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Version: October 1, 2011

The Philippines is one of the world's largest exporters of labor, deploying 1.5 million workers annually (Commission on Overseas Filipinos, 2008). Although migration can bring enormous income gains for migrants and their families (Clemens, Montenegro, and Pritchett 2008; Adams and Page 2005), the benefits of migration have been more difficult to access for rural Filipinos, who face higher informational and financial overseas search costs than their urban counterparts.

These search costs may restrict access to job-opportunities directly, by reducing the number of searchers, and indirectly, by preventing access to information about the returns to job search. Under standard dynamic job search models, reducing search costs increases productivity by increasing job search on the intensive or extensive margin, which in turn improving the quality of matches. (Pissarides 1990). However, as Autor (2001) observes, adverse selection among those workers induce to search if employers find it costly to screen out unqualified workers. Our understanding of the broader labor market implications of changes in search costs can benefit from examining the mechanisms behind the large-scale changes we observe. It is in that spirit that this paper measures the impact of reducing search costs on selection into job search and tests how this selection affects early-stage employment outcomes.

I conduct a randomized controlled trial in Sorsogon Province, Philippines, offering respondents a modest incentive to attend a local job fair for overseas employment. I find that subsidizing job search through a voucher yields a 34.7 percentage point, or 270 percent, increase in the likelihood of attendance, and a 9.6 percentage point, or 94 percent, increase in the likelihood of application. Those with the lowest prior likelihood of attendance experience the greatest relative increase in their attendance rates. Similarly, those with the lowest prior likelihood of application experience the greatest relative increase in their application rates. However, those induced to apply because of the voucher are less successful than the control group applicants in passing the first round of employment screening. One possible exception is for those who report the greatest uncertainty about their likelihood of being offered a job. This group, roughly one-third of the sample, is significantly more likely to apply for a job as a result of the voucher, and there is a small positive, but not statistically significant effect on the overall likelihood of passing the pre-screening interview.

These results have two implications: first, they provide evidence that small incentives to increase job search can have substantial effects on application, particularly when there is substantial

uncertainty about job prospects. However, job-search subsidies may bring primarily those with the lowest prior likelihoods of search. In this context, there appears little evidence of negative welfare effects, but in a broader setting, those comparatively worse applicants could crowd out better matches.

For decades, 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)[2]. The pool of OFWs is large and growing: approximately ten percent of Filipinos are living overseas, nearly half of those on temporary work contracts, and the Philippines deploys an average of 1.5 million temporary workers annually (Commission on Overseas Filipinos, 2008). These OFWs send back remittances worth 10 percent of the Philippines' GDP annually (Banko Sentral ng Pilipinas 2011).[3]

The overseas labor market in the Philippines is largely formal and highly regulated. Clustered in major urban areas, recruitment agencies account for 93 percent of new contracts (POEA 2009).[4] These agencies are licensed by the Philippine Overseas Employment Administration (POEA), which establishes guidelines on recruitment practices, placement fees, and wages. Agencies fill orders from overseas employers by finding and pre-screening interested applicants. The overseas employers typically conduct final interviews with those pre-selected applicants and make final offers. If the applicant accepts the offer, she then completes the necessary medical examination, pre-deployment orientation, visa application, and final POEA exit clearance before paying her placement fee and deploying overseas.

In the provincial areas, however, access to these agencies is limited. For example, the Bicol Region, the region of this study, accounts for 5.6 percent of the national population, but only 2.5 percent of the current outflow of OFWs. In Sorsogon Province, the nearest recruitment agency branch office is a two-hour bus ride away; anecdotally, most interested applicants choose to travel ten to twelve hours to Manila in order to search for work. As a result of this limited access to recruiting

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[2] The term "modern-day heroes" was first used by President Corazon Aquino in a 1998 speech to Filipino domestic helpers working in Hong Kong.
[3] In 2010, remittances totaled $US 18.8 billion, compared with GDP of $US 188.7 billion.
[4] This figure reflects all land-based contracts, which includes all overseas workers except those working on fishing vessels or ships.

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.

Sorsogon Province presents an ideal context in which to examine the role of search costs among applicants for overseas work: ongoing research in the province indicates that non-migrants are highly interested in working overseas. 37 percent of province residents age 20-35 who have never worked abroad are interested or strongly interested in doing so (Beam, McKenzie, and Yang 2011), yet 75 percent of interested residents have never taken steps to apply. Applicants may learn about job opportunities from social networks or personal experience, but this information may be limited because of Sorsogon's relative isolation.

Although the Filipino overseas labor market is in many ways unique, the decision to look for work abroad has several features that resemble other economic decisions, namely that applicants face costly searches and have limited information about opportunities and their own qualifications. For example, 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. Accounting for imperfect information among applicants is important to understanding how matching processes work in labor, education, and other settings.

The impact of imperfect information on economic decision-making

A substantial body of research has explored the role of imperfect information on a variety of individual-level decisions, including education (Jensen 2010, Nguyen 2008), migration (McKenzie, Gibson, and Stillman 2007), and retirement plan enrollment (Duflo and Saez 2003).

The related literature on the expected returns to education has found that parents and children may underestimate the true returns to education and under-invest as a result. Jensen (2010) finds that eighth-grade boys in the Dominican Republic substantially underestimate the wages they would earn by completing high school and college, and that providing information about average wages increases schooling by 0.20 years over four years. Nguyen (2008) similarly finds that providing information to parents about the average returns to schooling raises test scores for those who underestimate the returns to schooling, and lowers scores for those who overestimate.

These studies suggest that potential jobseekers may also make sub-optimal decisions in the presence of imperfect information. Though not as costly as education, job search may be expensive

and time-consuming. Limited social networks and opportunities for low-cost search may lead to substantial biases in individuals' perceived returns to search.

The impact of lowering job-search costs on entry and selection into search

Obtaining causal empirical evidence about the impact of lowered search costs on labor-market participation and job search has been more difficult, as there is little data available linking job-search effort to employment outcomes. Large-scale changes, such as the introduction of new Internet search technologies, operate through multiple channels, affecting both applicant and employer search costs[5]. Although lowering labor market entry costs will increase the number of participants in the market, labor market frictions could lead to worse matches if these new entrants are adversely selected and take up slots that higher productivity applicants would have obtained. Recent evidence on the impact of relatively low-cost Internet job search on unemployment suggests that these online jobseekers may be negatively selected on unobservable characteristics[6]. (Kuhn and Skuterud 2004, Hadass 2004). Duflo and Saez (2003) provide causal estimates of the impact of paying university employees to attend a benefit fair, which they find is successful in increasing attendance but has no direct impact on benefits enrollment. In the context of fair attendance, however, opportunity costs and credit constraints may be less of a factor.

