Information and Labor Markets in the Philippines

by

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ABSTRACT

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This dissertation explores barriers to job-search and labor migration in the Philippines. In my first chapter, I test the impact of factual information and experience attending a job fair on individuals' job-search processes and labor-market outcomes through a field experiment I conduct in the rural Philippines. Assignment to a voucher to encourage job-fair attendance more than doubles the likelihood of looking for work in Manila in the two months following the fair and increases formal sector employment ten months after the fair by 38 percent. Direct provision of information about average wages or minimum qualifications for overseas work does not affect individuals' decisions to look for work overseas, though it does affect their beliefs in predictable ways. These results indicate that a relatively modest increase in labor-market exposure, such as that obtained from attending a job fair, can have lasting effects on individuals' job-search effort and employment outcomes.

The second chapter uses this same field experiment to explore how individuals self-select into job search for overseas work. I examine the impact of a randomized one-time incentive to initiate job search on this selection. Subsidizing job-fair attendance reduces otherwise positive selection among those who attend the job-fair without the subsidy. While many

attendees then self-select out of participating, voucher assignment increases the attendance rates for those with a high degree of uncertainty about their own labor market prospects, indicating that imperfect information about the returns to participation affects individuals' search decisions.

My third chapter, joint with David McKenzie and Dean Yang, presents results from a field experiment to test the impact of reducing informational and bureaucratic barriers on individuals' ability to migrate overseas. We find that removal of these barriers leads individuals to take steps towards international migration, with passport assistance even leading to a higher rate of job interviews and job offers abroad. None of our treatments generate a significant increase in the likelihood of migrating abroad. We explore different explanations and conclude that there are multiple barriers on both the demand and supply sides of the international labor market.

CHAPTER 1

Incomplete Information in Job Search: Evidence from a Field Experiment in the Philippines

1.1 Introduction

Information is fundamental to how individuals decide when and where to search for work. I conduct a field experiment that randomly varies information and job-search experience in order to test the impact of information on these job-search behaviors. Improving information has been an important aspect of governments' efforts to promote employment in both developed and developing countries, as evidenced by the range of programs that provide potential job seekers with labor market information, job-search assistance, or training in how to search for work (Betcherman, Olivas and Dar, 2004).

Although standard dynamic job-search models assume that individuals have complete information about wages and their likelihood of finding work (Pissarides, 2000), a growing literature considers the impact of incomplete information on job-search decisions.[1] However,

[1]Rothschild (1974) develops a general theory of individuals searching with unknown price distributions and demonstrates the existence of reservation wages. Burdett and Vishwanath (1988) extend his model into the context of job search, finding that incomplete information about the wage offer distribution results in reservation wages that fall with unemployment duration. Both Gonzalez and Shi (2010) and Falk, Huffman and Sunde (2006*a*) model this uncertainty in the context of individual ability, building models in which individuals redirect their search as they update beliefs about their own ability based on past job-search outcomes.

the degree to which individuals lack information about wages or their likelihood of obtaining a job offer, and how individuals learn about the returns to search, remain open empirical questions. Laboratory evidence by Falk, Huffman and Sunde (2006*b*) indicates that bad job-search outcomes may lead individuals to adjust downward their expectations of their own qualifications and search less. Böheim, Hovarth and Winter-Ebmer (2011) find evidence that displaced workers with high firm-specific wage components in their previous jobs have higher reservation wages and, as a result, longer unemployment durations.[2] These two papers suggest a potential role for information and feedback, but the impact of information provision in actual job search has not been quantified.[3]

I examine the role of incomplete information on search decisions by testing the impact of factual information and job-search experience on individuals' job-search and labor-market trajectories. I do so in the context of the overseas labor market in the rural Philippines, in which potential job seekers have particularly limited access to jobs abroad but high potential returns.[4] I overcome potential endogeneity in individuals' information sets and search decisions by implementing a randomized field experiment, enabling me to identify the causal impact of reducing incomplete information along two separate dimensions - minimum qualifications and average wages - as well as the causal impact of providing job-search experience.

I conduct a baseline survey and assign individuals from randomly selected neighborhoods to a control group or to receive one of two types of information: a flier about average overseas wages or a tailored information treatment about the minimum qualifications for overseas work. If individuals underestimate overseas wages, as McKenzie, Gibson and Stillman (2013)

[2]They interpret this result as evidence that workers are overconfident in their own ability as a result of having high-paying jobs.

[3]In education, researchers find that individuals invest more in human capital when they learn about higher than expected returns through direct information provision (Jensen, 2010; Nguyen, 2008) or the expansion of labor market opportunities (Oster and Millett, 2011).

[4]Rural Filipinos also may increase their incomes by working in the capital of Manila, but information barriers are likely to be less substantial, as 39 percent of survey respondents previously had worked in Manila. Additionally, wages are much lower in the capital than than abroad. At P439 (US$10.03), average daily wages of wage and salary workers in the National Capital Region (metro Manila) are nearly twice as high as those in the Bicol Region, where this study takes place (BLES 2011). By comparison, overseas Filipinos earn P28,500 (US$651.16) monthly on average.

find in Tonga, wage information may induce individuals to take steps to find work overseas. Because jobs are arranged prior to departure and because search is costly, an important margin by which a person decides to search may be her perceived likelihood of being offered a job abroad. The qualification information treatment provides minimum education and experience requirements for common overseas positions based on 23,910 online job postings, enabling individuals to update their beliefs about their own propensities of finding work overseas.

Additionally, I use an encouragement design to randomly induce attendance at a job fair by offering individuals a restaurant gift certificate for attending. Job fairs may provide attendees with labor market information and experience looking for work, and they are one of the primary ways in which the Philippine government makes it easier for provincial job seekers to find work. Job-fair attendance may affect individuals' decisions to apply for work abroad, though the impacts may extend into the domestic labor market as well, particularly if the experience they gain is generalizable. I measure the impact of the information treatments on job-fair attendance by linking baseline survey data with job-fair administrative data, and I conduct a follow-up survey ten months after the job fair to measure the impact of job-fair attendance on the intensity and direction of individuals' search effort, as well as on their employment outcomes.

The two factual information treatments target incomplete information about wages and the likelihood of receiving a job offer for overseas work. I measure individuals' perceptions about the overseas labor market at baseline and in the follow-up survey. In contrast to McKenzie, Gibson and Stillman (2013), I find that individuals have reasonably accurate perceptions about overseas wages.[5] Additionally, they have accurate perceptions about the minimum educational requirements for overseas work, although they underestimate the minimum experience requirements. Information about average overseas wages raises individuals' expec-

[5]McKenzie, Gibson and Stillman (2013) find that non-migrants in Tonga report average overseas New Zealand wages that are 72 percent of the actual average. In this study, likeliest wage respondents report they could earn overseas is 93 percent of the intervention mean.

tations about what they could earn abroad, but it does not induce them to look for work abroad. Information about minimum qualifications for overseas work modestly increases respondents' accuracy about the minimum experience requirements, but it does not affect their likelihood of looking for work overseas, which remains low for all treatment groups.

Attending the job fair does not affect individuals' likelihood of migrating abroad, nor their likelihood of taking steps to migrate abroad. However, it has large and persistent impacts on individuals' later job-search effort, though only within the domestic labor market. Using a retrospective panel of job-search behavior, I find that voucher assignment changes where individuals look for work. Voucher assignment more than doubles the likelihood of looking for work in Manila, where job opportunities are more plentiful and wages are higher, in the two months following the job fair, increasing it by 2.1 percentage points compared with a mean rate of 1.6 percent among the control group. Voucher assignment reduces the likelihood of looking for work within the province by 2.3 percentage points, compared with a control group mean rate of 4.3 percent. I estimate local average treatment effects using voucher assignment as an instrument for attendance, and I find that attendance increases the likelihood of looking for work in Manila by 5.7 percentage points and reduces the likelihood of looking for work within the province by 6.4 percentage points. These results are robust to alternative specifications over the ten months following the fair.

Additionally, voucher assignment increases the likelihood of being employed in the formal sector by 4.7 percentage points, a 38 percent increase compared with a mean rate of 12.4 percent among the control group, which is offset by a reduction in self-employment. This large effect suggests that job-fair attendance not only affects where individuals search for work, but that it also may affect search efficacy.

I adjust for multiple comparisons by computing average effect sizes, following Katz, Kling and Liebman (2007), as well as by adjusting outcome-specific p-values to control for the family-wise error rate (FWER) and false discovery rate (FDR). I find strong evidence that the

voucher treatment results in an overall shift to search in Manila and to an increase in formal and informal sector employment. In terms of specific outcomes, the employment results remain robust to controlling for the FWER and FDR, although the impact on job search are just shy of significance at conventional levels after controlling for the FDR, indicating that some caution should be used when interpreting those individual outcomes.

The characteristics of those affected by job-fair attendance can indicate the potential relevance of each of these channels and also lend insight into the populations for which the gains of attendance are greatest. I find that those without formal job-search experience as well as those with work history in Manila change how they search, indicating that the fair may provide information or behavioral "nudge" into search (Paserman, 2008; DellaVigna and Paserman, 2005). Additionally, the increase in formal sector employment is concentrated among those with at least some prior job-search experience or work history in Manila, although those with formal job-search experience do not change their likelihood of search, suggesting that attending the fair may instead improve the effectiveness of their search effort.

This paper makes two main contributions. First, it provides empirical evidence on how incomplete information affects individuals' decisions to look for work abroad. I find that although factual information does affect individuals' perceptions, individuals initially have reasonably accurate information about average wages and minimum qualifications for overseas work. Additional information does not lead them to change their investment in the overseas labor market, which suggests that other barriers, such as high search costs, risk aversion, or imperfect information on other dimensions, should be considered when assessing why more people do not look for work overseas.

Secondly, this paper serves as the first study, to my knowledge, of the impact of job fairs. I find that increasing access to fairs is ineffective in terms of direct impacts, as individuals induced to attend are no more likely to migrate or to take steps to migrate. However, I find that the relatively modest experience of attending a job fair does have persistent labor-market

impacts domestically, affecting where individuals look for work as well as their employment outcomes. For policymakers, these results imply that providing information or expanding access to job fairs will not be sufficient to encourage overseas migration. However, real-world exposure to the job-search process can be an important way for individuals to learn about their own returns to search or to improve their search ability, which can affect how they look for work and their employment outcomes.

The next section provides additional background on overseas migration, job fairs, and the setting of this study. Section 1.3 describes my experimental design, and Section 1.4 describes the data. I present results on the impacts of information and job-search experience on migration steps, job-search effort, and employment in Section 2.4, and I discuss the role of the factual information treatments and potential channels of job-fair attendance in Section 2.5. Section 1.7 concludes.

1.2 Background

1.2.1 Study location

I conduct this study in the municipality of Bulan in Sorsogon Province, located on the southern tip of the main island of Luzon, 12 hours from Manila by bus. Sorsogon is a relatively poor and isolated province: approximately 43 percent of families live below the poverty line of US$300 per year, making it the 21st poorest out of 79 provinces (National Statistical Coordination Board, 2006).[6] With 92,000 residents, Bulan is the largest municipality in Sorsogon Province after the province's capital city (National Statistics Office, 2007). It has a centralized downtown as well as far-removed rural areas. The average education level is high - 75 percent of my sample has completed at least high school - such that a substantial share of the population may be qualified for overseas work, but there is also substantial diversity

[6]The poverty line is set separately for urban and rural areas by province to reflect the minimum income required to meet a family's basic needs.

in income and education levels. The local labor market is oversupplied with workers, and a large share of workers travel to urban areas, primarily Manila, to look for work. In my sample, 39 percent of respondents have worked in Manila in the past.

1.2.2 Overseas migration

The overseas labor market in the Philippines is large, formal, and highly regulated. The Philippines sends an average of 1.7 million new workers overseas each year (Commission on Filipinos Overseas, 2009), and 94 percent of new contracts are signed with recruitment agencies, which tend to cluster in major urban areas like Manila or Cebu (Philippine Overseas Employment Administration, 2011). Consequently, the benefits of migration have been more difficult to access for rural Filipinos, who have higher informational and financial search costs than their urban counterparts. In the municipality of Bulan, most applicants for overseas work travel to Manila, where there are hundreds of licensed agencies.[7] Consequently, although 25 percent of my sample is interested and 72 percent have at least some interest in working abroad at baseline, only 28 percent have applied for overseas work before.

Job fairs and similar recruitment activities are the main way in which local institutions aim to make overseas employment more accessible to residents living outside major urban areas. At these fairs, recruitment agencies collect applications and conduct preliminary interviews with applicants. Agencies invite qualified applicants to complete the process by visiting their offices in person, usually for a final interview with the employer and documentation processing. Governmental or educational institutions sponsor more than than 400 job fairs per year nationally, and in Sorsogon Province, larger municipalities like Bulan hold job fairs or smaller scale recruitment activities approximately once a year.[8] Despite the relative frequency of fairs, only 14 percent of respondents in my sample had ever attended a job fair

[7] There are no overseas recruitment agencies within Sorsogon Province

[8] In Bulan, there had not been an actual job fair in several years, but the municipality had held smaller-scale yearly "special recruitment activities" in which only one or two recruitment agencies came to the municipality to recruit.

for overseas work.

Although the Filipino overseas labor market is in many ways unique, the decision to look for work abroad may be similar to the decision to search in other labor markets, particularly those in which applicants face costly search and have limited information about opportunities, wages, or their chances of finding work.[9] Specifically, the overseas market is largely formal and highly regulated, with jobs secured prior to migrating. Contracts typically last two years, and while workers can renew them multiple times, they rarely result in permanent migration. In this way, job-search decisions in the Philippine overseas labor market bears a closer resemblance to search decisions in a domestic labor market than to standard migration decisions.

1.3 Experimental design

1.3.1 Sample selection

My sample frame consists of 96 neighborhoods from 17 *barangays* in the municipality of Bulan, Sorsogon Province. The *barangay* can be thought of as a village or, in more urban settings, a municipal district, and it serves as the smallest administrative unit in the Philippines.[10] Each *barangay* is composed of between three and ten formally defined neighborhoods.[11] The frame of neighborhoods is non-randomly selected to target those who are most likely to be qualified for overseas work. I select all ten *barangays* that are either classified as urban by the Philippine National Statistics Office or that are located in the central downtown areas. I randomly draw the remaining seven *barangays* from the remaining 53

[9] Also, search tends to be lumpy: visiting Manila to look for work abroad requires a substantial amount of time and possibly money, and search at a job fair, while less costly, still requires a substantial time investment.

[10] With an overall population of 92,000, Bulan has 63 barangays and an average of 1,500 residents in each (National Statistics Office, 2007).

[11] Neighborhoods, or *puroks*, are political subdivisions of each *barangay*. Figure 1.A.4 depicts the neighborhood and *barangay* boundaries for one urban and one rural *barangay* in my sample.

rural and outlying *barangays*. This results in 107 neighborhoods across 17 *barangays*, of which I randomly select 96 to form the sample area.[12]

I select respondents from household rosters provided by each *barangay* office, which include the name, age, and gender of each *barangay* resident, by household. Because the overseas labor market is highly segregated by gender, I target an equal number of men and women from each *barangay*. I randomly select from each neighborhood five households with at least one potential male respondent aged 20-35 and five households with at least one potential female respondent aged 20-35.[13] Upon finding a respondent, enumerators administer a brief screening questionnaire to confirm the respondent's eligibility. They verify that he is aged 20-35 at the time of the baseline survey. In addition, he must have a cell phone number and no prior experience working abroad.[14] When a target respondent cannot be interviewed due to ineligibility, out-migration, or refusal, the enumerator attempts to interview the next listed respondent of the same gender within that household. After two visits, if a household has no eligible members, its members cannot be located, or all potentially eligible members refuse to participate, the enumerator interviews the next randomly selected household. Overall, I obtain a response rate of 53 percent.[15] Using this procedure, I generate a sample of 865 respondents, though I restrict my analysis to the sample of 862 respondents for whom I am not missing data on key covariates. This number is less than the targeted sample due to high levels of out-migration and time constraints.[16]

[12]I originally select 99 *barangays* to target 990 respondents, but one selected neighborhood was inaccessible and rosters were not available for two others.

[13]A given household could therefore be in both the male and female sample. For households with multiple respondents of the same gender, I randomly order potentially eligible respondents, and enumerators attempt to survey the first randomly selected respondent.

[14]The screening questionnaire was required because information on cell phone ownership and overseas work experience was not included in the barangay rosters. Survey logs indicate that only five percent of contacted individuals were not eligible for the survey.

[15]Of surveys not completed, approximately six percent were refusals.

[16]There was not enough time to replace all targeted households that could not be contacted initially before the March job fair. The schedule was further constrained by a volcanic eruption in mid-February that halted operations for several days.

1.3.2 Randomization

Because respondents may have strong social networks in their nearby communities, I randomize information and voucher treatment assignment at the neighborhood level to reduce contamination from information spillovers.[17] To increase power, I randomize within eleven stratification cells of nine neighborhoods each, based on neighborhood density and distance from the location of the job fair.[18] This method minimizes the likelihood of an unbalanced sample due to spurious correlations (Bruhn and McKenzie, 2009). I randomly assign one-third of neighborhoods to the control group, one-third to receive information about overseas wages, and one-third to receive tailored information about minimum qualifications for overseas work. Additionally, I cross-randomize these information treatments with a direct incentive to attend the job fair; because of budget constraints, only one-third of neighborhoods are assigned to receive the incentive.[19]

1.3.3 Informational interventions

The wage information treatment consists of a flier that compares the average earnings of overseas Filipino workers with the average reported income of families in Sorsogon Province.[20] Wage data for OFWs is taken from a POEA dataset of all new overseas contracts from 2008-2009 (McKenzie, Theoharides and Yang, forthcoming). Data on income for Sorsogon families comes from a survey of approximately 5,000 households across the province in other municipalities (Beam, McKenzie and Yang, 2013). In addition to giving the flier to the

[17] Baseline results confirm that most spillovers are likely to occur within the neighborhood unit. Overall, 87 percent of those friends whom respondents see every day live within the same *barangay*, and 62 percent live within the same neighborhood.

[18] I calculate population density by dividing the population of each neighborhood listed on the provided rosters by the approximate area of each neighborhood, using *barangay* maps and satellite imagery. I then divide neighborhoods into terciles based on population density, and I sort them by distance to the job fair within each tercile. I generate blocks of nine neighborhoods with similar population densities and distance based on that sorting and randomize within each block.

[19] The assignment distribution and realized sample size is shown in Appendix Table 1.A.2.

[20] See Appendix 1.B.

respondent, the enumerators read a short script describing the information it contains.[21]

The qualification information treatment consists of information about the minimum educational and experience requirements for overseas positions. This information is tailored to respondents' own characteristics in order to maximize its relevance and potential impact.[22] Using the popular job-finding website *workabroad.ph*, I collect data on 23,910 job postings representing 228,914 total vacancies for temporary overseas work. Most employers explicitly restrict applications to only one gender, so I calculate separately the distribution of minimum education level and minimum years of experience for the most common overseas positions for men and women.[23] I use this data to generate a set of occupational cards that describe the distribution of minimum requirements for these positions.[24] To increase the relevance of the qualification information, respondents pick the two positions they are most interested in learning about,[25] and then the enumerators pick two more "best fit" positions by gender from the remaining choices, using a simple scoring rubric. Enumerators read a script that describes the four selected cards. The respondent receives a flier with the qualifications for the best-matched position out of the four shared cards, based on the rubric.

[21]The wage information treatment is similar in spirit to those of Jensen (2010) and Nguyen (2008), who use field experiments to measure the impact of providing information about the returns to education on education completion and performance.

[22]Wage information was not tailored for simplicity of implementation. While an average wage seemed relatively interpretable, an overall average qualification level did not. A large literature in public health finds tailored information can be more effective than general information in influencing individuals' behaviors. See Kreuter and Strecher (1996) for an example in health risk appraisal and Noar, Benac and Harris (2007) for a meta-analysis of a variety of printed health interventions.

[23]For men, the eight positions are (in order) factory workers, skilled tradesmen, general laborers and construction workers, waiters and food service workers, heavy equipment operators, technicians, cooks and assistants, and janitors and cleaners. For women, the ten positions (in order) are domestic helpers, factory workers, caregivers/caretakers, housekeepers and cleaners, waiters and food service workers, salespersons and assistants, cooks and assistants, receptionists, hairdressers, and sewers. I exclude nurses, which ranks in the top ten but has complicated licensing and certification requirements.

[24]1.B provides sample cards and scripts used in this information treatment. When the same occupation is included for both men and women, I create different cards, as the minimum requirements are often different.

[25]Although the cards are separated by gender, respondents can select any occupation, and the list and cards do not indicate which gender is dominant for each position.

1.3.4 Encouragement design

To generate exogenous variation in the likelihood of job-fair attendance, I assign respondents in randomly selected neighborhoods (one-third) to receive a voucher that can be exchanged for a gift certificate worth P150 (US$3.42, roughly the cost of a dinner for a family of four) to Jollibee, a popular fast-food chain restaurant, which has a location in the central business district.[26] Respondents must pick up the gift certificates in person at the job fair, and they can only do so during the two days of the job fair. To avoid confounding the encouragement of the incentive with an informational component, members of both the voucher treatment and control groups are invited to attend the job fair, and every respondent receives two text message reminders in the days leading up to the job fair, which also minimizes potential differential salience effects based on the date of the survey.

1.4 Data

Figure 1.1 outlines the timeline of the project and the order of interaction with respondents. In January and February 2011, I generated the sample and conducted the baseline survey. Respondents answered questions about their work experience, interest in and exposure to overseas work, and beliefs about wages within and outside the Philippines. Upon conclusion of the survey, those living in randomly selected neighborhoods received information about wages overseas or information about minimum qualifications for overseas work. All respondents were then invited to attend a nearby job fair for overseas employment, and randomly selected respondents received the voucher that they could exchange at the fair.

[26] This and all other conversions are calculated using the average exchange rate from January-February, 2011 of 1 US$ = 43.7976 PHP (OANDA, 2012).

1.4.1 Bulan job fair, 2011

I first measure the decision to initiate job search for work overseas by whether respondents attend a job fair for overseas work held March 1-2, 2011 (both weekdays). I partnered with the municipal government and Public Employment Service Office (PESO) to hold this fair, in which four overseas recruitment agencies and one domestic employer from another province participated. Upon arrival, job-fair attendees signed in with research staff.[27] The survey team advertised using fliers and radio in the week prior to the fair.[28] All survey respondents received two text message reminders in the days leading up to and on the day of the job fair. Overall attendance is 767. Survey respondents make up 29 percent of all attendees. I link attendance rosters with respondents using an approximate string-matching algorithm.[29]

1.4.2 Follow-up survey

I supplement job-fair attendance data with responses from a follow-up survey conducted one year after the baseline survey. Attrition is of particular concern in this study because if migrants are missing from follow-up reports, actual increases in migration would be indistinguishable from differential attrition by treatment. By using proxy surveys with an alternate household member when the original respondent was unavailable, I obtain a follow-up rate of 97 percent, with full surveys for 80 percent of baseline respondents and proxy surveys for the other 17 percent.[30] I find no evidence of differential attrition across treatments; details are provided in Appendix Table 1.A.4. For the rest of the analysis, I use the set of 862

[27] Although job-fair attendees provided written consent to participate in the research component of the fair and were aware that researchers were tracking their numbers, they likely viewed the job fair as typical. Their first interaction was with staff members of the municipal PESO, which typically coordinates local recruitment activities and collects biographical data for their own records. The local PESO office also assumed full credit for the implementation of the job fair, further reducing any perceptions that this was a "research" fair.

[28] Of non-survey respondents, 56 percent of attendees say they heard about the fair through radio, 17 percent through a flier, and 25 percent through a friend.

[29] I match individual names based on pairs of letters in relatively similar positions of the string (Winkler, 2004) and verify close matches with additional data on gender, age, and *barangay* when available. The specific protocol is available upon request.

[30] Additional details about those who attrit from the sample are included in Appendix Table 1.A.1.

baseline respondents when evaluating the impact of treatments on job-fair attendance and participation, and I restrict the sample to the 826 respondents who participated in the baseline and follow-up survey, including proxy responses, when considering outcomes measured at the follow-up survey.

1.4.3 Estimation

I estimate intention-to-treat (ITT) effects of assignment to the three treatments using OLS with the following specification:

$$Y_{ij} = \alpha + \beta_1 Voucher_j + \beta_2 Qual_j + \beta_3 Wage_j + X_i'\gamma + S_j'\psi + En_i'\chi + \epsilon_{ij} \tag{1.1}$$

where Y_{ij} is the outcome measure for individual i living in neighborhood j, and $Voucher_j$, $Qual_j$, and $Wage_j$ are binary indicators for treatment assignment of neighborhood j. I also include a vector of individual-level covariates X_i; stratification cell fixed-effects S_j for each of the 11 stratification cells, which are assigned at the neighborhood level; and enumerator fixed effects En_i. Because randomization takes place at the neighborhood level, I cluster standard errors at the neighborhood level, which also accounts for heteroskedasticity introduced by the linear probability model when estimating binary outcome variables.[31] Because I cross-randomize the two information treatments with voucher assignment, I can also examine interaction effects of the voucher in combination with each information treatment. I report these interacted impacts on job-fair attendance, but I restrict later analysis to the Equation 2.4 specification, as I find limited evidence of interaction effects.

[31] Assignment corresponds to actual treatment in all cases except for one neighborhood, in which enumerators accidentally administered the wrong treatments. Excluding that neighborhood or using realized treatment does not affect results.

1.4.4 Descriptive statistics and balancing tests

The first two columns of Table 1.1 present descriptive statistics of the full sample of 862 respondents, by treatment assignment. Columns 1 and 2 report covariate means of the non-voucher and voucher treatment groups, respectively.[32] By design, approximately half the sample is female. Nearly three-fourths of respondents have completed high school, and 16 percent have completed college. These education completion rates are consistent with work by Beam, McKenzie and Yang (2013) in other parts of Sorsogon Province, as well as with statistics from the 2000 Philippine Labor Force Survey, which show that 58 percent of residents, and 73 percent of urban residents of Sorsogon Province have completed at least high school (NSO 2001). Slightly more than one-third of respondents are currently working at baseline; this includes anyone who worked for pay in the previous month, regardless of whether it was in the formal or informal sector, and 84 percent have ever worked in the past. A high share of respondents, 39 percent, have previously worked in Manila. The mean household income is P5,800 per month, approximately US$132. Twenty-six percent report being interested in working abroad (not shown, 72 percent report at least some interest in working abroad), and among all respondents, only 28 percent (45 percent of those strongly interested in working abroad) have ever taken steps to apply for work overseas.

In Column 2, I use one, two, and three stars to indicate a statistically significant difference in means for each covariate between the voucher and non-voucher groups at the ten, five, and one-percent levels, respectively. Although the main demographic characteristics are balanced, the voucher treatment group members are less likely to plan to apply for work overseas in the next 12 months. As indicated by the F-test statistic at the bottom of Column 2, I cannot reject the joint equality of means between the voucher and non-voucher groups.

Columns 3-5 present means for the information control, wage information treatment, and qualification information treatment groups, all of which include both voucher and non-

[32]Full sample means and standard errors are reported in Appendix Table 1.A.3.

voucher recipients. As before, in Columns 4 and 5, I indicate where covariate means are statistically significantly different from the information control group. The wage information treatment group is slightly younger than the information control group, but I cannot reject joint equality of the means between the wage treatment and information control groups, which yields a p-value of 0.66. The qualification information treatment group displays stronger evidence of covariate imbalance. Members of this group are older, more likely to be married, and more likely to have children. They are also marginally more likely to have family members working abroad. Consequently, I reject joint equality of means between the qualification information treatment and information control groups at the five-percent level (p-value = 0.03).

The imbalance in qualification treatment assignment is concerning if it provides evidence that enumerators manipulated treatment assignment. However, randomization was conducted at the neighborhood level, and it was done prior to implementation. Imbalance could arise if enumerators put forth differential effort to find respondents depending on the information treatment. The number of respondents interviewed per information treatment assignment, however, is essentially equal (292 received no information, 284 received wage information, and 286 received qualification information).

1.5 Results

In this section, I first examine the impacts of assignment to factual information and voucher treatments on steps to migration, job-search effort, and employment outcomes. I then confirm the robustness of my results to alternative specifications. Last, I report local average treatment effect estimates of the impact of job-fair attendance on job-search and employment outcomes, using voucher assignment as an instrument for attendance.

1.5.1 Job-fair attendance and steps to migration

I examine whether the information and voucher treatments affect individuals' decisions to take steps to find work overseas, first looking at whether recipients were more or less likely to attend a job fair for overseas work. Figure 1.2 shows the estimated impact of the information treatments with and without voucher assignment, allowing for the possibility of interaction effects, using the full panel of 862 baseline respondents.[33] The voucher has a large, positive impact, nearly tripling the likelihood of attending the job fair, while the information treatments, with or without the voucher, have no effect.

Table 1.2 provides numerical ITT estimates of the impact of the information and voucher treatments on attendance. The first two columns include only binary treatment indicators for the information and voucher treatments, as in Equation 2.4. In case the information treatments have different impacts when combined with an incentive to attend, Columns 3 and 4 include interactions between information treatment assignment and voucher assignment. Columns 1 and 3 include only stratification cell and enumerator fixed effects, while Columns 2 and 4 add individual covariates. The voucher treatment raises the probability of job-fair attendance by 35.4 percentage points (Column 2) from a baseline of 12.7 percent, a 280-percent increase, making it a strong instrument for attendance. On their own, the information treatments have no impact on attendance. As seen in Figure 1.2, the qualification and wage information treatments, when combined with the voucher, have a small additional positive and negative impact, respectively. However, these interaction effects are imprecisely measured and not statistically significantly different from zero.

Job-fair attendance is not the only means by which individuals look for work overseas, and the information treatments could lead individuals to take other steps to apply. In Table 1.3, I estimate the impact of wage and qualification information treatment assignment on whether individuals look for work overseas in the ten months following the job fair, on whether they

[33] I omit covariates, stratification cell fixed effects, and enumerator fixed effects in Figure 1.2 so that the levels can be interpreted as attendance rates by treatment group.

visit a recruitment agency for overseas work for the first time, and on whether they obtain a passport.[34] In all cases, I find that the information treatments have no effect on steps to migrate. One exception is that wage information treatment assignment increases passport acquisition, but this is only marginally statistically significant.

These results indicate that the information treatments do not substantially affect individuals' decision to migrate overseas. I explore potential reasons in Section 2.5, finding that information does affect individuals' perceptions about the overseas labor market. Table 1.3 also presents ITT estimates of the impact of voucher assignment, which also does not affect the likelihood of taking steps to migrate, though they are three percentage points (27 percent) less likely to report being interested in working abroad.[35] The mean levels of these migration steps are low: only two percent of respondents looked for overseas work in the ten months following the job fair.[36] If, however, individuals' information sets and knowledge about how to search and apply for work are affected by attending a job fair, this could instead affect domestic labor outcomes.

1.5.2 Job-search effort and employment

In the previous section, I find that voucher assignment is a strong predictor of job-fair attendance. In this section, I estimate ITT impacts of voucher assignment and information treatment assignment, on labor market outcomes, interpreting the voucher as operating through job-fair attendance.

[34]Those who had visited an agency before at baseline are coded as a zero when estimating whether respondents visit an agency for the first time. Similarly, those who had a passport at baseline as coded as zero when estimating whether respondents obtain a passport. Restricting the sample to those who had never visited an agency or those who never had a passport yields similar results.

[35]Individuals report whether they are not interested, a little interested, neutral, somewhat interested, or very interested in working abroad. I code individuals who respond with "very" or "somewhat" as being "interested" in working abroad.

[36]I test but do not report whether the voucher treatment affects the likelihood of working abroad as of the follow-up survey because, at 0.6 percent, the overseas migration rate is very low. Only five respondents are overseas at follow-up: four from the voucher control group and one from the voucher treatment group. LPM estimates do not show an impact of the information or voucher treatments.

The experience of attending a job fair may have persistent impacts on individuals' job-search and labor-market trajectories in the presence of incomplete information. With respect to a standard job-search model, information may update individuals' beliefs about the wage distribution (Burdett and Vishwanath, 1988) or their job-offer arrival rate, in the case of learning about one's absolute ability, one's relative ability, or labor market conditions (Gonzalez and Shi, 2010; Falk, Huffman and Sunde, 2006*a*). Additionally, attendance may convey knowledge about how to search and apply for work that increases the effectiveness of search in other labor markets. Factual information about the overseas market may also have medium-run effects in the domestic labor market if it changes the relative returns to search or motivates individuals to obtain additional work experience or income, possibly as a "stepping stone" to work abroad, or as a result of the information priming individuals to think more about employment. Using follow-up survey data collected ten months after the job fair, I measure the impact of factual information and job-fair attendance on individuals' job-search effort and employment

Voucher assignment could affect the probability of job search on the extensive margin, as well as change the intensity and direction of search. I first examine whether individuals look for work in the two months after the job fair, which is most likely to reflect the direct impact of fair attendance. The impact on the intensity of search over the ten-month period may reflect this direct effect plus any indirect effects from previous changes in search behavior. For example, if individuals search more effectively in the months immediately following the fair, they may be less likely to search later. Alternatively, if attendance causes individuals to postpone local search and instead pursue opportunities in Manila earlier, impacts may attenuate in the long run. For this reason, I also examine the total number of months individuals search in the ten months after the job fair.

In Column 1 of Table 1.4, I predict whether respondents look for work in the two months after the fair using information and voucher assignment.[37] Because search may have higher returns

[37]I exclude the month of the fair itself in order to avoid double counting job-fair attendance.

in Manila, I differentiate between looking for work within Sorsogon Province and looking in Manila in Columns 2 and 3, respectively.[38] Column 1 shows that voucher assignment does not affect the overall likelihood of search, though the effect is imprecisely measured. Differentiating between looking for work within the province and in Manila in Columns 2 and 3, however, reveals that voucher assignment decreases the likelihood of looking within the province by 2.3 percentage points but increases the likelihood of looking in Manila by 2.1 percentage points. The factual information treatments have no statistically significant impact on whether individuals look for work in the two months following the fair: the coefficients are generally negative but very close to zero.[39] In Columns 4-6, I report the total number of offers received overall, within the province, or in Manila during the ten months following the job fair. Search in Manila induced by the voucher appears to be effective; the number of offers in Manila increases by 0.04, or by 37 percent compared with a rate of 0.12 offers among the control group, though it is only significant at the ten-percent level.

Although the wage information treatment does not affect the total number of months searched in Columns 4-6, there is also a reduction in the number of offers received overall as a result of the qualification information, consistent with the small, but statistically insignificant, reduction in the likelihood of looking for work observed in Columns 1-3. This is consistent with a positive, but statistically insignificant impact on the likelihood of informal employment I report later, which could reflect some individuals focusing on accumulating work experience as a result of the qualification treatment, but not doing so through direct job search.

[38]Respondents are asked to classify whether they search within Bulan, outside Bulan but within Sorsogon Province, in neighboring Albay Province, in Manila, overseas, or in some other location. I classify search within Sorsogon and Albay as "within the province" because of Albay's close proximity. Only 1.8 percent of respondents report ever looking for work in an "other location"; of them, only two do not also search in Manila.

[39]Appendix Table 1.C.2 of 1.C demonstrates that the impact of voucher assignment on the likelihood of search is concentrated in the first month after the fair, and that it remains substantial ten months afterward. Overall, the voucher increases the unconditional total number of months looked for work in Manila by 0.09, or by 44 percent. Non-experimental estimates on the number of months searched conditional on ever looking for work in the ten months following the job fair indicates that those assigned the voucher search 0.24 months fewer inside the province, from a mean of 0.67, and search 0.32 months more in Manila, from a mean of 0.70.

Individuals may be more likely to be working or may work in different sectors if job seekers are successful in finding work as a result of the redirection of search effort I observe. Job-fair attendance may also affect employment outcomes by increasing the effectiveness of search, which I do not measure directly. To examine the medium-run impact of the information and voucher interventions on employment, I consider whether respondents are working at the time of the follow-up survey and whether they are working in the formal sector, working in the informal sector, or self-employed.

Column 1 of Table 1.5 demonstrates that information and voucher assignments have no impact on whether individuals are working at the time of the follow-up survey. Assignment to the qualification information treatment has a positive impact on the likelihood of being employed, consistent with the earlier overall reduction in the number of months spent looking for work, but it is not statistically significant at conventional levels. Columns 2-4 reveal that the voucher induces individuals to shift into formal sector work from self-employment. Voucher assignment increases the likelihood of formal sector employment by 4.7 percentage points, significant at the five-percent level.[40] This increase is offset by a 6.7 percentage-point reduction in the likelihood of being engaged in self-employment, which also includes farming and fishing.[41] These magnitudes are large relative to the change in search effort, suggesting that attendance may also increase the efficacy of search.

1.5.3 Adjustments for multiple comparisons

These results broadly indicate that in addition to increasing the likelihood of job-fair attendance, voucher assignment induces individuals to look for work in Manila rather than in

[40] Informal sector employment increases by 2.4 percentage points, though this is not statistically significant. Testing for a change in the likelihood of being employed in the formal or informal sector produces a p-value of 0.02.

[41] Because these reported employment categories are mutually exclusive, I can also estimate marginal effects at covariate means using a multinomial logit model. The results are broadly unchanged: voucher assignment increases formal sector employment by 4.4 percentage points ($p = 0.04$), and decreases self-employment by 7.1 percentage points ($p = 0.00$).

the local labor market and to shift from self-employment to formal-sector employment. The informational treatments do not affect individuals' decisions to look for work abroad. In this section, I discuss the sensitivity of these estimates to adjustments for multiple comparisons and to other specifications.

