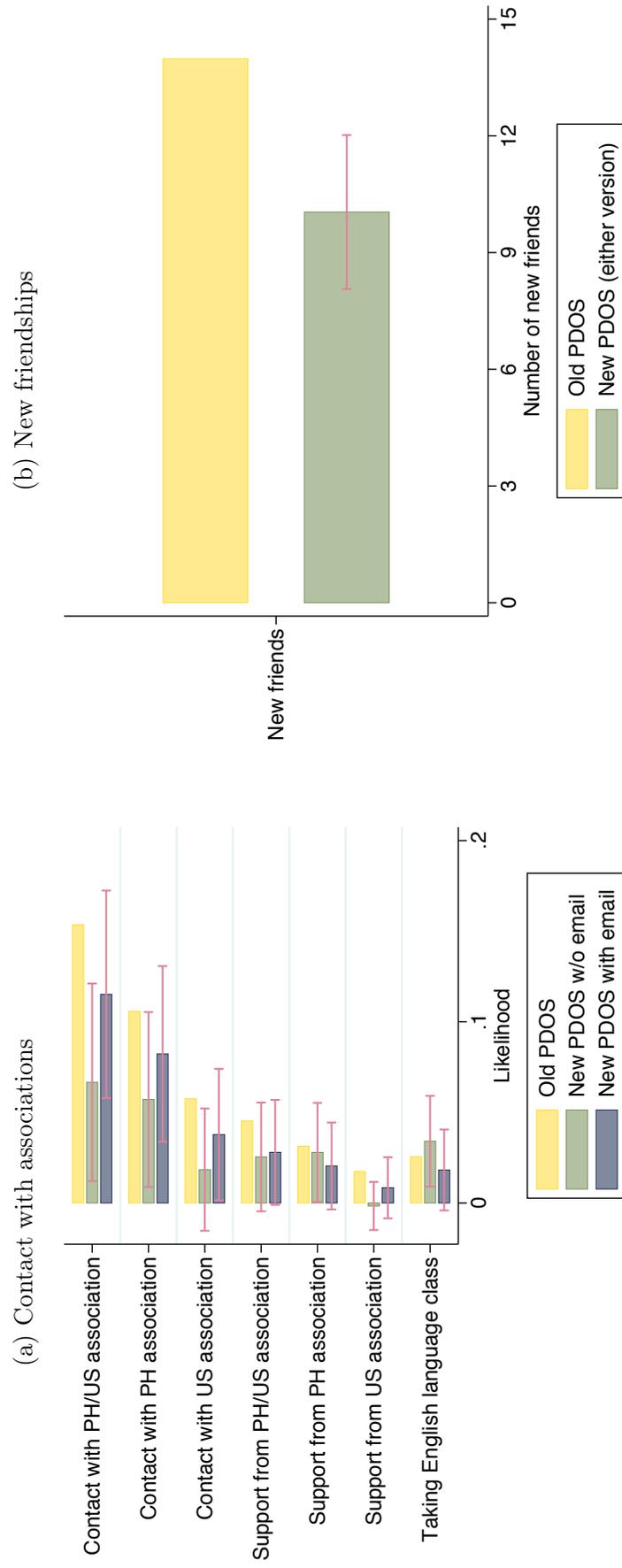
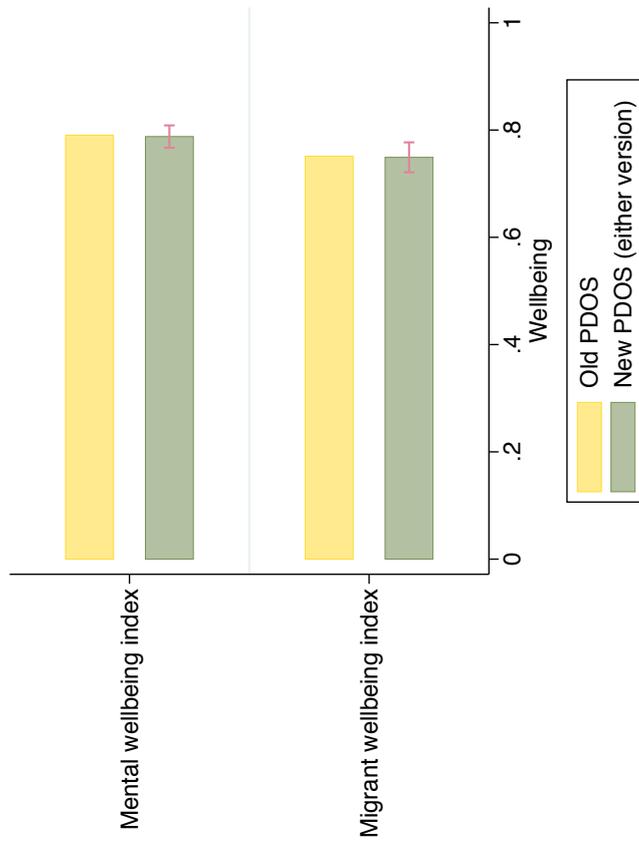