Theoretical Motivation

In a simple framework with perfect information and heterogeneous ability, individuals apply for work overseas if the benefits of doing so outweigh the costs. As shown in Figure 1, which plots individual ability along the x-axis and the expected benefits and costs along the y-axis, an individual searches for work if his ability is greater than a*, the point at which the expected benefit and cost curve intersect. These two lines reflect the following basic equations that establish a benefit function, *B*, which is an increasing, concave function of individual ability *a*. The cost function, *C*, is constant across all individuals.

$$B_i = f(a_i); f'(\cdot) > 0; f''(\cdot) < 0$$

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[5] For example, a reduction in search costs in aggregate should lead to increased labor market efficiency through better matching, increasing firms' reservation productivity and, in turn, individuals' reservation wages (Pissarides 1990, Autor 2001).

[6] An alternative interpretation of Hadass's finding, that employees matched to jobs via internet search technologies have shorter job duration, may be that those who are matched are skilled finding work, and are therefore are more likely to leave because they find an even better match (Ellison and Ellison 2005).

$$C_i = c$$

The voucher, which can be exchanged at the job fair for a gift certificate for a local fast-food restaurant, increases the minimum expected benefit of searching. A general payment to attend could be seen as reducing the cost of search, but because this voucher cannot be exchanged for cash and the cost of lunch is not a typical search cost, I interpret this as an increase in the minimum benefit. The implications in this particularly framework, however, are identical.

How the voucher affects the minimum benefit depends on how individuals value the voucher. If the voucher has an equal value to all individuals, it will lead to an upward shift of the benefit function, in which case the highest-ability non-searchers would be induced to search. If the value is greatest for those with the lowest benefit of search, which could be cause by risk aversion, among other factors, then the marginal increase in benefit is greatest for those who are the least likely to search, with the lowest relative abilities. This second interpretation is depicted in Figure 1.

How the voucher affects selection into search is important in order to understand the impact of the voucher on search outcomes, or lack thereof. If those induced to search are of slightly lower ability than the previous search pool, then they will have lower hiring rates, but there should still be an increase in hiring as a result of the treatment. If, however, those induced to search are drawn from the bottom of the distribution, there may be no increase in hiring.

My sample consists of 99 *puroks*, or districts, from 17 *barangays* from the municipality of Bulan in Sorsogon Province. While the barangay is smallest official administrative level in the Philippines, each barangay is divided into three to ten puroks, or districts, with an average of 6.5 puroks per barangay. These puroks typically represent the local neighborhoods and communities in which people interact daily. I select all ten barangays that are either classified by the Philippine National Statistics Office as urban or that compose the central downtown (*población)* areas. Seven are drawn randomly from the remaining 53 rural and outlying barangays. The puroks are randomly selected from the 107 total puroks in those barangays. [7] I randomly select 826 individuals from these puroks, each of whom receives her pre-assigned treatment. To be eligible, a respondent must be aged 20-35, have a cell phone number, and have never worked abroad. She completes a brief survey

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[7] Some rural barangays had to be substituted due to safety and logistical concerns.

about her work experience, interest and exposure to overseas work, and expectations about possible wages within and outside the Philippines.

Because respondents may have strong social networks within their nearby communities, I randomize at the purok level to reduce contamination from information spillovers. To increase power, I generate eleven stratification cells of six puroks each based on purok density and distance from the location of the job fair. This procedure minimizes the likelihood of spurious correlations due to an unbalanced sample (Bruhn and McKenzie 2008). Each purok is randomly assigned to receive one of four treatments: no additional treatment, information about average overseas wages, a voucher to attend a local job fair, or both information and the incentive.

At the end of the interaction, each respondent is invited to a job fair that takes place shortly after completion of the baseline survey. All respondents receive fliers inviting them to the fair, and residents of randomly selected puroks receive the restaurant voucher. Respondents must pick up the gift certificates in person, and they can only do so for the two days of the job fair. Each respondent also receives two text message reminders in the days leading up to the job fair.

Two additional informational interventions, not explored in this paper, are also randomly assigned to respondents. These treatments were cross-randomized such that one-third of the sample received information about overseas wages, and one-third received information about qualifications for overseas work. I will include dummy variables to indicate whether a respondent was assigned to either of these treatments, but I do not interact them with the voucher treatment in my analysis. For the rest of my analysis, I will refer to all respondents not assigned to receive a voucher as the "control group," regardless of any assigned information treatment. All respondents assigned to receive a voucher will be considered members of the treatment group.

Using household rosters provided by each barangay captain, I randomly select five households with men aged 20-35 and five households with women aged 20-35. I randomly select one member of the selected gender to be the target respondent in cases in which there are several potentially eligible members of our study sample. A number of individuals are ineligible because (a) they were currently living in another municipality or (b) they had no contact cell phone numbers. The number of individuals dropped as a result of having moved elsewhere is particularly high because the rosters provided by local barangays included household members living outside of the municipality

at the time of collection.[8] In some instances, the team exhausted the barangay rosters before reaching the target five men or five women, so the total number of survey individuals in a purok is lower than the target of ten.[9] Overall, 87 percent of puroks have at least eight respondents, and 53 percent have at least ten respondents[10].

Descriptive Statistics

The first two columns of Table 1 present descriptive statistics of the full sample of 826 respondents. Column 1 reports mean demographic characteristics for the control group. By design, approximately half of the sample is female. Three-fourths of respondents have completed high school, and 17 percent have completed college.[11] These education completion rates are consistent with ongoing work by Beam, McKenzie, and Yang (2011) in other parts of Sorsogon Province. About 40 percent of respondents report being currently employed; this includes anyone who worked for pay in the previous month, regardless of whether it was in the formal or informal sector.[12] The mean household income is P5,700 per month, approximately US$133 per month. The 74 percent who report being "interested" in working abroad consist of all those who answered that they were "strongly interested," "somewhat interested," "neutral," or "slightly interested."[13] Among all respondents, only 29 percent had ever taken steps to apply for work overseas in the past.

At the end of each survey, enumerators were asked to rank respondents' attractiveness on a scale from 1 (unattractive) to 5 (very attractive); the "attractive" variable is a binary variable equal to one if the respondent received a 4 or 5 rank, which accounts for 45 percent of the control group population. Additionally, I measure the respondents' baseline perceived likelihood of being offered a job overseas. Respondents give their perceived likelihood of finding work using a simple 0-100 visual scale shown in Figure 2a. Enumerators explain the scale to each respondent and ask two practice questions to ensure the participant is comfortable with the wording of the questions and

[8] As many as 40 percent of originally selected respondents were living outside the municipality. When possible, out-of-town respondents were replaced with the next randomly selected eligible household member of the same gender. Otherwise, the next randomly selected respondent from another household was used. Therefore, this sample is not representative of all members of Bulan households, but should be representative of all 20-35-year-old current Bulan residents.