Because main results are based on hypothesis tests from multiple outcome variables, some hypotheses may be falsely rejected due to chance.[42] I employ two approaches to address this concern.[43] My main specifications encompass ten unique outcome variables, which are naturally divided into three groups: migration outcomes (4), job-search outcomes (4), and employment outcomes (3).[44] I follow Katz, Kling and Liebman (2007) and compute the average effect size for each outcome group. That is, I estimate the following average standardized treatment effect τ_g for outcome group g with N total variables as the average of a standardized treatment effects from each outcome variable k, τ_{gk}:[45]

$$\tau_{gk} = \frac{\pi_{gk}}{\sigma_{gk}} \tag{1.2a}$$

$$\tau_g = \frac{1}{N} \sum_{k=1}^{N} \tau_{gk} \tag{1.2b}$$

where τ_{gk} is the treatment effect for outcome variable k in group g that is standardized by dividing the estimated treatment effect π_{gk} by the standard deviation of the outcome variable for the control group σ_{gk}. I measure the average treatment effect of the voucher and of each information treatment including the full set of covariates and stratification cell fixed

[42] See Fink, McConnell and Vollmer (2012) for a detailed example.

[43] Because the analysis draws conclusions about the effectiveness of treatment on the outcomes measures reported in the previous section, one can think of these as "confirmatory" analysis, and I adjust these results for concerns about multiple comparison. In Section 2.5, I investigate potential mechanisms driving these as well as impacts for subgroups. Because that section primarily derives hypotheses and insights for future research, I am more interested in the magnitude and direction of estimated coefficients than in statistical significance. Those tests can be thought of as "exploratory" and therefore not subject to the same set of concerns (Schochet, 2008).

[44] I omit three variables that are linear combinations of the other hypotheses: whether the respondent looks for work anywhere in the two months following the job fair, the total number of offers he receives overall in the ten months following the fair, and whether he is employed at all.

[45] The notation differs slightly from Katz, Kling and Liebman (2007) to be consistent with the later discussion of controlling the FWER and FDR.

effects used in previous specifications. I jointly estimate the π_{gk} using seemingly unrelated regressions to account for dependence between outcome variables within a group.

Table 1.6 reports the average effect size for each outcome group. I cannot reject the null hypothesis of no treatment effect on steps to migrate for the voucher or the qualification information, though I find a 0.09 standard deviation increase in taking steps to migrate for those receiving the wage information treatment, significant at the 10-percent level. With respect to the job-search outcomes, I reverse the sign of the local search and local offers variable to test whether there is evidence of a positive or negative shift to search in Manila. I find the voucher led to a 0.12 standard deviation increase in that domain, significant at less than the one-percent level. For the employment group, I reverse the sign of self-employment to test for evidence of an increase in formal and informal employment, and I reject the null hypothesis that the voucher had no effect at less than the one-percent level.[46] Table 1.6 confirms earlier results that the voucher has substantial impacts on individuals' job-search and employment outcomes, namely shifting their search from the local labor market to Manila, and increasing their likelihood of being employed formally (and informally).[47]

One concern with the Katz, Kling and Liebman (2007) approach in this setting is that I am interested in the impact of individual outcome variables within each family as much as the family of outcomes itself, particularly in the case of the job-search and employment outcomes. To account for multiple comparisons at the individual outcome level, I control for the family-wise error rate (FWER), the likelihood of falsely rejecting at least one hypothesis in a group of outcomes, and for the false discovery rate (FDR), the share of rejected hypotheses that are true (Benjamini and Hochberg, 1995). The Bonferroni correction provides the simplest and most conservative method to control the FWER, ensuring that it is no greater than α by

[46] I also test the more conservative hypothesis that the voucher shifted employment to the formal sector by reversing the signs of both informal employment as well as self-employment. I reject the null of no effect of the voucher at the ten-percent level.

[47] One less-powered alternative is to conduct F-tests for the joint hypotheses of no treatment effects across multiple variables, without adjusting outcome signs. I still reject the null hypothesis of no treatment effect across the search and employment outcomes at the five-percent level.[48]

using a revised critical p-value of $\alpha_{adj} = \alpha/N$, where N is the number of tests in the family. One refinement of that approach is the Holm step-down procedure (Holm, 1979), which sequentially rejects hypotheses based on the ranked order of the p-values. I rank hypotheses from that with smallest p-value to that with the largest. If the hypothesis with the smallest p-value is less than α/N, then I reject it. If I reject the first hypothesis, I then test the second, rejecting a null effect for the second-smallest p-value if it is less than $\alpha/(N-1)$. If I cannot reject the kth hypothesis, then I cannot reject any subsequent hypothesis. I proceed through all of the hypotheses until no further hypotheses can be rejected, rejecting the kth hypothesis if its p-value is less than $\alpha/(N-k+1)$.

Finally, I control for the FDR using the Benjamini-Hochberg step-up procedure, which is similar in spirit to the Holm procedure, except in this case I start with the largest p-value, p_K, and move downward. Once I reject hypothesis p_k, I reject all outcomes with a smaller p-value (Benjamini and Hochberg, 1995).[49] Though less conservative, the FDR is more appropriate for this context than the FWER if I am interested in the significance of individual outcome variables within a family, rather than the overall significance of the effects within a family.

In Table 1.7, I report the significance of intention-to-treat estimates of voucher assignment on each outcome variable, using the outcome groups described previously, adjusting with the three procedures described above:

1. Bonferroni (FWER): $p_{bon} = p_{adj} = pN$, where p is the uncorrected p-value.

2. Holm (FWER): $p_{adj} = p_k(N-k+1)$, where k is the rank of p_k after ordering the p-values such that $p_1 < p_2 < ... < p_N$. As this is a step-down prodecure, begin with the lowest p-value, and $p_{holm} = p_{adj}$ for $k = 1$. Moving upward, $p_{holm} = max(p_{adj}, p_{adj-1})$, where p_{adj-1} is the previously (lower) ranked p-value.

3. Benjamini-Hochberg (FDR): $p_{adj} = pN/k$, where k is the rank of p, after ordering

[49] It is likely to be conservative under when the p-values are positively correlated (Benjamini and Yekutieli, 2001).

the p-values such that $p_1 < p_2 < ... < p_N$ (Anderson, 2008). As this is a step-up procedure, begin with the highest p-value, and $p_{BH} = p_{adj}$ for $k = K$. Moving downward, $p_{BH} = min(p_{adj}, p_{adj+1},$ where p_{adj+1} is the previously (higher) ranked p-value.

Results in Table 1.7 indicate that the decrease in individuals' interest in working abroad induced by the voucher remains significant at the ten-percent level, regardless of the correction. The job-search results are less robust, with only the reduction in individuals' likelihood of looking for work locally in the two months following the job-fair remaining significant at the 10-percent level. However, the increase in the likelihood of looking for work in Manila and the number of offers received are nearly statistically significant under the Benjamini-Hochberg methods, with adjusted p-values of 0.12. The employment results remain highly robust regardless of the correction I use. The increase in formal-sector employment remains statistically significant at the ten-percent level under the Holm and Benjamini-Hochberg corrections, and the decrease in self-employment is statistically significant at the five-percent level under all corrections.

1.5.4 Robustness checks

Horrace and Oaxaca (2006) raise concerns about bias and inconsistency that may be introduced by OLS estimates of linear probability models, particularly with low frequency outcomes. Appendix Tables 1.D.1, 1.D.2, and 1.D.3 show that neither the magnitude nor the significance of results are affected by using a probit model.

I also test whether results are sensitive to the inclusion of covariates. Appendix Table 1.D.4 demonstrates that the voucher migration and search results are not affected by the inclusion of covariates. The impacts on employment, while still in the same direction, are not statistically significant without covariates. This difference appears to be driven by sample imbalance on education - those assigned to the voucher treatment group have lower edu-

cational attainment - which biases downward the impact of voucher assignment if I do not control for education. Appendix Tables 1.D.5 and 1.D.6 show that the estimated impacts of the targeted information interventions are not affected by the inclusion of covariates or fixed effects. The same set of tables indicate that my results are robust to excluding proxy surveys. Proxy surveys may be noisier than full surveys, as a family member or neighbor may not have full information about the job-search activities of the respondent, so it is unsurprising that my estimates are more precise when I exclude proxy respondents, but the magnitudes are not affected substantially.

1.5.5 Local average treatment effects

I interpret voucher treatment assignment as affecting individuals' behavior through job-fair attendance, which provides individuals with some combination of information and knowledge. Because job-fair attendance is endogenous, directly estimating the impact of attendance on outcomes will generate biased estimates. The encouragement design I implement generates exogenous variation in the likelihood of attendance, and I use voucher assignment to instrument for job-fair attendance. In addition to examining intention-to-treat effects of voucher assignment, I can examine local average treatment effects (LATE) for compliers, that is, those induced to attend the fair as a result of being assigned the voucher.[50]

I use two-stage least squares to estimate the following equations:

$$Attend_{ij} = \alpha + \beta_1 Voucher_j + \beta_2 Qual_j + \beta_3 Wage_j + X_i'\gamma + S_j'\psi + En_i'\chi + \epsilon_{ij} \quad (1.3a)$$

$$Y_{ij} = a + b_1 \widehat{Attend}_{ij} + b_2 Qual_j + b_3 Wage_j + X_i'd + S_j's + En_i'c + v_{ij} \quad (1.3b)$$

where $Attend_{ij}$ is a binary indicator for whether respondent i in neighborhood j attended the job fair, and $Voucher_j$, $Qual_j$, and $Wage_j$ are binary indicators for neighborhood j's

[50]The LATE estimates will be equal to average treatment effect estimates if the effect is constant across individuals.

assignment to treatment. I include the same set of covariates X_i, stratification cell fixed effects S_j, and enumerator fixed effects En_i in both stages. Using predicted attendance, $\widehat{Attend}_{ij}$, I estimate medium-run impacts on outcome variable Y_{ij} measured at the follow-up survey.

The coefficient of interest is the estimated $\hat{b}_1$, which can be interpreted as the causal impact of job-fair attendance on outcome Y_{ij} if the instrument is correlated with attendance and the conditional independence assumption holds: it cannot be correlated with any unobserved determinants of the outcome variable, and it cannot affect later stage outcomes in any other way than through job-fair attendance. The first-stage estimate of voucher assignment on job-fair attendance using the sample of follow-up respondents yields an F-statistic of 108. Random assignment ensures that on average, $cov[Voucher_j, v_{ij}] = 0$.[51]

If, for instance, the voucher itself motivates applicants to apply for work or take steps to look for work, perhaps by providing them with more information or inducing them to feel more encouraged, than this mechanism would violate the exclusion restriction. To minimize any differential informational impact, both treatment and control respondents are invited to attend the job fair, and all respondents receive a flier to keep and two text message reminders about the fair. Additionally, enumerators inform respondents that they are receiving the voucher to encourage them to attend the fair, without any mention of their own qualification levels or job-finding prospects. Because randomization takes place at the neighborhood level, respondents' neighbors receive the same offer, so it is less likely that they would feel relatively qualified or unqualified by comparison. Another concern might be that the voucher affects individuals' budget constraints. However, I find no evidence that respondents exchange the voucher for cash, and the voucher is small enough to not affect individuals' budget constraints

[51]For interpretation as a LATE, assignment must have a monotonic effect on attendance; in this case, it must have had a zero or positive effect for all individuals. The voucher could have a negative impact on attendance if it raised concerns about the legitimacy of the fair or if it seemed "too good to be true." However, the job fair was backed by the local Public Employment Service Office and was advertised broadly in the community, which, in addition to increasing attendance, should have encouraged trust among respondents.

in any substantial way.[52]

Table 1.8 presents the ITT impacts of the voucher with OLS and IV estimates of job-fair attendance on search effort and employment. OLS estimates of the impact of attendance, which are likely biased due to endogeneity, indicate that overall attendance is not correlated with job-search effort and that it is slightly negatively correlated with the likelihood of being employed, particularly in the informal sector. Using voucher assignment as an instrument for attendance demonstrates that the OLS results in Column 2 are biased downward. Those induced to attend by the voucher are negatively selected compared to those who attend without the voucher.[53] This indicates that it is those who are less skilled and have less job-fair experience who benefit the most from attending a job fair, and OLS estimates of attendance would underestimate these impacts. Those induced to attend the job-fair by the voucher are 5.7 percentage points more likely to look for work in the capital two months after the job fair than those not included, and they are 13.0 percentage points more likely to be employed in the formal sector.

1.6 Discussion

Job-fair attendance has a persistent impact on individuals' job-search behavior and their employment outcomes in domestic markets, but, on average, the factual information treatments do not. That the factual information treatments have limited impact on individuals' steps to migration may not be surprising if the information itself is ineffective in updating indi-

[52]I explore this more specifically using results from a brief survey in May 2012 with 102 randomly selected respondents, who I recontact because they won a raffle prize for their participation in the follow-up survey. Eighty-one percent of original respondents are contacted, of which 31 respondents are voucher treatment group members. Fourteen out of the 31 respondents report receiving and exchanging the voucher at the job fair, and no one trades or gives away the voucher.

[53]For example, 29 percent of all job-fair attendees who are in the voucher control group are college graduates, compared with only 14 percent of job-fair attendees who are in the voucher treatment group. Similarly, at baseline 61 percent of voucher control group job-fair attendees have looked for work formally, versus 33 percent of voucher treatment group job-fair attendees.

viduals' perceptions of overseas wages or their own qualifications.[54] In this section, I explore potential explanations for these results by examining the impact of wage and qualification information on labor market perceptions and exploring treatment effect heterogeneity. I find that factual information affects individuals' labor market perceptions, although it does not affect their job-search decisions. I also explore the characteristics of those who are affected most by the experience of attending a job fair, finding that employment effects are concentrated among those with either some formal search experience or past work experience in Manila, while those with no formal search experience change how they search for work.

1.6.1 Why doesn't factual information matter more?

1.6.1.1 Wage information treatment

The limited impact of the wage information treatment contrasts with the strong link between expected wages and migration in other migration research (McKenzie, Gibson and Stillman, 2013), as well as the substantial impact that revising wage expectations upward has on education decisions (Jensen, 2010; Nguyen, 2008). I find that the wage information does affect the individuals' beliefs about their likely wages overseas in predictable ways; however, beliefs about overseas wages do not correlate strongly with individuals' decisions to look for work. Another explanation for the ineffectiveness is that the wage information updated beliefs, but the effect was offset by increased interest in local job search because of a coding error that overstated average local wages on the intervention flier. However, I find no evidence that the wage treatment increased job search in any labor market, local or otherwise.

To examine whether individuals' beliefs are affected by the wage information treatment, I measure the impact of wage information assignment on the the "likeliest" wage that they personally could earn abroad.[55] I plot the smoothed distribution of the change in likeliest

[54]For example, Eberlein, Ludwig and Nafziger (2011) find that feedback does not necessarily change individuals' self-assessments, particularly in the case of bad news.

[55]This measure is implicitly conditional on being offered a job. Wage information may affect individuals'

wage between baseline and follow-up separately for the wage treatment group and the control group. Figure 1.3 shows that the wage information treatment shifts the distribution to the right, indicating that, on average, perceived wages of the wage information treatment group increase relative to the control group. A Komogorov-Smirnov test rejects the equality of distributions at the five-percent level ($p = 0.03$).[56] These results indicate that the wage information treatment does affect job-seeker beliefs about wages, increasing their expectations relative to the control group.

The wage information treatment may have a limited impact if individuals already have good information about the wages they could earn abroad. On average, the mean value of the likeliest wage individuals report they could earn abroad is only six percent lower than the intervention mean (P26,800 compared with P28,500). But this obscures heterogeneity in individuals' perceived likely wages, as 35 percent of individuals report higher expected wages than the intervention average. The results in Table 1.9 are consistent with differential treatment effects by baseline wage perceptions. I examine heterogeneity by perceived overseas wage at baseline along two outcome measures: whether the individual attends the job fair, and the likeliest wage she thinks she could earn abroad as of the follow-up survey. Columns 1 and 2 show that although the wage information treatment has no effect on job-fair attendance overall, the impact is slightly positive, though not significant, for those with low perceived wages, and the effect decreases as baseline perceived wages increase (significant at the 10-percent level). Furthermore, Columns 3 and 4 show that individuals' perceived overseas wages are affected in predictable ways. Overall, there is a small, positive impact on perceived overseas wages, but the interaction term in Column 4 indicates that the impact of the wage information decreases in individuals' perceived overseas wages.

Although the wage information treatment affects beliefs, this shift might not affect behavior

beliefs about wages across the distribution of workers or about their own wage prospects, and this measure captures only the latter.

[56] I exclude those who received the qualification information treatment or the cross-randomized voucher. Results are robust to alternative specifications.

if individuals' search and employment decisions on the margin are not determined by expected wages.[57] In Appendix Table 1.C.1, I predict whether respondents had ever applied for overseas work, as reported at baseline. Education, work experience, and beliefs about the likelihood of being offered a job abroad are strong predictors of past application, but perceived likely wages overseas do not predict past decisions to look for work abroad, conditional on these other variables. Given that overseas wages across occupations are consistently high relative to local wages, that median likely wages are 5.7 times higher than median household income,[58] and that most respondents (75 percent) have an immediate or extended family member who has worked abroad in the past five years, it is less surprising that increasing expected wages does not translate to changes in job-search and employment decisions.

1.6.1.2 Qualification information

The impact of qualification information may depend on individuals' baseline perceptions as well as their own characteristics.[59] At baseline, respondents report the minimum educational requirements and the minimum number of years of experience for six common overseas positions: domestic helper, caretaker, construction worker, plumber, factory worker, and food service worker. I compare the median responses to the median minimum requirements for each job based on position-weighted calculations from 23,910 job postings taken from *workabroad.ph*, described earlier.[60] Individuals have accurate expectations about the minimum educational requirements for these positions, as seen in Appendix Table 1.C.3.

[57] Additionally, if individuals have a high reservation wage for overseas work, the increase in expected wages may not be sufficient to induce search overseas. However, only 13 percent of respondents report a reservation wage that is higher than what they think they could earn abroad, consistent with other research that finds reservations wages not to be the constraint preventing job search (Diagne, 2011).

[58] The median likeliest wage respondents report they could earn abroad is P20,000, or US$457, per month. The median household income at baseline is P3,500, or US$80, per month.

[59] In 1.E, I examine heterogeneous treatment effects between men and women and between those with a high school diploma or less and those with some post-secondary education. I find that men update their beliefs about their own qualifications, and they are more likely to attend the job fair, but they are no more or less likely to take steps to migrate abroad.

[60] Medians overlap between men and women for food service worker positions. Women have lower experiential requirements for factory worker positions, so I use the median the corresponds to the respondent's gender.

However, they tend to underestimate the minimum experience requirements.[61]

To measure the impact of qualification information on the accuracy of individuals' perceptions about minimum experience requirements, I calculate the absolute value of the difference between the median years of related experience required for six common overseas positions, as measured using the data from *workabroad.ph*, and the number of years of experience reported by respondents the number of years experience required for each position. I average that difference over the six positions and report the results in Table 1.10. In the control group, individuals estimate minimum experience requirements at baseline that are 1.3 years away from the true values on average, with the average respondent underestimating experience requirements for 59 percent of positions and overestimating for 16 percent of positions. Column 1 shows that qualification information has a modest impact on perceptions, reducing the absolute difference between reported and actual experience requirements by 0.06 years, which is statistically significant at the ten-percent level. This is roughly the same impact as that of the voucher assignment, which reduces the absolute difference by 0.07 years. Columns 2 and 3 show that this change comes from a reduction in the likelihood of underestimating minimum experience requirements. These results indicate that the qualification information has a small impact on individuals' perceptions, but the tailored information on average is no more effective in changing perceptions than being incentivized to attend the job fair. Together, these results suggest that information about qualifications does improve information about minimum overseas qualifications, but that the provision of this information does not have substantial impacts on decisions to migrate overseas.

1.6.2 Who is affected by job-fair attendance?

In this section, I examine the characteristics of those affected by job-fair attendance, exploring whether the voucher most influences those with or without prior labor market exposure.

[61] One exception is the domestic helper position, for which more than half of vacancies do not require experience.

In Panel A of Table 1.11, I estimate the main job-search and employment outcomes using binary indicators for whether individuals do or do not having formal job-search experience at baseline interacted with the voucher assignment indicator, omitting the non-interacted voucher dummy.[62] In Panel B, I estimate the same outcomes, this time interacting voucher assignment with indicators for whether the respondent had worked in Manila as of the baseline survey. In the bottom row of each panel, I report the p-values for a test of equality of the two interacted terms for each subgroup.

The voucher increases the likelihood of search in Manila for those without formal job-search experience, but not those with job-search experience, suggesting that the information or a behavioral nudge provided by the fair is important for the former group. However, this change in search behavior for those without formal job-search experience does not lead to a statistically significant increase in formal or informal sector employment (though there is an overall increase in formal or informal sector employment, significant at the five-percent level). Those with past formal job-search experience increase their likelihood of formal sector employment and reduce their likelihood of search either in Manila or locally. This result is consistent with a scenario in which those with past formal job-search experience gain an improvement in their search ability as a result of attendance.

In Panel B, I find that those with work history in Manila adjust their search behavior, and they are more likely to be employed in the formal sector at follow-up.[63] Broadly, these results indicate that, in terms of formal-sector employment, those with at least some labor market exposure gain the most from job fair attendance, in terms of increasing formal sector employment, and that the gain appears to be driven by an improvement in search skills as well as through potential informational or behavioral channels. However, even those

[62]I define having formal job-search experience as having either submitted at least one resume (40 percent) or having interviewed at least once (38 percent). Results are robust to splitting the sample by whether individuals submitted a resume, or by whether individuals ever interviewed. The correlation between these two measures is 0.89.

[63]There is a positive correlation between having work history in Manila and having formal-search experience ($\rho = 0.16$), but 48 percent of those with history in Manila have never looked formally for work.

with essentially no labor-market exposure still change their search behavior, indicating that improving access to labor market information can affect search trajectories for a broad range of individuals. This change in behavior does not appear to be driven by individuals looking for work as a "stepping-stone" to migration; Table 1.3 demonstrates that voucher assignment does not increase individuals' likelihood of taking steps to find work overseas, and individuals are, in fact, less likely to report they are interested in working abroad as a result of voucher assignment. Overall, these results provide suggestive evidence that the employment gains of increased job-search exposure are concentrated among those with at least some prior search experience, while those with no formal job-search experience have the greater change in how they search. These results provide suggestive evidence that attendance works through multiple mechanisms, which provides an outline for future work to disentangle the roles of information, skill acquisition, and reduction of behavioral barriers on job-search effort.

1.7 Conclusion

I implement a randomized field experiment in the rural Philippines to evaluate the role of incomplete information in job-search decisions. I conduct a baseline survey with 862 respondents in Bulan, a rural municipality with limited access to opportunities to find work abroad. Individuals from randomly selected neighborhoods receive information about average overseas wages, minimum qualifications for common overseas positions, or no information. I also generate exogenous variation in job-fair attendance through an encouragement design. I measure the impact of these interventions on job-fair attendance as well as on migration, job-search, and employment outcomes I measure in a follow-up survey conducted ten months after the job fair.

This paper has two main findings. Information about the overseas labor market increases the accuracy of individuals' labor market perceptions, but their decisions to search for work overseas are not affected. It appears that despite their geographic isolation from the capital,

individuals already have fairly good information about overseas work at baseline, particularly about wages and the minimum education requirements. These results indicate that information is not a main barrier to overseas migration in this context.

Secondly, job-fair attendance does not increase migration, though it has persistent domestic labor-market impacts. Assignment to the voucher treatment group, which subsidizes job-fair attendance, more than doubles the likelihood that individuals search for work in Manila in the two months after the job fair, increasing the likelihood of search by 2.1 percentage points compared with an average of 1.6 percentage points for the control group. Additionally, attendance induces individuals to shift from self-employment to work in the formal sector. Formal sector employment rises by 38 percent, or 4.8 percentage points, as a result of voucher assignment, and self-employment falls by 25 percent, or 6.7 percentage points. These results are highly robust to estimating average effect sizes by outcome group, and the employment results remain significant after adjusting for multiple comparisons by controlling the FWER or FDR.

The change in search experience is concentrated among two groups: those without formal job-search experience and those with work history in Manila, indicating a potential role for information or behavioral "nudge' into search. However, only those with at least some labor-market exposure - either with past formal job-search experience or with work history in Manila - increase their likelihood of being employed in the formal sector. Because those with formal job-search experience are more likely to be employed in the formal sector but do not change how they search, there is also evidence that attending the fair may improve individuals' skill in looking for work.

This paper provides the first evidence of the impact of factual information and the experience of searching on individuals' job-search beliefs and decisions. In addition, the main results have implications beyond the realm of job-search decisions in the rural Philippines. These findings indicate that experiential learning may be particularly important in shaping individ-

uals' beliefs and decisions, particularly when information and knowledge is costly and there is uncertainty about outcomes, which is important in contexts ranging from education and health investment decisions to technology adoption. While the exact parameter estimates are likely specific to this context, they indicate the importance of accounting for incomplete information in job-search decisions more broadly.

Figures

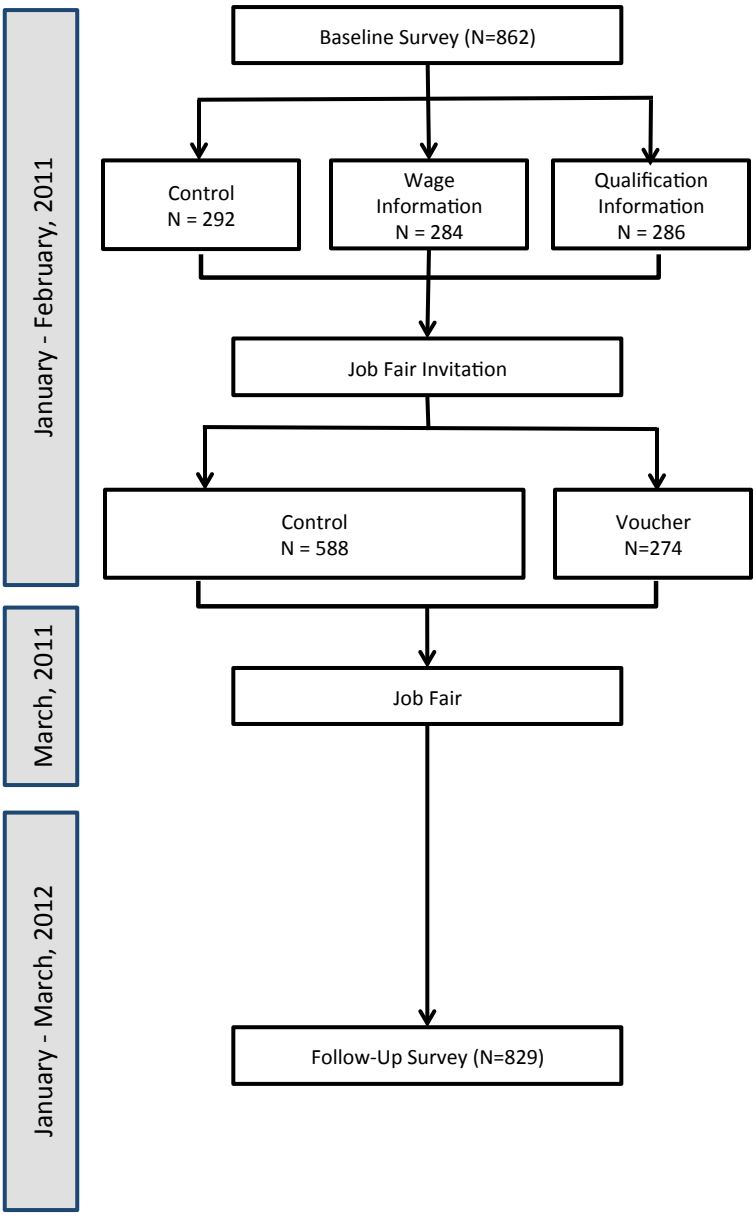


Figure 1.1: Project timeline and intervention flowchart

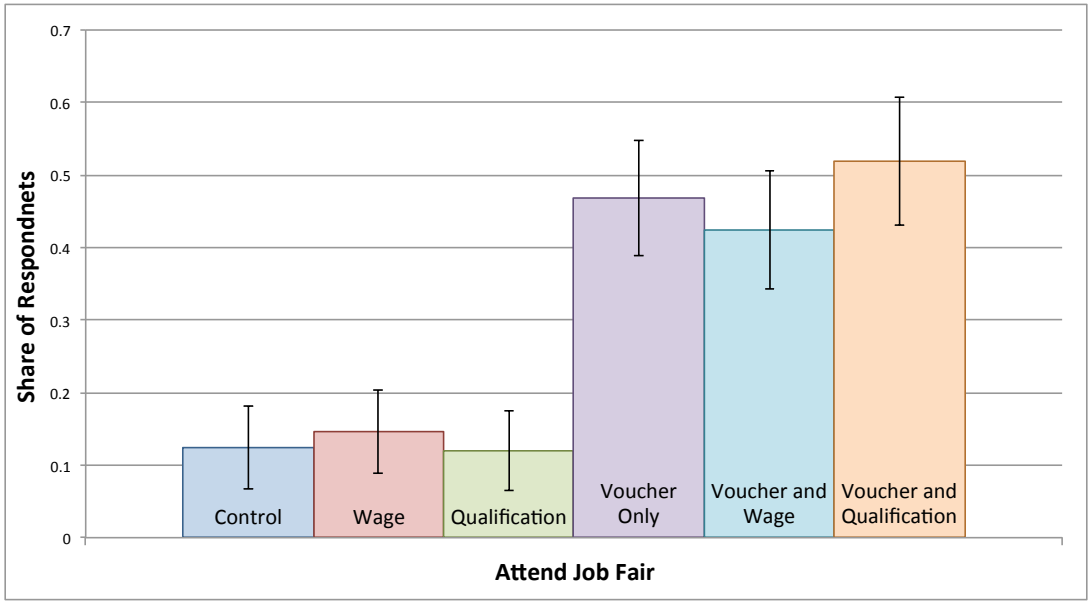


Figure 1.2: Impact of voucher and information treatments on job-fair attendance

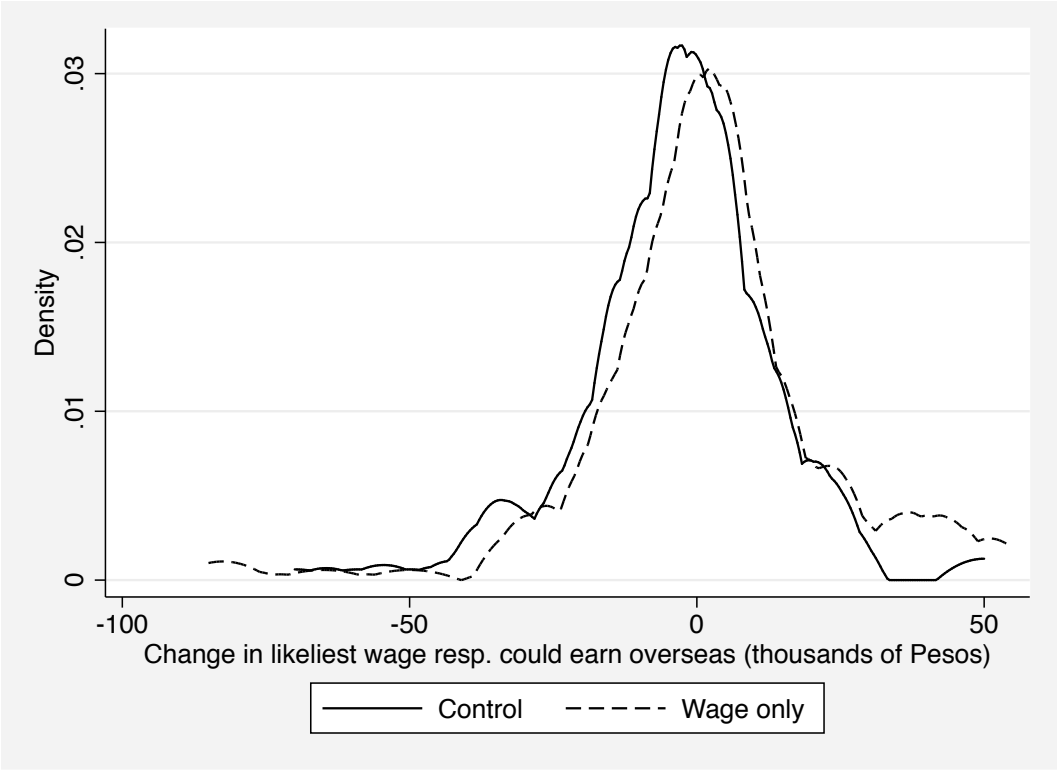


Figure 1.3: Differential change in likeliest wages respondent would earn overseas between baseline and follow-up surveys, by wage treatment assignment

Note: Kolmogorov-Smirnov test rejects equality of distributions with p = 0.026

Tables

Table 1.1: Summary statistics and balancing tests

	Voucher		Information		
	Control	Treatment	Control	Wage	Qual.
	(1)	(2)	(3)	(4)	(5)
Female	49.3	52.6	49.3	48.9	52.8
Age (mean)	27.2	27.2	27.2	26.4	28.0**
Married	57.3	56.9	54.1	51.4	66.1**
With children	58.2	59.5	56.2	51.8	67.8**
High school or greater	74.7	67.9	72.3	75	70.3
College graduate	17.5	13.1	16.8	15.5	16.1
Mean household income (,000s)	6.1	5.3	5.6	6.3	5.5
Working at baseline	35.9	37.2	37.7	35.6	35.7
Ever worked	83.7	85.4	84.9	81.7	86.0
Ever worked in Manila	40.0	37.2	38.0	41.5	37.8
Interested in working abroad	28.2	20.1	28.1	23.9	24.8
Plan to apply abroad, next 12 mo.	34.7	27.4*	29.1	34.2	33.9
Currently has passport	5.4	4.4	4.5	4.2	6.6
Ever applied abroad	29.1	24.8	25.3	28.1	29.7
Any family abroad since 2005	48.5	45.3	45.5	49.7	47.1831
Distance to job fair (km)	3.0	3.2	2.9	3.6	2.8
Observations	588	274	292	284	286
F-test statistic		1.14		0.83	1.82
P-value		0.33		0.65	0.04**

*** p<0.01, ** p<0.05, * p<0.10

Notes: Starred values indicate statistically significant differences between that treatment group (voucher, wage information, or qualification information) and the respective control group. F-test statistic and corresponding p-value reported for joint test of the equality of all covariates between that treatment group and the respective control group. Standard errors clustered at the neighborhood level. Income is top-coded at P40,000 ($US 913) per month.

Table 1.2: Intention-to-treat estimates of voucher and information treatments on whether respondents attend job fair

	Attend job fair			
	(1)	(2)	(3)	(4)
Voucher	0.334***	0.354***	0.327***	0.336***
	[0.035]	[0.035]	[0.053]	[0.055]
Wage Information	-0.008	-0.006	0.004	0.000
	[0.034]	[0.035]	[0.031]	[0.031]
Wage X Voucher			-0.034	-0.015
			[0.090]	[0.092]
Qualification Information	0.007	0.018	-0.010	-0.003
	[0.031]	[0.032]	[0.034]	[0.032]
Qualification X Voucher			0.062	0.077
			[0.076]	[0.076]
Constant	0.687***	0.663***	0.648***	0.622***
	[0.086]	[0.121]	[0.079]	[0.116]
Observations	862	862	862	862
Individual covariates	NO	YES	NO	YES
P-value of joint tests:				
Voucher + Wage + Voucher X Wage = 0			0.00***	0.00***
Voucher + Qual + Voucher X Qual = 0			0.00***	0.00***
Dependent Mean, Control		12.7%		

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to baseline respondents with non-missing covariates. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

Table 1.3: Intention-to-treat estimates of voucher and information treatments on steps to migrate

	Look abroad, Apr.-Jan.	Visit recruit. agency, first time	Obtain passport	Interested working abroad
	(1)	(2)	(3)	(4)
Voucher	0.000	-0.017	0.005	-0.035**
	[0.008]	[0.013]	[0.013]	[0.015]
Wage Information	0.008	0.012	0.032*	-0.004
	[0.008]	[0.018]	[0.017]	[0.023]
Qualification Information	0.007	-0.009	0.008	-0.034
	[0.009]	[0.017]	[0.013]	[0.025]
Constant	-0.050	0.002	-0.036	0.001
	[0.033]	[0.061]	[0.044]	[0.078]
Observations	826	826	826	825
Dependent Mean, Control	1.1%	6.0%	1.6%	13.0%
Stratification Cell FE	YES	YES	YES	YES
Individual Covariates	YES	YES	YES	YES

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to follow-up respondents. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

Table 1.4: Intention-to-treat estimates of voucher and information treatments on job-search effort

	Whether look for work two months after fair			Total offers received ten months after fair		
	Anywhere	Within province	Within Manila	Anywhere	Within province	Within Manila
	(1)	(2)	(3)	(4)	(5)	(6)
Voucher	-0.002	-0.023**	0.021*	0.016	-0.028	0.044*
	[0.015]	[0.010]	[0.012]	[0.032]	[0.020]	[0.025]
Wage Info	-0.004	-0.007	0.008	-0.006	-0.014	0.008
	[0.017]	[0.013]	[0.013]	[0.039]	[0.027]	[0.027]
Qualification Info	-0.011	-0.011	-0.001	-0.068*	-0.025	-0.043
	[0.016]	[0.012]	[0.011]	[0.039]	[0.026]	[0.029]
Constant	0.095	0.069	0.040	0.308**	0.239**	0.070
	[0.066]	[0.055]	[0.035]	[0.139]	[0.111]	[0.108]
Observations	826	826	826	826	826	826
Dep. Mean, Control	5.9%	4.3%	1.6%	0.3	0.1	0.1

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to follow-up respondents. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

Table 1.5: Intention-to-treat estimates of voucher and information treatments on employment status at follow-up survey

Employment status at follow-up survey	Any (1)	Formal (2)	Informal (3)	Self-employ. (4)
Voucher	0.005	0.047**	0.024	-0.067***
	[0.028]	[0.023]	[0.026]	[0.025]
Wage Information	0.005	-0.001	0.029	-0.023
	[0.033]	[0.028]	[0.034]	[0.029]
Qualification Information	0.059	-0.000	0.041	0.019
	[0.037]	[0.025]	[0.038]	[0.033]
Constant	0.275**	0.132	0.111	0.032
	[0.133]	[0.084]	[0.108]	[0.127]
Observations	826	826	826	826
Dependent Mean, Control	54.1%	12.4%	14.6%	27.0%

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to follow-up respondents. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

Table 1.6: Mean standardized treatment effects, by outcome family

	Voucher (1)	Wage Information (2)	Qualification Information (3)
Take steps to migrate	-0.033	0.091*	-0.001
	[0.037]	[0.047]	[0.047]
Shift search to Manila	0.118***	0.039	0.001
	[0.042]	[0.046]	[0.044]
Δ in formal/informal sector employment	0.120***	0.044	0.024
	[0.041]	[0.046]	[0.053]

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to baseline respondents with non-missing covariates. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad. Mean effect sizes calculated based on Equation 1.2.