Figure 8: Contact with associations and new friendships in the US



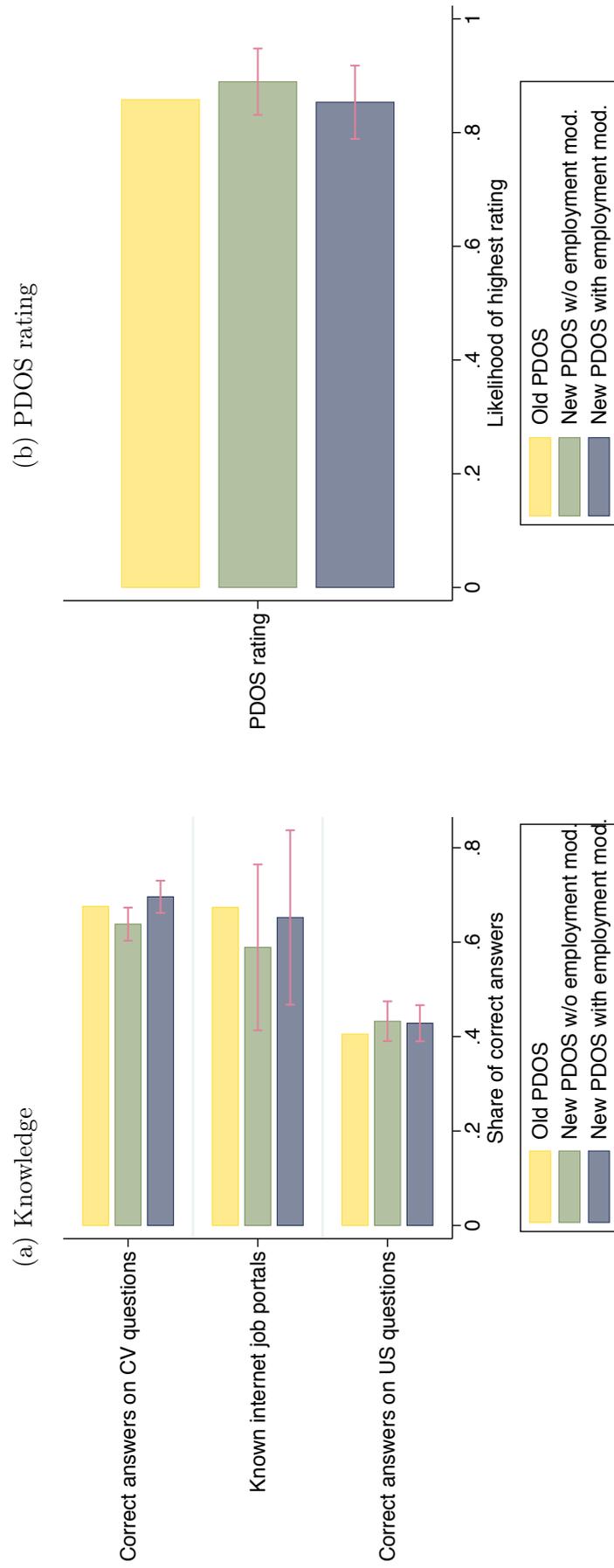
Pink spikes indicate the 90 percent confidence interval.