[9] While this procedure ensures that we interview no more than one individual per household for a given gender, there are cases in which we may interview one man and one woman in the same household.

[10] In one purok, surveyors accidentally interviewed an eleventh respondent.

[11] Students graduate from high school after ten years of schooling, so members of this sample could have completed college by age twenty.

[12] This includes self-employed farmers, fisherman, and shop-owners. However, some respondents may have worked in these capacities without pay, and would not have been recorded as employed.

[13] Not reported in the table, 26 percent of respondents said they were "strongly interested" in working overseas.

answers. To measure the perceived likelihood of finding work, enumerators ask, "Suppose you submit an application to an [overseas] recruitment agency today. What is the chance that you would be offered a job within the next twelve months?" For simplicity, I refer to this question as the *perceived likelihood of job finding*. As shown in Figure 2b, respondents report a wide range of responses with nearly one-third of respondents clumping at 50 percent.

The second column reports the difference in means between the voucher group and the control group. Differences that are statistically significant one, five, or ten-percent level are starred. Overall, the voucher group has slightly more women, has a greater share of respondents who did not complete high school, and includes respondents who are farther away from the site of the job fair, but these differences are not statistically significant. The voucher group is six percentage points less likely to be interested in working abroad, which is statistically significant at the ten-percent level. Most specifications will control for these covariates, so this imbalance will only affect my results if it suggests there may be other unobserved variables that are correlated with the likelihood of being treated and with my outcome variables of interest.

Outcomes

I measure job search through participation in a local job fair organized in partnership with the local government of Bulan.[14] Four overseas recruitment agencies and one local employer from another province participated 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 day of the job fair. Overall attendance was 767, with many participants attending both days. Survey respondents made up 29 percent of all attendees.[15]

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[14] Although participants were aware that researchers were tracking their numbers, they likely perceived the job fair as a "normal 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 before entering the fair 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 claimed full credit for the implementation of the job fair – both during and after the fair – further reducing any perceptions that this was a "research" job fair.

[15] 40 percent of attendees said they heard about the fair through radio, 11 percent through a flier, and 16 percent through a friend.

Survey staff assigned each participant a unique identifier upon arrival, and this number was recorded when participants visited a recruitment agency booth, enrolled in an online job-finding website, visited a passport information booth, retrieved their restaurant vouchers, and exited. A survey respondent is recorded as "attending" the fair if he registered his name at the entrance and received a number. Some simply exchanged their vouchers for the restaurant gift certificates and left; 1others attended both days of the fair and applied at several recruitment agencies. If he also applied at a recruitment agency, then he is recorded as "applying." 47.5 percent of all respondents who attended the job fair also applied; 79.2 percent of the control group attendees also applied, as did 29.0 percent of the voucher recipients.

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Table 2 presents the mean rates of attendance, application, prescreening, and prescreening conditional on application by demographic characteristic. Among the control group, attendance is relatively higher among men, those who are unmarried, those without children, and those who have completed at least some post-secondary education. Those who are not currently working, with no family members overseas since 2005, are more likely to attend, as are those who are more confident in their likelihood of being offered work if they applied. These trends persist for the measure of application and pre-screening. Conditional on application, the differences in the likelihood of passing the pre-screening interview are less pronounced, though men are more likely to pass, as are those who are unmarried and without children, and those with education beyond high school. Interestingly, it is those who have family members abroad and those who have the lowest confidence in their ability to find work who have the highest pre-screening rates, conditional on application.

Table 3 presents the reduced-form impact of the voucher treatment on the likelihood of job-fair attendance, application, prescreening, and the likelihood of passing the pre-screening interview conditional on application. The odd-numbered columns include only a binary indicator for receiving the voucher, dummy variables for the other cross-randomized treatments, and stratification cell fixed effects. The even-numbered columns also include a series of individual characteristics that may influence the likelihood of attending or participating at the job fair. From column 2, the voucher caused a 34.7 percentage-point increase in the likelihood of attendance, from a baseline of 12.9 percent among the control group. Unsurprisingly, the effect of the voucher on likelihood of application is much smaller, though still large and statistically significant. The voucher led to a 9.6 percentage-point increase in the likelihood of application, compared with a baseline rate

of 10.2 percent. The impact on the likelihood of prescreening is very close to zero, and switches signs with the inclusion of individual covariates.

The reduced form results in columns 7 and 8, which condition on the endogenous application variable, demonstrate that those who received the voucher were 14 to 22-percentage points less likely to pass the prescreening interview, compared with a baseline rate of 50.9 percent. Most of this effect is likely due to selection, as the voucher may have brought in less qualified applicants, who in turn were less successful during the prescreening interview. The upcoming analysis will explore the role of selection in more detail.

Impact of Voucher on Selection into Job Search

I examine the impact of the voucher on selection into job search by predicting the likelihood of attendance, application, and prescreening conditional on application using characteristics of the control group. Table 4 reports these results. Some individual-level covariates are omitted when predicting prescreening conditional on application because of the low sample size. I exclude those covariates that are least likely to be observable to employers; including them does not affect results. Education is a strong predictor of attendance, application, and conditional prescreening; those with at least some post-secondary education are 13 percentage points more likely to attend the job fair and apply at the fair than those with less than a high school education. Those with a high school diploma or at least some college are 93 percentage points more likely than those without a high school diploma to pass the prescreening interview, conditional on application. Additionally, those who are rated as "attractive" by enumerators, those without any family abroad since 2005, and those with plans to apply overseas are more likely to attend and apply at the job fair. After controlling for covariates, the perceived likelihood of being offered a job remains a strong predictor of attendance and application: a 10-percentage point increase in the reported likelihood of being offered a job is associated with a 1.4 percentage point increase in the likelihood of attendance and a 1.3 percentage point increase in the likelihood of application. Those with passports are more likely to attend and apply, and they are 53 percentage points more likely to be prescreened conditional on applying, consistent with anecdotal reports from recruitment agencies that having a passport before starting the application process is an important qualification for being offered work abroad.

Using the coefficients estimated in Table 4, I predict the likelihoods of attendance, application, and conditional prescreening for the full sample. I then interact the voucher treatment with these predicted probabilities, and I present the results in Table 5. Column 1 reports the correlation

between true attendance and the likelihood of attendance. The voucher increases the baseline likelihood of attendance by 45.5 percentage points for those with a zero likelihood of attendance. By construction, the coefficient on the predicted probability of attendance is approximately equal to one. However, the interaction with the voucher treatment is large, negative, and highly statistically significant. It indicates that the voucher essentially eliminates the selection into attendance observed in the control group. The actual likelihood of attendance is still increasing in the predicted likelihood for members of the voucher, but only slightly. Column 3 reports similar results for application, interacting the voucher treatment with the predicted likelihood of attendance from Table 4. The treatment has a 9.6-percentage point effect on the likelihood of application, which is statistically significant at the one-percent level, and the coefficient on the predicted probability of application is roughly 1. The interaction of the voucher treatment with the predicted probability is large and negative, indicating that the voucher also weakens selection into application, but not by as much as with attendance.