Table 1.7: Family-wise and false discovery rate adjusted p-values of voucher treatment effects

		FWER		FDR
	Unadjusted p-value	Bonferroni	Holm Step-down	Benjamini-Hochberg
	(1)	(2)	(3)	(4)
Take steps to migrate				
Look abroad, Apr.-Jan.	0.997	1.000	1.000	0.997
Visit recruitment agency, first time	0.197	0.788	0.591	0.394
Obtain passport	0.682	1.000	1.000	0.909
Interested in working abroad	0.020	0.080*	0.080*	0.080*
Job search, months after fair				
Look for work locally, 2 months	0.027	0.108	0.108	0.108
Look for work in Manila, 2 months	0.087	0.348	0.255	0.116
# local offers, 10 months	0.162	0.648	0.255	0.162
# offers in Manila, 10 months	0.085	0.340	0.255	0.116
Employment				
Employed in formal sector	0.046	0.138	0.092*	0.069*
Employed in informal sector	0.347	1.000	0.347	0.347
Self-Employed	0.009	0.027**	0.027**	0.027**

*** p<0.01, ** p<0.05, * p<0.10

Notes: Adjusted p-values calculated as discussed in Section 1.5.3. Sample restricted to follow-up respondents. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

Table 1.8: IV and OLS measures of job-fair attendance on job-search effort and employment status

	Voucher	Attend Job Fair	
	OLS	OLS	IV
	(1)	(2)	(3)
Whether look for work, two months after job fair:			
Anywhere	-0.002	-0.011	-0.006
	[0.015]	[0.020]	[0.039]
Within Province	-0.023**	-0.001	-0.064**
	[0.010]	[0.016]	[0.028]
Within Manila	0.021*	-0.004	0.057*
	[0.012]	[0.012]	[0.033]
Whether employed at follow-up:			
Any	0.005	-0.026	0.013
	[0.028]	[0.035]	[0.076]
Formal	0.047**	0.042	0.130**
	[0.023]	[0.029]	[0.063]
Informal	0.024	-0.049*	0.067
	[0.026]	[0.028]	[0.069]
Self-Employed	-0.067***	-0.019	-0.185***
	[0.025]	[0.036]	[0.069]

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to follow-up respondents. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

Table 1.9: Heterogeneous impacts of wage information on job-fair attendance and perceived likeliest wages overseas, by baseline beliefs about overseas wages

	Attend job fair		Likeliest wage could earn overseas, follow-up	
	(1)	(2)	(3)	(4)
Wage Info	-0.004	0.062	1.502	8.195**
	[0.034]	[0.057]	[1.917]	[3.259]
Wage X Expected Wage		-0.003*		-0.232*
		[0.002]		[0.119]
Constant	0.205*	0.210*	24.861***	15.721***
	[0.111]	[0.114]	[5.926]	[5.349]
Observations	862	862	663	663
Individual covariates	YES	YES	YES	YES
DV Mean, control	12.7%		24.9	

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to baseline respondents with non-missing covariates. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

Table 1.10: Intention-to-treat impacts of voucher and information treatments on accuracy of expectations about minimum experience requirements for overseas work.

Difference between reported and actual minimum experience for overseas work	Abs. average difference	Avg. share overestimate	Avg. share underestimate
	(1)	(2)	(3)
Voucher	-0.070***	0.022	-0.027**
	[0.025]	[0.013]	[0.013]
Wage Information	-0.001	0.009	-0.015
	[0.030]	[0.017]	[0.016]
Qualification Information	-0.057*	0.010	-0.025
	[0.031]	[0.016]	[0.017]
Constant	1.075***	0.140**	0.491***
	[0.149]	[0.055]	[0.050]
Observations	629	629	629
Dependent Mean, Control	1.3	21.1%	56.5%

*** p<0.01, ** p<0.05, * p<0.10

Notes: Average difference based on six common overseas occupations: domestic helper, caretaker, construction worker, plumber, factory worker, and food service worker. Actual minimum experience based on median experience requirements from 23,910 job postings on *workabroad.ph*. Sample includes full follow-up respondents with non-missing qualification information at baseline and follow-up. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

Table 1.11: Heterogeneous impacts of voucher and information treatments on job-search effort and employment outcomes, by past labor-market exposure

	Whether look for work, two months after fair			Total offers received ten months after fair				Employment status at follow-up survey		
	Anywhere	Within province	Within Manila	Anywhere	Within province	Within Manila	Any	Formal	Informal	Self-Emp.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Formal Search Experience										
Voucher X No Search	0.021	-0.019*	0.039**	0.053	-0.013	0.066**	0.012	0.024	0.047	-0.060**
	[0.018]	[0.011]	[0.017]	[0.040]	[0.023]	[0.033]	[0.030]	[0.027]	[0.031]	[0.028]
Voucher X Search	-0.047**	-0.031*	-0.015	-0.054	-0.056*	0.002	-0.009	0.091**	-0.020	-0.080**
	[0.023]	[0.016]	[0.016]	[0.049]	[0.029]	[0.039]	[0.051]	[0.043]	[0.038]	[0.037]
Constant	0.086	0.067	0.032	0.294**	0.233**	0.061	0.272**	0.142*	0.102	0.029
	[0.067]	[0.055]	[0.037]	[0.139]	[0.111]	[0.109]	[0.135]	[0.085]	[0.109]	[0.127]
Observations	826	826	826	826	826	826	826	826	826	826
No search = Search (p-value)	0.02**	0.50	0.03**	0.10*	0.21	0.23	0.71	0.19	0.16	0.61
Panel B: Whether Ever Worked in Manila										
Voucher X Never Manila	-0.011	-0.012	0.001	-0.027	-0.027	-0.001	0.027	0.026	0.055*	-0.054
	[0.019]	[0.013]	[0.014]	[0.035]	[0.025]	[0.025]	[0.037]	[0.029]	[0.032]	[0.036]
Voucher X Ever Manila	0.012	-0.040**	0.053**	0.086	-0.030	0.116**	-0.030	0.081**	-0.025	-0.087**
	[0.026]	[0.019]	[0.020]	[0.062]	[0.036]	[0.056]	[0.048]	[0.037]	[0.044]	[0.043]
Constant	0.098	0.066	0.046	0.322**	0.239**	0.083	0.268**	0.139	0.101	0.028
	[0.066]	[0.056]	[0.035]	[0.142]	[0.111]	[0.110]	[0.134]	[0.085]	[0.107]	[0.126]
Observations	826	826	826	826	826	826	826	826	826	826
No Manila = Manila (p-value)	0.48	0.24	0.04**	0.14	0.94	0.08*	0.37	0.22	0.16	0.60

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to follow-up respondents. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

1.A Sample characteristics

Figure 1.A.4: Urban and rural barangay maps, with neighborhood boundaries

Table 1.A.1: Sample size and attrition

		N	Share
Baseline		**865**	**100.0%**
Follow-up		**835**	**96.5%**
	Full Survey	692	80.0%
	Proxy	143	16.5%
Attrition		**30**	**3.5%**
	Deceased	4	0.5%
	Refused (no proxy)	15	1.7%
	In Manila (no proxy)	4	0.5%
	Outside municip. (no proxy)	4	0.5%
	Moved w/in Bulan (no proxy)	2	0.2%
	Unlocated	1	0.1%

Table 1.A.2: Treatment assignment distribution

	(Share) Sample Size		
	No Voucher	Voucher	Total
No Information	*22%*	*11%*	*33%*
	197	95	292
Wage Information	*22%*	*11%*	*33%*
	186	98	284
Qualification Information	*22%*	*11%*	*33%*
	205	81	286
Total	*66%*	*33%*	*100%*
	588	274	862

Table 1.A.3: Summary statistics and balancing tests

	Mean	S.D.	F-test	
	All		Info	Voucher
	(1)	(2)	(3)	(4)
Female	50.3	50.0	2.2	2.3
Age (mean)	27.2	4.4	9.2***	0.0
Married	57.2	49.5	5.7***	0.0
With children	58.6	49.3	6.3***	0.1
HS Only	31.1	46.3	0.6	0.1
Some college or vocational	25.3	43.5	0.6	0.9
College graduate	16.1	36.8	0.1	2.2
Mean household income (thousands)	5.8	6.6	0.5	1.4
Working at baseline	36.3	48.1	0.2	0.1
Ever worked	84.2	36.5	0.7	0.3
Ever worked in Manila	39.1	48.8	0.2	0.2
Interested in working abroad	25.6	43.7	0.5	5.9**
Plan to apply abroad in next 12 months	32.4	46.8	0.6	3.4
Currently has passport	5.1	22.0	1.0	0.4
Ever applied abroad	27.7	44.8	0.7	1.6
Any family abroad since 2005	47.4	50.0	0.3	0.6
Distance to job fair (km)	3.1	2.8	0.6	0.1
Observations			862	

*** p<0.01, ** p<0.05, * p<0.10

Notes: Mean and standard deviation reported for full sample. F-test statistic for joint test of equality of means between all information groups (control, wage, qualification) and for voucher groups (control, treatment), with standard errors clustered at the neighborhood level. Income is top-coded at P40,000 ($US 913) per month.

Table 1.A.4: Differential attrition by treatment assignment

	Attrition				Proxy			
	Mean	SD	F-test	P-val	Mean	SD	F-test	P-val
No Information	2.73	16.32			18.43	38.86		
Wage Info.	4.58	20.94	1.82	0.18	16.90	37.54	0.27	0.61
Qualification Info.	3.13	17.43	0.02	0.88	14.24	35.00	1.59	0.21
No Voucher	3.05	17.21			17.12	37.70		
Voucher	4.36	20.47	0.95	0.3314	15.27	36.04	0.59	0.4451
Observations	865				865			

1.B Intervention materials

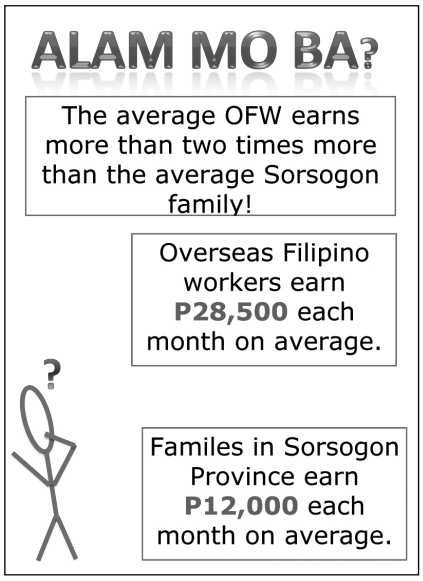


Figure 1.B.1: Wage information treatment (English translation)

Wage information script:

I would like to share with you some information about average wages locally and overseas. Information on OFW wages comes from POEA and information on Sorsogon wages come from a survey we conducted around Sorsogon Province last year. These wages are based on an average of the experiences of thousands of workers and families, so the experiences of yourself and the people you know may be different.

On average the salary of an OFW is more than two times the total income of a Sorsoganon family. The average OFW earns P28,500 every month. The average family in Sorsogon province earns P12,000 every month.

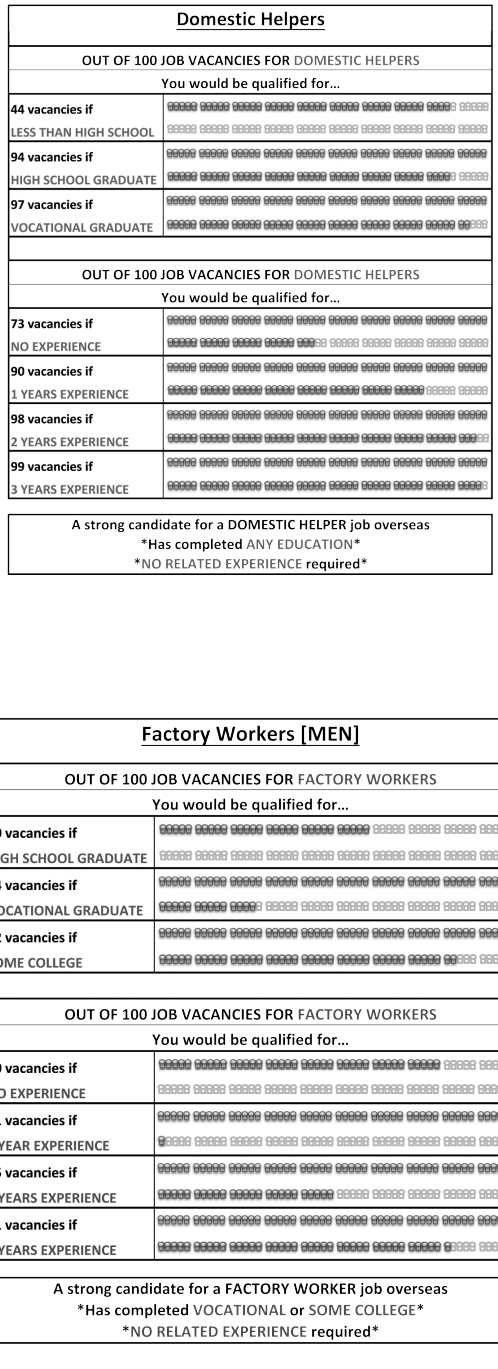


Figure 1.B.2: Occupation cards for domestic helper (women) and factory worker (men)

Qualification Information Script:

I would like to share with you some information about your qualifications for work overseas. We've collected information about job postings for thousands of overseas job vacancies from workabroad.ph and we've summarized it on these pages.

In order to give you the most useful information, please select TWO occupations that you would like to learn more about from the following list. **[SHOW LIST]**

First, I'm going to tell you about typical qualifications for a position as a [DESIRED POSITION 1]. These qualifications are based on an average of hundreds of job postings, so there may be vacancies with both higher and lower minimum qualifications.

Each shaded person represents one job vacancy out of 100 job vacancies. For example, if all job postings for a certain position are open to a high school graduate, all 100 persons will be shaded. If only half of positions are open to a high school graduate, 50 persons will be shaded and 50 persons will be empty.

Do you have any questions? **[READ SCRIPT FOR DESIRED POSITION 1]**

Now, I'm going to tell you about typical qualifications for a position as a [DESIRED POSITION 2].

[READ SCRIPT FOR DESIRED POSITION 2]

Based on your qualifications, I'm going to tell you about the typical qualifications for positions as a [ASSIGNED POSITION 1] and [ASSIGNED POSITION 2].

[READ SCRIPT FOR ASSIGNED POSITIONS 1 AND 2]

Position Script:

For [WOMEN/MEN] applying for a position as a POSITION,

[READ ONLY THOSE EDUCATION PROMPTS INCLUDED ON THE INFO SHEET]

XX vacancies out of every 100 vacancies, or XX percent, would be open to you if you had less than a high school diploma. YY vacancies out of every 100 vacancies, or YY percent, would be open to you if you are a high school graduate. ...

[READ ONLY THOSE EXPERIENCE PROMPTS INCLUDED ON THE INFO SHEET]

With respect to experience, XX vacancies out of every 100 vacancies, or XX percent, would be open to you if you have no related experience. YY vacancies out of every 100 vacancies, or YY percent, would be open to you if you have 1 year of related experience. ...

Because you are a RESPONDENT EDUCATION, you would be eligible for XX vacancies out of 100 vacancies, or XX percent. Because you have RESPONDENT RELATED EXPERIENCE years of related experience, you would be eligible for YY vacancies out of 100 vacancies, or YY percent.

[PICK THE CUTOFF WHERE AT LEAST 40 VACANCIES ARE AVAILABLE]

In general, a good candidate for POSITION would be at least CUTOFF EDUCATION and have at least CUTOFF EXPERIENCE years of related experience.

[IF MEETS BOTH > 60] Based on your qualifications, you would be a very strong candidate for a position overseas as a POSITION.

[IF MEETS BOTH > 40] Based on your qualifications, you would be a strong candidate for a position overseas as a POSITION.

[IF MEETS ONE OR NONE > 40] Based on your qualifications, you are not a strong candidate right now for a position as a POSITION, but you could be by increasing your **[EDUCATION/EXPERIENCE/EDUCATION AND EXPERIENCE]**.

Do you have any questions?

1.C Additional specifications

Table 1.C.1: Predictors of whether respondents had ever applied overseas at baseline

	Ever applied for overseas work, baseline	
	(1)	(2)
Likeliest wage would earn abroad (in thousands)	0.003**	0.001
	[0.001]	[0.001]
Likelihood offered job if applied	0.434***	0.251***
	[0.059]	[0.058]
Female		0.005
		[0.035]
Age		0.001
		[0.003]
Any children		-0.043
		[0.031]
At least high school graduate		0.126***
		[0.029]
College graduate		0.162***
		[0.044]
Employed		0.027
		[0.036]
Ever worked in Manila		0.070**
		[0.034]
Interested in working abroad		0.154***
		[0.046]
Observations	862	862
R-squared	0.105	0.173

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to baseline respondents with non-missing covariates. Stratification cell and enumerator FE included. Robust standard errors clustered at the neighborhood level reported in brackets. Binary indicators included for missing data on likeliest wages and likelihood offered a job abroad.

Table 1.C.2: Intention-to-treat estimates of voucher and information treatments on job-search effort, one and ten months after job fair

	Whether look for work one month after job fair			Whether look for work ten months after job fair			Total months look for work ten months after job fair		
	Anywhere	Within province	Within Manila	Anywhere	Within province	Within Manila	Anywhere	Within province	Within Manila
	(1)	(2)	(3)	(4)	(5)	(6)	(4)	(5)	(6)
Voucher	0.008	-0.014***	0.022**	0.002	-0.039	0.031	0.012	-0.062*	0.088**
	[0.011]	[0.005]	[0.009]	[0.026]	[0.023]	[0.021]	[0.053]	[0.033]	[0.042]
Wage Info	0.000	0.010	-0.005	0.004	-0.012	0.014	0.003	0.001	-0.016
	[0.011]	[0.008]	[0.009]	[0.037]	[0.031]	[0.025]	[0.066]	[0.039]	[0.047]
Qualification Info	0.000	0.002	-0.003	-0.080**	-0.052	-0.047*	-0.095	-0.031	-0.093**
	[0.010]	[0.007]	[0.008]	[0.039]	[0.032]	[0.024]	[0.072]	[0.043]	[0.047]
Constant	0.089**	0.046*	0.056*	0.472***	0.359***	0.163*	0.401	0.418***	0.114
	[0.038]	[0.024]	[0.032]	[0.133]	[0.118]	[0.093]	[0.244]	[0.140]	[0.185]
Observations	826	826	826	826	826	826	826	826	826
Dep. Mean, Con.	1.6%	0.5%	1.1%	29.8%	18.1%	12.8%	0.42	0.21	0.20

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to follow-up respondents. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

Table 1.C.3: Baseline accuracy of respondent perceptions of minimum qualifications for work abroad

	Minimum education required to work abroad				
	Median		Accuracy of respondent estimates		
	Baseline	Workabroad.ph	% Below	% Correct	% Above
Domestic helper	High school	High school	0.11	0.61	0.28
Caretaker	High school	Some college/voc	0.57	0.25	0.18
Plumber	High school	High school	0.14	0.63	0.23
Construction worker	High school	High school	0.10	0.52	0.38
Food service worker	Some college/voc	Some college/voc	0.42	0.29	0.29
Factory worker	High school	Some college/voc	0.53	0.27	0.20

	Minimum years experience to work abroad				
	Median		Accuracy of respondent estimates		
	Baseline	Workabroad.ph	% Below	% Correct	% Above
Domestic helper	1	0	0.00	0.30	0.70
Caretaker	1	1	0.28	0.50	0.22
Plumber	1	3	0.90	0.06	0.04
Construction worker	1	3	0.91	0.06	0.03
Food service worker	1	2	0.76	0.17	0.07
Factory worker	1	1 (men)/0(women)	0.20	0.55	0.25

1.D Robustness

Table 1.D.1: Intention-to-treat estimates of voucher and information treatments on steps to migrate, probit specifications

	Look abroad, Apr.-Jan.	Recruitment agency visit, first time	Obtain passport	Interested in working abroad
	(1)	(2)	(3)	(4)
Voucher	0.000	-0.013	0.008	-0.034**
	[0.002]	[0.012]	[0.010]	[0.017]
Qualification Information	0.005	-0.009	0.011	-0.027
	[0.005]	[0.013]	[0.012]	[0.021]
Wage Information	0.006	0.009	0.028*	-0.005
	[0.006]	[0.015]	[0.015]	[0.020]
Observations	826	826	826	825
Observations	826	826	826	826
Dependent Mean, Control	1.1%	6.0%	1.6%	13.0%

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to follow-up respondents. Marginal effects reported at covariate means. Robust standard errors clustered at the neighborhood level reported in brackets. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently employed, ever employed in Manila, and interested in working abroad. Whether ever employed and whether completed at least high school excluded because they perfectly predict some outcome variables.

Table 1.D.2: Intention-to-treat estimates of voucher and information treatments on job-search effort, probit specifications

	Whether look for work two months after job fair		
	Anywhere	Within province	Within Manila
	(1)	(2)	(3)
Voucher	0.004	-0.020**	0.020*
	[0.014]	[0.008]	[0.011]
Wage Information	-0.002	-0.005	0.006
	[0.015]	[0.010]	[0.009]
Qualification Information	-0.004	-0.008	0.004
	[0.016]	[0.009]	[0.009]
Observations	826	826	826
Dependent Mean, Control	5.9%	4.3%	1.6%

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to follow-up respondents. Marginal effects reported at covariate means. Robust standard errors clustered at the neighborhood level reported in brackets. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently employed, ever employed in Manila, and interested in working abroad. Whether ever employed and whether completed at least high school excluded because they perfectly predict some outcome variables.

Table 1.D.3: Intention-to-treat estimates of voucher and information treatments on employment status at follow-up survey, probit specifications

At follow-up:	Any	Formal	Informal	Self-employ.
	(1)	(2)	(3)	(4)
Voucher	0.018	0.037*	0.034	-0.059*
	[0.039]	[0.022]	[0.030]	[0.031]
Wage Information	0.016	-0.011	0.031	-0.025
	[0.042]	[0.023]	[0.034]	[0.035]
Qualification Information	0.090*	-0.005	0.048	0.019
	[0.051]	[0.023]	[0.039]	[0.036]
Observations	826	826	826	826
Dependent Mean, Control	54.1%	12.4%	14.6%	27.0%

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to follow-up respondents. Marginal effects reported at covariate means. Robust standard errors clustered at the neighborhood level reported in brackets. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently employed, ever employed, ever employed in Manila, and interested in working abroad.

Table 1.D.4: Robustness of voucher impacts on migration steps, job-search effort, and employment status

	Voucher					
	(1)	(2)	(3)	(4)	(5)	(6)
Whether take steps to find work abroad						
Look for work abroad, 10 mo	-0.002	0.001	0.000	-0.004	-0.002	-0.004
	[0.009]	[0.009]	[0.008]	[0.010]	[0.010]	[0.009]
Visit RA first time	-0.022	-0.016	-0.017	-0.013	-0.009	-0.011
	[0.016]	[0.014]	[0.013]	[0.018]	[0.016]	[0.014]
Obtain passport	-0.000	0.007	0.005	-0.002	0.004	0.001
	[0.015]	[0.014]	[0.013]	[0.016]	[0.015]	[0.015]
Interested in working abroad	-0.051**	-0.036**	-0.035**	-0.044**	-0.034*	-0.029*
	[0.020]	[0.018]	[0.015]	[0.022]	[0.019]	[0.017]
Whether look for work, two months after job fair						
Anywhere	-0.001	0.001	-0.002	0.011	0.011	0.006
	[0.015]	[0.014]	[0.015]	[0.016]	[0.016]	[0.016]
Within province	-0.023**	-0.022**	-0.023**	-0.022**	-0.022**	-0.023**
	[0.010]	[0.009]	[0.010]	[0.010]	[0.010]	[0.011]
Within Manila	0.022*	0.022*	0.021*	0.033**	0.033**	0.029**
	[0.013]	[0.012]	[0.012]	[0.014]	[0.014]	[0.013]
Employment status at follow-up survey						
Any	0.000	0.012	0.005	0.011	0.014	0.010
	[0.037]	[0.031]	[0.028]	[0.046]	[0.038]	[0.035]
Formal	0.022	0.039	0.047**	0.033	0.040*	0.046**
	[0.028]	[0.023]	[0.023]	[0.026]	[0.022]	[0.022]
Informal	0.026	0.029	0.024	0.040	0.041	0.041
	[0.029]	[0.030]	[0.026]	[0.035]	[0.035]	[0.030]
Self-employment	-0.049	-0.056*	-0.067***	-0.061	-0.067*	-0.075**
	[0.033]	[0.031]	[0.025]	[0.039]	[0.037]	[0.031]
Proxy respondents included	YES	YES	YES	NO	NO	NO
Observations	826	826	826	663	663	663
Individual covariates		X	X		X	X
Stratification cell fixed effects			X			X
Enumerator fixed effects			X			X

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to follow-up respondents. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

Table 1.D.5: Robustness of wage information impacts on migration steps, job-search effort, and employment status

	Wage Information					
	(1)	(2)	(3)	(4)	(5)	(6)
Whether take steps to find work abroad						
Look for work abroad, 10 mo	0.008	0.010	0.008	0.010	0.011	0.008
	[0.010]	[0.010]	[0.008]	[0.012]	[0.012]	[0.010]
Visit RA first time	0.005	0.013	0.012	0.007	0.012	0.011
	[0.021]	[0.019]	[0.018]	[0.021]	[0.019]	[0.019]
Obtain passport	0.030	0.031*	0.032*	0.039*	0.038*	0.040**
	[0.019]	[0.018]	[0.017]	[0.021]	[0.020]	[0.018]
Interested in working abroad	-0.012	-0.007	-0.004	0.003	0.006	0.010
	[0.030]	[0.026]	[0.023]	[0.034]	[0.030]	[0.026]
Whether look for work, two months after job fair						
Anywhere	-0.002	-0.001	-0.004	-0.003	-0.001	-0.001
	[0.017]	[0.017]	[0.017]	[0.018]	[0.018]	[0.018]
Within province	-0.006	-0.006	-0.007	-0.004	-0.003	-0.000
	[0.013]	[0.013]	[0.013]	[0.014]	[0.014]	[0.014]
Within Manila	0.008	0.009	0.008	0.006	0.006	0.006
	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]
Employment status at follow-up survey						
Any	-0.016	0.004	0.005	-0.003	0.000	0.000
	[0.039]	[0.033]	[0.033]	[0.051]	[0.040]	[0.043]
Formal	-0.007	-0.012	-0.001	0.009	0.002	0.013
	[0.033]	[0.028]	[0.028]	[0.031]	[0.025]	[0.023]
Informal	0.027	0.035	0.029	0.030	0.032	0.020
	[0.032]	[0.032]	[0.034]	[0.034]	[0.033]	[0.035]
Self-employment	-0.036	-0.019	-0.023	-0.042	-0.033	-0.033
	[0.038]	[0.033]	[0.029]	[0.044]	[0.038]	[0.034]
Proxy respondents included	YES	YES	YES	NO	NO	NO
Observations	826	826	826	663	663	663
Individual covariates		X	X		X	X
Stratification cell fixed effects			X			X
Enumerator fixed effects			X			X

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to follow-up respondents. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

Table 1.D.6: Robustness of qualification information impacts on migration steps, job-search effort, and employment status

	Qualification Information					
	(1)	(2)	(3)	(4)	(5)	(6)
Whether take steps to find work abroad						
Look for work abroad, 10 mo	0.011	0.010	0.007	0.012	0.012	0.009
	[0.010]	[0.010]	[0.009]	[0.011]	[0.011]	[0.009]
Visit RA first time	-0.012	-0.010	-0.009	-0.008	-0.004	-0.002
	[0.018]	[0.017]	[0.017]	[0.019]	[0.018]	[0.017]
Obtain passport	0.007	0.011	0.008	0.007	0.012	0.012
	[0.013]	[0.012]	[0.013]	[0.013]	[0.013]	[0.014]
Interested in working abroad	-0.046	-0.034	-0.034	-0.051*	-0.037	-0.030
	[0.028]	[0.025]	[0.025]	[0.026]	[0.023]	[0.024]
Whether look for work, two months after job fair						
Anywhere	-0.010	-0.004	-0.011	0.010	0.015	0.011
	[0.017]	[0.017]	[0.016]	[0.018]	[0.018]	[0.017]
Within province	-0.012	-0.011	-0.011	-0.007	-0.006	-0.003
	[0.012]	[0.012]	[0.012]	[0.013]	[0.013]	[0.013]
Within Manila	-0.002	0.003	-0.001	0.013	0.016	0.013
	[0.012]	[0.012]	[0.011]	[0.013]	[0.013]	[0.013]
Employment status at follow-up survey						
Any	0.051	0.065	0.059	0.057	0.074	0.074*
	[0.044]	[0.041]	[0.037]	[0.052]	[0.046]	[0.044]
Formal	-0.027	-0.007	-0.000	-0.001	0.013	0.018
	[0.030]	[0.026]	[0.025]	[0.027]	[0.023]	[0.023]
Informal	0.042	0.049	0.041	0.065	0.070*	0.061
	[0.037]	[0.037]	[0.038]	[0.040]	[0.039]	[0.040]
Self-employment	0.035	0.023	0.019	-0.007	-0.009	-0.004
	[0.038]	[0.036]	[0.033]	[0.045]	[0.043]	[0.039]
Proxy respondents included	YES	YES	YES	NO	NO	NO
Observations	826	826	826	663	663	663
Individual covariates		X	X		X	X
Stratification cell fixed effects			X			X
Enumerator fixed effects			X			X

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to follow-up respondents. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

1.E Qualification treatment heterogeneity

Like the wage information treatment, information about minimum qualifications for overseas work may have heterogeneous impacts depending on respondents' characteristics, both because their response may depend on their own perceptions, and because what information they receive depends on their gender and may also depend on their education level and work experience. I examine the role of heterogeneity to determine whether the information affects individuals' behavior and labor market perceptions differentially by gender or by educational attainment. I estimate the ITT impact of minimum qualification information on whether individuals attend the job fair, their average accuracy on minimum experience requirements described earlier, their predicted probability of being offered a job overseas if they apply (the "perceived likelihood of job-finding abroad"), and their self-reported qualification level for overseas work. The last measure is based on reports of how qualified respondents say they are for each of six common overseas positions, ranging from "not qualified" (1) to "very qualified" (5).[64] I take the maximum of these six values as their self-reported qualification level. Appendix Table 1.E.1 reports estimates for these three measures, first using the full sample, then separately by gender and by whether they had completed at least some post-secondary schooling.[65]

Although the qualification information has no net impact overall, men assigned to receive qualification information are 9.1 percentage points more likely to attend the job fair, and they increase their perceived likelihood of job-finding abroad, conditional on applying, by 10.3 percentage points. This change in the perceived likelihood of job-finding abroad is statistically significantly different between men and women.[66] The impact on the maximum qualification index is also positive for men, though small and not statistically significant.

[64]These positions are domestic helper, caretaker, construction worker, plumber, factory worker, and food service crew member. I control for the baseline reported maximum qualification index in these specifications.

[65]I exclude proxy surveys in all specifications, as the perceived probabilities of job offers and qualification levels are only reported in the full surveys. Attendance results are comparable in the full sample.

[66]The reported p-values of tests of the equality of coefficients between men and women are based on a model that fully interacts a gender dummy with all treatment indicators, covariates, and fixed effects.

These results contrast sharply with the results for women, which are all negative and not statistically significant, and are different from the results for men at the five-percent level. The distinction along education lines is less clear, which is reasonable given that a high school diploma is a sufficient qualification for many occupations and that this does not account for relevant experience, the dimension along which individuals were the least accurate. Consequently, qualification information does not affect attendance or the perceived likelihood of job-finding abroad for those with or without post-secondary education, though individuals with some post-secondary education report that they are more qualified for overseas positions at follow-up.

Together, the heterogeneity in impacts suggest that information about minimum qualifications for overseas work does affect individuals' perceptions about minimum qualifications for overseas work, but that it only translates to changes in one's own labor market perceptions and job-fair attendance for men. In Appendix Table 1.E.2, I find that qualification information has small impacts on migration steps taken (those used in Table 1.3) by gender and by educational attainment. There are broadly positive impacts on migration steps among those who did not complete any post-secondary schooling, but only one of these - whether an individual searched abroad at all in the ten months following the fair - is marginally statistically significant. There are also small, negative impacts of qualification information on the likelihood of visiting a recruitment agency for the first time among women and those with some post-secondary schooling, but only the latter is marginally statistically significant. I cannot reject the equality of coefficients between gender or education subgroups.

Table 1.E.1: Heterogeneous impacts of qualification information on job-fair attendance and overseas labor market perceptions, by gender and education

	Attend job fair	Abs. average dif. in min. experience	Prob. job offer abroad, if apply	Qualification index, 1(low) -5 (high)
	(1)	(2)	(3)	(4)
All	0.024	-0.057*	0.040	0.106
	[0.031]	[0.031]	[0.025]	[0.137]
Men	0.091*	-0.067	0.103***	0.140
	[0.047]	[0.048]	[0.032]	[0.178]
Women	-0.025	-0.062	0.004	-0.018
	[0.042]	[0.043]	[0.033]	[0.153]
High school or less	0.014	-0.044	0.070**	-0.016
	[0.041]	[0.046]	[0.035]	[0.175]
More than high school	0.020	-0.087**	-0.032	0.365*
	[0.054]	[0.042]	[0.039]	[0.217]
Total observations	862	629	663	663
Dep. Mean, Control	12.7%	1.3	47.5%	3.7
P-value from test for equality of coefficients				
Gender	0.12	0.98	0.01**	0.60
Education	0.80	0.74	0.05*	0.04**

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to baseline respondents with full follow-up surveys. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

Table 1.E.2: Heterogeneous impacts of qualification information on steps to migrate, by gender and education

	Look abroad, Apr.-Jan.	Recruitment agency visit, first time	Obtain passport
	(1)	(2)	(3)
All	0.007	-0.009	0.008
	[0.009]	[0.017]	[0.013]
Men	0.024	0.024	-0.008
	[0.016]	[0.026]	[0.016]
Women	-0.003	-0.034	0.023
	[0.009]	[0.024]	[0.023]
High school or less	0.013*	0.012	0.010
	[0.008]	[0.022]	[0.014]
More than high school	0.007	-0.034	0.002
	[0.021]	[0.026]	[0.024]
Total observations	826	826	826
Dependent Mean, Control	1.1%	5.9%	1.6%
P-value from test for equality of coefficients			
Gender	0.17	0.12	0.28
Education	0.74	0.18	0.79

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample includes all follow-up respondents. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and interested in working abroad.

CHAPTER 2

Perceived Returns and Job-Search Selection

2.1 Introduction

Participant self-selection into (or out of) active labor market programs is a fundamental component of measuring the programs' overall impact. While natural and randomized experiments can obtain causal identification of these program impacts, generalizing these estimates requires understanding how people who select into the evaluated program may differ from the general population, which they may do in both observable and unobservable ways.

This paper uses experimental evidence from the rural Philippines to examine how the characteristics of individuals who participate in labor market programs differ from those who do not. Specifically, I consider the degree and nature of individuals' self-selection into attending and participating in a job fair for overseas work. By combining survey data with a novel dataset of labor demand for overseas work, I examine how individuals' qualifications and labor market perceptions correlate with their decisions to look for work at the fair. I also measure how this selection changes in response to exogenous variation in the benefit of searching. Specifically, I examine the impact of a modest incentive to look for work abroad, similar in spirit to door prizes or giveaways commonly used to entice job-seekers to job and career fairs, on the overall levels of attendance and participation at the fair, as well as on the characteristics of the searchers.