Figure 9: Subjective wellbeing



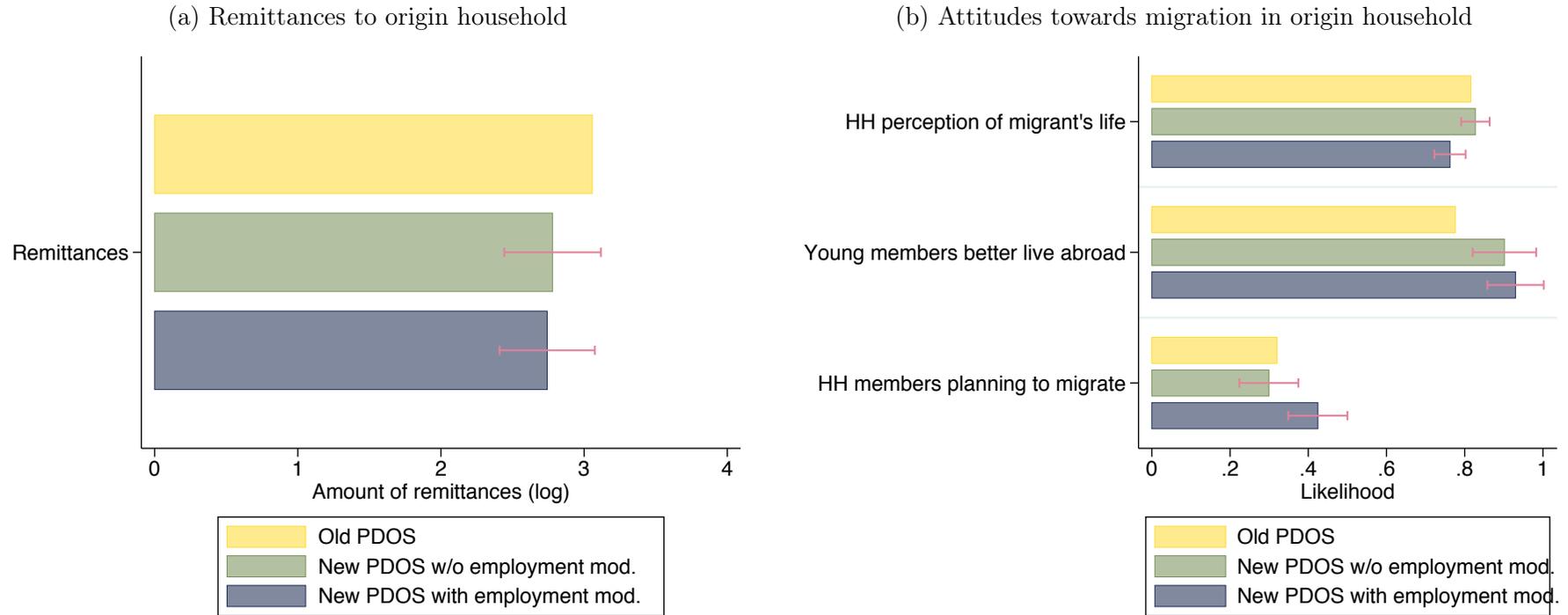
The mental wellbeing index is the sum of five five-point items with a score range from 5 to 25, normalized to the range [0-1]. It is defined as the sum of the items (i) being a happy person, (ii) feeling calm and peaceful, (iii) not being a very nervous person, (iv) not feeling down-hearted and blue, (v) not feeling down in the dumps. Higher values indicate better mental wellbeing. The migrant wellbeing index is the sum of two five-point items with a score range from 2 to 10, normalized to the range [0-1]. It is defined as the sum of the items (i) not feeling homesick, (ii) not feeling overwhelmed by the challenges faced in the US. Higher values indicate better migrant wellbeing. Pink spikes indicate the 90 percent confidence interval.

Figure 10: Knowledge and PDOS rating



Pink spikes indicate the 90 percent confidence interval.