In columns 2 and 4 of Table 5, I test how the voucher affects selection into attendance and application based on the predicted likelihood of prescreening a job, conditional on application. This prediction reflects the information observable to the recruitment agency. Unobserved characteristics may also affect hiring decisions, though in this setting that concern is mitigated somewhat because the prescreening decisions are fairly standardized and based on readily observable characteristics. The interactions with recruitment agents were relatively brief, and reports from agents indicate that decisions about qualifications were based primarily on education, work experience, age, gender, and whether the respondent holds a passport. The voucher treatment effect remains large and statistically significant for those with the lowest predicted prescreening probabilities. However, the interaction term between the voucher treatment and the predicted prescreening probability is much smaller in magnitude and no longer statistically significant. The *relative* effect on attendance and application is still greatest for those individuals with the lowest prior likelihoods of being prescreened if they applied, but the impact of the voucher does not decline as substantially. Column 5 restricts the sample to only those individuals who applied for a job, and I interact the predicted probability of pre-screening with the voucher treatment. Here the voucher has a positive effect on the likelihood of being pre-screened, but it is not significant. Similarly, the interaction term is negative but not statistically significant. I cannot reject that the voucher had no effect on the likelihood of being pre-screened, among those who applied.

To provide better insight into the treatment interactions presented in Table 5, I plot the results of local constant regressions of the same outcome variables against the predicted probabilities of application, attendance, and conditional prescreening. In Figure 4a, I plot estimates of actual job fair attendance by predicted likelihood of attendance for the treatment and control groups[16]. Because the independent variable is a generated regressor, I bootstrap the two-stage procedure with 5,000 repetitions to estimate 95-percent confidence intervals. The impact of the voucher is greatest for individuals with the lowest baseline likelihood of attending the job-fair, and it converges to zero as the predicted likelihood of attendance increases. The plot is erratic at high probabilities of attendance, but as shown in Figure 2a, this reflects a very small number of individuals. Figure 4b plots actual job fair attendance against the predicted likelihood of being prescreened conditional on application. As shown in Table 5, I cannot reject that the slopes of the two lines are different. Figures 5a and 5b plot actual job fair application against predicted application and predicted conditional prescreening, respectively. The patterns are similar to the attendance results, though the results are less pronounced. It appears that the voucher has a positive effect only amount those least likely to apply, but I cannot reject equality at individual points along the plot. The treatment effect is small and near constant across applicant quality, as measured by the conditional prescreening probability. Figure 6 plots the true prescreening outcome against predicted prescreening, restricting the sample to only those who applied. Though not statistically significant at any point in the graph, those who receive the voucher and apply do worse than those who did not receive the voucher and apply, and the effect appears roughly constant throughout the ability distribution.

Mean Decomposition of Treatment Effects

Mean decomposition provides an alternative way to see the impact of the voucher treatment on selection into search. To separate the treatment from selection effects of the voucher, I conduct a series of Blinder-Oaxaca decompositions on the linear specification of my estimates (Blinder 1973, Oaxaca 1973), presented in Table 6 using the following standard specification:

$$\bar{Y}_{Voucher} - \bar{Y}_{Control} = (\bar{X}_{Voucher} - \bar{X}_{Control})'\hat{\beta}_{Control} + \bar{X}_{Voucher}(\hat{\beta}_{Voucher} - \hat{\beta}_{Control})$$

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[16] I use an Epanechnikov kernel and the rule-of-thumb bandwidth estimator chosen using Stata 11's lpoly command.

The variation in the covariate means is labeled as the "covariate" while the treatment effect due to differences in the coefficients is labeled as the "coefficient." In Table 6, all columns include a series of individual demographic characteristics that are likely to be observable to employers: her gender, age, education, marital status, attractiveness, employment status, whether she has children, and whether she holds a valid passport. The even-numbered columns add a series of covariates that reflect individuals' experiences and perceptions: whether she has ever applied for work abroad, whether she plans to apply for work abroad in the next 12 months, and her perceived likelihood that she would be offered a job abroad if she applied.

Columns 1 and 2 predict whether the respondent attended the job fair. The treatment effect here is similar to estimates from Table 3; after decomposing the linear model, the voucher increased the likelihood of attendance by 35 percentage points. There is a small, 2-percentage point reduction in the likelihood of attendance due to differences in covariates, which is not statistically significant and reflects the differences in respondent baseline characteristics described in Table 1. In columns 3 and 4, I restrict the sample to individuals who attended the job fair and estimate the likelihood of applying for work. Approximately 71 of treatment attendees do not take any steps to apply, compared with 21 percent of the control group. Here, 17 percentage points (column 4) of the reduction in application rates among attendees is due to observable covariate differences between the voucher attendees and the control attendees. However, the remaining 33 percentage points is not attributable to covariates – this could be due to unobservable characteristics of voucher attendees that made them less likely to apply, or due to a treatment effect that actively discouraged application, such as if respondents left the fair to redeem their gift certificates, when they otherwise would have stayed and applied.

The difference in the likelihood of passing the pre-screening interview conditional on applying is large, but not statistically significant in linear estimates used to generate the decomposition. However, the magnitudes of the estimates in columns 5 and 6 indicate that nearly the entire effect is operating through selection, which is what we would expect given that the voucher should have no direct effect on the likelihood of being hired.

The voucher increased job search effort the most for individuals who were, at baseline, least likely to attend the job fair. From the results in Tables 5 and 6, it appears that negative selection into attendance drew in those who might be less qualified to work overseas or who might have higher

opportunity costs of search. However, one clear finding is that the voucher had a large impact on application among individuals who faced the greatest uncertainty about the likelihood of finding work overseas. Individuals who reported a 50-percent likelihood of being offered a job were 9 percentage points (Table 6) more likely to apply as a result of receiving the voucher. However, after conditioning on application, those who reported a 50-percent likelihood appear to have fared worse.

Because of the nature of the question, it is not clear whether individuals who report a 50-percent likelihood of job-finding actually mean that they have a fifty-fifty chance of finding a job if they apply, or whether they are answering 50 percent as a proxy for not knowing. However, either interpretation suggests that those individuals, roughly one-third of the sample, faced the greatest uncertainty about their overseas job prospects.