Under a simple framework of program participation, individuals will attend the job fair if the perceived benefits exceed the perceived costs.[1] Positive selection will occur if more-qualified workers, with higher expected benefits from working abroad, are more likely to attend.[2] However, more-qualified workers may also have higher opportunity costs of attending the fair and of migrating abroad, inducing negative selection.[3] The distribution of underlying relative returns to migration - reflecting qualification levels, individuals' outside options, and the costs of search - will determine the overall pattern of selection (Roy, 1951; Borjas, 1987). A subsidy will increase the benefit of attending, bringing in less qualified workers in the case of positive selection, or bringing in more-qualified workers in the case of negative selection. For example, Duflo and Saez (2003) find that paying university employees to attend a retirement savings plan enrollment fair yields large increases in attendance, but the higher rate of enrollment they observe is driven entirely by spillovers to untreated members of the same department, as those who attend the fair as a result of the subsidy are no more likely to enroll.[4]

In the presence of imperfect information, however, two additional issues may complicate selection. First, individuals' perceptions of their labor market prospects may not correlate perfectly with their actual returns; individuals may over or underestimate their own qualifications or they may be highly uncertain about their prospects (Falk, Huffman and Sunde, 2006*a*). These factors may affect their attendance decisions directly, and individuals may also revise their beliefs upon attending. If individuals update their expectations about their

[1] I assume that credit constraints do not prevent attendance. In this context, most individuals live within walking distance from the job fair. The subsidy is unlikely to address credit constraints directly because individuals receive the subsidy after traveling to the fair, and because the subsidy is a restaurant voucher, which is difficult to convert to cash.

[2] Alternatively more-qualified workers may participate if they're more likely to know about the fair. See Heckman and Smith (2004) for an example.

[3] For example, recent evidence on the impact of the expansion of relatively low-cost Internet job search on unemployment suggests that these online job-seekers are negatively selected on unobserved characteristics (Kuhn and Skuterud, 2004; Hadass, 2004).

[4] That degree of negative selection is particularly problematic in the similar case of a job fair, as a large number of unmotivated attendees might crowd out motivated attendees, potentially reducing their chances of job-finding.

job-finding prospects after attending, and if the cost of participating conditional on attending is non-zero, they may select differently into participation, and this change in selection may depend on their underlying qualifications and their prior perceptions.[5]

To understand how individuals self-target into job search, I surveyed 862 residents of Bulan, Sorsogon Province, who were ages 20-35 and had never worked overseas. I obtained their detailed work histories and measured their beliefs about the likelihood they would be offered a job abroad if they were to apply. I also collected data from the most popular online job-finding database for overseas Filipino workers on minimum educational and experiential requirements for overseas work from 24,300 job-postings, representing roughly 230,000 vacancies. I linked this data on the number of overseas jobs available by education, years of relevant experience, and gender to respondents' backgrounds to measure the share of overseas jobs for which they are potentially qualified. This measure serves as a proxy for individuals' relative qualification levels for overseas work, which reflects their likelihood of being able to find work abroad.[6]

I generated exogenous variation in the benefit of attending by offering individuals from randomly selected neighborhoods vouchers that they could exchange for a gift certificate to a local fast-food restaurant any time during a two-day overseas employment fair located nearby.[7] The survey team hosted this job-fair in partnership with the municipality, and it

[5]Respondents may have stayed at the job fair after receiving the voucher despite low perceived returns if applying is nearly costless, particularly if the job fair is viewed as more of a social event or if the time required to apply is negligible. However, slightly more than half of respondents arrive at the job fair alone. Additionally, there were large queues of applicants at the recruitment agency booths. Applicants spent, on average, 116 more minutes at the job fair than those who only attended. For respondents to view applying as costless, the opportunity cost of time for low-qualified applicants would have to be very low.

[6]I use a measure that reflects the likelihood of job-finding rather than wages because the relative returns to migration are high even for relatively low-paying overseas jobs. In 2011-adjusted pesos, the average overseas worker earned P28,500 (US$650) monthly (McKenzie, Theoharides and Yang, forthcoming), and for relatively less-skilled overseas domestic helpers, the Philippine government set a minimum wage of US$400 monthly. In contrast, the median wage of a permanent wage/salary worker in Manila was 404 pesos daily in 2011, roughly US$185 per month with 20 workdays. Outside the capital, the median wage was about 273 pesos daily (US$125 monthly). This and all subsequent currency conversions are based on the average exchange rate from January to February 2011 of 1 US$= 43.7976 PH (OANDA, 2012).

[7]The gift certificate was for Jollibee, a popular fast-food chain with a restaurant located in the central business distract of Bulan. It was worth P150 (US$3.42), which was approximately enough to buy a fast-food meal for four people.

attracted more than 750 participants, roughly 30 percent of whom were survey respondents. Enumerators tracked individuals' attendance and participation at the job fair, and I matched this administrative data with survey responses to examine how those induced to search through the increased benefit of attending differ from the general applicant pool, as well as how those who stay and participate in the fair differ from those who leave immediately after retrieving their incentive.

I find that 13 percent of the control group - individuals who were invited to attend the job-fair but not subsidized - do attend the fair, and they are positively selected from the overall distribution of respondents, in terms of both their qualifications and their own perceptions. Offering a subsidy increases attendance by 35.4 percentage points, or by 270 percent.[8] Attendance rates increase for both high and low qualification levels, indicating that high opportunity costs or underestimation of one's qualifications may be restricting attendance in the absence of this subsidy. In general, this increase is greatest for the least qualified and those with the lowest perceived chance of job-finding. However, these attendees, while negatively selected compared to the control-group attendees, are broadly representative of the population from which they are drawn.

The subsidy also generates a 8.8 percentage-point increase in the likelihood that individuals visit an information booth at the fair and a 4.7 percentage-point increase in application rates. While most unsubsidized control-group attendees (78 percent) apply with a recruitment agency, roughly half of subsidized attendees leave after collecting their voucher. I find that individuals self-select out based on their interest in working abroad and qualifications. However, their perceived likelihood of job-finding remains a strong predictor of participation even after controlling for individuals' education or the share of jobs for which they may be qualified. The voucher induces individuals with a high degree of uncertainty about their

[8]These effects are large in magnitude but in line with estimates of the response to incentivized fair attendance in other contexts; for example, Duflo and Saez (2003) find that offering $20 subsidy to university employees for attending an employee retirement-benefits fair increased attendance rates by a factor greater than five.

job-finding prospects - those who report a 50-percent chance they would be offered a job abroad if they applied - to apply with recruitment agencies. I find suggestive evidence that this reported uncertainty proxies for individuals not knowing their labor market prospects, suggesting that these uncertain searchers are either just on the margin of applying without the subsidy, or that they update their beliefs about their own prospects upon attending the fair.

These results have several implications: they provide evidence that small incentives to increase job search have large effects on attendance and application. While these incentives "undo" some of the positive selection that occurs in their absence, those who attend the fair are reflective of the general population in their qualifications, perceived chances of job-finding, and interest in overseas work. Additionally, that the increase in application induced by the voucher is concentrated exclusively among those with a high degree of uncertainty about their job-finding prospects indicates the presence of imperfect information about overseas migration, and that a modest subsidy can help individuals choose to reduce these informational barriers. Additionally, unless these uncertain respondents are just on the margin of applying, where the difference between the benefits exceed the cost but by less than the utility gained from a P150 voucher, these results suggest these uncertain individuals may be dynamically updating their beliefs during the job fair experience.

These findings are relevant to the program participation literature pertaining to active labor market programs, but also to other literatures in which uncertainty about market returns may influence not only individuals' take-up decisions, but also their response to incentives. Selection into take-up and the role of imperfection information in self-selection have been important issues in the education and health literatures. Recent work has found individuals in developing countries tend to underestimate their own and others' returns to education (Jensen, 2010; Nguyen, 2008) or migration (McKenzie, Gibson and Stillman, 2013). However, these studies do not account for the perceived likelihood of finding a job, which may be especially important in contexts with high unemployment and underemployment. In the

education literature, Attanasio and Kaufmann (2012) and Kaufmann (2012) do account for perceived unemployment risk but not uncertainty around that risk.[9] Avery and Kane (2004) find suggestive evidence that many students from low-income backgrounds interested in attending college do not apply because they believe they will be rejected.

The next section provides additional background on overseas migration and the project location. Section 2.3 discusses the characteristics of those who attend the job fair, and Section 2.4 examines the impact attendance subsidy on job-fair participation and selection into search. In Section 2.5, I discuss the role of individual perceptions, and Section 2.6 concludes.

2.2 Overseas migration and job fairs in the Philippines

For decades, Filipino politicians and government officials have heralded overseas Filipino workers (OFWs) as the "bagong bayani," or "modern-day heroes" of the nation (E.O.446 2005).[10] The pool of OFWs is large and growing: approximately nine percent of Filipinos are living overseas, and nearly half of those abroad are on temporary work contracts. The Philippines deploys an average of 1.7 million temporary workers annually (CFO 2009; POEA 2013). These overseas Filipino workers (OFWs) have been an important means of economic growth for the Philippines; total remittances have more than doubled over the past eight years to US$21.4 billion in 2012, which account for roughly 8 percent of total GDP (BSP 2012).

On an individual level, migration can bring large income gains for migrants and their families (Clemens, Montenegro and Pritchett, 2009; Adams and Page, 2005). But despite high demand abroad for both low and high-skilled workers, the benefits of migration have been

[9] Attanasio and Kaufmann (2012) find that boys who have a relatively low perceived likelihood of employment conditional on only having high school degree, and a relatively high perceived likelihood conditional on having a college degree, are more likely to attend college.

[10] The term "modern-day heroes" was first used by President Corazon Aquino in a 1988 speech to Filipino domestic helpers in Hong Kong.

more difficult to access for rural Filipinos, who face higher informational and financial overseas search costs than their urban counterparts. In Bulan, the nearest overseas recruitment agency branch office is more than a two-hour bus ride away; anecdotally, most interested applicants choose to travel twelve hours to Manila in order to search for work abroad. As a result of this limited access to recruiting institutions, the job search process is particularly costly for rural applicants, and there may be few opportunities for applicants to learn about potential returns to job search.

2.2.1 Job fairs in the Philippines

Job fairs in the Philippines are frequent and crowded events. Participants first queue outside to register with the organizing agency, typically the Department of Labor and Employment or an educational institutions. In the case of overseas employment, recruitment agencies set up booths at which they collect applications and conduct preliminary interviews with applicants. Fair participants queue up at the agencies to which they wish to apply, waiting their turn to submit their application materials and interview one-on-one with a recruitment officer.

At typical job fairs, a small share of applicants are offered a job "on-the-spot;" more commonly, successful applicants receive invitations to the agency's office for a final interview with the employer or additional testing (Tubeza, 2011). For overseas employment, recruitment agencies can only recruit for job orders registered with the Philippine Overseas Employment Administration, though they may also conduct "manpower pooling," in which they note those applicants who are qualified for positions that may arise in coming months. In general, the number of positions available at a given fair far exceed the number of applicants, and the manpower pooling option ensures that all qualified applicants are likely to be considered for vacancies, rather than fair applicants competing against each other. Consequently, encouraging job-fair attendance is likely to lead to additional hires rather than shifting offers from

less to more-qualified applicants.

The overseas labor market in Sorsogon Province provides an useful context in which to examine individuals' self-selection into program participation: non-migrants are highly interested in working overseas, yet few who who want to work abroad have taken steps to apply. In my sample, of the 26 percent who reported they were "strongly interested" in working abroad, less than half had ever applied. Although job fairs are the main way agencies recruit in rural areas, and most larger municipalities of the province hold fairs roughly once a year, only 14 percent of respondents, and 24 percent of "strongly interested" individuals, had ever attended a job fair for overseas work. Expanding access to job fairs may provide those with limited information or high opportunity or transport costs with additional opportunities to learn about their prospects and apply for work abroad.

2.3 Selection into job-fair participation

2.3.1 Data

2.3.1.1 Survey data

In January and February 2011, interviewers surveyed 862 residents of Bulan, Sorsogon Province. They collected data on individuals' qualifications and labor market perceptions from a randomly selected sample of individuals ages 20-35 who had never worked overseas. The sample frame of seventeen *barangays* included all ten *barangays* classified as "urban" by the National Statistics Office, as well as seven that I randomly selected from the remaining list of rural *barangays*.[11] In these *barangays*, there are 107 neighborhoods in total, of which I randomly selected 99.

I used recent household rosters provided by *barangay* captains to randomly order households

[11]The *barangay* is the smallest administrative unit in the Philippines. The municipality of Bulan has 63 *barangays*. In Bulan, each *barangay* has between three and ten *puroks*, or neighborhoods.

with at least one man aged 20-35 listed on the household roster and to randomly order households with at least one women aged 20-35. Enumerators targeted five women and five men per neighborhood. They visited each household in order and screened the first potentially eligible member, selected randomly from the list of same-gendered respondents within the target ages of 20-35 in that household. To be eligible, the respondent must also have had a cell phone number and not have worked overseas before. Ineligible respondents were replaced with eligible respondents in the same household, and if the household had no eligible members, the enumerator would proceed to the next randomly selected household.

Columns (1) and (2) of Table 2.1 report demographic characteristics of the sample respondents. Half of respondents are female (a result of the explicit stratification by gender), 58 percent percent are married, and the mean age is 27 years. Roughly three-fourths of respondents reported completing high school, and 16 percent are college graduates. 36 percent reported that they were working at baseline, defined as "currently working for pay," and nearly 40 percent had worked in Manila previously. Exposure to overseas Filipino workers (OFWs) is quite high; 45 percent had at least one family member work abroad since 2005.

To assess how comparable this sample is to the general Filipino population, I report demographic characteristics taken from the January wave of the 2011 Philippine Labor Force Survey.[12] The sample in columns (3) and (4) consists of individuals ages 20 through 35 who live in a rural area.[13] Columns (5) and (6) include all individuals from the Bicol Region, where Sorsogon Province is located. The samples are similar on most dimensions, such as the mean age and the share who are female, are married, and have completed at least high school. Members of my sample are slightly more educated, and they are less likely to report working at baseline.[14] Although I select individuals randomly within each randomly selected

[12]The LFS is a household-level survey, and respondents list the work experience and demographic characteristics of each household member. I exclude household members who are reported as working overseas.

[13]This definition excludes the National Capital Region, which is entirely classified as urban.

[14]The definition of working is slightly different as well: in the LFS, respondents are considered to be working if they did any work in the past week or if they had a job (but did not work) during that past week. I code those whose primary occupation is "worked without pay on own-family operated farm or business" as not currently working.

household, individuals who had migrated internally or could not be reached because of work were not surveyed, so it is unsurprising that the Bulan sample reflects a population that is less likely to be working.

In the survey, I collected detailed information on individuals' qualifications for overseas work, primarily through their education and work history, which included both position name and the number of years they had worked at each job. I use this history to generate measures of the number of relevant years of work experience each individual has. Additionally, I collected data on individuals' subjective likelihood of job finding overseas. Specifically, each respondent used a 0 to 100 scale to answer the question: "Suppose you submit an application for overseas work today. How likely is it that you will be offered overseas work in the next 12 months?"[15] Responses are fairly evenly divided between a less than 50-percent chance (33 percent), exactly a 50-percent chance (30 percent), and more than a 50-percent chance (36 percent) (see Figure 2.1). I refer to this measure as the "perceived chance of job-finding abroad."

2.3.1.2 Job-fair outcomes

All survey respondents received an invitation to attend a job-fair for overseas work that took place March 1 and 2, 2011, in Bulan. I link respondents' survey responses to their participation in this fair,[16] which I organized in partnership with the municipal government.[17] Four overseas recruitment agencies and one domestic employer from another province participated

[15]Respondents used a visual scale to assist them in answering the question. This question was one of a series of questions about their subjective expectations about the likelihood of other labor market events, which were preceded by two practice questions to ensure they understood the question structure.

[16]At the fair, participants signed a separate consent form if they were willing to have their participation information linked to survey responses.

[17]Although participants were aware that researchers were tracking their numbers and signed a consent form, they likely perceived the job fair as a typical job fair. Their first interaction was with staff members of the municipal Public Employment Service Office (PESO), which typically coordinates local recruitment activities. Receiving numbers and filling out forms is common at most job fairs - the PESO officers also distributed numbers and a bio-data sheet - and the remaining post-registration activities were typical of other local job fairs. The local PESO office also assumed full credit for the implementation of the job fair both during and afterwards, further reducing any perceptions that this was a "research" job fair.

in the fair. Although specific recruitment procedures vary by firm, participants typically visited agencies of interest to apply and undergo a pre-screening interview that day. Job fair participants could also enroll in an online job-finding website or visit a booth to learn how to apply for a passport. The fair was advertised through fliers and radio in the days before the fair, and all survey respondents received two text message reminders on the days leading up to the job fair. Overall attendance was 767, and survey respondents made up 29 percent of all attendees.[18] Survey staff assigned each participant a unique identifier upon arrival, and this number was recorded whenever participants visited a recruitment agency, enrolled in an online job-finding website, visited a passport information booth, retrieved their restaurant vouchers, or exited.

I consider four outcomes of interest: whether respondents attend the fair, visit an information booth, apply with a recruitment agency, and receive a final interview offer. A survey respondent is recorded as "attending" the fair if he registered his name at the entrance and received a number. Some attendees left immediately after exchanging their vouchers for the restaurant gift certificate; others attended both days of the fair and applied at several recruitment agencies. If a respondent enrolled in an online job-finding website or visited a passport information booth, he is recorded as having "visited an information booth".[19] Those who visited a recruitment agency booth are also recorded as "applying." A job-fair participant could visit an recruitment agency booth without actually applying, but that would be unlikely given the long wait. The application rate is 11.1 percent from the entire sample, or 47.3 percent among those who attended the job fair. Finally, roughly half of those who applied were invited to attend a final interview, and a few were offered a job on the spot; these respondents are recorded as having received a "final interview offer."[20]

[18]Forty percent of attendees said they heard about the fair through radio, 11 percent through a flier, and 16 percent through a friend.

[19]Enrolling in the website could also be thought of as applying for work, but unlike visiting a recruitment agency booth, there is no immediate feedback on one's qualifications. Like the passport booth, this element of the fair was staffed by the research team, and therefore I classify it as visiting an information booth.

[20]One agency only provided data on the people they interviewed in Manila after the fair, not on the individuals who they invited to interview. Of those who applied at this agency, most were offered a final

2.3.1.3 Online job-posting data

I use a novel dataset on labor demand for overseas work to derive an objective proxy for respondents' qualifications for work abroad. I collect 24,310 job postings, representing 227,243 vacancies, from the most popular overseas job-finding website in the Philippines, workabroad.ph.[21] By using posting data rather than data on the occupational distribution of actual overseas migrants, I can measure labor demand independently of how that demand matches with the supply of workers.

Data was collected the during the last two weeks of October 2010 on all current job postings. In addition to providing a description of the position, each recruitment agency or employer reports the minimum educational requirements, the minimum number of years of related experience, and for which genders the position is open.[22] I classify occupations based on name using two-digit codes from the International Standard Classification of Occupations, or ISCO (ILO 2007). Using occupation-specific years of experience rather than total years of experience generates a more accurate measure of qualification level, and it is particularly important in this setting, as work experience in a specific position is often a main qualification for technical and vocational positions. In Appendix Figure 2.A.1a, I plot the rank of each respondent relative to the other survey respondents in terms of the share of jobs for which he or she is potentially qualified, first using the preferred "relevant experience" measure (y-axis) and again using a measure which only accounts for education and total years of work experience (x-axis). I do this separately by respondents' level of education, and there is substantial variation in rank order; specifically, when I do not account for whether their experience is related to the occupation, less-educated individuals are ranked too highly, and

interview from another agency anyway, but seven were not offered a final interview from another agency, which could lead to a downward bias in my estimates. I check the robustness of my results to assuming all applicants to that agency were offered a final interview, and doing so does not affect the results.

[21] Competitors include jobsdb.com and jobstreet.com. However, workabroad.ph was most referenced by recruitment agencies as their main source for online recruits, and it averages the greatest number of job postings. The Philippine government also runs a job-finding website for domestic and overseas jobs, www.phil-job.net; however, it is much less popular.

[22] These overseas positions are highly sex-segregated.

higher-educated individuals are ranked too low.[23] Weighting these postings by the number of vacancies each represents, I calculate the share of vacancies for which each respondent meets the minimum qualifications, based on his or her gender, education, and work experience. Appendix Table 2.A.1 shows the distribution of respondents' positions across two-digit ISCO codes, and Appendix Table 2.A.2 reports descriptive statistics of the characteristics of respondents with experience in each position group.

Figure 2.2 plots the distribution of the share of overseas jobs for which respondents are potentially qualified, using two-digit ISCO codes. The absolute number of jobs is less relevant than the share, which provides a unidimensional estimate of how qualified each individual is for work overseas. There is a wide distribution in qualification levels, with a few outliers who are potentially qualified for more than eight percent of job vacancies. In Figure 2.3, I plot the distribution separately by education level, using a smoothed kernel density function. Education correlates highly with the share of jobs for which respondents are qualified but there is still a wide range of qualifications within each education level.[24]

2.3.2 Determinants of job-fair participation

Focusing on the sample respondents who were invited to attend but not subsidized - the control group - I predict whether respondents attend, visit an information booth, apply, or are offered a final interview using individuals' demographic and employment characteristics. In Table 2.2, the perceived chance of job-finding abroad is a strong predictor of attendance; every 10 percentage-point increase is associated with an additional 1.5 percentage point increase in attendance. Additionally, attendees are more likely to report they are strongly

[23] Appendix Figure 2.A.1b shows that using three-digit occupational codes yields broadly similar results to the two-digit codes. However, for some occupations, there are relatively few opportunities within the three-digit code but many within the two-digit code. For example, individuals with experience in the three-digit occupation of "sales shopkeeper" are likely qualified for other three-digit occupations within the broader two-digit grouping "salesperson". Because the two-digit code seems to correspond more closely to a job definition of "relevant experience," I prefer these more general codes.

[24] Eight percent of vacancies have minimum educational requirements but do not require any relevant experience.

interested in working abroad, significant at the ten-percent level. Of those who attend, 53 percent visit at least one information booth, and 78 percent apply with a recruitment agency.

Columns (2) and (3) predict the likelihood of visiting an information booth or applying with a recruitment agency, conditional on attending. Those who visit the information booth are more likely to have applied for work overseas and they are less likely to be interested in working abroad, though only the second covariate is statistically significant. Conditional on attending, those who apply are potentially qualified for a higher share of jobs ($p = 0.073$), come from farther away ($p = 0.070$), are more educated, and report a higher perceived chance of job-finding abroad, though the last two covariates are not statistically significant. Among those who apply, 53 percent receive invitations to a final interview. Being qualified for a higher share of jobs abroad and having applied for work in the past are strong predictors of being invited to a final interview, as column (4) shows.

Figure 2.4a plots the distribution of qualification levels across the control-group baseline sample (solid line) and for those who participate in the fair (dashed lines). Without an incentive, those who attend the job fair are positively selected from the overall population, and the distribution of those who attend and are offered the final interview are nearly identical, except at the left tails of the distribution, where the least qualified who attend are not offered a final interview.

2.4 Subsidy impact on selection

2.4.1 Experimental design

I generateed exogenous variation in individuals' likelihood of attending a job fair by assigning individuals in randomly selected neighborhoods to receive a small, in-kind subsidy conditional on attendance. Randomization took place at the neighborhood level to reduce spillovers within neighborhoods, and respondents in one-third of neighborhoods were assigned

to receive a restaurant voucher. Respondents in the remaining two-thirds of neighborhoods form the control group. At the end of the survey, all respondents were invited to attend the job fair already described. Recipients assigned to the treatment group received a voucher that they could exchange at the two-day job fair for a gift certificate worth P150 (US$3.42) to Jollibee, a popular fast-food franchise. All respondents also received two text message reminders in the days leading up to the job fair to minimize differential salience effects based on the administration date of the survey. This voucher treatment was cross-randomized with two other information treatments, which are outside the scope of the paper.[25] I include binary indicators for assignment to the two information groups in all specifications.[26]

In Table 2.3, I test the balance of treatment assignment across respondents' demographic characteristics. I conduct a series of F-tests of the equality of means between the two groups after controlling for stratification cell and enumerator fixed effects, clustering standard errors at the *barangay* level. The sample is largely balanced, though members of the voucher treatment group report lower educational attainment on average, are less likely to be interested in working abroad, and are less likely to plan to apply overseas in the next year. Only the difference between groups on having plans to apply abroad is statistically significant (at the ten-percent level). Overall, I cannot reject the null hypothesis that these means are jointly equal between treatment and control groups ($F = 1.23, p = 0.26$). I control for these individual-level covariates in my specifications.

2.4.2 Impact of subsidy on job-fair participation

In order to measure the causal intention-to-treat (ITT) impacts of the voucher treatment on job-fair attendance, information-booth visits, application, and final interview offers, I

[25] See Beam (2013).

[26] Appendix 2.C shows that my results are broadly robust to excluding individuals cross-randomized to either of the two information treatments.

estimate the following regression specification using ordinary least squares.

$$Y_{ijk} = \alpha + \beta Voucher_{jk} + X'_{ijk}\gamma + S'_k\delta + \epsilon_{ijk} \tag{2.1}$$

where individual i from neighborhood j in stratification cell k has binary job-fair outcome Y_{ijk}. The binary variable $Voucher_{jk}$ is equal to one if neighborhood j from stratification cell k is assigned to the voucher treatment group. X_{ijk} is a vector of individual-level covariates, S_k is a set of stratification cell dummy variables, and ϵ_{ijk} is the individual-specific error term. Because treatment is assigned at the neighborhood level, I cluster estimated standard errors at the neighborhood level to account for likely correlation in outcomes between individuals from the same neighborhood and to correct for heteroskedasticity imposed by the linear probability model.

Table 2.4 presents estimates of Equation 2.1 for the full sample. Column (1) omits the set of individual-level covariates discussed above, including only a binary indicator for assignment to the voucher, dummy variables for the other cross-randomized treatments, and stratification cell and enumerator fixed effects. Column (2) includes a series of individual characteristics that may influence the likelihood of attending or participating in the job fair. From column (2), the voucher increases the likelihood of attendance by 35.4 percentage points, a 270 percent increase from the 13.1 percent attendance rate among the control group. The voucher has substantial but smaller effects on participation at the fair; it increases the likelihood of visiting an information booth by 8.8 percentage points and of applying by 4.7 percentage points, 128 and 46-percent increases, respectively, from control-group rates of 7.0 and 9.5 percent. The impact on the likelihood of being offered a final interview is close to zero and not statistically significant, indicating that the subsidy is not effective in increasing the number of people who successfully pass the first stage of the interview process.[27]

[27]Results are robust to using a probit model.

2.4.3 Impact of subsidy on selection into search

2.4.3.1 Differences in demographic characteristics

Table 2.5 presents the distribution of respondent characteristics conditional on participation at the job fair separately for members of the treatment and control groups. I superscript voucher means with one, two, and three stars if the mean is statistically significantly different from the control group mean at the ten, five, and one-percent level, respectively, clustering at the neighborhood level and including stratification-cell fixed effects.[28] Job-fair attendees from the voucher treatment group differ substantially from control-group attendees. They have completed less education, are less likely to be interested in working abroad, report a lower perceived chance of job-finding abroad, and are potentially qualified for fewer overseas jobs (differences significant at the one-percent level). They also are younger and more likely to be married, though these differences are not statistically significant.

This negative selection on qualifications, perceptions, and interest in work abroad among voucher recipients lessens somewhat for those who visit an information booth or apply at the job fair. They are less educated on average, but they are just as likely as control-group participants to report they are interested in working abroad at baseline. Among the 46 respondents who are invited to a final interview, the treatment group is less educated and less confident about their chance of being offered jobs abroad than the control group, but they are much closer in the share of jobs for which they might be qualified.

Figure 2.4 also demonstrates how the voucher "undoes" the positive selection among job-fair attendees. Those who attend are no more or less qualified than the full set of members of the voucher treatment group. The distribution shifts rightward among those who visit the information booth and those who apply for work; those who receive final interview offers are more positively selected, though still less so than as compared to the control group attendees.

[28] I omit enumerator fixed effects because there are relatively few observations in columns (3) through (8). Including them does not change the results.

To see this comparison more clearly, Figure 2.5 compares the qualification levels of control and voucher-group attendees, information booth visitors, applicants, and those who receive final interviews. The qualification distribution of voucher-receiving attendees, booth visitors, and applicants is to the left of the control group.[29] The distribution of qualification levels is fairly similar between those offered final interviews, with a longer left tail for the voucher treatment group members.

2.4.3.2 Impacts by education

I then examine the impact of voucher assignment on job-fair participation by education. In Table 2.6, I interact voucher assignment with mutually exclusive indicators for whether the respondent's highest education level completed is high school, some college, vocational training, or a college degree (omitting less than high school). I report the interacted impacts as well as the binary indicators for educational completion. Consistent with Table 2.2, education is a strong predictor of job-fair attendance and participation, particularly whether individuals have completed at least high school, and whether they have completed any post-secondary schooling.[30] Uninteracted voucher assignment, which can be interpreted as the impact of the voucher for those without a high school diploma, has large, statistically significant impacts on whether individuals attend, visit an information booth, or apply for work abroad at the job fair, with effects of 39.8, 9.2, and 6.0 percentage points, respectively.

With the exception of college graduates, the impact of the voucher does not vary with respondents' educational attainment. The voucher-college graduate interaction is consistently negative and is significant at the ten-percent level for application and final interview offer.

[29] A two-sided Komologorov-Smirnov test rejects the equality of the attendee distributions ($p = 0.002$). However, it does not reject equality of the booth visitor or applicant distributions ($p = 0.182$, $p = 0.145$, respectively), in part because the distributions are closer together, and in part because they reflect a smaller sample.

[30] For attendance, application, and final interview offer, I reject the equality of all four education indicators at the at the ten, five, and one-percent levels, respectively. I cannot reject equality of the some college, vocational, and college graduate indicators.

Overall, however I cannot reject the joint null hypothesis of no interaction effects for any outcome. Figure 2.6 plots the mean rates of attendance and job-fair participation separately by education and treatment group assignment. The 95-percent confidence-interval bars reflect a simple regression of treatment indicators on each outcome, clustering standard errors at the neighborhood level but omitting individual covariates or stratification and enumerator fixed effects for ease of interpretation. Graphically, these figures show that the voucher increases attendance for all groups, with a smaller increase for college graduates. Information booth visits and application increases most for those with only a high school diploma or some college; but, with the exception of visiting an information booth for those who have completed some college, these differences are not statistically significant.

2.4.3.3 Impacts by qualification

That the subsidy generates relatively equal effects across education levels, excepting college graduates, may not be surprising if education is a poor proxy for individuals' expected returns to looking for overseas work. Because there is high demand for Filipino workers in both low and high-skill positions, using education alone is likely to miss the important variation within skill levels that determine job-hiring decisions. As Figure 2.3 shows, education is correlated with the share of jobs for which one is qualified, but accounting only for education leaves out substantial variation.

I examine the differential impact of subsidy assignment between relatively low and highly qualified individuals linearly and semi-parametrically in Table 2.7. In the odd-numbered columns, I interact a binary indicator for voucher assignment with the continuous measure of the share of jobs qualified, using two-digit ISCO codes. In the even-numbered columns, I interact voucher assignment with tercile indicators for the share of jobs qualified, omitting the lowest tercile indicator and its interaction. Although I cannot reject the null hypothesis that the interactions are jointly zero, the signs of the interaction terms indicate that the effects

of the voucher are strongest for those in the lowest qualification tercile. While the voucher increases attendance substantially for members of all qualification terciles, application rates increase only for those in the bottom tercile.[31]

In Figures 2.7a through 2.7d, I estimate the impact of voucher assignment non-parametrically across two-digit ISCO qualification level, using local constant regressions.[32] Consistent with the regression results of Table 2.7, the impact of the voucher on attendance (Figure 2.7a) and information booths visits (Figure 2.7b) is essentially flat across the full distribution of qualification levels, with confidence intervals converging at the high end of the qualification distribution, where there are relatively few respondents. The impact on application (Figure 2.7c) starts positive (though not statistically significant) and converges to zero among the higher qualified individuals. There is no detectable treatment effect on final interview offers across the distribution (Figure 2.7d).[33]

2.4.3.4 Impacts by perception

Table 2.8 shows that the voucher induces individuals who report a 50-percent perceived chance of job-finding not only to attend, but also to apply at the job fair. In the odd-numbered columns, I include a linear term for the perceived chance of job-finding abroad and an indicator for whether the respondent reported a 50-percent chance (as roughly one-third of the sample does - see Figure 2.1). I interact both terms with an indicator for voucher assignment. The continuous measure of the perceived chance of job-finding is itself statistically significant; holding all other covariates equal, reporting a ten-percent higher chance of job-finding abroad is associated with percentage-point increases of 2.5, 1.4, 2.3, and 1.3 in the rates of attendance, visiting an information booth, application, and receiving a final

[31] These results are robust to using quartiles or quintiles.

[32] I bootstrap 95-percent confidence intervals using 5,000 repetitions, clustering at the *barangay* level. I trim the qualification measure at the 99th percentile. These specifications do not account for covariate means or stratification cell or enumerator fixed effects.

[33] These results are robust to estimating first and second-degree local polynomial regressions, which are reported in Figures 2.D.1 and 2.D.2.

interview offer, respectively, all of which are significant at the one-percent level. The linear interaction term is itself negative, and not statistically significant, but the interaction with the indicator for having a 50-percent perceived chance of job-finding abroad is generally positive, and in the case of application, it is quite large (9.2 percentage points) and statistically significant. In the even-numbered columns, I interact voucher assignment with indicators for having a 50 percent or greater than 50 percent perceived chance of job-finding abroad, leaving the less than 50-percent chance indicator as the omitted category. Consistent with the linear results, the voucher increases attendance and the likelihood of visiting an information booth regardless of individuals' perceived chances of job-finding abroad. However, the voucher increases application only for the 50-percent chance group, and does so by an additional 9.5 percentage points, statistically significant at the five-percent level. I jointly reject that these two interaction terms are zero at the ten-percent level.

2.5 Discussion: Who stays?

In Section 2.4, I find that voucher assignment reduces the positive selection into job-fair attendance I find among the non-subsidized attendees, both in terms of qualifications and in terms of individuals' perceived chances of job-finding abroad. This reduction attenuates slightly in the decision to participate in the fair; those who are least interested and least qualified leave after redeeming their voucher. What stands out particularly is that individuals who express a high degree of uncertainty about their job finding prospects - that is, those who report a 50-percent likelihood of finding work abroad - respond strongly to the modest incentive and do stay to apply.

In this section, I explore ways to interpret this 50-percent perceived chance of job-finding, and I find that it is indicative of individuals being highly uncertain about their own prospects in the overseas labor market, and that this uncertainty is correlated with their past exposure to the overseas labor market. These results are consistent with two explanations: that indi-

viduals on the margin of applying at the job fair are those with a high degree of uncertainty about their overseas labor market prospects, and that these uncertain individuals are most likely to update their beliefs upon attending and consequently are more likely to stay to apply once they attend.

Individuals' perceived chance of job-finding abroad is correlated with objective measures of qualification; those who are more highly educated report higher chances, and those who are potentially qualified for a higher share of jobs abroad report higher chances. To check whether the differential impacts of those reporting a 50-percent chance of job-finding reflect other qualifications, I include interactions with both the share of jobs abroad for which the respondent is potentially qualified and his perceived chance of job-finding abroad in Table 2.9. I include both linear specifications with an indicator for a 50-percent chance of job-finding (odd-numbered columns) as well as categorical variables (even-numbered columns). In this "horse race," the 50-percent perceived chance interaction is the clear winner. The voucher has an additional 11-percentage point effect on the likelihood of application for those who report a 50-percent chance. The uninteracted voucher coefficient on application, representing the impact on those in the lowest qualification tercile with a less than 50-percent perceived chance of job-finding abroad, is close to zero and not statistically significant, indicating that the positive and significant impact of voucher assignment for the lowest qualification tercile in Table 2.7 is driven by those with 50-percent (and higher) perceived chances of job-finding abroad.

I also report local constant regressions of the control and treatment group job-fair participation rates across qualification levels, separately for each perceived chance of job finding group, in Appendix 2.B. The results are consistent with the regression results in Table 2.9; increases in application rates are concentrated among those who report a 50-percent chance of job-finding abroad, and the increase is relatively constant across the distribution of qualification levels.

The results in Table 2.9 indicate that the perceived chance of job-finding abroad reflects more than simply qualification level, and in fact, those with a high degree of uncertainty about they job prospects are more responsive to the voucher. The impact of voucher assignment on application is large, but it is entirely concentrated among those who report they have a 50-percent of job-finding abroad. Individuals' reported likelihoods could reflect their beliefs about the market, beliefs about their own qualification levels, beliefs about the difficulty of matching with the market, as well as individual factors like confidence, self-esteem, and optimism. An extensive body of literature finds that respondents frequently use "50 percent" or "fifty-fifty" to indicate that the answer is beyond their control or that they simply don't know (Bruine de Bruin et al., 2000; Fischhoff and Bruine de Bruin, 1999). In the context of overseas job finding, feelings of uncertainty may prevent respondents from applying for work abroad, even if their perceived net benefits are positive.

In Table 2.10, I examine predictors of individuals' reported likelihood of job-finding, as well as predictors of whether they report a 50-percent chance of job-finding abroad. In columns (1) and (2), I use the full range of perceived chance responses as a linear outcome variable, and in columns (3) and (4), I exclude those who report a 50-percent chance of job-finding. Columns (1) and (3) include standard covariates that reflect individuals' demographic characteristics and past educational and work experience. Education is the strongest predictor of individuals' reported likelihood of job-finidng abroad, and the share of jobs for which they are potentially qualified is also positively correlated, but not statistically significant.

Columns (2) and (4) include additional covariates that reflect individuals' past job-search behavior such as whether they reported they had ever worked in Manila, had searched for work formally (by submitting a resume or interviewing), had ever applied for work abroad, or have had a family member working abroad since 2005. Additionally, I include measures of individuals' general perceptions and interest in overseas work: whether they are "strongly" interested in working abroad and whether they say their lives will be better next year (instead of reporting they will be the same or worse), a linear measure of self-confidence. Additionally,

to check whether their responses are related to whether they understood the questions, I include a binary indicator for whether the enumerator marked that the respondent had trouble answering some questions.