Figure 11: Spillovers on those who stay behind in the Philippines

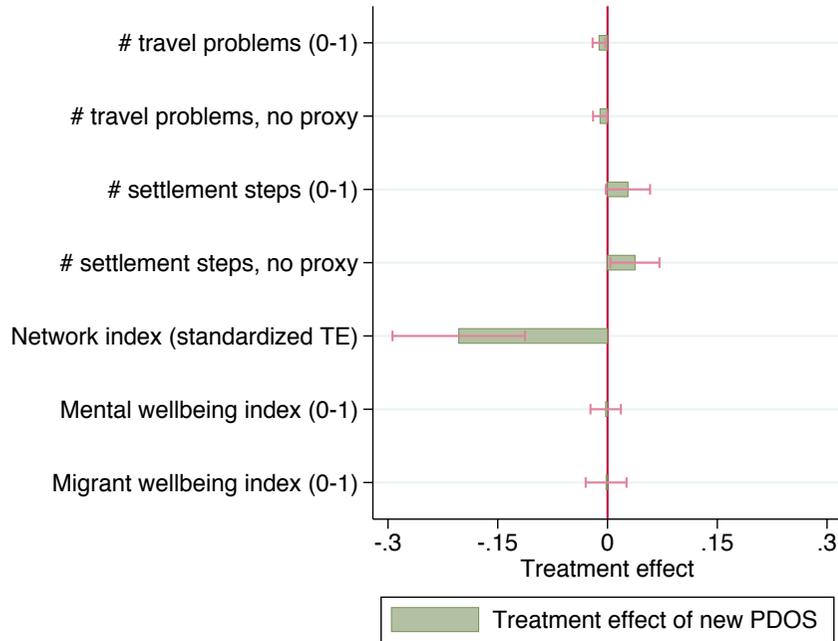


Panel (b): HH perception of migrant's life is the sum of ten five-point items with a score range from 10 to 50, normalized to the range [0-1]. It captures the perception of household members in the Philippines on how well their migrant does on various matters in the US. It is defined as the sum of the items (i) meeting new people, (ii) social life, (iii) language skills, (iv) employment, (v) getting degree accredited in the US, (vi) adjusting to culture in the US, (vii) adjusting to weather/climate, (viii) dealing with authorities, (ix) housing, (x) finance. Young members better live abroad captures the average response of the main respondent to the question whether it would be good for each individual household member aged 3-25 to live abroad in the future. HH members planning to migrate is the share of household members aged 18 and above who are planning to migrate temporarily or permanently.

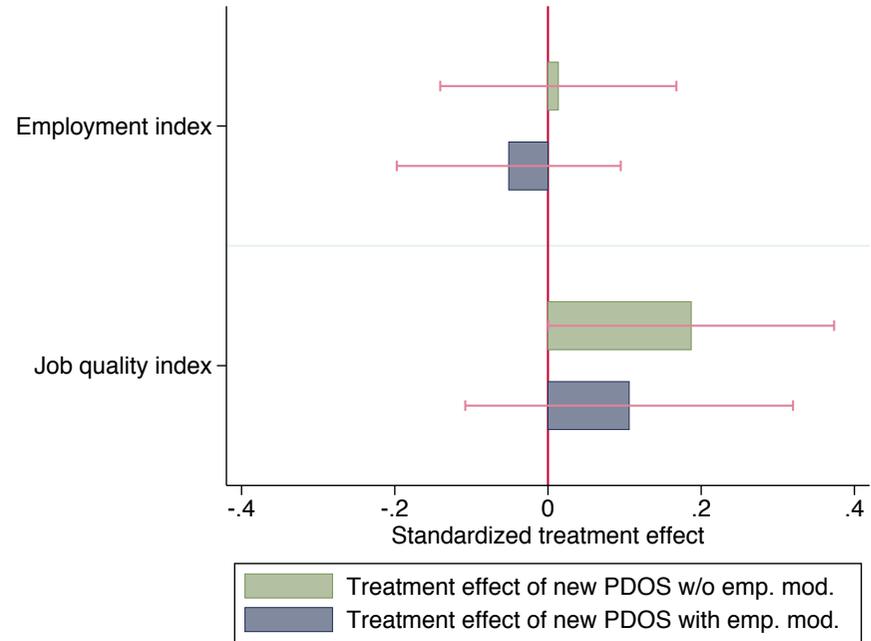
Pink spikes indicate the 90 percent confidence interval.

Figure 12: Effects on overall indices by outcome domain

(a) Travel, settlement, social networks, subjective wellbeing



(b) Employment



Panel (a): # travel problems (0-1) is the sum of travel-related problems (see Figure 5 for details), normalized to the range [0-1]. The first row uses information from all interviews (direct and proxy interviews). The second row only uses information from direct interviews. # settlement steps (0-1) is the sum of completed settlement steps (see Figure 5 for details), normalized to the range [0-1]. The first row uses information from all interviews (direct and proxy interviews). The second row only uses information from direct interviews. The network index is defined as a standardized treatment effect and based on (i) having received support from an association in the US, (ii) the number of new friends in the US. The mental wellbeing index is the sum of five five-point items with a score range from 5 to 25, normalized to the range [0-1]. It is defined as the sum of the items (i) being a happy person, (ii) feeling calm and peaceful, (iii) not being a very nervous person, (iv) not feeling down-hearted and blue, (v) not feeling down in the dumps. Higher values indicate better mental wellbeing. The migrant wellbeing index is the sum of two five-point items with a score range from 2 to 10, normalized to the range [0-1]. It is defined as the sum of the items (i) not feeling homesick, (ii) not feeling overwhelmed by the challenges faced in the US. Higher values indicate better migrant wellbeing.

Panel (b): The employment index is defined as a standardized treatment effect and based on (i) being employed, (ii) log of monthly income, (iii) expected chance of having a job in nine months, (iv) expected chance of having a job that matches the initial qualification in nine months. The sample is restricted to migrants who did not have a job in the US before departure (compare Figure 6). The job quality index is defined as a standardized treatment effect and based on (i) log of monthly income, (ii) having a job that matches the initial qualification, (iii) not looking for another job. The sample is restricted to migrants who were employed at the time of the follow-up interview and did not have a job in the US before departure (compare Figure 7).

Pink spikes indicate the 90 percent confidence interval.