In Table 7, I present a series of regressions that test for the interaction of this uncertainty with the voucher treatment. The first set of regressions interacts the voucher treatment with a linear term for the perceived likelihood of job finding and a dummy variable for having a reported 50-percent likelihood of being offered a job. The voucher treatment led to a differential 13 percentage point increase in the likelihood of applying, and has a positive, but not statistically significant, impact on attendance and the likelihood of pre-screening. Note that in column 3, this likelihood of pre-screening is not conditional on application.

The second set of regressions generates interacts the voucher treatment with three categorical variables for the perceived likelihood of job finding. Because this specification does not include an independent treatment dummy, there is no omitted category. Here, effects on attendance and application remain the largest for uncertain respondents. The difference between treatment effect for the 50-percent and the others is not statistically significant. Although the likelihood of passing the prescreening interview is not significant for any group, it is positive only for the uncertain respondents, and it is larger than the treatment effects for those with likelihoods above or below 50 percent.

In the Philippines, the decision to search for work overseas may be just the first step of a difficult and costly process of migrating abroad. This decision to enter the overseas labor market may be hampered due to job search costs and uncertainty about work opportunities. In a unique field experiment, this paper examines the impact of job-search costs and perceptions on job-search

effort. I find evidence that reducing the cost of search increases search effort, but also induces negative selection. Policy interventions that reduce the cost of search may be successful in increasing the number of applicants, but not necessarily in increasing the number of hires. Although the voucher increased attendance dramatically, it had a much smaller effect on participation, and no effect on the likelihood of passing the pre-screening interview.

By examining the impact of the voucher on selection into search, I find that the voucher has the largest relative increase in attendance rates among those least likely to attend. Those induced to attend and to apply are, on average, of lower education levels and less interested in working abroad. However, it is those who are most uncertain about whether they would be offered a job if they applied who are most affected by the voucher treatment.

Additionally, it appears that updating individuals' expectations about overseas wages using national averages may not increase overall employment, and may result in a pool of applicants that is less successful compared to those not given information. However, these findings should be interpreted with caution due to very small sample sizes and limited data. I plan to follow-up with respondents to gain better information about ultimate employment outcomes and beliefs about the returns to job search, which have now been updated both by the information treatment, the job-fair, and the respondents' subsequent job-search behavior.

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	(1)	(2)
Female	49.01%	3.32%
Age (mean)	27.23	0.04
Married	57.63%	-1.98%
With children	58.35%	1.12%
Less than HS	25.31%	7.13%
HS Only	30.88%	1.49%
Some College	17.59%	-1.51%
Vocational	8.80%	-2.66%
College graduate	16.52%	-4.08%
Currently employed	36.62%	-0.97%
Longest employment spell	3.34	(0.16)
Ever worked in Manila	39.86%	-1.95%
Mean household income (thousands)	5.76	(0.67)
Interested in working abroad	74.15%	-5.71%*
Currently has passport	5.92%	-1.50%
Ever applied abroad	28.73%	-1.36%
Any family abroad since 2005	75.76%	-4.12%
Plan to apply in next 12 months	34.47%	-3.68%
Chance offered job abroad if applied	49.66%	-0.60%
Distance to job fair (meters)	2,972.93	363.98
N	557	269

Table 2: Conditional Attendance, Application, and Pre-screening Outcomes

	Counts		Attend		Apply		Prescreen		Prescreen|Apply	
	Control	Voucher	Control	Voucher	Control	Voucher	Control	Voucher	Control	Voucher
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
All	**557**	**269**	**12.9%**	**46.1%**	**10.2%**	**13.4%**	**5.6%**	**4.8%**	**50.9%**	**36.1%**
Male	188	89	16.0%	51.7%	12.8%	19.1%	7.4%	7.9%	58.3%	41.2%
Female	175	84	12.6%	45.2%	9.7%	11.9%	4.6%	2.4%	35.3%	20.0%
Age 20-24	194	96	10.3%	41.7%	8.2%	9.4%	4.6%	4.2%	56.3%	44.4%
Age 25-29	280	126	13.9%	41.3%	10.7%	13.5%	5.4%	5.6%	50.0%	41.2%
Age 30-35	275	142	11.6%	50.0%	9.8%	13.4%	5.8%	4.2%	51.9%	31.6%
Not married	236	115	17.4%	40.9%	13.1%	16.5%	8.1%	6.1%	58.1%	36.8%
Married	321	154	9.7%	50.0%	8.1%	11.0%	3.7%	3.9%	42.3%	35.3%
No children	232	107	15.9%	38.3%	12.1%	15.0%	7.8%	7.5%	60.7%	50.0%
Has Children	325	162	10.8%	51.2%	8.9%	12.3%	4.0%	3.1%	41.4%	25.0%
Less than high school completed	141	86	3.5%	41.9%	1.4%	7.0%	0.0%	1.2%	0.0%	16.7%
High school graduate	172	85	10.5%	49.4%	7.6%	15.3%	2.9%	4.7%	38.5%	30.8%
Some college or vocational	147	62	20.4%	45.2%	17.0%	21.0%	8.8%	9.7%	48.0%	46.2%
College graduate	92	35	20.7%	51.4%	18.5%	11.4%	14.1%	5.7%	70.6%	50.0%
Not employed	353	170	13.6%	48.8%	11.0%	13.5%	5.7%	3.5%	51.3%	26.1%
Employed	204	99	11.8%	41.4%	8.8%	13.1%	5.4%	7.1%	50.0%	53.8%
No family abroad since 2005	135	74	17.8%	40.5%	12.6%	12.2%	4.4%	4.1%	35.3%	33.3%
Family abroad since 2005	422	195	11.4%	48.2%	9.5%	13.8%	5.9%	5.1%	57.5%	37.0%
<50% chance offered work if applied	190	98	5.8%	39.8%	3.7%	4.1%	2.6%	2.0%	71.4%	50.0%
50% chance offered work if applied	161	85	10.6%	51.8%	7.5%	20.0%	3.1%	4.7%	33.3%	23.5%
>50% chance offered work if applied	206	86	21.4%	47.7%	18.4%	17.4%	10.2%	8.1%	52.6%	46.7%

Table 3: Reduced Form Impacts of Voucher on Job-Fair Attendance, Application and Pre-Screening

	Likelihood Attend		Likelihood Apply		Likelihood Prescreen		Likelihood Prescreen, Conditional on Apply	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Voucher	0.333***	0.347***	0.0786***	0.0962***	-0.00875	0.00249	-0.224**	-0.138
	[0.0378]	[0.0393]	[0.0251]	[0.0261]	[0.0163]	[0.0154]	[0.0994]	[0.0923]
Constant	0.0908**	0.188*	0.0896***	0.0755	0.0617***	0.0432	0.600***	0.480
	[0.0369]	[0.0981]	[0.0319]	[0.100]	[0.0206]	[0.0576]	[0.196]	[0.390]
Individual Covariates		YES		YES		YES		YES
Sample Size	826	826	826	826	826	826	93	93
Dependent variable mean	12.9%		10.2%		5.6%		50.9%	

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

Notes: Robust standard errors clustered at the purok level reported in brackets. Stratification cell fixed effects included, but not reported. Individual characteristics include sex, age, education, whether married, income, whether currently or ever employed, whether interested in working abroad, whether ever applied overseas, whether has a passport, whether has any family members abroad since 2005, expected likelihood of a job offer, and a dummy variable for missing data on the expected likelihood of a job offer. A dummy variable for information treatments is also included.