With the addition of these covariates, having completed at least some post-secondary education is smaller in magnitude and no longer significant, and the share of jobs for which the respondent is potentially qualified is large and negative (though imprecisely estimated). Instead, those who have higher self-reported likelihoods of job-finding are those with more labor force exposure: those who have looked for work formally and have ever applied for work abroad. Additionally, those who are interested in working abroad, more optimistic, and more self-confident also report higher values. Conditioning on these factors, whether individuals reported they had ever been employed is negatively correlated with the perceived chance of job-finding abroad.

In columns (5) and (6), I predict whether individuals report a 50-percent perceived chance of job-finding abroad using the above covariates. Individuals who are have completed at least high school are more likely to report a 50-percent chance, while those who have worked in Manila are less likely. Neither having trouble answering questions nor being more or less confident is correlated with individuals' likelihood of reporting a 50-percent chance, indicating that this response pattern is more consistent overall with limited labor market exposure than with their inability to understand or answer the question.

The question about the perceived likelihood of job-finding is one of eight labor market expectations questions, which follow two practice questions to ensure respondents understand the question structure. If respondents only answer "50 percent" to the overseas job-finding question, it would be more likely they truly believe there is a 50-percent chance. However, if they answer "50-percent" to many questions, this suggests their answers are consistent with a high degree of uncertainty, and that they may feel generally uncertain about their labor market prospects. To examine this, I count the number of 50-percent responses each

respondent gives in the seven other labor-market questions.[34] I define respondents as having a "high share" of 50-percent responses if they report three or more 50-percent responses.[35]

In Table 2.11, I interact voucher assignment with whether respondents report a 50-percent chance of overseas job-finding and with whether they report a "high share" of 50-percent responses in the other labor market questions. Having a high share of 50-percent responses in itself does not predict job-fair attendance or participation, nor does the interaction of a high share of 50-percent responses with voucher assignment. However, the voucher-50-percent chance of job-finding interaction term is largest for those with a "high share" of 50-percent responses, and I can reject the equality of interaction terms between the low and high share of responses at the five-percent level for attendance and application. These results suggest that the individuals who respond to the voucher by applying at the fair may be facing a high degree of uncertainty about their overseas job-market prospects.

2.6 Conclusion

Even after controlling for education and relative qualification level, individuals' perceived chances of job-finding abroad are strong predictors of their participation in a job fair for overseas work. While job-fair attendees are positively selected from the general population, a modest subsidy to incentivize search "undoes" this selection by increasing attendance rates both among more and less qualified searchers, but many of the least qualified individuals then self-select out of participation in the fair.

The voucher yields a large increase in application among individuals who express the greatest degree of uncertainty in their job-search prospects abroad - those who report a 50-percent chance of job-finding overseas if they were to submit an application. It could be that these uncertain job-seekers happen to form the sub-group most on the margin of applying at the

[34]Fifty-five percent report zero or one 50-percent responses, 18 percent report two, 12 percent report three, and 15 percent report four or more.

[35]These results are robust to setting the cutoff at two, four, or five out of seven responses.

fair, but given the relatively modest size of the subsidy and the large potential gains from overseas migration, this finding is more consistent with individuals dynamically updating their beliefs about their overseas prospects once they attend the fair.

This result on the role of uncertainty is in line with related work I conduct on the medium-run impacts of job-fair attendance in the Philippines (Beam, 2013). In the Philippines, the decision to look for work abroad is just the first step in what is often a difficult and costly process of migrating overseas (Beam, McKenzie and Yang, 2013), and the job fair subsidy is not sufficient to induce individuals to migrate abroad. However, I find attending a job-fair changes how individuals interact with the domestic labor market, consistent with them updating their beliefs in response to the job-fair.[36]

These results highlight the importance of individuals' prior beliefs about their returns, not only with respect to whether they believe they are likely to be offered a job abroad, but also to the sense of uncertainty they have about their own job prospects. This paper contributes to our understanding of how individuals select into programs and what impact a modest subsidy may have on the direction of selection. In similar contexts, initiatives to incentivize program participation may have substantial impacts on take-up, and an untargeted subsidy can bring in a range of participants relatively similar to the underlying population. Without conditioning the incentive on fully participating in the designated program, individuals may self-select out of participating fully, in line with their perceived returns, but these subsidies may have additional indirect benefits through information provision to potential participants who are uncertain about their own potential gains.

[36]Incentivizing fair attendance increases the likelihood individuals look for work in the capital, particularly in the months immediately following the fair, and it increases the share of individuals who report they are employed in the formal sector approximately ten months afterward. I find evidence consistent with individuals updating their beliefs, but I am not able to rule out other explanations, such as the subsidy providing a one-time "nudge" to initiate search.

Figure 2.1: Distribution of perceived likelihood of job-finding abroad

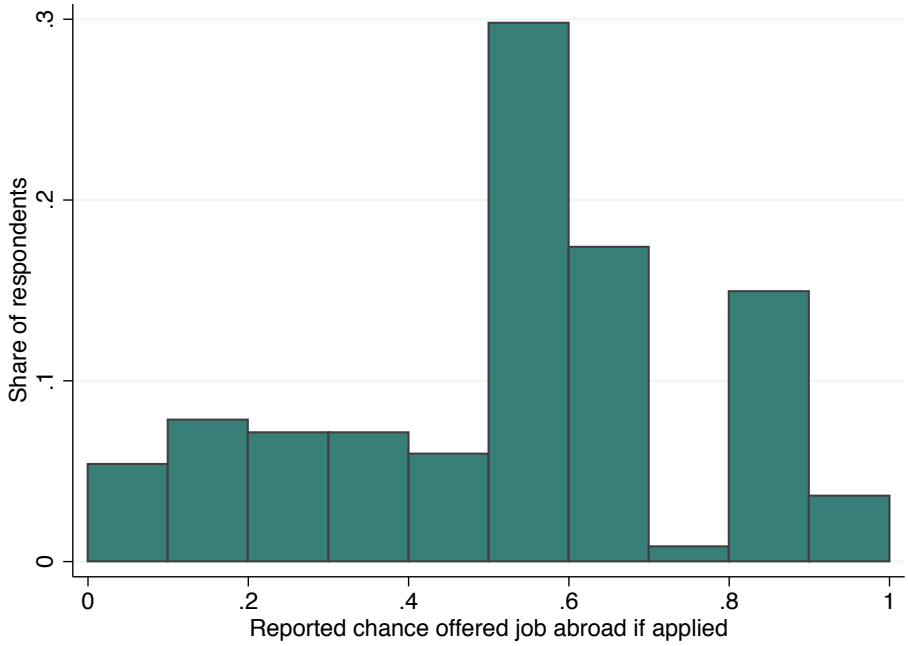


Figure 2.2: Distribution of overseas jobs for which potentially qualified

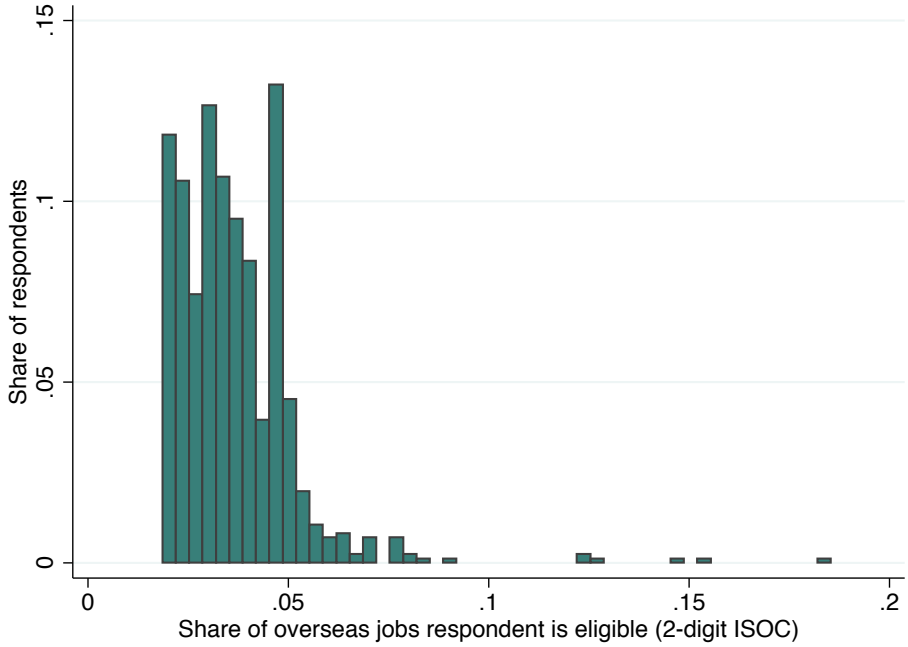


Figure 2.3: Distribution of overseas jobs for which potentially qualified, by education

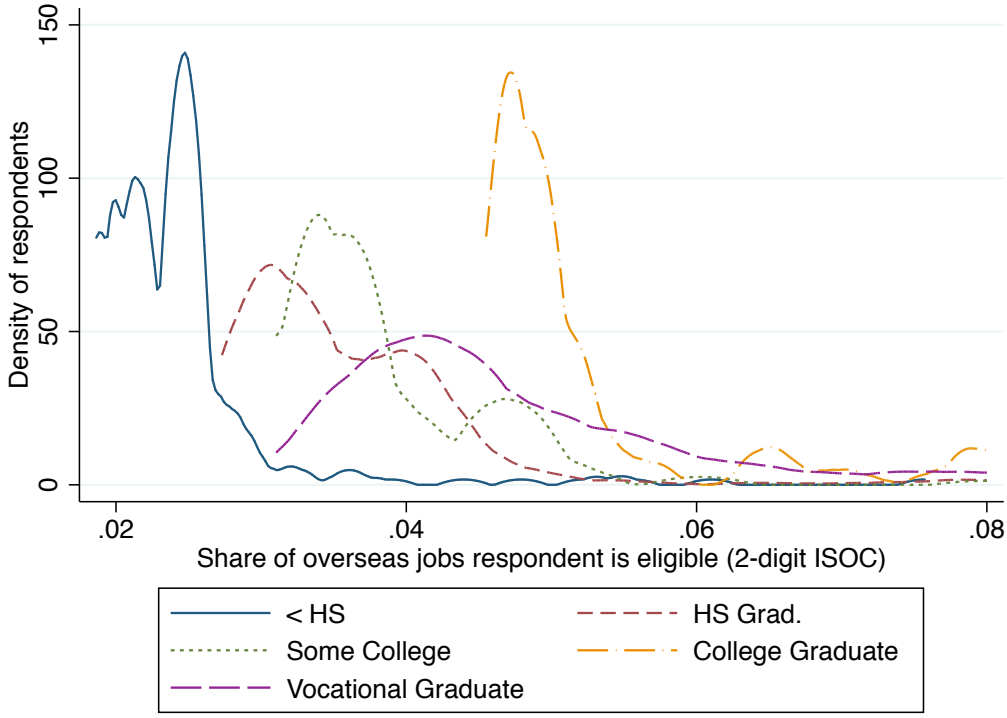
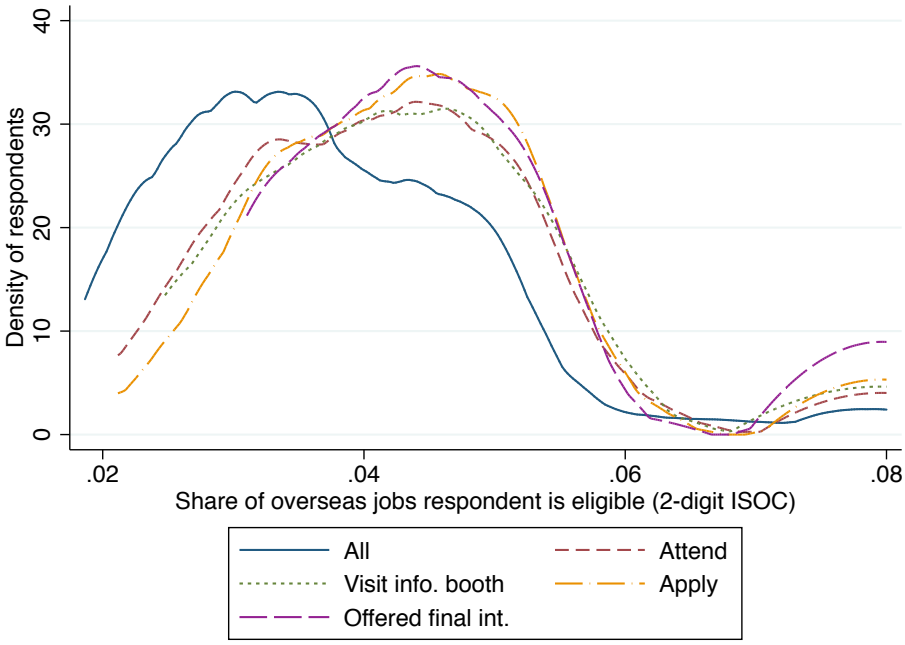
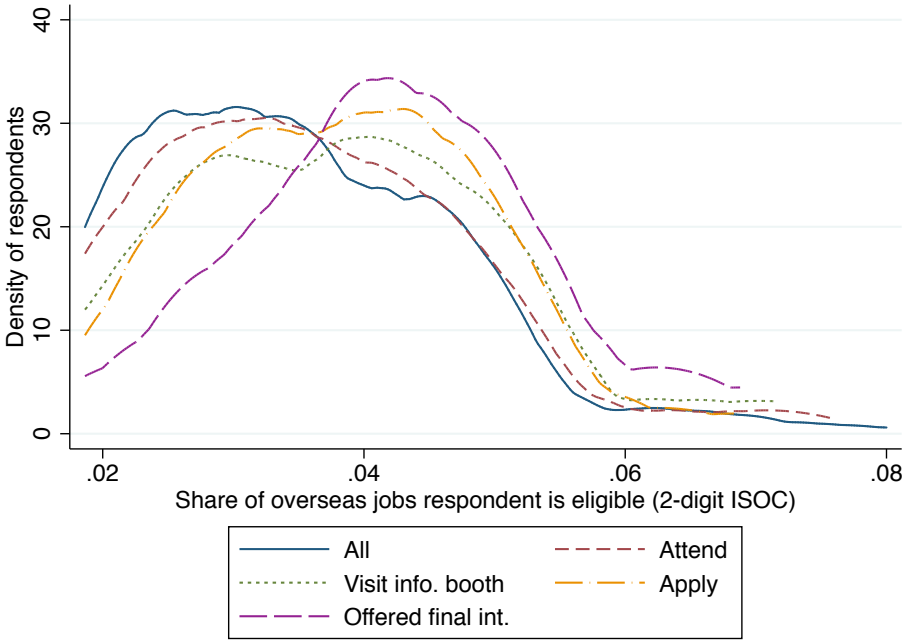


Figure 2.4: Distribution of overseas jobs for which potentially qualified, by job-fair participation

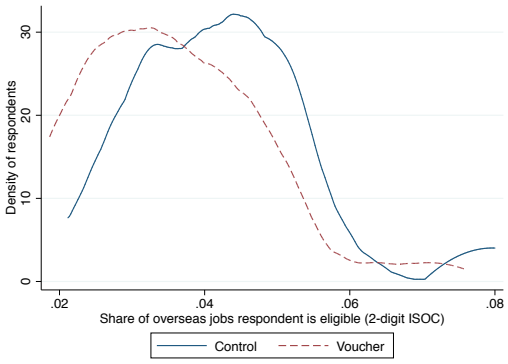


(a) Control group

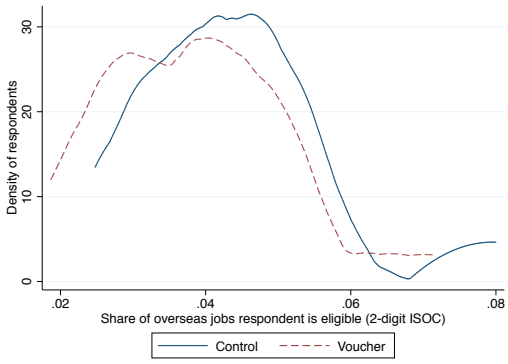


(b) Voucher group

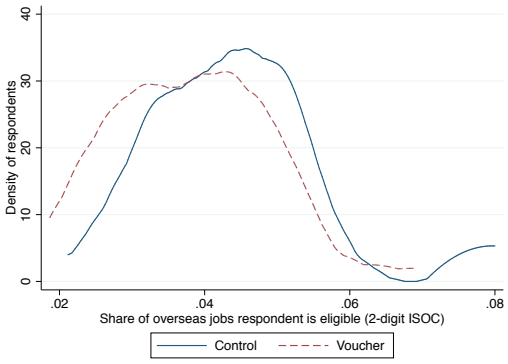
Figure 2.5: Distribution of overseas jobs for which potentially qualified, by voucher assignment



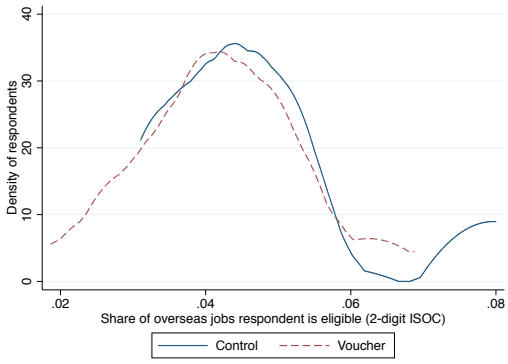
(a) Attendees only



(b) Info. booth visitors only

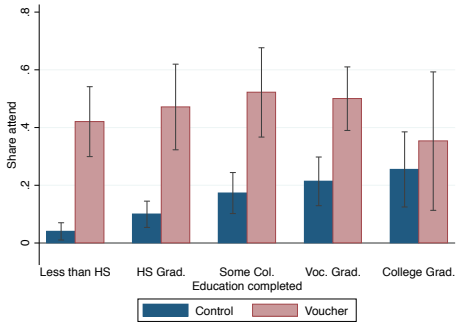


(c) Applicants only

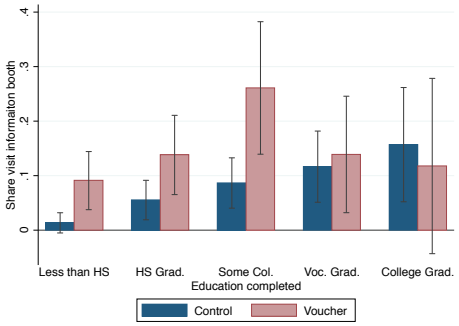


(d) Offered final interview

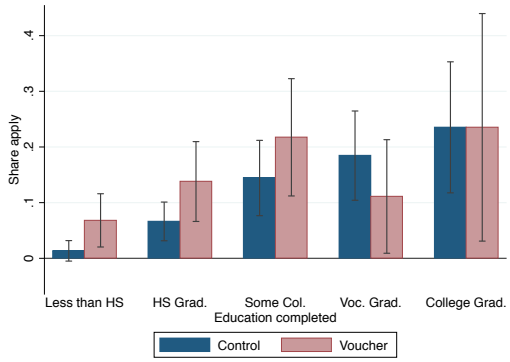
Figure 2.6: Impact of voucher assignment on job-fair outcomes, by education



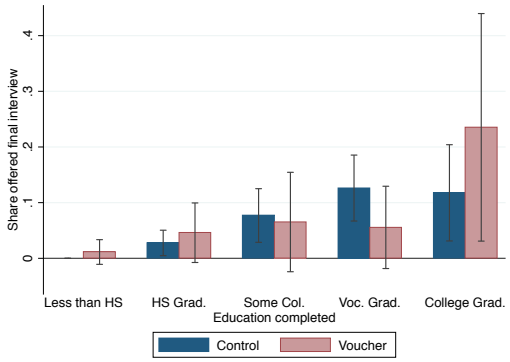
(a) Attendance



(b) Visit information booth

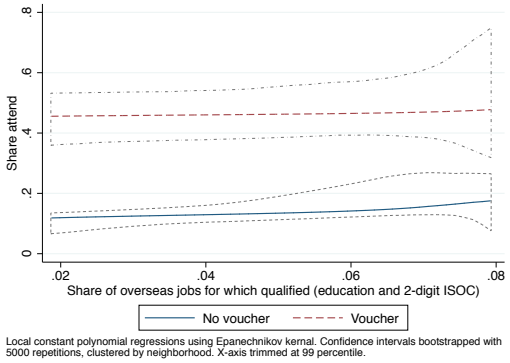


(c) Application

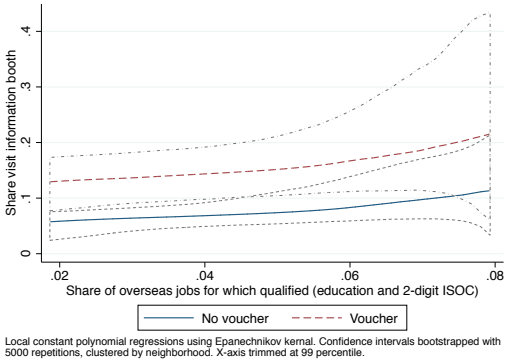


(d) Final interview offer

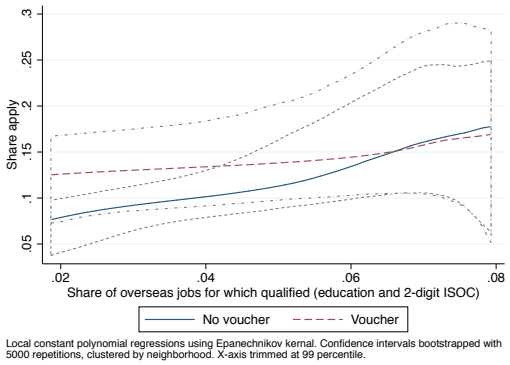
Figure 2.7: Impact of voucher assignment on job-fair outcomes, by qualification level (2-digit ISOC)



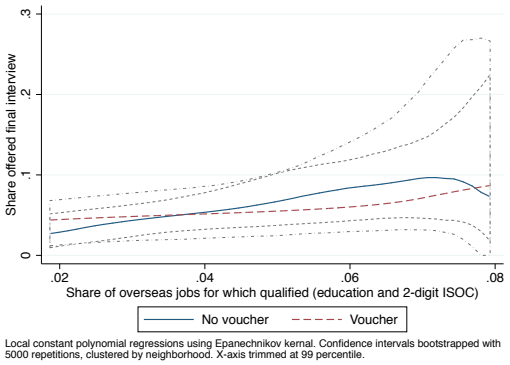
(a) Attendance



(b) Visit information booth

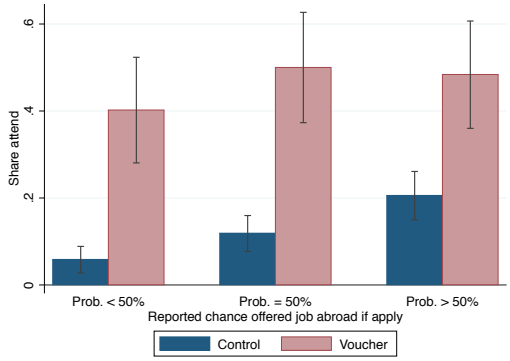


(c) Application

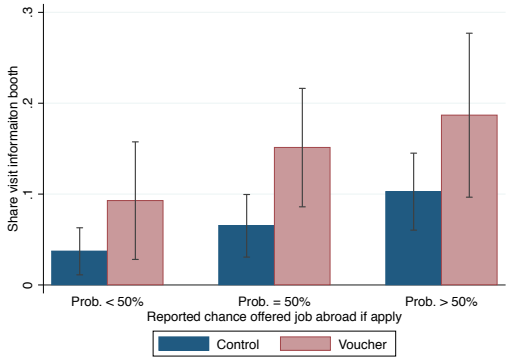


(d) Final interview offer

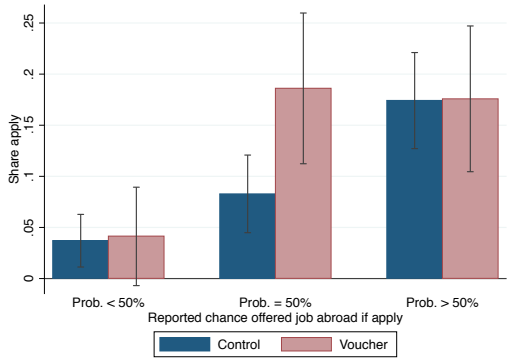
Figure 2.8: Impact of voucher assignment on job-fair outcomes, by perceived likelihood of job-finding



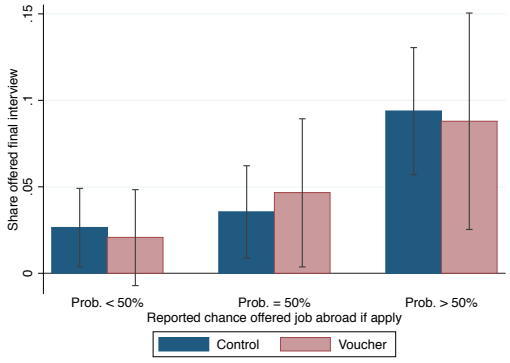
(a) Attendance



(b) Visit information booth



(c) Application



(d) Final interview offer

Table 2.1: Individual demographic characteristics, Bulan and Philippine Labor Force Survey (2011) samples

	Bulan sample		LFS, rural provinces		LFS, Bicol Region	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
	(1)	(2)	(3)	(4)	(5)	(6)
Female	50.3	50.0	46.8	49.9	46.9	49.9
Age (mean)	27.2	4.4	26.9	4.8	26.8	4.8
Married	57.2	49.5	53.6	49.9	50.0	50.0
With children	58.6	49.3				
High school or greater	72.5	44.7	56.0	49.6	62.7	48.4
College graduate	16.1	36.8	10.8	31.0	13.1	33.8
Mean household income (,000s)	5.8	6.6				
Working at baseline	35.7	47.9	52.0	50.0	49.7	50.0
Ever worked	84	36.7	86.4	34.3	85.6	35.1
Ever worked in Manila	39.1	48.8				
Interested in working abroad	25.6	43.7				
Plan to apply abroad, next 12 months	32.4	46.8				
Currently has passport	5.1	22.0				
Ever applied abroad	27.7	44.8				
Any family abroad since 2005	47.4	50.0				
Distance to job fair (km)	3.1	2.8				
Observations	862		22,241		2,154	

*** p<0.01, ** p<0.05, * p<0.10

Notes: LFS data taken from January wave of 2011 Philippine Labor Force Survey. Both samples include individuals ages 20-35 who are not currently working overseas. Column (2) includes all people living in areas classified as "rural" by the NSO, and column (3) includes all residents of Bicol Region, where Sorsogon Province is located. "Currently employed" in LFS data is defined as having worked at least one hour or had a job in the past week, excluding those whose primary occupation is "worked without pay on own-family operated farm or business." Income top-coded at P40,000.

Table 2.2: Predictors of job-fair attendance, participation, application, and final interview offer

	Attend	Visit information booth	Apply	Final interview offer
	(1)	(2)	(3)	(4)
Age	-0.023	0.150	0.116	0.146
	[0.030]	[0.159]	[0.138]	[0.187]
Female	-0.005*	0.006	-0.001	-0.029
	[0.003]	[0.016]	[0.013]	[0.023]
HS diploma or greater	0.004	0.142	0.261	0.411
	[0.032]	[0.233]	[0.245]	[0.294]
Some college or greater	0.064	-0.156	0.172	0.018
	[0.041]	[0.147]	[0.116]	[0.173]
Income	-0.004*	0.012	-0.003	0.006
	[0.003]	[0.009]	[0.009]	[0.009]
Currently employed	-0.025	-0.132	0.053	-0.059
	[0.033]	[0.165]	[0.138]	[0.196]
Share jobs abroad qualified	0.022	0.036	0.036*	0.062**
	[0.014]	[0.032]	[0.020]	[0.026]
Ever employed	-0.014	-0.239	-0.075	0.066
	[0.048]	[0.239]	[0.203]	[0.333]
Ever worked in Manila	-0.008	-0.074	-0.189	0.077
	[0.031]	[0.145]	[0.144]	[0.198]
Looked for work formally	0.039	0.244	0.068	-0.051
	[0.029]	[0.202]	[0.158]	[0.233]
Interested work abroad	0.060*	-0.229*	-0.029	0.036
	[0.032]	[0.128]	[0.103]	[0.174]
Applied for work abroad	0.004	0.133	0.099	0.415***
	[0.036]	[0.146]	[0.122]	[0.148]
Pr(job offer abroad)	0.147***	0.043	0.217	-0.283
	[0.050]	[0.292]	[0.307]	[0.391]
Pr(job offer abroad) = 50	-0.025	-0.084	-0.109	-0.148
	[0.032]	[0.138]	[0.133]	[0.165]
Distance to job fair (km)	-0.004	-0.035	0.039*	-0.029
	[0.005]	[0.029]	[0.021]	[0.038]
Constant	0.118	0.278	0.163	0.672
	[0.096]	[0.577]	[0.433]	[0.777]
Observations	588	77	77	60
R-squared	0.091	0.211	0.259	0.314
Dep. variable mean	13.1%	53.2%	77.9%	53.3%

*** p<0.01, ** p<0.05, * p<0.10

Notes: Robust standard errors clustered at the neighborhood level reported in brackets. Sample restricted to the control group. An indicator for a missing perceived chance of job-finding abroad is included but not reported.

Table 2.3: Descriptive statistics and balancing tests

	Control	Voucher
	(1)	(2)
Female	49.3	52.6
Age (mean)	27.2	27.2
Married	57.3	56.9
With children	58.2	59.5
High school or greater	74.7	67.9
College graduate	17.5	13.1
Mean household income (,000s)	6.1	5.3
Working at baseline	35.2	36.9
Ever worked	83.3	85.4
Ever worked in Manila	40.0	37.2
Interested in working abroad	28.2	20.1
Plan to apply abroad, next 12 mo.	34.7	27.4*
Currently has passport	5.4	4.4
Ever applied abroad	29.1	24.8
Any family abroad since 2005	48.5	45.3
Distance to job fair (km)	3.0	3.2
F-test statistic		1.23
P-value		0.26
Observations	588	274

*** p<0.01, ** p<0.05, * p<0.10

Tests for statistically significant differences are clustered at the neighborhood level. Income is top-coded at P40,000.

Table 2.4: ITT impact of voucher on job-fair participation

	Dependent variable mean, control	Voucher	
		(1)	(2)
Attend	13.1%	0.335***	0.354***
		[0.035]	[0.035]
Visit information booth	7.0%	0.076***	0.088***
		[0.023]	[0.023]
Apply	10.2%	0.029	0.047**
		[0.023]	[0.023]
Final interview offer	5.4%	-0.006	0.007
		[0.016]	[0.015]
Observations		862	862
Individual covariates		NO	YES

*** p<0.01, ** p<0.05, * p<0.10

Notes: Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and strongly interested in working abroad.

Table 2.5: Individual characteristics, conditional on job-fair attendance, application, participation, and final interview offer

Sample:	Attendees		Visit info. booth		Applicants		Final interview	
	Control	Voucher	Control	Voucher	Control	Voucher	Control	Voucher
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female	42.9	55.6	46.3	56.4	45.0	55.6	46.9	50.0
Age 20-24	41.6	38.1	29.3	35.9	41.7	47.2	43.8	50.0
Age 25-29	32.5	31.0	36.6	28.2	33.3	30.6	31.3	21.4
Age 30-35	26.0	31.0	34.1	35.9	25.0	22.2	25.0	28.6
Married	44.2	61.9***	48.8	56.4	46.7	44.4	40.6	42.9**
Has children	49.4	65.1**	51.2	64.1	50.0	52.8	43.8	35.7
Less than high school	7.8	29.4***	4.9	20.5***	3.3	16.7***	0.0	7.1
High school graduate	23.4	32.5	24.4	30.8	20.0	33.3**	15.6	28.6
Some college or vocational	40.3	23.8**	41.5	35.9	45.0	38.9	43.8	50.0
College graduate	28.6	14.3**	29.3	12.8**	31.7	11.1***	40.6	14.3***
Employed	32.5	32.5	29.3	38.5	35.0	36.1	34.4	57.1
Family abroad since 2005	45.5	48.4	43.9	53.8	46.7	50.0	56.3	64.3
Interested in working abroad	46.8	27.8***	39.0	46.2	50.0	52.8	56.3	78.6
<50% chance job offer abroad	14.3	31.0**	17.1	23.1	11.7	11.1	15.6	14.3
50% chance job offer abroad	26.0	34.1	26.8	33.3	23.3	44.4**	18.8	28.6
>50% chance job offer abroad	59.7	34.9***	56.1	43.6	65.0	44.4	65.6	57.1
Share of jobs qualified	4.5	3.6***	4.7	3.8**	4.7	3.8***	5.2	4.2
Observations	77	126	41	39	60	36	32	14
F-test, joint equality of means		4.8***		5.7***		4.1***		2.8**

*** p<0.01, ** p<0.05, * p<0.10

Notes: Tests for statistically significant differences are clustered at the neighborhood level and include stratification cell fixed effects.

Table 2.6: ITT impact of voucher on job-fair participation, by education

	Attend	Visit info. booth	Apply	Final inter. offer
	(1)	(2)	(3)	(4)
Voucher	0.398***	0.092***	0.060**	0.015
	[0.061]	[0.032]	[0.026]	[0.014]
Voucher X HS graduate	-0.021	-0.004	0.012	0.004
	[0.091]	[0.052]	[0.048]	[0.031]
Voucher X Some college	-0.069	0.057	0.020	-0.018
	[0.115]	[0.075]	[0.071]	[0.057]
Voucher X Voc. graduate	-0.269	-0.099	-0.090	0.088
	[0.163]	[0.127]	[0.141]	[0.137]
Voucher X Col. graduate	-0.126	-0.081	-0.136*	-0.091*
	[0.092]	[0.077]	[0.071]	[0.047]
HS graduate	0.067**	0.052**	0.065***	0.030**
	[0.030]	[0.024]	[0.025]	[0.014]
Some college	0.108**	0.064**	0.124***	0.075***
	[0.043]	[0.027]	[0.040]	[0.024]
Vocational graduate	0.219***	0.158***	0.243***	0.137***
	[0.072]	[0.058]	[0.064]	[0.049]
College graduate	0.169***	0.103***	0.171***	0.128***
	[0.047]	[0.036]	[0.042]	[0.030]
Observations	862	862	862	862
DV Mean, Control	13.1%	7.0%	10.2%	5.4%
Interactions jointly zero	0.369	0.491	0.336	0.340

*** p<0.01, ** p<0.05, * p<0.10

Notes: Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and strongly interested in working abroad.

Table 2.7: ITT impact of voucher on job-fair participation, by share of jobs abroad for which potentially qualified

	Attend		Visit info. booth		Apply		Final interview offer	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Voucher	0.418***	0.385***	0.070	0.107***	0.071	0.070**	0.032	0.023
	[0.099]	[0.056]	[0.072]	[0.032]	[0.063]	[0.031]	[0.050]	[0.015]
Voucher X Share jobs qualified	-2.064		0.396		-0.859		-0.806	
	[2.660]		[2.132]		[1.724]		[1.487]	
Voucher X Mid. tercile qualified		-0.045		-0.054		-0.049		-0.041
		[0.080]		[0.042]		[0.041]		[0.031]
Voucher X Top tercile qualified		-0.093		-0.026		-0.056		-0.033
		[0.075]		[0.058]		[0.051]		[0.040]
Share of jobs qualified	3.802***		2.611***		3.952***		3.187***	
	[0.989]		[0.910]		[0.988]		[0.937]	
Mid. tercile qualified		0.059**		0.051**		0.076***		0.056***
		[0.027]		[0.021]		[0.023]		[0.016]
Top tercile qualified		0.123***		0.093***		0.142***		0.097***
		[0.032]		[0.025]		[0.029]		[0.018]
Observations	862	862	862	862	862	862	862	862
DV Mean, Control	13.1%		7.0%		10.2%		5.4%	
V + V*Middle tercile		0.000***		0.081*		0.549		0.509
V + V*Top tercile		0.000***		0.105		0.719		0.779
Interactions jointly zero		0.444		0.426		0.402		0.403

*** p<0.01, ** p<0.05, * p<0.10

Notes: Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and strongly interested in working abroad.

Table 2.8: ITT impact of voucher on job-fair participation, by perceived chance of job-finding abroad

	Attend		Visit info booth		Apply		Final interv. offer	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Voucher	0.363***	0.358***	0.083	0.064*	0.013	0.002	0.015	-0.004
	[0.076]	[0.058]	[0.052]	[0.035]	[0.038]	[0.026]	[0.023]	[0.016]
V X Pr(job offer)	-0.074		-0.009		-0.014		-0.041	
	[0.128]		[0.113]		[0.085]		[0.057]	
V X Pr(job offer) = 50%	0.043	0.011	0.003	0.017	0.092*	0.095**	0.010	0.009
	[0.083]	[0.095]	[0.047]	[0.051]	[0.049]	[0.044]	[0.032]	[0.030]
V X Pr(job offer) > 50%		-0.062		0.030		0.008		-0.001
		[0.084]		[0.064]		[0.049]		[0.038]
Pr(job offer abroad)	0.245***		0.144***		0.230***		0.131***	
	[0.053]		[0.043]		[0.044]		[0.034]	
Pr(job offer) = 50%	-0.019	0.056*	-0.008	0.029	-0.031	0.039	-0.028	0.009
	[0.030]	[0.030]	[0.023]	[0.024]	[0.025]	[0.025]	[0.018]	[0.019]
Pr(job offer) > 50%		0.141***		0.070***		0.131***		0.071***
		[0.033]		[0.025]		[0.026]		[0.021]
Observations	856	856	856	856	856	856	856	856
DV Mean, Control	13.1%		7.0%		10.2%		5.4%	
V + V X 50% = 0		0.000***		0.038**		0.024**		0.868
V + V X >50% = 0		0.000***		0.058**		0.808		0.873
Interactions jointly zero	0.707	0.658	0.996	0.887	0.146	0.099*	0.767	0.953

*** p<0.01, ** p<0.05, * p<0.10

Notes: Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and strongly interested in working abroad.

Table 2.9: ITT impact of voucher on job-fair participation, by share of jobs abroad for which potentially qualified and perceived chance of job-finding abroad

	Attend		Visit info. booth		Apply		Final interview offer	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Voucher	0.438***	0.390***	0.077	0.093**	0.063	0.039	0.042	0.020
	[0.116]	[0.075]	[0.079]	[0.040]	[0.068]	[0.031]	[0.048]	[0.016]
Voucher X Share of jobs qualified	-2.300		0.335		-1.473		-0.747	
	[2.652]		[2.167]		[1.893]		[1.535]	
Voucher X Mid. tercile qualified		-0.043		-0.060		-0.059		-0.045
		[0.080]		[0.043]		[0.041]		[0.031]
Voucher X Top tercile qualified		-0.090		-0.034		-0.075		-0.035
		[0.072]		[0.058]		[0.054]		[0.041]
Voucher X chance job offer abroad	-0.046		-0.003		0.009		-0.025	
	[0.128]		[0.114]		[0.085]		[0.056]	
Voucher X chance job offer = 50%	0.046	0.031	-0.003	0.022	0.092*	0.111**	0.008	0.015
	[0.082]	[0.095]	[0.045]	[0.049]	[0.050]	[0.048]	[0.033]	[0.029]
Voucher X chance job offer > 50%		-0.039		0.041		0.029		0.010
		[0.083]		[0.066]		[0.051]		[0.038]
Share of jobs qualified	3.260***		2.300**		3.473***		2.969***	
	[0.916]		[0.898]		[0.917]		[0.936]	
Mid. tercile qualified		0.048*		0.047**		0.069***		0.055***
		[0.029]		[0.021]		[0.024]		[0.015]
Top tercile qualified		0.097***		0.082***		0.122***		0.089***
		[0.033]		[0.025]		[0.029]		[0.018]
Chance job offer abroad if apply	0.209***		0.117***		0.190***		0.098***	
	[0.053]		[0.042]		[0.044]		[0.035]	
Chance job offer abroad = 50%	-0.025	0.035	-0.012	0.011	-0.037	0.012	-0.033*	-0.010
	[0.030]	[0.034]	[0.024]	[0.025]	[0.025]	[0.028]	[0.018]	[0.020]
Chance job offer > 50%		0.117***		0.049**		0.101***		0.049**
		[0.033]		[0.024]		[0.026]		[0.020]
Observations	862	862	862	862	862	862	862	862
DV Mean, Control	13.1%		7.0%		10.2%		5.4%	
Chance offer interact. = 0	0.779	0.739	0.998	0.812	0.156	0.074*	0.898	0.863
Qual. interact. = 0		0.444		0.383		0.265		0.336
All interactions jointly zero	0.734	0.693	0.999	0.710	0.291	0.181	0.916	0.673

*** p<0.01, ** p<0.05, * p<0.10

Notes: Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and strongly interested in working abroad.

Table 2.10: Determinants of perceived chance of job-finding abroad

	Chance offer job abroad				50% chance offer job abroad	
	All		Excl. 50% chance		All	
	(1)	(2)	(3)	(4)	(5)	(6)
Female	-0.022	-0.020	-0.025	-0.021	-0.003	-0.007
	[0.018]	[0.017]	[0.025]	[0.024]	[0.037]	[0.037]
Age 25-29	-0.012	-0.003	-0.008	0.000	0.004	0.003
	[0.019]	[0.019]	[0.026]	[0.023]	[0.041]	[0.040]
Age 30-35	0.001	0.022	0.017	0.041*	0.054	0.061
	[0.017]	[0.018]	[0.024]	[0.023]	[0.042]	[0.043]
HS or greater	0.107***	0.072***	0.127***	0.084**	0.202***	0.195***
	[0.028]	[0.025]	[0.038]	[0.034]	[0.046]	[0.047]
Some col. or greater	0.083***	0.038	0.120***	0.052	-0.021	-0.025
	[0.023]	[0.024]	[0.033]	[0.034]	[0.045]	[0.047]
Currently employed	0.017	0.020	0.030	0.027	0.047	0.033
	[0.022]	[0.022]	[0.031]	[0.031]	[0.040]	[0.041]
Share of jobs qualified	0.031	-0.377	0.191	-0.407	-0.969	-0.702
	[1.046]	[0.927]	[1.495]	[1.230]	[1.367]	[1.331]
Ever employed	-0.010	-0.062**	-0.033	-0.088**	-0.042	-0.017
	[0.026]	[0.025]	[0.038]	[0.035]	[0.052]	[0.053]
Ever worked in Manila		0.018		0.021		-0.076**
		[0.019]		[0.025]		[0.036]
Looked for work formally		0.059***		0.087***		0.021
		[0.018]		[0.025]		[0.041]
Ever applied abroad		0.061***		0.065***		-0.044
		[0.017]		[0.024]		[0.040]
Interested in work abroad		0.131***		0.169***		-0.060
		[0.017]		[0.024]		[0.040]
Any family abroad		-0.009		-0.006		0.055
		[0.017]		[0.025]		[0.035]
Better life next year		0.044**		0.071***		0.022
		[0.018]		[0.024]		[0.040]
Confidence [0-4]		0.050**		0.052*		-0.028
		[0.022]		[0.029]		[0.046]
Trouble answering ques.		-0.009		-0.003		-0.003
		[0.028]		[0.038]		[0.058]
Observations	856	854	601	600	856	854
R-squared	0.152	0.255	0.205	0.324	0.055	0.068
Mean	49.9%		49.8%		29.8%	

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample excludes respondents with missing responses to perceived chance of job-finding abroad. Stratification cell and enumerator fixed effects included.

Table 2.11: Interacted impact of 50-percent perceived chance of job-finding abroad with low versus high number of "50-percent chance" responses

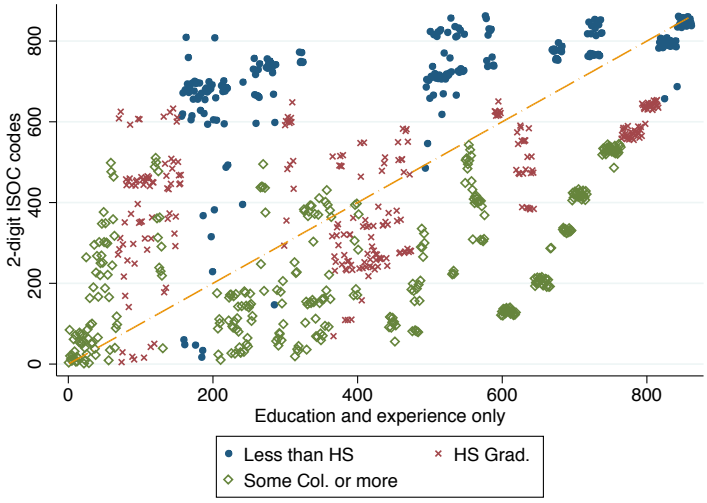
	Attend	Visit info. booth	Apply	Final inter. offer
	(1)	(2)	(3)	(4)
Voucher	0.363***	0.104***	0.027	0.015
	[0.047]	[0.031]	[0.028]	[0.022]
Voucher X Pr(job offer) = 50% X Low50	-0.050	-0.054	0.011	-0.018
	[0.113]	[0.063]	[0.069]	[0.034]
Voucher X Pr(job offer) = 50% X High50	0.274***	0.148	0.250***	0.083
	[0.102]	[0.090]	[0.077]	[0.052]
Voucher X High share with prob. = 50%	-0.140	-0.105	-0.063	-0.058
	[0.104]	[0.069]	[0.064]	[0.038]
Pr(job offer) = 50%	-0.059	-0.014	-0.044	-0.048**
	[0.040]	[0.033]	[0.035]	[0.022]
High share with prob. = 50%	-0.020	0.035	0.004	-0.011
	[0.055]	[0.045]	[0.051]	[0.032]
Pr(job offer) = 50% X High50	0.081	-0.025	0.008	0.041
	[0.072]	[0.061]	[0.062]	[0.042]
Observations	856	856	856	856
DV Mean, Control	13.1%	7.0%	10.2%	5.4%
Pr(50) X Low50 = Pr(50) X High50	0.043**	0.105	0.022**	0.123

*** p<0.01, ** p<0.05, * p<0.10

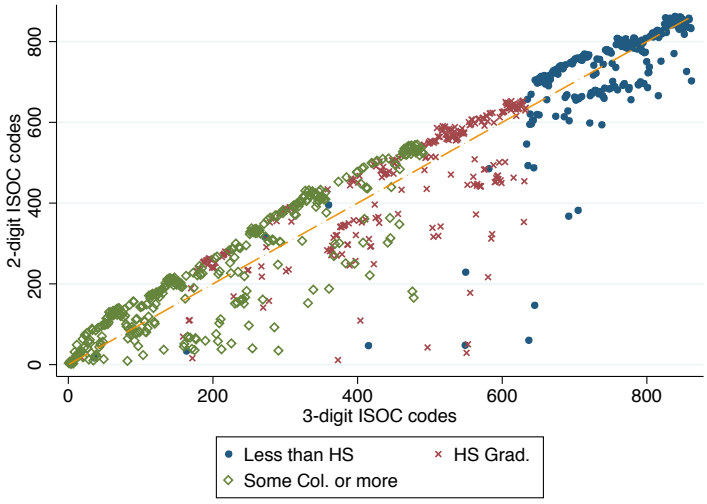
Notes: Sample excludes respondents with missing responses to perceived chance of job-finding abroad. Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and strongly interested in working abroad. A "high share" of 50% chance responses is coded as having three or more responses of "50 percent" to seven labor market expectations question, excluding the perceived chance of job-finding abroad.

2.A Project details

Figure 2.A.1: Within-sample rank of share of qualified jobs, by qualification measure



(a) 2-digit ISOC relevant experience codes vs. education and experience only



(b) 2-digit ISOC relevant experience codes vs. 3-digit ISOC relevant experience codes

Table 2.A.1: Classification of occupations, sample

Job title, two digit ISCO code	Number of positions
Labourers in mining, construction, manufacturing and transport	56
Sales workers	44
Food preparation assistants	19
Cleaners and helpers	18
Refuse workers and other elementary workers	17
General and keyboard clerks	15
Food processing, wood working, garment and other craft and related trades workers	13
Legal, social and cultural professionals	13
Personal service workers	11
Protective services workers	9
Market-oriented skilled forestry, fishery and hunting workers	9
Other clerical support workers	8
Drivers and mobile plant operators	8
Numerical and material recording clerks	7
Market-oriented skilled agricultural workers	7
Handicraft and printing workers	7
Teaching professionals	6
Health associate professionals	6
Customer services clerks	6
Metal, machinery and related trades workers	5
Personal care workers	4
Electrical and electronic trades workers	4
Science and engineering associate professionals	4
Street and related sales and service workers	3
Building and related trades workers, excluding electricians	3
Health professionals	3
Information and communications technicians	2
Business and administration associate professionals	1
Unclassified	1
Administrative and commercial managers	1
Legal, social, cultural and related associate professionals	1
Stationary plant and machine operators	1

Notes: Counts reflect number of total positions reported by respondents, matched to two-digit ISCO-08 codes.

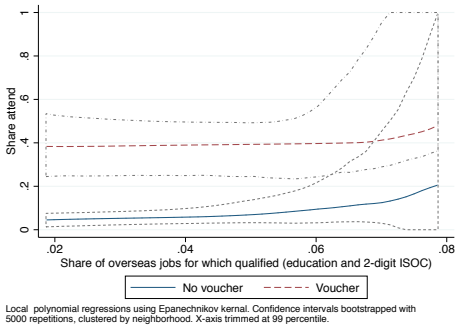
Table 2.A.2: Characteristics of respondents, by 2-digit ISCO code

Job title, two digit ISCO code	Avg. yrs. exper. (1)	% jobs qualified (2)	HS grad. or more (3)	Some col. or more (4)	Share female (5)
Laborers in mining, construction, etc.	3.9	3.6	60.5	21.4	24.7
Sales workers	2.1	4.6	92.5	64.0	52.3
Food preparation assistants	2.7	3.8	83.7	55.4	50.5
Cleaners and helpers	2.7	3.5	51.7	36.7	63.0
Refuse workers and other elementary workers	3.4	4.2	87.7	55.8	12.5
General and keyboard clerks	2.6	4.7	86.7	80.0	61.6
Other craft and related trades workers	2.6	3.4	75.3	20.7	47.0
Legal, social and cultural professionals	3.4	4.1	100.0	92.3	38.5
Personal service workers	3.5	4.4	87.1	39.0	57.3
Protective services workers	2.8	4.1	88.9	80.7	11.5
Skilled forestry, fishery and hunting workers	7.4	3.4	41.5	28.6	0.0
Other clerical support workers	3.2	5.0	99.3	74.6	46.8
Drivers and mobile plant operators	3.1	5.9	95.8	50.0	0.0
Numerical and material recording clerks	2.4	4.0	100.0	85.7	57.1
Market-oriented skilled agricultural workers	6.3	3.0	26.5	6.3	0.0
Handicraft and printing workers	1.9	3.2	42.9	14.3	42.9
Teaching professionals	2.6	4.7	100.0	100.0	85.3
Health associate professionals	1.4	3.6	83.3	72.2	100.0
Customer services clerks	0.9	4.5	97.2	97.2	50.0
Metal, machinery and related trades workers	4.1	10.0	92.1	66.4	0.0
Personal care workers	3.7	3.1	65.0	20.8	89.2
Electrical and electronic trades workers	2.6	8.0	90.0	82.5	0.0
Science and engineering associate professionals	1.5	6.0	83.3	83.3	41.7
Street and related sales and service workers	6.0	3.9	33.3	33.3	33.3
Building and related trades workers	3.9	5.6	56.4	5.1	0.0
Health professionals	1.6	3.4	66.7	66.7	83.3
Information and communications technicians	1.3	8.5	100.0	100.0	5.6
Business and admin. associate professionals	0.7	4.5	100.0	100.0	66.7
Unclassified	1.7	3.9	87.0	52.2	47.8
Administrative and commercial managers	3.0	5.2	100.0	100.0	0.0
Legal, social, cultural and related associate prof.	5.0	4.5	100.0	100.0	0.0
Stationary plant and machine operators	3.0	3.0	0.0	0.0	0.0

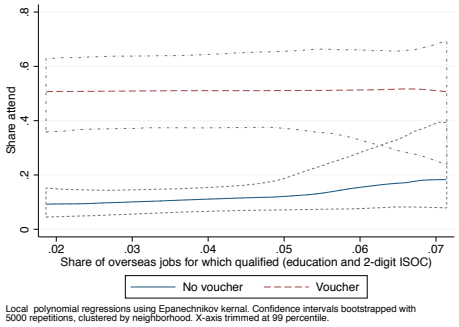
Notes: Counts reflect number of total positions reported by respondents, matched to two-digit ISCO-08 codes.

2.B Supplemental non-parametric estimates

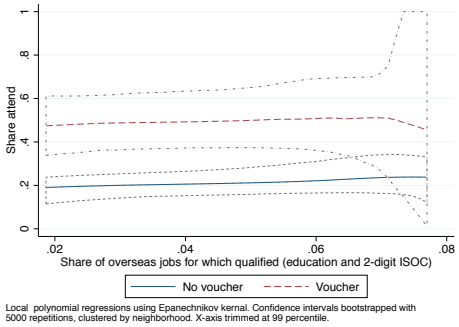
Figure 2.B.1: Impact of voucher assignment on job-fair attendance, by qualification level (2-digit ISOC), separately by perceived likelihood of job-finding abroad



(a) Pr $<$ 50%

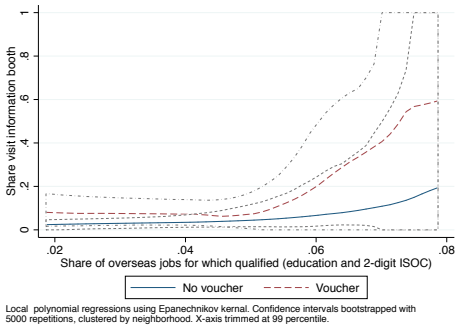


(b) Pr $=$ 50%

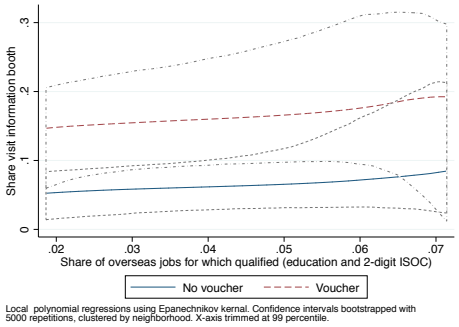


(c) Pr $>$ 50%

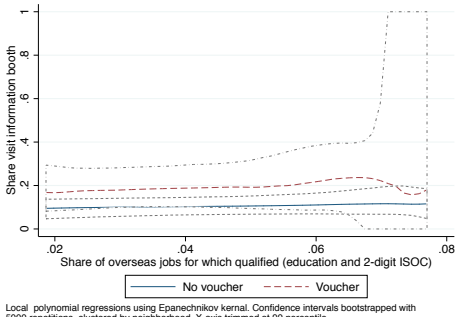
Figure 2.B.2: Impact of voucher assignment on whether visited job-fair information booth, by qualification level (2-digit ISOC), separately by perceived likelihood of job-finding abroad



(a) Pr $<$ 50%

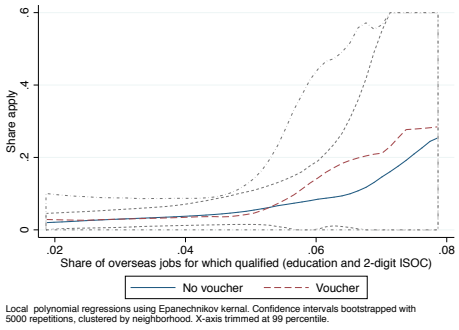


(b) Pr $=$ 50%

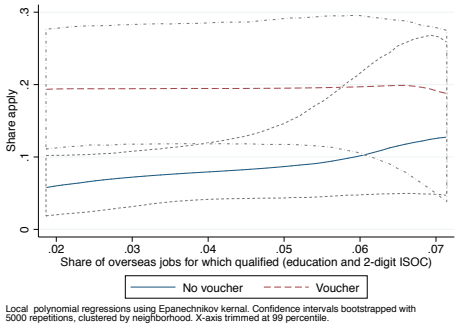


(c) Pr $>$ 50%

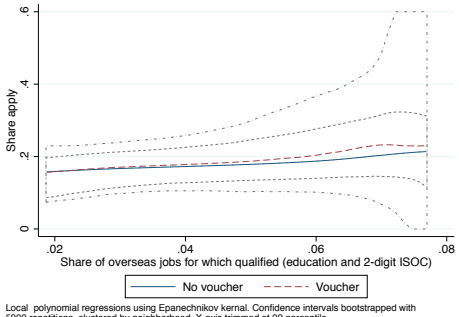
Figure 2.B.3: Impact of voucher assignment on application, by qualification level (2-digit ISOC), separately by perceived likelihood of job-finding abroad



(a) Pr $<$ 50%

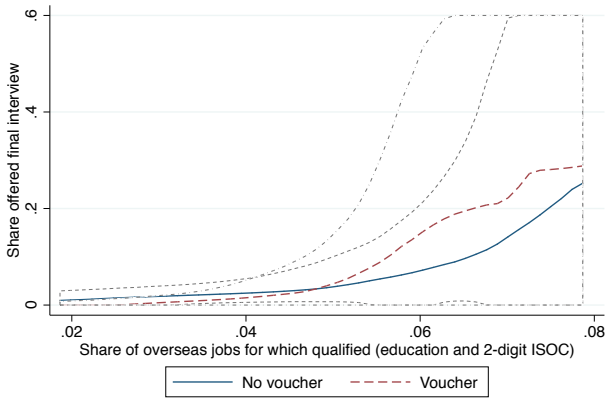


(b) Pr $=$ 50%



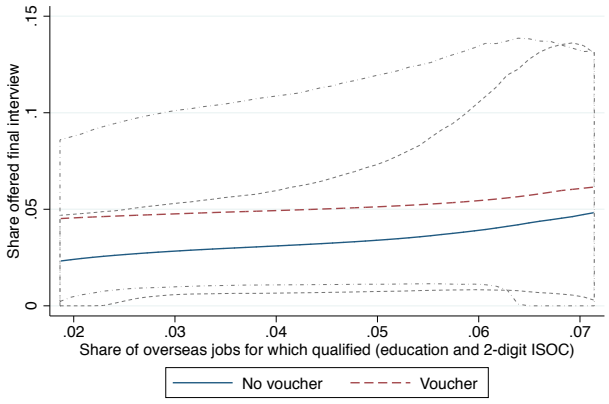
(c) Pr $>$ 50%

Figure 2.B.4: Impact of voucher assignment on whether invited to final interview, by qualification level (2-digit ISOC), separately by perceived likelihood of job-finding abroad



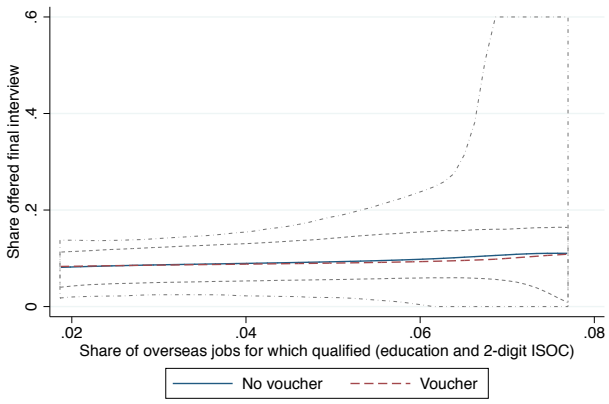
Local polynomial regressions using Epanechnikov kernal. Confidence intervals bootstrapped with 5000 repetitions, clustered by neighborhood. X-axis trimmed at 99 percentile.

(a) Pr $<$ 50%



Local polynomial regressions using Epanechnikov kernal. Confidence intervals bootstrapped with 5000 repetitions, clustered by neighborhood. X-axis trimmed at 99 percentile.

(b) Pr $=$ 50%



Local polynomial regressions using Epanechnikov kernal. Confidence intervals bootstrapped with 5000 repetitions, clustered by neighborhood. X-axis trimmed at 99 percentile.

(c) Pr $>$ 50%

2.C Main specifications, excluding information treatment groups

Table 2.C.1: ITT impact of voucher on job-fair participation, excluding wage and qualification information groups

	DV Mean, Control	Voucher	
		(1)	(2)
Attend	0.127	0.331***	0.337***
		[0.049]	[0.052]
Visit info. booth	0.071	0.071**	0.074**
		[0.033]	[0.036]
Apply	0.102	0.005	0.010
		[0.035]	[0.037]
Final interview offer	0.0609	0.004	0.009
		[0.027]	[0.028]
Observations		292	292
Individual covariates		NO	YES

*** p<0.01, ** p<0.05, * p<0.10

Notes: Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and strongly interested in working abroad.

Table 2.C.2: ITT impact of voucher on job-fair participation, by education, excluding wage and qualification information groups

	Attend	Visit info. booth	Apply	Final inter. offer
	(1)	(2)	(3)	(4)
Voucher	0.409***	0.152**	0.017	0.023
	[0.116]	[0.058]	[0.056]	[0.052]
Voucher X HS graduate	0.021	-0.079	0.123	0.013
	[0.180]	[0.087]	[0.104]	[0.070]
Voucher X Some college	-0.140	-0.031	-0.033	-0.013
	[0.223]	[0.152]	[0.143]	[0.131]
Voucher X Voc. graduate	-0.367	-0.276**	0.030	0.105
	[0.311]	[0.124]	[0.231]	[0.231]
Voucher X Col. graduate	-0.208	-0.218**	-0.227**	-0.150*
	[0.137]	[0.102]	[0.107]	[0.080]
HS graduate	0.059	0.084**	0.058	0.009
	[0.049]	[0.034]	[0.046]	[0.026]
Some college	0.081	0.082*	0.075	0.055
	[0.081]	[0.045]	[0.073]	[0.050]
Vocational graduate	0.175	0.153	0.171	0.147
	[0.138]	[0.112]	[0.120]	[0.093]
College graduate	0.223**	0.150*	0.191*	0.132*
	[0.097]	[0.083]	[0.100]	[0.066]
Observations	292	292	292	292
DV Mean, Control	12.7%	7.1%	10.2%	6.1%
Interactions jointly zero	0.396	0.112	0.091*	0.227

*** p<0.01, ** p<0.05, * p<0.10

Notes: Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and strongly interested in working abroad.

Table 2.C.3: ITT impact of voucher on job-fair participation, by share of jobs abroad for which potentially qualified, excluding wage and qualification information groups

	Attend		Visit info. booth		Apply		Final interview offer	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Voucher	0.483***	0.406***	0.218*	0.156**	0.179**	0.060	0.166	0.035
	[0.164]	[0.095]	[0.119]	[0.060]	[0.088]	[0.042]	[0.098]	[0.046]
Voucher X Share jobs qual.	-3.925		-3.920		-4.549*		-4.220	
	[4.411]		[3.445]		[2.581]		[2.813]	
Voucher X Mid. tercile qual.		-0.104		-0.164*		-0.054		-0.062
		[0.131]		[0.082]		[0.056]		[0.068]
Voucher X Top tercile qual.		-0.113		-0.081		-0.102		-0.022
		[0.132]		[0.106]		[0.078]		[0.084]
Share of jobs qualified	5.074***		3.426**		5.328***		5.072***	
	[1.550]		[1.448]		[1.419]		[1.527]	
Mid. tercile qualified		0.079		0.097***		0.093*		0.066*
		[0.050]		[0.034]		[0.046]		[0.034]
Top tercile qualified		0.150**		0.115**		0.167**		0.093**
		[0.066]		[0.050]		[0.064]		[0.039]
Observations	292	292	292	292	292	292	292	292
DV Mean, Control	12.7%		7.1%		10.2%		6.1%	
V + V*Middle tercile		0.001***		0.901		0.896		0.509
V + V*Top tercile		0.000***		0.295		0.511		0.779
Interactions jointly zero		0.667		0.139		0.423		0.403

*** p<0.01, ** p<0.05, * p<0.10

Notes: Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and strongly interested in working abroad.

Table 2.C.4: ITT impact of voucher on job-fair participation, by perceived chance of job-finding abroad, excluding wage and qualification information groups

	Attend		Visit info booth		Apply		Final interv. offer	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Voucher	0.471***	0.432***	0.172**	0.116*	0.019	-0.014	0.039	-0.000
	[0.121]	[0.096]	[0.071]	[0.062]	[0.041]	[0.031]	[0.041]	[0.033]
V X Pr(job offer)	-0.237		-0.224		-0.116		-0.138	
	[0.239]		[0.142]		[0.111]		[0.093]	
V X Pr(job offer) = 50%	-0.083	-0.164	0.024	-0.033	0.149**	0.122**	0.109*	0.078
	[0.125]	[0.151]	[0.066]	[0.071]	[0.069]	[0.055]	[0.057]	[0.048]
V X Pr(job offer) > 50%		-0.148		-0.102		-0.045		-0.053
		[0.156]		[0.095]		[0.072]		[0.067]
Pr(job offer abroad)	0.270**		0.198**		0.262***		0.199**	
	[0.110]		[0.083]		[0.087]		[0.082]	
Pr(job offer) = 50%	-0.018	0.064	-0.023	0.025	-0.058	0.024	-0.061	-0.003
	[0.062]	[0.056]	[0.055]	[0.048]	[0.046]	[0.043]	[0.037]	[0.029]
Pr(job offer) > 50%		0.147**		0.088*		0.146***		0.103**
		[0.068]		[0.046]		[0.053]		[0.045]
Observations	291	291	291	291	291	291	291	291
DV Mean, Control	12.7%		7.1%		10.2%		6.1%	
V + V X 50% = 0		0.018**		0.143		0.094*		0.076*
V + V X >50% = 0		0.006***		0.821		0.370		0.373
Inteactions jointly zero	0.502	0.516	0.299	0.568	0.098*	0.095*	0.142	0.182

*** p<0.01, ** p<0.05, * p<0.10

Notes: Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and strongly interested in working abroad.

Table 2.C.5: ITT impact of voucher on job-fair participation, by share of jobs abroad for which potentially qualified and perceived chance of job-finding abroad, excluding wage and qualification information groups

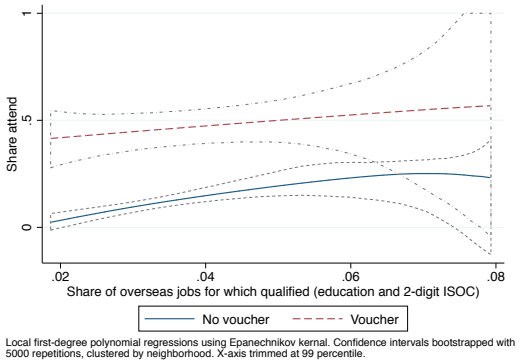
	Attend		Visit info. booth		Apply		Final interview offer	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Voucher	0.566***	0.476***	0.280**	0.181**	0.204**	0.030	0.192*	0.027
	[0.185]	[0.125]	[0.131]	[0.073]	[0.095]	[0.041]	[0.101]	[0.039]
Voucher X Share of jobs qualified	-2.666		-3.392		-5.872**		-4.749	
	[4.150]		[3.356]		[2.516]		[2.981]	
Voucher X Mid. tercile qualified		-0.088		-0.152*		-0.051		-0.057
		[0.126]		[0.088]		[0.058]		[0.076]
Voucher X Top tercile qualified		-0.058		-0.062		-0.127		-0.028
		[0.110]		[0.104]		[0.076]		[0.092]
Voucher X chance job offer abroad	-0.208		-0.184		-0.046		-0.082	
	[0.242]		[0.137]		[0.108]		[0.095]	
Voucher X chance job offer = 50%	-0.092	-0.166	0.026	-0.032	0.155**	0.147***	0.109*	0.076
	[0.110]	[0.132]	[0.058]	[0.067]	[0.059]	[0.053]	[0.055]	[0.048]
Voucher X chance job offer > 50%		-0.125		-0.072		-0.016		-0.041
		[0.147]		[0.097]		[0.076]		[0.080]
Share of jobs qualified	4.730***		3.149*		4.962***		4.836***	
	[1.565]		[1.570]		[1.392]		[1.530]	
Mid. tercile qualified		0.062		0.088**		0.079*		0.056*
		[0.050]		[0.032]		[0.045]		[0.031]
Top tercile qualified		0.129**		0.105**		0.151**		0.082**
		[0.061]		[0.046]		[0.058]		[0.034]
Chance job offer abroad if apply	0.224**		0.166*		0.211**		0.150*	
	[0.109]		[0.084]		[0.087]		[0.085]	
Chance job offer abroad = 50%	-0.023	0.041	-0.028	0.003	-0.065	-0.005	-0.067*	-0.019
	[0.057]	[0.057]	[0.049]	[0.047]	[0.039]	[0.046]	[0.035]	[0.028]
Chance job offer > 50%		0.122*		0.063		0.116**		0.086*
		[0.063]		[0.044]		[0.050]		[0.044]
Observations	291	291	291	291	291	291	291	291
DV Mean, Control	12.7%		7.1%		10.2%		6.1%	
Chance offer interact. = zero	0.461	0.427	0.410	0.738	0.041**	0.031**	0.159	0.175
Qual. interact. = zero		0.767		0.231		0.258		0.508
All interactions jointly zero	0.618	0.775	0.436	0.276	0.002***	0.063*	0.101	0.356

*** p<0.01, ** p<0.05, * p<0.10

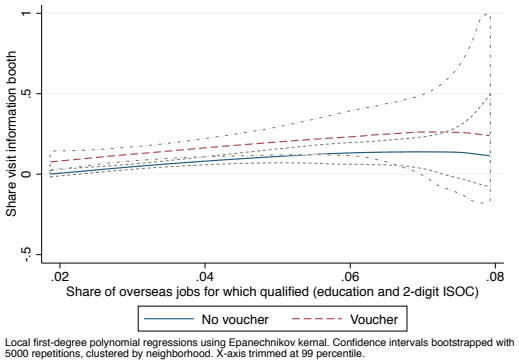
Notes: Robust standard errors clustered at the neighborhood level reported in brackets. Stratification cell and enumerator fixed effects included. Individual characteristics include sex, age, marital status, education, and dummy variables for whether currently or ever employed, ever employed in Manila, and strongly interested in working abroad.

2.D Robustness checks

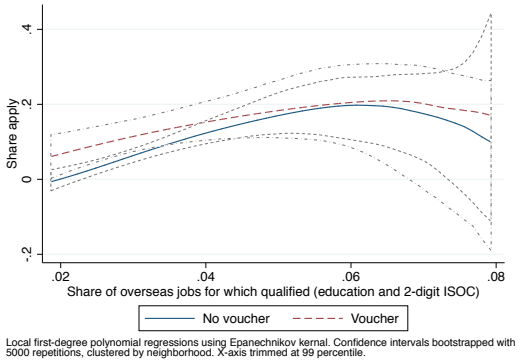
Figure 2.D.1: Local linear regressions of voucher assignment on job-fair outcomes, by qualification level (2-digit ISOC)



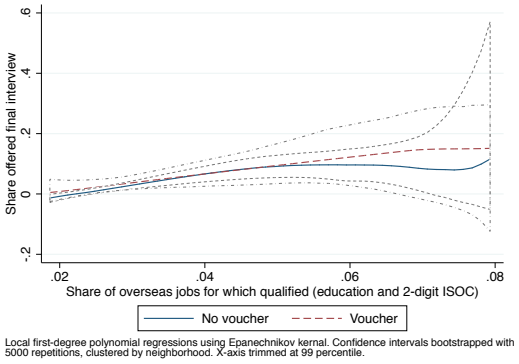
(a) Attendance



(b) Visit information booth

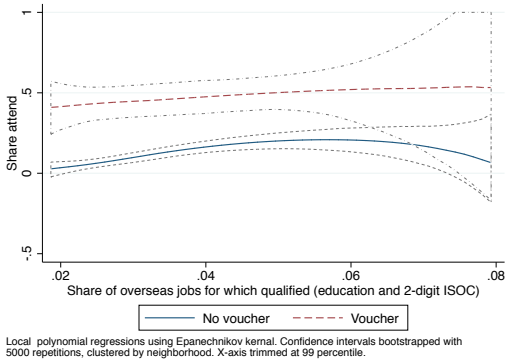


(c) Application

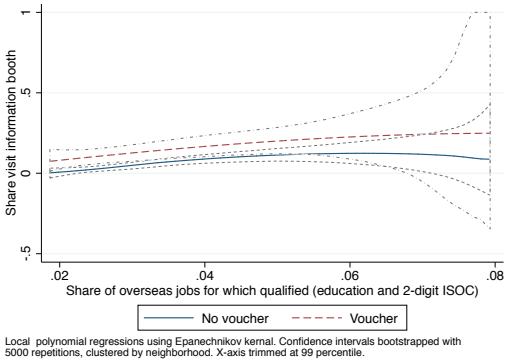


(d) Final interview offer

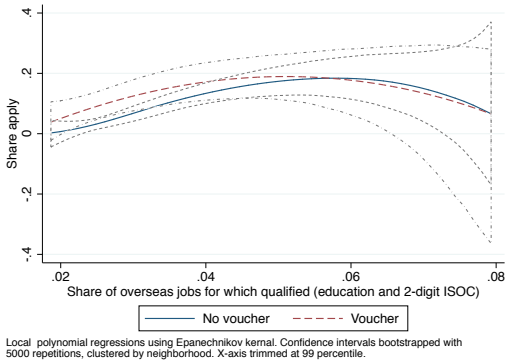
Figure 2.D.2: Local quadratic regressions of voucher assignment on job-fair outcomes, by qualification level (2-digit ISOC)



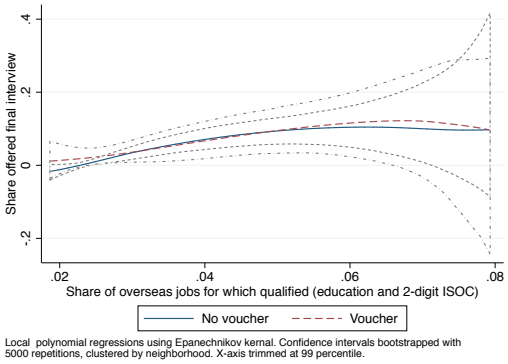
(a) Attendance



(b) Visit information booth



(c) Application



(d) Final interview offer

CHAPTER 3

Unilateral Facilitation Does Not Raise International Labor Migration from the Philippines

3.1 Introduction

Wage rates of workers using the same skills and doing the same jobs differ by as much as ten to one depending on the country in which they work (Ashenfelter, 2012). Moving from a developing to a developed country results in immediate large increases in income for the migrants, with gains that far exceed those of any other development policy intervention (Clemens, Montenegro and Pritchett, 2009; Gibson and McKenzie, 2013; Hanson, 2009; McKenzie, Gibson and Stillman, 2010). Why do so few people emigrate, and what policies can governments in developing countries pursue to make it easier for their citizens to escape poverty through international migration?