Table 4: Predictors of Attendance, Application, and Pre-Screening, No Voucher

		Attend	Apply	Prescreen | App.
		(1)	(2)	(3)
Age		-0.00305	-0.00175	0.00878
		[0.00319]	[0.00235]	[0.0215]
Female		-0.0125	-0.00574	0.0752
		[0.0261]	[0.0187]	[0.164]
Any Children		0.0442	0.026	-0.375
		[0.0372]	[0.0285]	[0.336]
Married		-0.0645	-0.0236	0.146
		[0.0434]	[0.0329]	[0.357]
Education	High School	0.0788	0.0832	0.930***
		[0.0507]	[0.0511]	[0.0249]
	Some Col +	0.132***	0.129***	0.929***
		[0.0469]	[0.0451]	[0.0295]
Currently Employed		-0.00956	-0.0124	0.112
		[0.0257]	[0.0182]	[0.166]
Attractive (0/1)		0.0485*	0.0339*	-0.034
		[0.0264]	[0.0202]	[0.167]
Any family abroad since 2005		-0.0587*	-0.0243	
		[0.0329]	[0.0234]	
Plan to apply abroad next year		0.0608**	0.0328	
		[0.0284]	[0.0208]	
Ever applied abroad		-0.00919	0.00285	
		[0.0257]	[0.0191]	
Perceived likelihood offered job if applied	Likelihood	0.140***	0.131***	
		[0.0516]	[0.0400]	
	Likel. = 50%	-0.016	-0.0124	
		[0.0256]	[0.0190]	
Currently has passport		0.141*	0.0773	0.527***
		[0.0786]	[0.0579]	[0.150]

Observations

0 0 0Mr   1(1 .M0 0Mr   1(1 :M0Mr   1(1

R puft.   N b s h j o b m f ggf d ut   g s p n   r s p c ku e m s f t t kp o t s f r p s u f e   b u d p x b s kb uf   n f b o t(S p c v t u t u b o e b s e   f s s p s t d m t u f s f e   b u u i f   r v pl   fn x f m s f r p s u f e   ko c s b d l f ut(a u s b u kg kd b u kp o d f m m g ky f e   f ggf d ut Jko d m e f e Mp o m Mko M d p m n o t M) Mb b o e M)   f

Table 5: Impact of Voucher on Selection into Attendance and Application

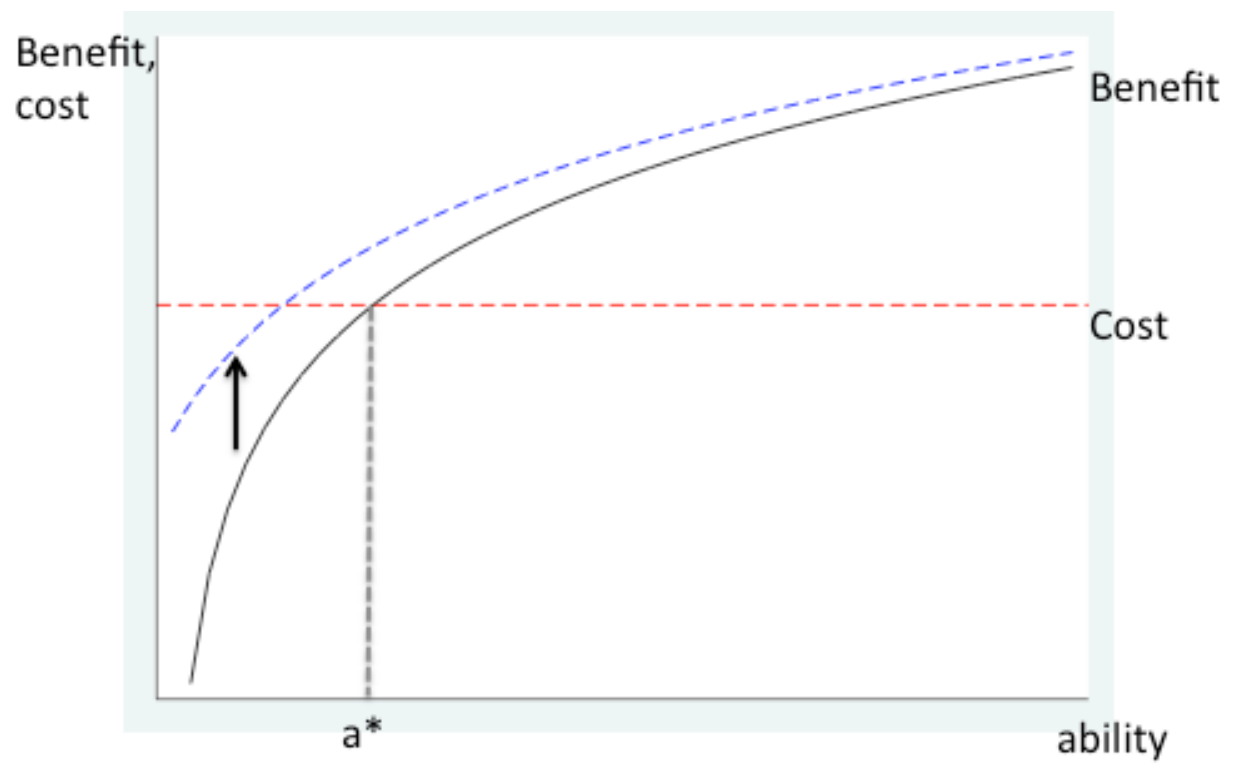| N = ALL (S1)	Likelihood Attend		Likelihood Apply		Prescreen | Apply
	(1)	(2)	(3)	(4)	(5)
Voucher	0.432***	0.429***	0.0958***	0.0701*	0.0898
	(0.0435)	(0.0856)	(0.0247)	(0.0420)	(0.198)
Predicted Prob	0.992***	0.264**	0.991***	0.234**	1.041***
	(0.0452)	(0.119)	(0.0479)	(0.0911)	(0.117)
Prediction X Voucher	-0.746***	-0.281	-0.558**	-0.0965	-0.281
	(0.268)	(0.187)	(0.225)	(0.0963)	(0.423)
Constant	-0.00751	0.0305	-0.0145	0.00748	0.126
	(0.0175)	(0.0527)	(0.0127)	(0.0379)	(0.0886)
Observations	826	826	826	826	93