Migration-source country governments have pursued two broad approaches to facilitating international migration for formal, legal work. Source countries can pursue unilateral facilitation policies on their own, without needing the cooperation of migration-destination country governments. Unilateral facilitation may involve provision of information, loan facilitation, and policies to ease the international job search process. These policies act on the supply side of the migrant labor market. Enhanced unilateral facilitation could have positive

impacts on migration if immigration policies in destination countries are sufficiently open, or if bilateral policies are already in place. Bilateral facilitation policies, on the other hand, involve cooperation with governments or employers in destination countries, and include formalization of agreements to allow labor migration of specified numbers and types of workers. Such policies primarily attempt to influence the demand side of the migrant labor market, but could also have supply-side components.

Despite the spread of these policies, there is currently little rigorous empirical evidence on the effectiveness of either unilateral or bilateral migration facilitation. We implement a randomized experiment measuring the impacts of unilateral migration facilitation. Our experiment is large in scale, implements unilateral facilitation at a range of intensities, and occurs in the Philippines, one of the world's most important sources of legal, temporary international labor migration.

The Philippines has made perhaps the greatest progress among migration-source countries in implementing bilateral approaches, as evidenced by the existence of 49 bilateral migration agreements with 25 destination countries (6) and an annual deployment of more than 1.6 million Filipino workers worldwide (POEA 2013). We implement our study in Sorsogon, a province that sends relatively few labor migrants overseas, compared to other parts of the Philippines. These features - existing and extensive bilateral labor migration arrangements, but relatively low migration relative to other parts of the country - make our experimental context one where unilateral migration policies could potentially have a substantial positive impact.

In the classic economic migration model, migration is an investment: individuals and households incur moving costs to generate returns via higher incomes (Sjaastad, 1962). Subsequent work acknowledges imperfect financial markets in developing countries can also create additional rationales for migrating such as to finance household investments (Stark and Bloom, 1985; Yang, 2006).

This framework suggests three main reasons why individuals do not migrate even when there are job opportunities abroad. First, individuals may have high disutility from moving and therefore not wish to participate in international migration even though the monetary benefits outweigh the monetary costs. This is certainly not what many non-migrants say - for example, 51.1 percent of surveyed Filipinos aged 15 and over say they would like to work abroad if they had the opportunity (Gallup, 2010). Second, individuals may not be fully informed about the costs and benefits of migration. Perhaps because they do not get to observe the outcomes of the most successful individuals who leave (Wilson, 1987), potential migrants may underestimate the benefits of migration (McKenzie, Gibson and Stillman, 2013). Third, individuals may wish to migrate, but be unable to do so because of various constraints such as credit market imperfections (Mckenzie and Rapoport, 2007; Grogger and Hanson, 2011); documentation barriers such as difficulty in obtaining a passport (McKenzie, 2007); or frictions in job search that are exacerbated when searching internationally (Ortega, 2000; Lumpe and Weigert, 2009).

Our experiment tested the impact of unilateral facilitation policies designed to reduce such barriers. We randomized adults of prime migration age into various combinations of treatments facilitating international labor migration. Individuals were randomized into a control group that received no treatments, or into receiving one or more of the set of facilitation treatments. The different treatments alleviated constraints in the following areas: 1) information (about job search, migration financial, and passport processing); 2) frictions in job search (assistance in enrolling in an online job-finding website set up by the project to lower search costs and facilitate matching between recruiters and workers); and 3) documentation barriers (assistance and a full subsidy for passport application).

3.2 Setting

The Philippines is a useful setting to study the impact of unilateral approaches. The Philippine government's extensive bilateral facilitation policies, along with strong international labor demand, have created many migration opportunities in the past few decades. The government directly encourages international emigration, regulates private labor recruiters, and numerous financial institutions provide financial to help potential migrants pay recruitment fees (O'Neil, 2004). Yet even with this infrastructure in place, and despite the fact that the country's per capita GDP (around US$2,000) is less than one tenth of that in developed countries, most Filipinos do not migrate (five in six families do not receive remittances from workers abroad). We conducted our experiment in Sorsogon, a rural province 10-12 hours by bus from the capital, Manila, where most recruitment activities take place. Reflecting its relative poverty and isolation, the Bicol region (where Sorsogon is located) has relatively low participation in international migration. The region accounts for 5.8 percent of the Philippine population, but only 3.3 percent of the country's overseas worker deployments in 2011 (NSO 2011).

3.3 Methods

We randomly selected 4,153 households from six municipalities in Sorsogon Province. From each household, we interviewed the first member we met who had never worked abroad and was aged 20-40. The supplementary online text describes our sampling procedure in greater detail. We conducted the baseline survey in early 2010. Table 1 reports demographic characteristics of the sample from the baseline survey. 71 percent of respondents are female, reflecting the fact that females were more likely to be at home when our project staff called upon the household. Respondents report relatively high educational attainment (69 percent have completed high school and 36 percent have completed at least some post-secondary

schooling) but low levels of household income (averaging P7,800 pesos/month, or US$157) suggesting they may have high returns to working overseas.[1] Thirty-four percent report that they are "interested" or "strongly interested" in working abroad.

We revisited respondents in 2012 to collect information on their overseas job-search knowledge, job-search behavior, and migration decisions. We ask whether and how respondents searched for work overseas between 2010-2012, and we classify respondents as having migrated if they obtained a job offer and migrated abroad during that period. We successfully surveyed 90.8 percent of respondents or another member of their household at endline, and we find no evidence of differential attrition across treatment assignment.[2] Our primary analytical sample consists of these 90.8 percent for whom we successfully fielded an endline survey of the respondent or a fellow household member. Among the 9.2 percent who could not be reached at endline in this manner, we fielded brief "log" surveys of neighbors on international labor migration by the respondent, and inclusion of these log surveys raises our total endline response rate (for the "migrate abroad" outcome) to 98.5 percent.

We show in the SOM that our estimated impacts on migration are robust to use of the full (98.5 percent) endline sample including the log surveys. During the baseline survey, we randomly assigned respondents to a control group or to one of four treatment groups designed to improve their information about and access to overseas work opportunities (Figure 3.1). These groups were application information [T1], financial information [T2], application and financial information [T1] + [T2], and website assistance [T4]. The application information consisted of information on typical overseas costs; the steps needed to apply for work abroad; an advertisement to enroll in Pilijobs.org, an overseas job-finding website designed as part of this project[3]; and a list of ways to avoid illegal recruitment from the Philippine Overseas Employment Agency. Financial information consisted of typical placement fees for work

[1]This and all other conversions based on the average exchange rate from February-June 2010, 1 USD = 45.0497 PHP (OANDA, 2012)

[2]See Table**XXX**.

[3]See Appendix 3.A for more details on the interventions.

abroad and a list of Manila-based financial companies that provide loans for placement fees.

To facilitate job-matching, we worked with several Manila-based overseas recruitment agencies and a Sorsogon microfinance NGO to develop a website, Pilijobs.org, to help respondents easily contact and apply with reputable recruitment agencies, and to allow those agencies to directly post job opportunities that could be accessed by respondents. Website assistance [T4] was always assigned along with application and financial information ([T1] + [T2]). It consisted of a paper form they could use to enroll in Pilijobs.org, with interviewers providing help if requested. Interviewers returned to pick up completed forms, or respondents returned them to a nearby office. Project staff encoded and uploaded forms to the website. Based on feedback from our partner recruitment agencies during the first stage of the project, we determined that another potential barrier to overseas migration was difficulty accessing a passport. Agencies reported that because of difficulty and delays many individuals encounter when applying for passports, they preferred to prioritize applicants with passports. In mid-2011, we randomly assigned a subset of our sample to one of two treatments targeted to help respondents get passports for overseas work, which were cross randomized with our initial treatments to generate 15 total treatment and control cells (Figure 3.1).

The first passport treatment, passport information [T3], provided respondents a flier on the importance of having a passport before applying for overseas work and the steps they could take to obtain a passport. The second passport treatment, passport assistance [T3]+[T5], involved the passport information treatment, plus a letter inviting respondents to participate in a program that fully subsidized the typical costs of applying for a passport (including transportation), along with project staff assistance with passport application.

Figure 3.1 shows the treatments, which range from the control group to "All information" (application, financial, and passport information [T1] + [T2] + [T3]) and "All information + website" ([T1] + [T2] + [T3] + [T4]). The most intensive treatment, "Full assistance," includes all information treatments, website assistance, and passport assistance ([T1] + [T2]

+ [T3] + [T4] + [T5]). The supplementary online text presents the methodology used to test the impacts of these treatments on knowledge about migration, job-search activities, and international migration.

3.4 Results

We examine whether unilateral facilitation can increase international migration by testing four hypotheses:

H1: The massive gain in income possible from migration should result in high migration demand. Since the monetary gains from migration are likely to far exceed the monetary costs for most Filipinos (2), theory predicts most individuals will wish to migrate unless the disutility from moving is high. In fact only 33.9 percent of individuals say they interested or very interested in migration at baseline, and far fewer search for work overseas (5.1 percent of the control group) between survey rounds.

H2: Incomplete information prevents individuals from realizing the gains from migration. If individuals underestimate the gains from migration (McKenzie, Gibson and Stillman, 2013), or overstate the costs, then some individuals for whom it is optimal to migrate will decide not to do so. Knowledge is clearly incomplete - at baseline, one-quarter of individuals responded with "don't know" to the typical wages and costs of work overseas for six common destination countries, and the responses given by those who do give an answer also suggest considerable inaccuracies. For example, half of those who did respond estimated they would earn the same wage or less in high-wage Canada as they would in low-wage Saudi Arabia. At endline, only 14.3 percent of the control group can name a lender who can finance migration costs and only 19.9 percent know where to go to apply for a passport. However, the information treatments alone do not result in higher rates of job search or international migration.

Figure 3.2 highlights means of key outcomes across a representative subset of treatments. We

see the rate of overseas job search (5.3 percent) for the "All information" treatment is similar in magnitude, and not statistically different, from the 5.1 percent rate in the control group, and that only 1.1 percent of the "All information" group migrates abroad over the two year period. Table 3.2 provides regression estimates of the treatment effects for a broader range of job-search and migration outcomes over the two-year period and confirms this lack of impact. Table 3.3 restricts the regression analysis to the subset of individuals who indicated that they were interested in migrating at baseline. In this subsample, information alone induces statistically significant increases (at the ten-percent level) in the likelihood of being invited to interview and attending an interview for work abroad, but there is no statistically significant impact of information alone on actual migration.

H3: Frictions in matching with recruiters limit international migration. Even if individuals have correct information and decide the gains from migration exceed the costs, they still need to match with a job abroad (Ortega, 2000; Lumpe and Weigert, 2009). The website treatment is intended to help individuals do this. Figure 3.2 shows that the combination of information and the website treatment ("All Information + Website") caused a substantial increase in the rate of search for work abroad, from 5.1 percent to 15.7 percent. The regression-adjusted estimate of this treatment effect from Table 3.2 is nearly identical, indicating a 10.8 percentage point increase (statistically significant at the one-percent level). Despite inducing substantially higher search effort, the treatment causes no additional migration abroad: the coefficient estimate in Table 3.2 column 8 is very small in magnitude and is not significantly different from zero. For the subgroup expressing interest in migrating at baseline, Table 3.3 shows the website and information combination resulted in a 20.1 percentage-point increase in job search and a 7.7 percentage-point increase in attending an interview (statistically significant at the one and five-percent levels, respectively), but much smaller and statistically insignificant increases in the job offer rate (4.4 percentage points) and in the migration rate (2.3 percentage points).

H4: Documentation barriers prevent individuals from taking advantage of job openings

abroad. Lack of a passport may prevent recruiters from even considering individuals for job openings or prevent some of those who receive job offers from taking up these offers. Our most intensive "Full assistance" treatment, which combines information, website assistance, and assistance obtaining a passport, results in a 21.7 percent job search rate (Figure 3.2), but is still far short of the 33.9 percent reporting interest in migration at baseline. Table 3.2 shows that this 16.0 percentage-point increase in job search over the control group rate is statistically significant at the one-percent level, and mainly reflects increased online search (column 2, increase significant at the one-percent level), in addition to some additional search via other methods, such as attending job fairs (column 4, increase significant at the five-percent level). The full assistance treatment also has positive impacts on job interview invitations, interview attendance, and job offer receipt (columns 5-7, effects significant at the ten, five, and one-percent levels respectively), and these effects are large relative to control group rates (2.6 percent, 1.5 percent, and 1.7 percent, respectively). Despite these positive impacts on pre-migration outcomes, the treatment has no statistically significant impact on migration abroad: the point estimate is zero percentage points to the third decimal place (column 8).

Table 3.3 shows these effects are larger for the sub-group initially expressing interest in migration (for whom demand should not be the constraint), with a 26.7 percentage-point increase in job search, a 8.3 percentage-point increase in job interview attendance, and a 7.4 percentage-point increase in the likelihood of receiving a job offer abroad (all statistically significant at the five-percent level or less). However, there is still only a statistically insignificant 1.6 percentage-point increase in migration abroad. That is, our full package of unilateral facilitation delivered to the subgroup interested in migrating still does not significantly increase migration.

Appendix 3.A shows that these results are robust to a variety of specifications and to alternate measures of migration outcomes, including a follow-up effort in 2013 to check the migration status of those with job offers who had not yet migrated in 2012. In Table 3.A.5, we also

examine the reasons some individuals with job offers did not migrate. The most common reasons given were financial and health related: 24.1 percent say they could not afford migration costs, and 10.3 percent cite health issues or that they failed the medical exam. Additionally, at least 27.9 percent of unaccepted offers can be attributed to a lack of demand to migrate, either because of the conditions of the position (8.6 percent not interested in type of work, 6.9 percent salary too low), family obligations (10.3 percent), or because the respondent was no longer interested in working abroad (1.7 percent).

3.5 Discussion

The large gain in income possible through international migration makes it a puzzle that so few individuals migrate abroad. We conduct a randomized impact evaluation of migration facilitation policies designed to overcome information, matching, and documentation constraints that may inhibit individuals from realizing these gains. These are policies that developing countries can implement unilaterally, without needing to reach bilateral agreements with migration destination countries.

Our results suggest that information constraints are not an important barrier to international labor migration. Despite individuals lacking complete knowledge about the incomes they could earn abroad, the costs of moving, or the process involved in migrating, we find that providing such information has no overall impact on either job search or international migration.[4]

In contrast, we do find that assisting individuals to match with recruiters through a jobs website, and to overcome documentation barriers through passport assistance, does lead to a substantial increase in job search effort, and to an increased likelihood of obtaining a job

[4](26) One potential reason for this is that more accurate information may dissuade overly optimistic individuals from searching, balancing out an increase in search from individuals who undervalue the gains from migrating. Indeed we find (and show in Appendix 3.A) that providing only financial information or passport information without other facilitation has a small negative impact on job search, consistent with individuals understating the costs and complexity of moving.

interview. These constraints therefore appear to inhibit individuals taking steps towards international migration, although even with our maximum intensity facilitation, the rate of overseas job search over a two-year period, 21.7 percent, is still far short of the fraction of individuals expressing interest in overseas migration at the start of that period (33.9 percent). We conclude that survey-based elicitations of migration interest are likely to exceed actual attempts at migration, even in response to intensive migration assistance.

However, these substantial impacts on job search lead to no large or statistically significant increases in actual migration. Only a minority of the additional respondents induced to search for jobs overseas in response to our most intensive facilitation treatment are invited to interview for overseas jobs or receive overseas job offers. (That said, the effects of the treatment on these outcomes are statistically significant and imply large proportional effects relative to low control-group rates of interviews and offers.) Substantial fractions of those induced to search for overseas jobs by our treatments appear to be screened out by those on the demand side of the migrant labor market - recruitment agencies and the ultimate overseas employers. This is consistent with recent work showing how binding minimum wages specific to occupation and destination limit the number of job openings abroad for Filipinos McKenzie, Theoharides and Yang (forthcoming).

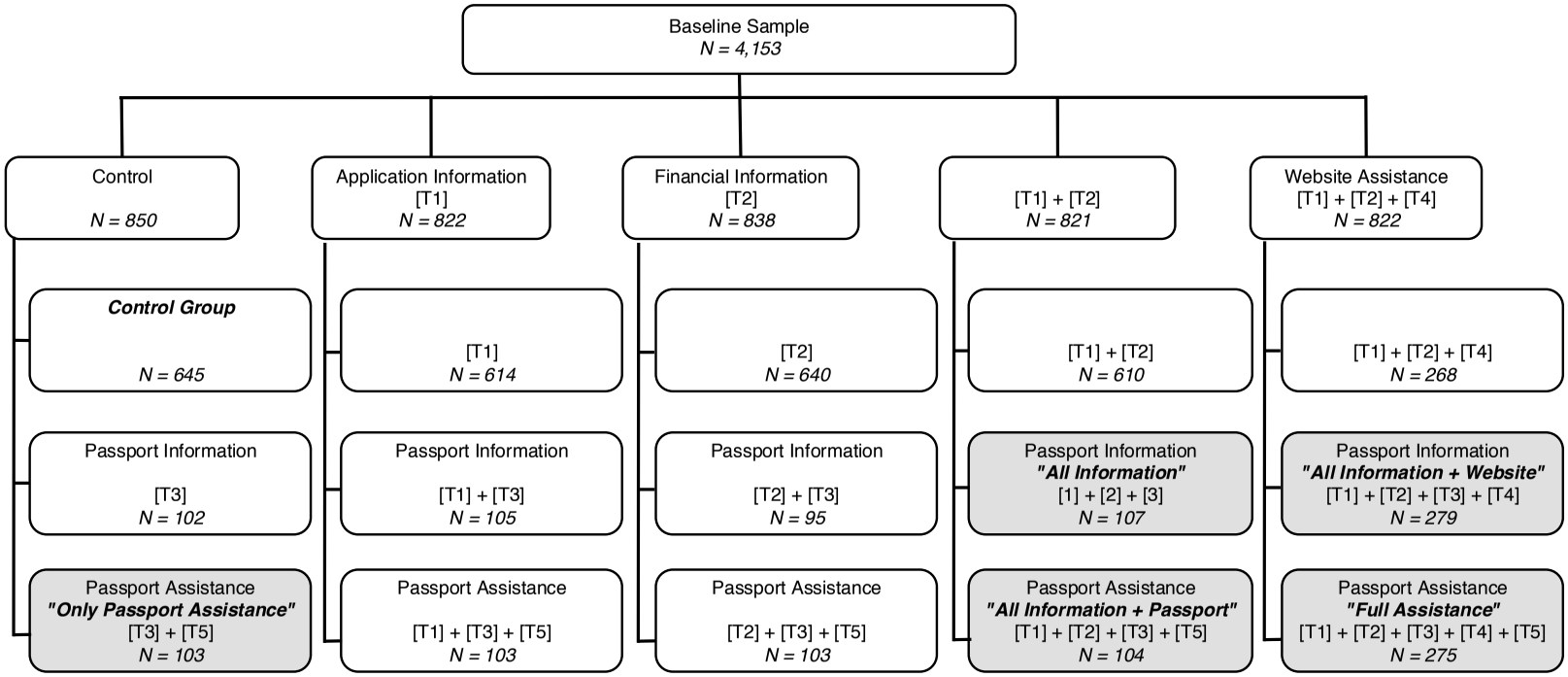
Perhaps the most surprising result of our study is that, while our most intensive facilitation treatment delivers statistically significant increases in overseas job offers (that are large relative to control group rates), it has zero impact on actual overseas migration (over a two-year post-treatment window). This finding contrasts strongly with recent work on facilitating internal migration (Bryan, Chowdhury and Mobarak, 2011), which has found small subsidies such as the cost of a bus ticket can have large impacts on internal job search and internal migration.

This lack of impact serves to further underline the point that demand for international migration on the part of developing-country residents is likely to be overstated - those induced

by an intervention to receive actual job offers commonly reject those offers in the end. Our survey evidence on the reasons these jobs are declined fails to pinpoint a dominant reason behind such job-offer rejections. The most common reason, financial constraints (cited by nearly a quarter of job-offer decliners), does not distinguish whether individuals face actual financial constraints or whether they are indicative that the perceived benefits of migration do not exceed the perceived costs.

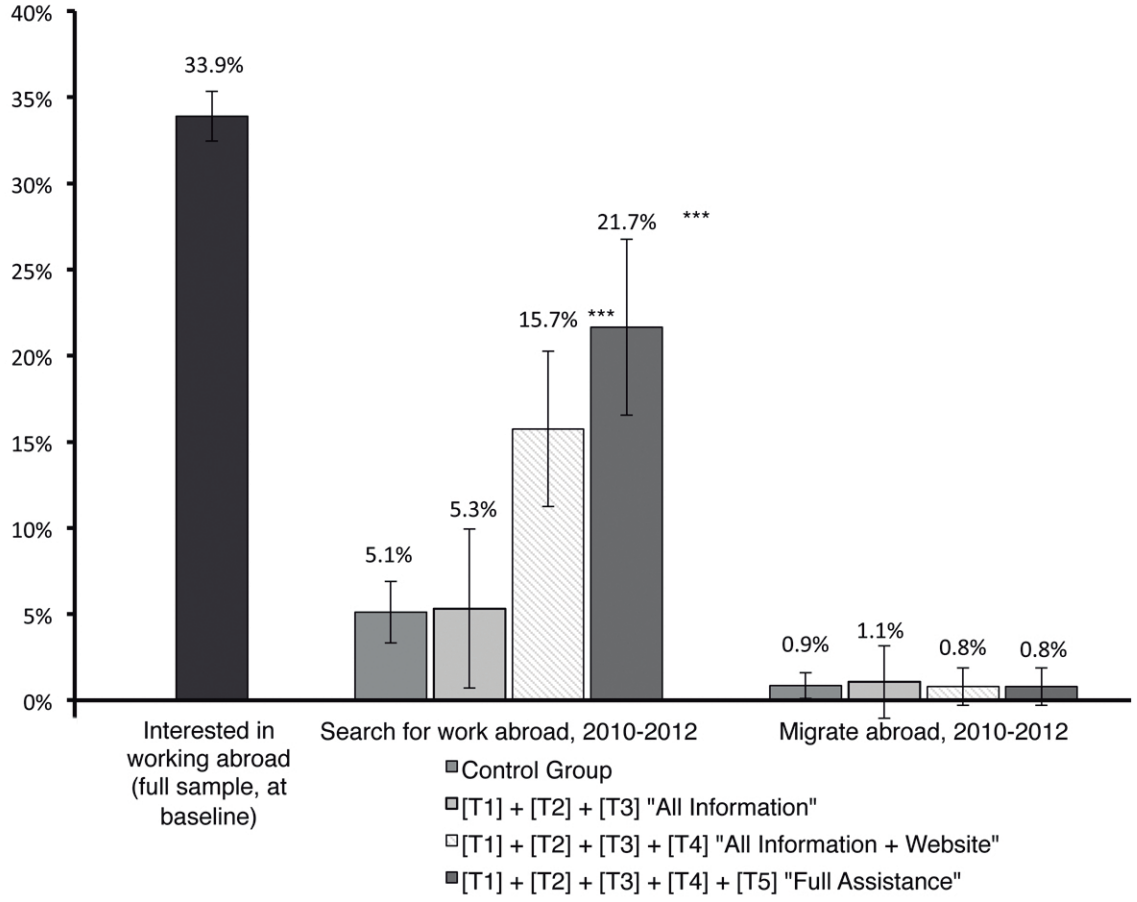
Together, these results indicate that unilateral facilitation policies related to information, job search, and documentation assistance are not sufficient to increase rates of international labor migration. We find evidence of multiple remaining barriers on both the supply side (relatively low interest on the part of potential migrants) and demand side (highly selective screening for interviews and job offers) for overseas work. Our findings indicate that policymakers aiming to expand access to migration, particularly for those in isolated areas, should not expect to achieve success if relying solely on unilateral migration facilitation, and brings to the fore the role of complementary bilateral facilitation policies. Investigating the effectiveness of such bilateral policies is an important avenue for future research.

Figure 3.1: Treatment assignment



Notes: Sample includes all baseline respondents. Total observations per treatment assignment cell are reported in italics, which include those who attrit from the endline survey. Treatment coefficients for shaded boxes reported in Tables 3.2 and 3.2. The full set of treatment effects are reported in Tables 3.A.7 and 3.A.8.

Figure 3.2: Reported interest in overseas migration, compared to search effort and realized migration across selected treatment conditions



Notes: "Interested in working abroad" indicates respondent reported he/she was "interested" or "very interested" in migrating overseas at baseline (early 2010). Other variables reported in 2012 endline survey. Searching for work abroad includes asking family/friends, applying with a recruitment agency, applying online, or searching another way. Sample includes all baseline respondents with completed endline surveys. Error bars indicate 95% confidence intervals. See Figure 3.1 for treatment definitions. Stars indicate difference vs. control group is statistically significant at 10% (*), 5% (**), and 1% (***) levels.

Table 3.1: Descriptive statistics

	Mean	S.D.	N
	(1)	(2)	(3)
Female	0.71	0.46	4151
Age (mean)	31.65	6.06	4151
High school graduate	0.33	0.47	4151
Some college or vocational	0.23	0.42	4151
College graduate	0.13	0.34	4151
Interested in working abroad	0.34	0.47	4151
Willing to take risks (1=low-10=high)	5.39	3.53	4143
Household income	7.88	7.64	4091
Household savings (uncond.)	1.78	10.03	3927
No household savings	0.83	0.38	3927
Anyone in HH ever take out loan	0.53	0.50	4150
Normalized asset index	0.00	1.00	4151
Any immediate fam. overseas	0.13	0.34	4151
Any extended fam. overseas	0.54	0.50	4151
Observations		4151	

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to baseline respondents without missing data on education and past household member migration. Household income and savings reported in thousands of pesos.

Table 3.2: Impact of unilateral facilitation on overseas job search and migration

	From 2010-2012, did the respondent search for work overseas by...				From 2010-2012, did/was the respondent ...			
	Any way	Using Internet	Visiting recruitment agency	Some other wage	Invited to interview	Attend interview	Receive an offer abroad	Migrate abroad
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
[T1] + [T2] + [T3] **"All Information"**	0.002	-0.008	0.001	0.013	0.027	0.025	0.004	0.004
	[0.025]	[0.013]	[0.019]	[0.015]	[0.023]	[0.021]	[0.016]	[0.011]
[T1] + [T2] + [T3] + [T4] **"All Information + Website"**	0.108***	0.103***	0.000	0.012	0.018	0.022	0.009	0.002
	[0.025]	[0.022]	[0.014]	[0.010]	[0.015]	[0.013]	[0.012]	[0.007]
[T3] + [T5] **"Only Passport Assistance"**	0.076**	0.007	0.031	0.054**	0.024	0.024	0.012	0.004
	[0.036]	[0.020]	[0.026]	[0.026]	[0.025]	[0.022]	[0.020]	[0.012]
[T1] + [T2] + [T3] + [T5] **"All Information + Passport"**	0.044	-0.004	0.038	0.027	0.043*	0.029	0.007	0.015
	[0.029]	[0.014]	[0.025]	[0.019]	[0.026]	[0.022]	[0.017]	[0.016]
[T1] + [T2] + [T3] + [T4] + [T5] **"Full Assistance"**	0.160***	0.147***	0.014	0.026**	0.030*	0.032**	0.027*	-0.000
	[0.028]	[0.024]	[0.016]	[0.013]	[0.017]	[0.015]	[0.015]	[0.007]
Sample Size	3,802	3,802	3,802	3,802	3,802	3,802	3,802	3,802
Control DV Mean	5.1%	1.0%	2.9%	1.4%	2.6%	1.5%	1.7%	0.9%
P-value, coefficients jointly zero	0.000***	0.000***	0.256	0.020**	0.557	0.549	0.922	0.691

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample includes baseline respondents with completed endline survey. Stratification-cell status fixed effects and an indicator for not being in passport sample are also included. Covariates include age, gender, education, interest in work abroad, willingness to take risks, HH income and savings, whether HH has taken out a loan, whether any immediate or extended family member currently abroad, and an normalized durable asset index. Missing covariates are coded as zeroes with a binary flag included. Huber-White standard errors reported in brackets. Coefficients for all treatments reported in Table S7.

Table 3.3: Impacts for the subgroup expressing interest in migrating abroad at baseline

	From 2010-2012, did the respondent search for work overseas by...				From 2010-2012, did/was the respondent...			
	Any way	Using Internet	Visiting recruitment agency	Some other wage	Invited to interview	Attend interview	Receive an offer abroad	Migrate abroad
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
[T1] + [T2] +[T3] **"All Information"**	0.052	0.009	0.032	0.030	0.102*	0.093*	0.035	0.025
	[0.065]	[0.036]	[0.052]	[0.041]	[0.062]	[0.056]	[0.043]	[0.028]
[T1] + [T2] + [T3] + [T4] **"All Information + Website"**	0.201***	0.173***	0.017	0.025	0.070*	0.077**	0.044	0.023
	[0.059]	[0.049]	[0.035]	[0.029]	[0.040]	[0.037]	[0.033]	[0.021]
[T3] + [T5] **"Only Passport Assistance"**	0.173**	0.013	0.077	0.137**	0.080	0.078	0.048	0.019
	[0.082]	[0.041]	[0.058]	[0.063]	[0.062]	[0.054]	[0.050]	[0.030]
[T1] + [T2] + [T3] + [T5] **"All Information + Passport"**	0.199**	0.005	0.175**	0.089	0.175**	0.118	0.048	0.065
	[0.093]	[0.044]	[0.082]	[0.064]	[0.084]	[0.074]	[0.059]	[0.055]
[T1] + [T2] + [T3] + [T4] + [T5] **"Full Assistance"**	0.267***	0.227***	0.040	0.047	0.071*	0.083**	0.074**	0.016
	[0.060]	[0.050]	[0.037]	[0.031]	[0.041]	[0.037]	[0.035]	[0.017]
Sample Size	1,292	1,292	1,292	1,292	1,292	1,292	1,292	1,292
Control DV Mean	11%	1.7%	6.6^	2.8%	6.0%	3.3%	3.9%	1.7%
P-value, coefficients jointly zero	0.000***	0.000***	0.512	0.066*	0.643	0.405	0.885	0.697

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample includes baseline respondents with completed endline surveys who reported being "interested" or "strongly interested" in working abroad at baseline. Stratification-cell fixed effects and baseline covariates described in Table 3.2 are included. Huber-White standard errors reported in brackets. Coefficients for all treatments reported in Table S8.

3.A Appendix

3.A.1 Data collection and sampling procedure

We obtained human subjects approval for this study from the University of Michigan, Health Sciences and Behavioral Sciences Institutional Review Board, project number HUM00034271, "The Determinants of Temporary Labor Migration in the Philippines." Participants received information on the general purpose of the study and signed a written consent form before participating in the baseline and endline surveys. Participants in the passport sample consented before participating in a brief survey, and those who enrolled in the passport assistance program also received information specific to the intervention and signed a separate consent form at the time of their enrollment. Table 3.A.1 presents the full timeline of our project. Early in 2010, we selected six municipalities in Sorsogon Province in which to conduct the baseline survey. These were selected to include both wealthier and poorer municipalities and both rural and urban areas. We randomly selected 42 barangays from these municipalities. A barangay is the smallest administrative division in the Philippines. The municipalities we selected each have between 25 and 65 barangays, and there are a total of roughly 42,000 barangays in the country. We selected eleven from the capital of Sorsogon City, seven from Casiguran, Castilla, Pilar, and Gubat, and five from Castilla and Irosin. Due to security and logistical considerations, three initially selected barangays were excluded and replaced with the next randomly selected barangay.

We collected a household roster from each barangay that included a list of households, and we used these to set barangay-specific target sample sizes proportional to population. We targeted approximately five percent of the total population from each barangay, or roughly 26 percent of households. We sorted households randomly and selected the first listed households to be our target. When a household could not be located or had no eligible members, we replaced it with the next household on the list.

Interviewers screened the first person they approached in the household. To be eligible for our study, the target respondent had to be between ages 20 and 45, and he or she must have not worked abroad in the past. Households that had current or past overseas Filipino workers (OFWs) were still eligible for the study. If the first household member was not eligible or did not want to participate in the survey, the interviewer asked if anyone else in the household might be eligible, and would interview that person instead. Houses selected were typically far enough apart from each other that concerns about information spillovers are second order; to the extent that there were spillovers, our treatment estimates are lower bounds on the differential impact of more information. The passport assistance was only offered to the respondents themselves, and so are not subject to such spillovers. We surveyed 5,008 individuals between March and August 2010.

In this paper, our baseline sample consists of the 4,153 individuals ages 20-40 in our sample. In working with recruitment agencies subsequent to the baseline survey, we learned that most individuals over age 40 would not be eligible for overseas work. In selecting the passport sample, we required that individuals be between ages 20-40. Tables 3.A.9 and 3.A.10 demonstrate that our results are not affected by including the 855 respondents ages 41-45.

In 2011, we launched the second stage of our project to provide some respondents with assistance obtaining a passport. We revisited a subset of our baseline sample. Specifically, of respondents ages 20-40, we included all who received the website treatment [T4], all Pilijobs.org enrollees in other treatment groups (32 respondents), 300 respondents randomly selected from each information treatment group ([T1], [T2], and [T1]+[T2]), and 300 respondents randomly selected from the control group.

At the time of the passport survey, we also interviewed and offered passport assistance to a supplemental sample of Sorsogon Province residents who enrolled in Pilijobs.org through other means that we describe in SOM section 4 below, but who were not a part of our baseline sample. We do not include these respondents in our analysis.

We conducted an endline survey in mid-2012 to measure the impacts of our interventions. We visited all respondents from the baseline sample, making two attempts to reach each respondent. We interviewed another household member and administered a proxy survey when the respondent was not available, enabling us to obtain full data on respondent and household migration steps and job-search behavior when we could not directly reach the respondent. When no member of the household could be interviewed, we interviewed a neighbor using a "log" survey. The information collected in that survey was limited to the respondents' whereabouts, and whether he or she was currently working overseas. We show below (in section 7) that our finding of no impacts of the treatments on migration abroad are robust to expanding the sample to include these log surveys.

Using this three-pronged approach, we obtained measures of whether the respondent migrated abroad for work from full, proxy, or log surveys for 4,089 respondents, or 98.5 percent of our sample. Of those, 73 percent were surveys with the respondents themselves, 20 percent were proxy surveys, and 7 percent were log surveys. Excluding the log surveys, we have a 91 percent response rate for our full set of job search and migration outcome variables.

We provide full details on attrition rates in Table 3.A.2. In column 1, the dependent variable is an indicator for the endline either being completely missing or administered only via the log survey, in which case we are missing the pre-migration outcome measures we examine in columns 1-7 of Tables 2 and 3. We do not find evidence that either type of attrition is substantially related to treatment assignment. Coefficients on all treatments are small in magnitude, and although the coefficient on treatment [T2] + [T3] is individually significant, we cannot reject the null hypothesis that the treatment assignments are jointly unrelated to attrition.

In column 2, the dependent variable is an indicator for the respondent not being included in any of our endline surveys (respondent, proxy, or log surveys). Similar to column 2, we find some evidence of differential attrition for those assigned to treatments [T2] + [T3],

significant at the five-percent level. However, the difference in response rates is small in magnitude (only 1.7 percentage points). We use the sample that does not include the log surveys for our main analysis, and only use this log survey data as a robustness check.

3.A.2 Randomization to treatment and control

3.A.2.1 Information and website assistance randomization

Our baseline sample was randomly allocated to a control group or to one of four treatment groups: application information [T1], financial information [T2], application and financial information ([T1] + [T2]), and website assistance ([T1] + [T2] + [T4]). The sample was divided evenly between these five groups.

Each respondent's treatment assignment was blind to the interviewer until after he or she completed the baseline survey. Interviewers received sealed envelopes containing a thank-you letter, the information treatments (as assigned), and blank paper to even out the weight of the envelopes between treatment types so that the interviewer could not guess the treatment until the envelope was opened after the survey. Each envelope was labeled with the household identification number assigned to the respondent being interviewed, serving as the link between the respondent and treatment assignment.

Because of our partnership with the microfinance institution PALFSI, we anticipated that current clients might respond differently to treatment and have different characteristics from non-PALFSI clients. Envelopes were randomized by barangay and by microfinance client status in blocks of five. This procedure generated block randomization within 81 barangay-by-client-status stratification cells. Our regression estimates include indicator variables for each stratification cell as control variables.

3.A.2.2 Passport randomization

Respondents in the passport survey were randomly assigned with equal probability to a control group or to one of two treatment groups prior to implementation. We stratified members of the passport sample by baseline treatment group, whether they had enrolled in Pilijobs.org, barangay, and age. Specifically, we divided members of this sample into groups based on baseline treatment assignment and Pilijobs.org enrollment status, divided each group into barangays, sorted by age within each barangay-sample cell, and block-randomized by threes. These respondents were resurveyed and randomly assigned to a passport control group or to the passport information [T3] or passport assistance ([T3] + [T5]) interventions.

3.A.2.3 Balancing tests

Columns 1 through 5 of Table 3.A.3 report mean values for a set of individual and household characteristics of respondents, separately for each of the four original treatment conditions plus the control group. In columns 6 through 8 of the table, we report the corresponding characteristics of respondents who were part of the passport sample, based on their assignment to the passport control, information, or assistance treatments. (Recall that these are overlapping treatments, but that the passport sample excludes respondents aged 41-45.)

On the whole the various randomized treatments have similar observables to the respective control groups. While there are some cases where the mean value of a covariate in a treatment group is statistically significantly different from the mean value in the respective control group (indicated by one, two, or three stars for significance levels of ten percent, five percent, and one percent, respectively), their frequency is commensurate with what would occur via random variation: out of 84 comparisons with the control group mean in the table, nine (10.7 percent) are statistically significant at the ten-percent level or less. Our regression estimates will control for this set of baseline covariates, which should account for any biases due to these chance imbalances.