Table 6: Blinder-Oaxaca Decomposition of Mean Attendance, Conditional Application, and Conditional Prescreening

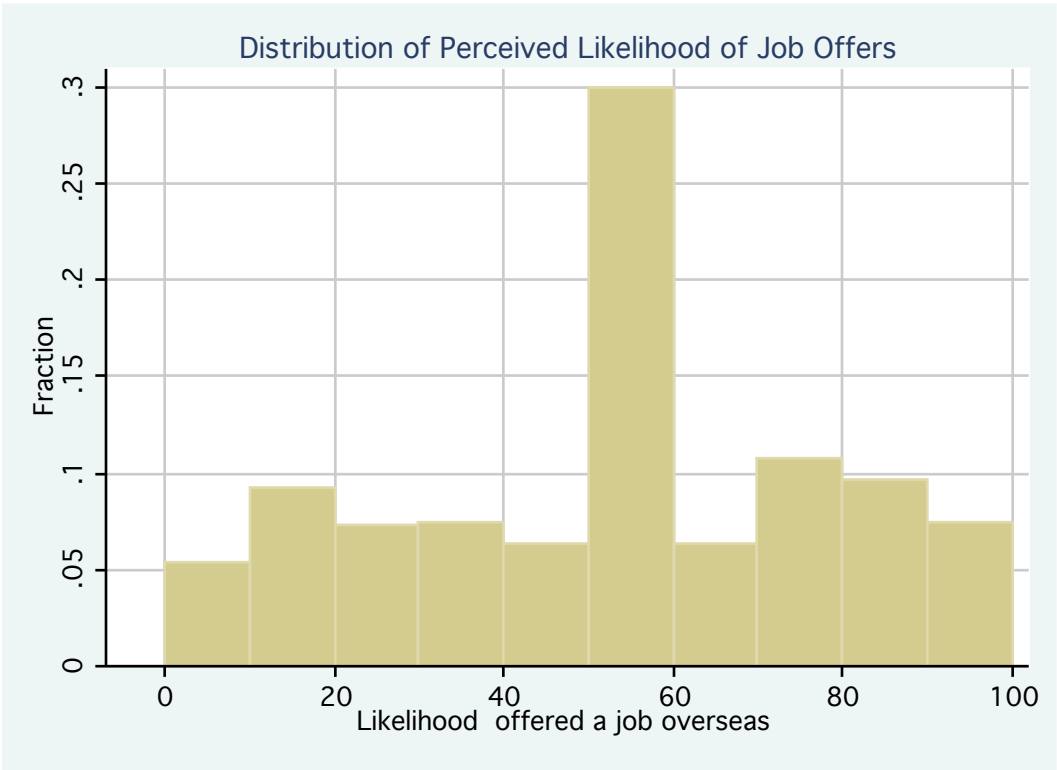|	Likelihood Attend		Likelihood Apply, Conditional on Attend		Likelihood Prescreen, Conditional on Apply	
	(1)	(2)	(3)	(4)	(5)	(6)
Covariate difference	-0.0132	-0.0164	-0.134*	-0.174**	-0.105	-0.111
	(0.0106)	(0.0114)	(0.0791)	(0.0715)	(0.0843)	(0.114)
Coefficient difference	0.345***	0.348***	-0.368***	-0.327***	-0.0427	-0.0363
	(0.0446)	(0.0448)	(0.106)	(0.0949)	(0.0926)	(0.0906)
Demographic Characteristics	YES	YES	YES	YES	YES	YES
Individual Perceptions/Exp.		YES		YES		YES
Sample Size	826	826	196	196	93	93

*** p<0.01, ** p<0.05, * p<0.10
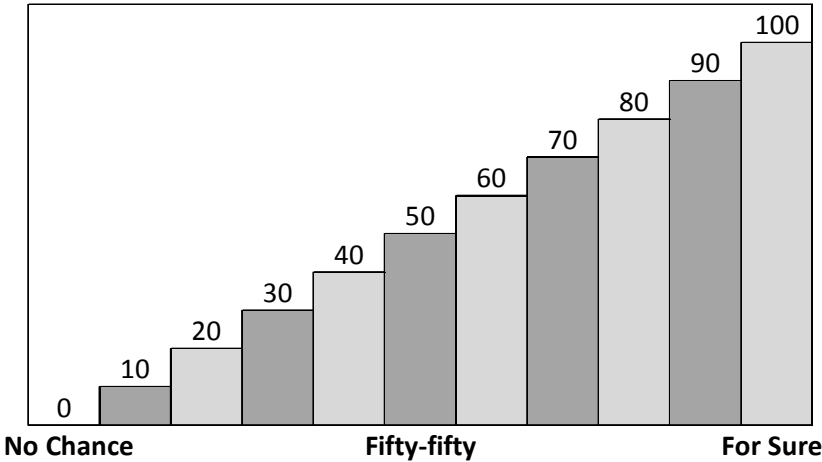
Notes: Robust standard errors clustered at the purok level reported in brackets. Included covariates listed in Table 4a.