3.A.3 Specifications

We use the following specification to measure the impact of unilateral facilitation on job-search and migration:

$$Y_i = \alpha + \sum_{j=1}^{14} \beta_j D_i^j + B'\gamma + X'\delta + \epsilon_i \tag{3.1}$$

where Y_i is the outcome variable for respondent i, measured in the 2012 endline survey. D_i^j is a binary indicator equal to one if respondent i is assigned to combination j of application information [T1], financial information [T2], passport information [T3], website assistance [T4], or passport assistance [T5].

Vector B includes the barangay/client-status set of stratification cell fixed effects, along with an indicator for whether the respondent was randomly selected to be in the passport sample. The coefficient on this indicator would be non-zero if simply being interviewed in the passport sample affected our endline outcomes. (In practice, this coefficient is consistently close to zero and not statistically significant.) To increase the precision of our estimates, we also include a vector of pre-specified controls, X, for the following baseline characteristics: female (indicator); age (continuous); high school completion (indicator); some college or vocational training (indicator); college completion (indicator); interested in working abroad (indicator); willingness to take risks (0-10 scale); household income (in thousands of pesos); household savings (in thousands of pesos); whether the household has ever taken out a loan (indicator); asset ownership (normalized index of durable asset holdings); whether the respondent has extended family overseas (indicator); and whether the respondent has immediate family overseas (indicator). Missing covariate values are coded as zeros, and we include a set of missing value indicator flags. These covariates are outlined in our pre-analysis plan, available online at `https://sites.google.com/site/eabeam/AnalysisPlan_june8_swap_beammckenzieyang.pdf` and archived with the J-PAL Hypothesis Registry on June 8,

2012.

This results in 14 mutually exclusive treatment categories in addition to an omitted control group:

1. Application information [T1]
2. Financial information [T2]
3. Passport information [T3]
4. Application and financial information [T1] + [T2]
5. Application and passport information [T1] + [T3]
6. Financial and passport information [T2] + [T3]
7. Application, financial, and passport information [T1] + [T2] + [T3] ("All information")
8. Application information, financial information, and website assistance [T1] + [T2] + [T4]
9. Application information, financial information, passport information, and website assistance [T1] + [T2] + [T3] + [T4] ("All information + website")
10. Passport information and passport assistance ("Only passport assistance") [T3] + [T5]
11. Application information, passport information, and passport assistance [T1] + [T3] + [T5]
12. Financial information, passport information, and passport assistance [T2] + [T3] + [T5]
13. Application information, financial information, passport information, and passport assistance [T1] + [T2] + [T3] + [T5] ("All information + passport")

14. Application information, financial information, passport information, and website assistance, and passport assistance [T1] + [T2] + [T3] + [T4] + [T5] ("Full Assistance")

In main text Tables 2 and 3, we estimate all coefficients but to simplify presentation we report results for only the following five treatments:

1. Application, financial, and passport information [T1] + [T2] + [T3] ("All information")
2. Application information, financial information, passport information, and website assistance [T1] + [T2] + [T3] + [T4] ("All information + website")
3. Passport information and passport assistance ("Only Passport Assistance") [T3] + [T5]
4. Application information, financial information, passport information, and passport assistance [T1] + [T2] + [T3] + [T5] ("All information + passport")
5. Application information, financial information, passport information, and website assistance, and passport assistance [T1] + [T2] + [T3] + [T4] + [T5] ("Full Assistance")

This enables us to report results for the full information treatment, and then for combinations of the website assistance and passport assistance with full information. We report the full set of 14 treatment coefficients in Tables 3.A.7 and 3.A.8.

3.A.4 Pilijobs.org

We developed Pilijobs.org in partnership with several Manila-based overseas recruitment agencies and our local microfinance partner (PALFSI). Pilijobs.org provided applicants with the opportunity to easily contact and apply for overseas jobs with reputable recruitment agencies, and allowed those agencies to directly post job opportunities that could be accessed by Sorsogon residents. While several widely used job-finding websites for overseas work already exist in the Philippines, we developed a separate one to ensure that applicants

would be put in contact only with high-quality, properly licensed recruitment agencies, and to track their enrollment and participation in the website. Five recruitment agencies used the site, both to post job listings and to review applicants, and we worked closely with them to get their feedback and to encourage their staff to use the website.

We launched Pilijobs.org in early April 2010, within weeks of the start of the baseline survey period. Nearly all (91 percent) of baseline respondents who enrolled in Pilijobs.org did so using paper forms, so their enrollment is unlikely to be affected by their brief delay between survey launch and the Pilijobs.org website launch. In addition to the baseline applicants who enrolled online or through our paper forms, we recruited other applicants through door-to-door advertising in selected municipalities and barangays of Sorsogon Province that were not included in our baseline sample. This was done to ensure the website had enough of a user base to make it attractive to the recruiters. These applicants also received paper forms that staff encoded and uploaded to the website, and these advertising efforts all took place after completion of the baseline survey and interventions. We also advertised with bumper stickers and posters in municipalities that were not part of our baseline sample. To avoid spillovers, we did not use these general advertising methods in any of our baseline municipalities. Finally, we marketed Pilijobs.org broadly across the Philippines, using targeted Facebook advertising. All of these efforts resulted in an additional 5,500 enrollees, bringing the total enrollment in Pilijobs to roughly 7,100.

3.A.5 Impact on passport acquisition

Our administrative records indicate that 9.6 percent of baseline respondents offered passport assistance successfully obtained a passport. Although the program provided a full subsidy of the cost of the passport and required documentation, as well as fully subsidized transport expenses, passport applicants were still required to put forth substantial time and effort to obtain a passport. For example, each applicant traveled one to two hours to the regional

office of the Department of Foreign Affairs in Legazpi City three separate times to apply for and receive their passport, and most applicants made additional trips to other local agencies to obtain required documentation for their passport application.

The payments we disbursed for the passport assistance treatment varied across applicants, ranging from P1250 (US$28) for just transportation and the passport fee to P2350 (US$52) for those with additional documentation requirements. Some applicants had costs that could not be subsidized by the program. For example, the project did not cover the expenses of amending a birth certificate or other documentation due to misspellings or erroneous information (with costs as much as P30,000). Approximately 11.6 percent of respondents initiated the passport process but were not able to complete it.

Because respondents may have obtained passports without directly interacting with our staff, these administrative records are not sufficient to test the impact of receiving passport information. Table 3.A.4 reports the impact our assigned treatments on whether respondents reported in the endline survey that they currently had a valid passport. All treatments that include passport assistance [T5] have positive effects on passport ownership that are statistically significant at the five-percent level or less. Effect sizes for these treatments range from 7.3 to 12.7 percentage points, which are large compared with the control group rate of 4.5 percent. In addition, the most comprehensive treatment that does not include passport assistance [T5], "All information + Website" ([T1]+[T2]+[T3]+[T4]), also increases passport ownership by 5.1 percentage points (statistically significant at the five-percent level).

3.A.6 Reported reasons for not migrating

Table 3.A.5 presents data from our endline survey on reported reasons for not migrating, for those individuals who did receive an overseas job offer. We discuss this table in the main text.

3.A.7 Impacts on migration, including log survey endline data

All estimation results presented in the main text and here so far use data from respondent or proxy (other household member) surveys, which account for 91 percent of endline surveys. As noted above in column 1 of Table 3.A.2, there is no systematic pattern of differential inclusion in the respondent or proxy surveys related to treatment status.

That said, it is important to confirm that our (absence of) results for the impact of the treatments on migration overseas are robust to including responses from the "log" surveys of neighbors, which were administered when neither respondent nor proxy surveys could be successfully completed. Log surveys were very limited in content, asking only whether the respondent was currently living overseas and what they were doing abroad. Inclusion of the log survey responses on whether the respondent was working abroad raises our endline response rate to 98.5 percent.

We report the impact of our treatments on whether respondents were currently working abroad, including log survey responses, in column 1 of Table 3.A.6. The results confirm our previously reported findings that use only the respondent and proxy surveys: there is no evidence of positive statistically significant impacts of any treatment on migration overseas. Indeed, we find that some information treatments may have actually reduced international migration. Those assigned to treatments [T2] + [T3] are 1.2 percentage points less likely to have migrated overseas, which is significantly different from zero at the five-percent level. Some of these differences could have resulted from the differential attrition observed in Table 3.A.2, column 2, though it is possible that the information we provided respondents with new information on the difficulties involved in overseas labor migration, discouraging some respondents from seeking to migrate. However, we cannot reject the null hypothesis that all of the treatment effects are jointly zero.

3.A.8 2013 Supplementary survey of job offer recipients

At the time of the endline survey, 13.8 percent of those who had received overseas job offers but had not yet migrated reported that their migration was still pending (row 2, Table 3.A.5). One possibility we sought to examine was whether our endline survey took place too soon to capture migration effects. We conducted the endline survey from May through August 2012, which was between nine months and one year after we offered respondents passport assistance. Because the passport process was quite time-consuming, some respondents received their passports as late as three months before the endline survey, and they may not have yet had time to finish the migration process they initiated when we followed up with them.

To address this concern, in March and April 2013 we re-surveyed respondents who reported that anyone in their household was offered a job overseas between 2010 and 2012, including those who had offers they had not yet accepted. We asked them about the status of the offers they listed in the endline survey, as well as any offers that were received but not listed in the endline survey, either because they were not reported or because the offer was received after the endline survey took place.

From our set of baseline respondents, we attempted to contact 196 households, and we successfully completed 194 surveys (99 percent). We completed 54 percent with respondents and 46 percent with a proxy household member. (Proxy survey rates are especially high for the 2013 offer survey because if the respondent was not available at the initial visit but another household member was willing to participate, we interviewed that member rather than schedule another visit.)

Using this 2013 survey of baseline respondents reporting job offers in the 2012 endline, we generate a modified indicator of overseas migration, measured nearly two years after initial passport treatment assignment. This variable modifies the previous "Migrate abroad" variable (in column 8 of Tables 3.2, 3.3, and 3.A.7 through 3.A.10) by additionally counting

a respondent as having migrated if a job offer they reported in the 2012 endline survey is reported as having led to migration overseas in the 2013 survey. We did not modify the "Migrate abroad" variable if in the 2013 survey we learned that a respondent migrated but it was the result of a job offer not reported in the 2012 endline. This is because our objective here was simply to check whether our results would change if we allowed migration pending as of the 2012 endline to actually lead to migration. (To have done otherwise would have led to a false inflation of the treatment effect of "Full Assistance," because we only surveyed those with job offers in the 2013 survey, and because the "Full Assistance" treatment led to a higher rate of job offers.)

Column 2 of Table 3.A.6 reports the impacts of our treatments on this modified "Migrate abroad" variable. Our previous results are confirmed: there are no positive statistically significant impacts on migration, and impacts are similar in magnitude to the migration outcomes reported in column 8 of Table 3.2.

3.A.9 Additional specifications

In Tables 3.A.7 and 3.A.8, we present the full set of results from the specifications used in Tables 2 and 3, respectively.

Tables 3.A.9 and 3.A.10 demonstrate that our previous results are robust to including individuals ages 41-45 in our sample. These individuals, as described earlier, were part of our baseline survey. However, we learned there are few overseas opportunities for new migrants over 40. We restricted our passport sample to individuals aged 20-40 years old, and we define our baseline sample similarly, which better reflects the target population of unilateral migration facilitation efforts.

Table 3.A.1: Project timeline

Year	Month	Project Phase
2010	March April May June July August	Baseline survey and info/web interventions
	September October November December	
2011	January February March	
	April May June July August	Passport survey and passport interventions
	September October November December	
2012	January February March April	
	May June July August	Endline survey
	September October November December	
2013	January February	
	March April	Offer follow-up
	May	

Table 3.A.2: Sample attrition

	Missing respondent or proxy survey (1)	Missing respondent,proxy or log survey (2)
Application Information [T1]	-0.009	0.006
	[0.016]	[0.007]
Financial Information [T2]	-0.006	0.001
	[0.016]	[0.007]
Passport Information [T3]	0.018	0.004
	[0.034]	[0.016]
[T1] + [T2]	-0.002	-0.003
	[0.016]	[0.007]
[T1] + [T3]	-0.016	-0.009
	[0.030]	[0.012]
[T2] + [T3]	-0.051**	-0.017**
	[0.024]	[0.008]
[T1] + [T2] +[T3] **"All Information"**	0.039	0.002
	[0.035]	[0.015]
[T1] + [T2] + Web. Assistance [T4]	-0.002	0.006
	[0.023]	[0.012]
[T1] + [T2] + [T3] + [T4] **"All Information + Website"**	0.010	-0.006
	[0.023]	[0.010]
[T3] + [T5] **"Only Passport Assistance"**	-0.002	-0.008
	[0.031]	[0.013]
[T1] + [T3] + [T5]	-0.004	-0.010
	[0.032]	[0.013]
[T2] + [T3] + [T5]	0.002	-0.004
	[0.031]	[0.013]
[T1] + [T2] + [T3] + [T5] **"All Information + Passport"**	-0.009	0.000
	[0.031]	[0.015]
[T1] + [T2] + [T3] + [T4] + [T5] **"Full Assistance"**	-0.004	0.009
	[0.023]	[0.012]
Sample Size	4,153	4,153
Control DV Mean	9.2%	1.4%
P-value, coefficients jointly zero	0.667	0.031**

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample includes all baseline respondents. Stratification-cell fixed effects and baseline covariates described in Table 3.2 are included. Huber-White standard errors reported in brackets.

Table 3.A.3: Balancing tests

	Information/Website Assistance					Passport Assistance		
	Control	App. Info.	Fin. Info.	App. + Fin. Info.	Website Assist.	Control	Pass. Info.	Pass. Assist.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female	69.7%	73.1%	70.3%	71.5%	68.1%	69.9%	67.4%	70.9%
Age (mean)	31.9	31.6	31.6	31.9	31.3*	31.1	31.8*	31.6
High school graduate	34.9%	32.5%	30.4%*	34.1%	31.5%	35.0%	33.7%	30.0%**
Some college or vocational	20.0%	22.7%	23.7%	22.9%	23.4%	22.6%	21.9%	25.6%
College graduate	13.5%	12.1%	13.2%	13.2%	15.3%	15.3%	13.7%	12.1%
Interested in working abroad	33.0%	30.9%	35.9%	32.0%	37.8%**	36.6%	36.6%	36.5%
Willing to take risks (1=low-10=high)	5.2	5.2	5.5	5.3	5.8***	5.7	5.5	5.4
Household income	7.9	7.6	7.9	7.6	8.5	8.3	8.0	7.9
Household savings (uncond.)	1.8	1.2	2.0	2.4	1.5	1.8	1.3	1.5
No household savings	81.4%	84.8%**	81.7%	83.0%	81.9%	81.7%	83.3%	83.9%
Anyone in HH ever take out loan	54.4%	52.0%	51.2%	57.6%	50.1%	54.2%	52.5%	50.1%
Normalized asset index	0.0	0.0	0.0	0.0	0.1*	0.1	0.0	0.0
Any immediate fam. overseas	1.3%	13.5%	12.8%	10.8%	14.2%	12.4%	13.4%	13.7%
Any extended fam, overseas	53.9%	50.7%	54.9%	55.7%	55.5%	53.8%	54.2%	56.3%
Observations	849	821	838	821	822	680	687	688

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample restricted to baseline respondents. Household income and savings reported in thousands of pesos. Columns 6-8 restricted to baseline participants who were randomly assigned to passport sample, as described in SOM section 1. Tests for statistically significant differences for each covariate include stratification cell-fixed effects and use Huber-White standard errors. Stars indicate statistically significant differences between each information/website treatment groups (columns 2-5) and the information/website control group (column 1, and between each passport information and assistance treatment groups (columns 7-8) and the passport control group (column 6, those randomly selected to be in the passport group).

Table 3.A.4: Impact of unilateral facilitation on passport acquisition

	Resp. has valid passport
	(1)
Application Information [T1]	-0.008
	[0.011]
Financial Information [T2]	-0.002
	[0.012]
Passport Information [T3]	-0.009
	[0.023]
[T1] + [T2]	0.008
	[0.013]
[T1] + [T3]	0.029
	[0.024]
[T2] + [T3]	0.050*
	[0.029]
[T1] + [T2] +[T3] **"All Information"**	0.019
	[0.025]
[T1] + [T2] + Web. Assistance [T4]	0.009
	[0.019]
[T1] + [T2] + [T3] + [T4] **"All Information + Website"**	0.051**
	[0.020]
[T3] + [T5] **"Only Passport Assistance"**	0.126***
	[0.037]
[T1] + [T3] + [T5]	0.073**
	[0.033]
[T2] + [T3] + [T5]	0.127***
	[0.037]
[T1] + [T2] + [T3] + [T5] **"All Information + Passport"**	0.127***
	[0.037]
[T1] + [T2] + [T3] + [T4] + [T5] **"Full Assistance"**	0.122***
	[0.024]
Sample Size	3,763
Control DV Mean	0.0446
P-value, coefficients jointly zero	0.000***

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample includes baseline respondents with completed endline survey. Stratification-cell fixed effects and baseline covariates described in Table 3.2 are included. Huber-White standard errors reported in brackets. Passport status is reported for full and proxy surveys with non-missing responses.

Table 3.A.5: Reported reasons for not migrating, conditional on receiving an overseas job offer

Reason for not migrating	N	Share
	(1)	(2)
Could not afford expenses	14	24.1%
Migration still pending	8	13.8%
Health problems/did not pass medical exam	6	10.3%
Family obligations	6	10.3%
Not interested in type of work	5	8.6%
Problem with respondent qualifications	5	8.6%
Salary too low	4	6.9%
Training not completed	3	5.2%
Problem with documentation/passport	3	5.2%
Other/missing	2	3.4%
Not interested in working abroad	1	1.7%
Offer changed/no longer available	1	1.7%
Total		58

Notes: Counts based on includes all reported job offers respondents received from 2010-2012 that did not lead to migration as of the endline survey.

Table 3.A.6: Impact of unilateral facilitation on alternate migration measures

	All surveys	Respondent + proxy
	In 2012, respondent working abroad abroad	By 2013, respondent migrated (confirmed offers)
	(1)	(2)
Application Information [T1]	-0.006	-0.003
	[0.005]	[0.005]
Financial Information [T2]	-0.003	-0.002
	[0.006]	[0.006]
Passport Information [T3]	-0.001	0.005
	[0.012]	[0.012]
[T1] + [T2]	-0.003	-0.004
	[0.005]	[0.005]
[T1] + [T3]	-0.010*	-0.006
	[0.006]	[0.005]
[T2] + [T3]	-0.012**	-0.008*
	[0.006]	[0.005]
[T1] + [T2] +[T3] **"All Information"**	-0.001	0.004
	[0.011]	[0.011]
[T1] + [T2] + Web. Assistance [T4]	-0.008	-0.004
	[0.007]	[0.006]
[T1] + [T2] + [T3] + [T4] **"All Information + Website'**	-0.003	0.002
	[0.008]	[0.007]
[T3] + [T5] **"Only Passport Assistance'**	-0.001	0.002
	[0.012]	[0.012]
[T1] + [T3] + [T5]	-0.010*	-0.006
	[0.006]	[0.005]
[T2] + [T3] + [T5]	-0.003	0.003
	[0.012]	[0.012]
[T1] + [T2] + [T3] + [T5] **"All Information + Passport'**	0.017	0.004
	[0.018]	[0.012]
[T1] + [T2] + [T3] + [T4] + [T5] **"Full Assistance'**	-0.001	-0.001
	[0.008]	[0.007]
Sample Size	4,089	3,802
Control group dependent variable mean	0.011	0.0102
P-value, coefficients jointly zero	0.500	0.781

*** p<0.01, ** p<0.05, * p<0.10

Notes: Column 1 sample includes baseline respondents with respondent, proxy, and log endline surveys and non-missing outcome variables. Column 2 migration outcome is based on 2010-2012 offers confirmed in 2013 follow-up survey, which was conducted among all households with at least one job offer overseas at 2012 endline. Stratification-cell fixed effects and baseline covariates described in Table 3.2 are included. Huber-White standard errors reported in brackets.

Table 3.A.7: Impact of unilateral facilitation on overseas job search and migration, full set of coefficients from Table 3.2

	From 2010-2012, did the respondent search for work overseas by...				From 2010-2012, did/was the respondent ...			
	Any way	Using Internet	Visiting recruitment agency	Some other way	Invited to interview	Attend interview	Receive an offer abroad	Migrate abroad
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Application Information [T1]	0.003	0.002	-0.008	0.011	0.005	0.012	0.004	-0.002
	[0.013]	[0.006]	[0.009]	[0.008]	[0.010]	[0.009]	[0.008]	[0.005]
Financial Information [T2]	-0.024**	-0.004	-0.018**	-0.002	-0.008	0.001	-0.000	-0.002
	[0.012]	[0.006]	[0.009]	[0.007]	[0.009]	[0.008]	[0.008]	[0.005]
Passport Information [T3]	-0.035*	-0.024***	-0.007	-0.009	-0.004	0.005	-0.005	0.005
	[0.021]	[0.009]	[0.018]	[0.007]	[0.018]	[0.017]	[0.013]	[0.012]
[T1] + [T2]	0.001	-0.001	0.003	0.005	0.002	0.008	0.006	-0.002
	[0.013]	[0.006]	[0.010]	[0.008]	[0.009]	[0.008]	[0.008]	[0.005]
[T1] + [T3]	0.014	-0.008	0.004	0.024	0.008	0.007	0.006	-0.006
	[0.027]	[0.013]	[0.020]	[0.018]	[0.020]	[0.016]	[0.016]	[0.005]
[T2] + [T3]	0.010	0.001	0.003	0.001	0.017	0.005	0.004	-0.007
	[0.026]	[0.016]	[0.020]	[0.013]	[0.023]	[0.017]	[0.017]	[0.005]
[T1] + [T2] +[T3] **"All Information"**	0.002	-0.008	0.001	0.013	0.027	0.025	0.004	0.004
	[0.025]	[0.013]	[0.019]	[0.015]	[0.023]	[0.021]	[0.016]	[0.011]
[T1] + [T2] + Web. Assistance [T4]	0.103***	0.105***	-0.016	0.018	0.010	-0.000	0.004	-0.003
	[0.026]	[0.022]	[0.013]	[0.012]	[0.015]	[0.012]	[0.012]	[0.006]
[T1] + [T2] + [T3] + [T4] **"All Information + Website"**	0.108***	0.103***	0.000	0.012	0.018	0.022	0.009	0.002
	[0.025]	[0.022]	[0.014]	[0.010]	[0.015]	[0.013]	[0.012]	[0.007]
[T3] + [T5] **"Only Passport Assistance"**	0.076**	0.007	0.031	0.054**	0.024	0.024	0.012	0.004
	[0.036]	[0.020]	[0.026]	[0.026]	[0.025]	[0.022]	[0.020]	[0.012]
[T1] + [T3] + [T5]	0.037	0.046*	0.001	0.004	0.027	0.006	-0.005	-0.005
	[0.031]	[0.025]	[0.021]	[0.013]	[0.025]	[0.018]	[0.014]	[0.005]
[T2] + [T3] + [T5]	0.043	0.010	0.032	0.006	0.038	0.038	0.025	0.004
	[0.031]	[0.020]	[0.025]	[0.013]	[0.026]	[0.023]	[0.021]	[0.012]
[T1] + [T2] + [T3] + [T5] **"All Information + Passport"**	0.044	-0.004	0.038	0.027	0.043*	0.029	0.007	0.015
	[0.029]	[0.014]	[0.025]	[0.019]	[0.026]	[0.022]	[0.017]	[0.016]
[T1] + [T2] + [T3] + [T4] + [T5] **"Full Assistance"**	0.160***	0.147***	0.014	0.026**	0.030*	0.032**	0.027*	-0.000
	[0.028]	[0.024]	[0.016]	[0.013]	[0.017]	[0.015]	[0.015]	[0.007]
Sample Size	3,802	3,802	3,802	3,802	3,802	3,802	3,802	3,802
Control group dependent variable mean	5.1%	1.0%	2.9%	1.4%	2.6%	1.5%	1.7%	0.9%
P-value, coefficients jointly zero	0.000***	0.000***	0.256	0.020**	0.557	0.549	0.922	0.691

*** p<0.01, ** p<0.05, * p<0.10

Notes: Same specification as Table 3.2, reporting full set of treatment indicators. Sample includes baseline respondents with completed endline surveys. Stratification-cell fixed effects and baseline covariates described in Table 3.2 are included. Huber-White standard errors reported in brackets.

Table 3.A.8: Impacts for the subgroup expressing interest in migrating abroad at baseline, full set of coefficients from Table 3.3

	From 2010-2012, did the respondent search for work overseas by...				From 2010-2012, did/was the respondent ...			
	Any way	Using Internet	Visiting recruitment agency	Some other wage	Invited to interview	Attend interview	Receive an offer abroad	Migrate abroad
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Application Information [T1]	0.015	0.019	-0.016	0.025	0.021	0.039	0.020	0.009
	[0.037]	[0.018]	[0.027]	[0.023]	[0.029]	[0.024]	[0.024]	[0.016]
Financial Information [T2]	-0.034	0.013	-0.028	-0.004	-0.006	0.017	0.010	0.008
	[0.032]	[0.017]	[0.024]	[0.019]	[0.026]	[0.022]	[0.022]	[0.014]
Passport Information [T3]	-0.028	-0.032	0.024	-0.025	0.031	0.050	0.015	0.029
	[0.052]	[0.026]	[0.045]	[0.022]	[0.046]	[0.042]	[0.032]	[0.025]
[T1] + [T2]	0.034	0.012	0.014	0.028	0.016	0.035	0.024	-0.005
	[0.038]	[0.018]	[0.030]	[0.023]	[0.029]	[0.025]	[0.026]	[0.014]
[T1] + [T3]	0.077	-0.028	0.057	0.070	0.052	0.049	0.044	0.007
	[0.080]	[0.040]	[0.059]	[0.057]	[0.060]	[0.048]	[0.047]	[0.012]
[T2] + [T3]	0.041	-0.002	0.032	0.005	0.056	0.032	0.031	-0.002
	[0.060]	[0.036]	[0.048]	[0.032]	[0.053]	[0.040]	[0.040]	[0.013]
[T1] + [T2] +[T3] **"All Information"**	0.052	0.009	0.032	0.030	0.102*	0.093*	0.035	0.025
	[0.065]	[0.036]	[0.052]	[0.041]	[0.062]	[0.056]	[0.043]	[0.028]
[T1] + [T2] + Web. Assistance [T4]	0.194***	0.188***	-0.009	0.032	0.028	0.012	0.011	0.008
	[0.059]	[0.048]	[0.033]	[0.031]	[0.040]	[0.031]	[0.030]	[0.016]
[T1] + [T2] + [T3] + [T4] **"All Information + Website"**	0.201***	0.173***	0.017	0.025	0.070*	0.077**	0.044	0.023
	[0.059]	[0.049]	[0.035]	[0.029]	[0.040]	[0.037]	[0.033]	[0.021]
[T3] + [T5] **"Only Passport Assistance"**	0.173**	0.013	0.077	0.137**	0.080	0.078	0.048	0.019
	[0.082]	[0.041]	[0.058]	[0.063]	[0.062]	[0.054]	[0.050]	[0.030]
[T1] + [T3] + [T5]	0.093	0.131*	0.014	0.008	0.035	-0.004	-0.005	-0.007
	[0.081]	[0.070]	[0.052]	[0.041]	[0.063]	[0.044]	[0.042]	[0.014]
[T2] + [T3] + [T5]	0.088	0.008	0.073	0.019	0.068	0.072	0.066	0.029
	[0.072]	[0.055]	[0.056]	[0.034]	[0.057]	[0.048]	[0.046]	[0.030]
[T1] + [T2] + [T3] + [T5] **"All Information + Passport"**	0.199**	0.005	0.175**	0.089	0.175**	0.118	0.048	0.065
	[0.093]	[0.044]	[0.082]	[0.064]	[0.084]	[0.074]	[0.059]	[0.055]
[T1] + [T2] + [T3] + [T4] + [T5] **"Full Assistance"**	0.267***	0.227***	0.040	0.047	0.071*	0.083**	0.074**	0.016
	[0.060]	[0.050]	[0.037]	[0.031]	[0.041]	[0.037]	[0.035]	[0.017]
Sample Size	1,292	1,292	1,292	1,292	1,292	1,292	1,292	1,292
Control group dependent variable mean	11.0%	1.7%	6.6%	2.8%	6.0%	3.3%	3.4%	1.7%
P-value, coefficients jointly zero	0.000***	0.000***	0.512	0.066*	0.643	0.405	0.885	0.697

*** p<0.01, ** p<0.05, * p<0.10

Notes: Same specification as Table 3.3, reporting full set of treatment indicators. Sample includes baseline respondents with completed endline surveys. Stratification-cell fixed effects and baseline covariates described in Table 3.2 are included. Huber-White standard errors reported in brackets.

Table 3.A.9: Impact of unilateral facilitation on overseas job-search and migration, including respondents ages 41-45

	From 2010-2012, did the respondent search for work overseas by...				From 2010-2012, did/was the respondent ...			
	Any way	Using Internet	Visiting recruitment agency	Some other way	Invited to interview	Attend interview	Receive an offer abroad	Migrate abroad
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Application Information [T1]	0.002	0.001	-0.008	0.010	0.005	0.011	0.003	-0.001
	[0.011]	[0.005]	[0.008]	[0.006]	[0.008]	[0.007]	[0.006]	[0.004]
Financial Information [T2]	-0.018*	-0.004	-0.016**	0.002	-0.006	0.002	0.002	-0.001
	[0.010]	[0.005]	[0.007]	[0.006]	[0.007]	[0.006]	[0.006]	[0.004]
Passport Information [T3]	-0.050**	-0.041***	-0.003	-0.009	-0.007	0.004	-0.005	0.006
	[0.020]	[0.009]	[0.017]	[0.007]	[0.017]	[0.017]	[0.013]	[0.011]
[T1] + [T2]	-0.000	-0.001	0.002	0.003	-0.001	0.004	0.005	-0.001
	[0.011]	[0.005]	[0.008]	[0.006]	[0.008]	[0.007]	[0.007]	[0.004]
[T1] + [T3]	-0.003	-0.026**	0.007	0.024	0.005	0.005	0.005	-0.005
	[0.026]	[0.013]	[0.019]	[0.018]	[0.019]	[0.016]	[0.016]	[0.004]
[T2] + [T3]	-0.006	-0.017	0.006	0.000	0.015	0.004	0.004	-0.006
	[0.026]	[0.015]	[0.020]	[0.012]	[0.022]	[0.017]	[0.017]	[0.004]
[T1] + [T2] +[T3] **"All Information"**	-0.015	-0.026**	0.005	0.013	0.025	0.024	0.003	0.005
	[0.024]	[0.013]	[0.019]	[0.015]	[0.023]	[0.021]	[0.016]	[0.011]
[T1] + [T2] + Web. Assistance [T4]	0.060***	0.060***	-0.006	0.016**	0.004	-0.001	0.003	-0.002
	[0.016]	[0.013]	[0.009]	[0.008]	[0.009]	[0.007]	[0.007]	[0.004]
[T1] + [T2] + [T3] + [T4] **"All Information + Website"**	0.092***	0.085***	0.004	0.012	0.015	0.020	0.009	0.003
	[0.024]	[0.022]	[0.013]	[0.010]	[0.014]	[0.013]	[0.011]	[0.007]
[T3] + [T5] **"Only Passport Assistance"**	0.061*	-0.009	0.036	0.053**	0.021	0.022	0.011	0.005
	[0.036]	[0.020]	[0.026]	[0.026]	[0.024]	[0.022]	[0.019]	[0.011]
[T1] + [T3] + [T5]	0.019	0.027	0.005	0.004	0.025	0.005	-0.006	-0.005
	[0.030]	[0.025]	[0.020]	[0.012]	[0.024]	[0.017]	[0.013]	[0.004]
[T2] + [T3] + [T5]	0.026	-0.008	0.036	0.005	0.034	0.036	0.025	0.005
	[0.031]	[0.020]	[0.025]	[0.012]	[0.025]	[0.023]	[0.021]	[0.011]
[T1] + [T2] + [T3] + [T5] **"All Information + Passport"**	0.026	-0.022*	0.041*	0.026	0.040	0.028	0.007	0.016
	[0.028]	[0.013]	[0.025]	[0.019]	[0.025]	[0.021]	[0.016]	[0.015]
[T1] + [T2] + [T3] + [T4] + [T5] **"Full Assistance"**	0.143***	0.130***	0.018	0.026**	0.028*	0.031**	0.027*	0.001
	[0.027]	[0.024]	[0.015]	[0.013]	[0.016]	[0.015]	[0.014]	[0.007]
Sample Size	4,596	4,596	4,596	4,596	4,596	4,596	4,596	4,596
Control group dependent variable mean	0.0436	0.00925	0.0251	0.0106	0.0211	0.0132	0.0132	0.0066
P-value, coefficients jointly zero	0.000***	0.000***	0.233	0.009***	0.627	0.570	0.925	0.648

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample includes baseline respondents (ages 20-45) with completed endline surveys. Stratification-cell fixed effects and baseline covariates described in Table 3.2 are included. Huber-White standard errors reported in brackets.

Table 3.A.10: Impacts for the subgroup expressing interest in migrating abroad at baseline, including respondents ages 41-45

	From 2010-2012, did the respondent search for work overseas by...				From 2010-2012, did/was the respondent ...			
	Any way	Using Internet	Visiting recruitment agency	Some other way	Invited to interview	Attend interview	Receive an offer abroad	Migrate abroad
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Application Information [T1]	0.014	0.011	-0.010	0.026	0.022	0.037*	0.019	0.009
	[0.032]	[0.016]	[0.024]	[0.020]	[0.026]	[0.022]	[0.020]	[0.013]
Financial Information [T2]	-0.037	0.006	-0.024	-0.004	-0.008	0.012	0.009	0.008
	[0.029]	[0.016]	[0.022]	[0.016]	[0.023]	[0.020]	[0.019]	[0.012]
Passport Information [T3]	-0.054	-0.059**	0.027	-0.023	0.020	0.040	0.012	0.028
	[0.051]	[0.024]	[0.044]	[0.020]	[0.045]	[0.042]	[0.031]	[0.026]
[T1] + [T2]	0.030	0.011	0.014	0.021	0.007	0.022	0.019	-0.002
	[0.033]	[0.016]	[0.026]	[0.019]	[0.024]	[0.022]	[0.021]	[0.011]
[T1] + [T3]	0.056	-0.055	0.065	0.078	0.047	0.044	0.043	0.005
	[0.078]	[0.039]	[0.058]	[0.056]	[0.059]	[0.047]	[0.046]	[0.010]
[T2] + [T3]	0.019	-0.030	0.040	0.010	0.051	0.027	0.030	-0.003
	[0.059]	[0.035]	[0.046]	[0.031]	[0.052]	[0.039]	[0.039]	[0.011]
[T1] + [T2] +[T3] **"All Information"**	0.031	-0.020	0.040	0.037	0.098	0.090	0.034	0.025
	[0.065]	[0.034]	[0.051]	[0.041]	[0.062]	[0.057]	[0.042]	[0.028]
[T1] + [T2] + Web. Assistance [T4]	0.141***	0.127***	0.006	0.045*	0.018	0.008	0.013	0.005
	[0.046]	[0.035]	[0.029]	[0.026]	[0.029]	[0.024]	[0.022]	[0.012]
[T1] + [T2] + [T3] + [T4] **"All Information + Website"**	0.180***	0.146***	0.026	0.030	0.062	0.071**	0.042	0.022
	[0.058]	[0.048]	[0.034]	[0.028]	[0.038]	[0.036]	[0.031]	[0.020]
[T3] + [T5] **"Only Passport Assistance"**	0.154*	-0.014	0.087	0.141**	0.077	0.075	0.049	0.019
	[0.080]	[0.040]	[0.057]	[0.062]	[0.060]	[0.053]	[0.048]	[0.030]
[T1] + [T3] + [T5]	0.068	0.103	0.019	0.014	0.031	-0.008	-0.005	-0.008
	[0.079]	[0.069]	[0.051]	[0.040]	[0.061]	[0.042]	[0.041]	[0.013]
[T2] + [T3] + [T5]	0.062	-0.015	0.078	0.019	0.059	0.064	0.063	0.027
	[0.070]	[0.054]	[0.054]	[0.033]	[0.055]	[0.047]	[0.045]	[0.030]
[T1] + [T2] + [T3] + [T5] **"All Information + Passport"**	0.166*	-0.024	0.175**	0.091	0.164**	0.11	0.047	0.064
	[0.090]	[0.042]	[0.080]	[0.062]	[0.081]	[0.072]	[0.057]	[0.054]
[T1] + [T2] + [T3] + [T4] + [T5] **"Full Assistance"**	0.244***	0.199***	0.048	0.052*	0.066*	0.079**	0.073**	0.015
	[0.058]	[0.049]	[0.036]	[0.030]	[0.039]	[0.036]	[0.034]	[0.017]
Sample Size	1,453	1,453	1,453	1,453	1,453	1,453	1,453	1,453
Control group dependent variable mean	0.102	0.0186	0.0605	0.0233	0.0558	0.0326	0.0326	0.014
P-value, coefficients jointly zero	0.000***	0.000***	0.482	0.024**	0.589	0.396	0.869	0.676

*** p<0.01, ** p<0.05, * p<0.10

Notes: Sample includes baseline respondents (ages 20-45) with completed endline surveys who reported being "interested" or "strongly interested" in working abroad at baseline. Stratification-cell fixed effects and baseline covariates described in Table 3.2 are included. Huber-White standard errors reported in brackets.

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