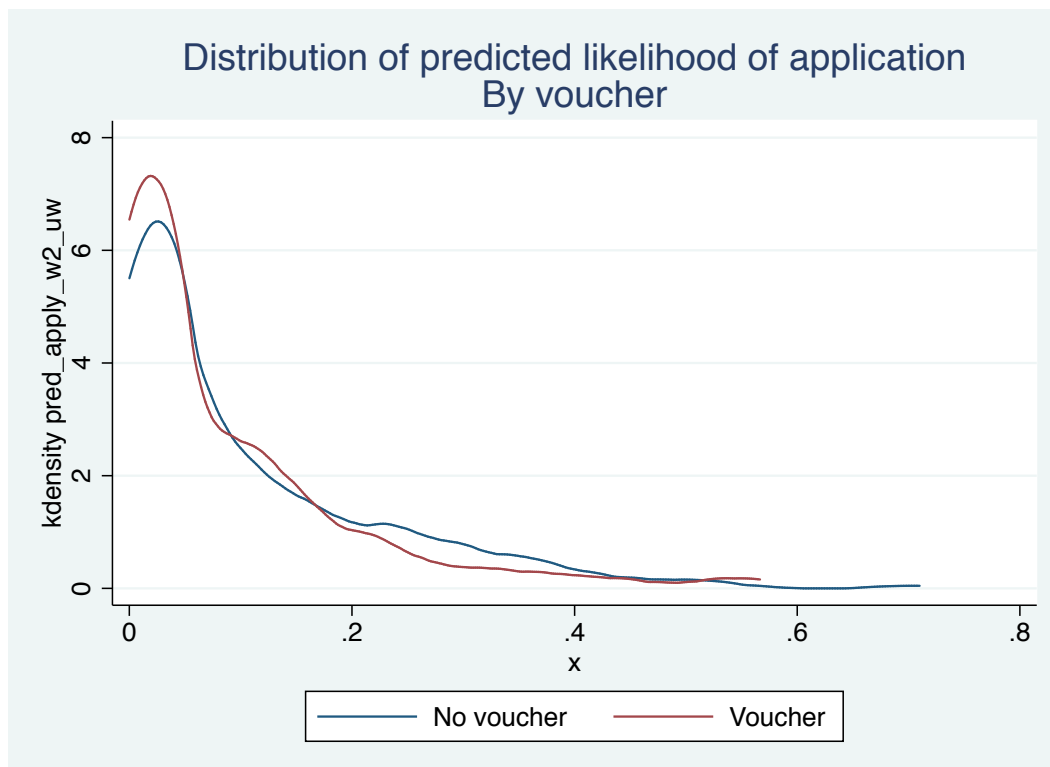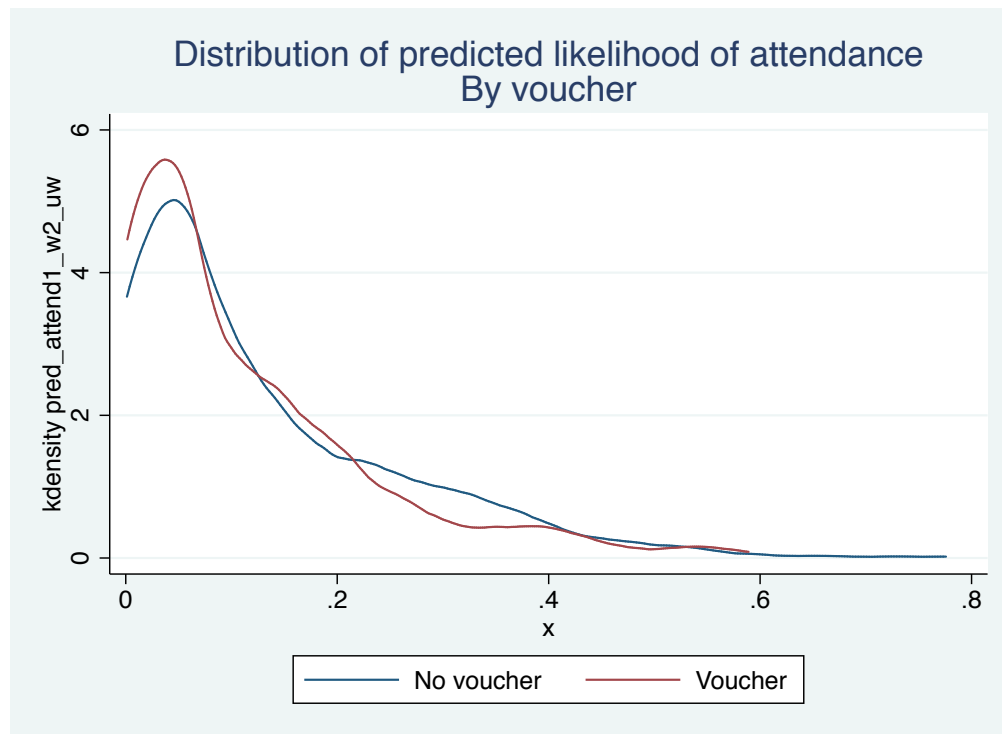|	(1)	(2)	(3)
Voucher	0.354***	0.00905	0.0171
	[0.0774]	[0.0372]	[0.0229]
Voucher X Likelihood offered job	-0.0716	-0.00854	-0.0400
	[0.130]	[0.0913]	[0.0562]
Voucher X Likelihood offered job = 50	0.0906	0.126***	0.0192
	[0.0790]	[0.0475]	[0.0284]
Voucher X Likelihood offered job < 50	0.350***	-0.00213	-0.00316
	[0.0620]	[0.0259]	[0.0166]
Voucher X Likelihood offered job = 50	0.404***	0.127***	0.0146
	[0.0683]	[0.0443]	[0.0266]
Voucher X Likelihood offered job > 50	0.275***	0.00467	-0.00836
	[0.0654]	[0.0466]	[0.0333]

Benefit,
cost

Benefit

Cost

a*

ability

LIKELIHOOD SCALE

F1
F2
F3
F4
F5
F6
F7
F8

100

90

80

70

60

50

40

30

20

10

0

No Chance   **Fifty-fifty**   **For Sure**

Distribution of Perceived Likelihood of Job Offers

Fraction

Likelihood offered a job overseas

Distribution of predicted likelihood of attendance
By voucher

Distribution of predicted likelihood of application
By voucher
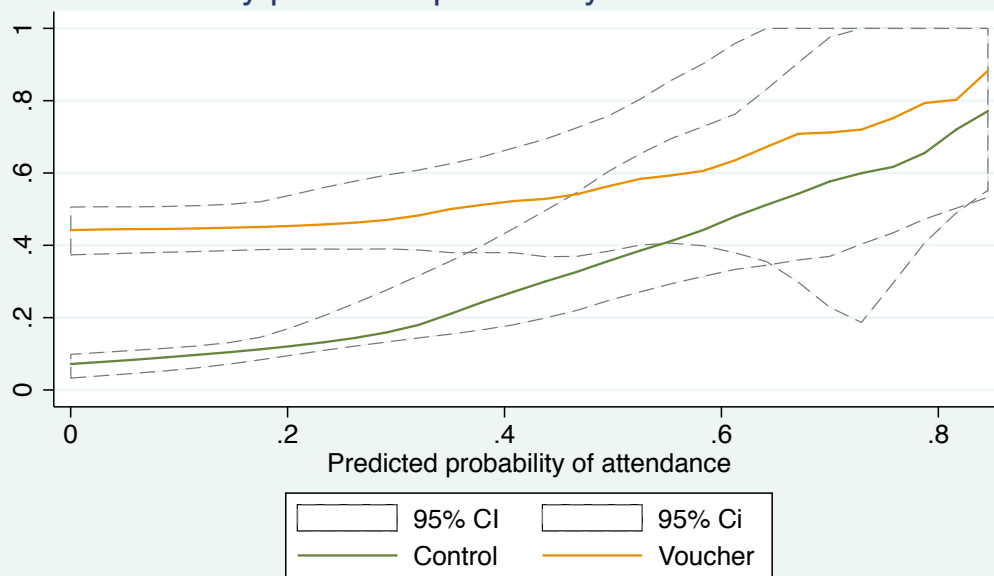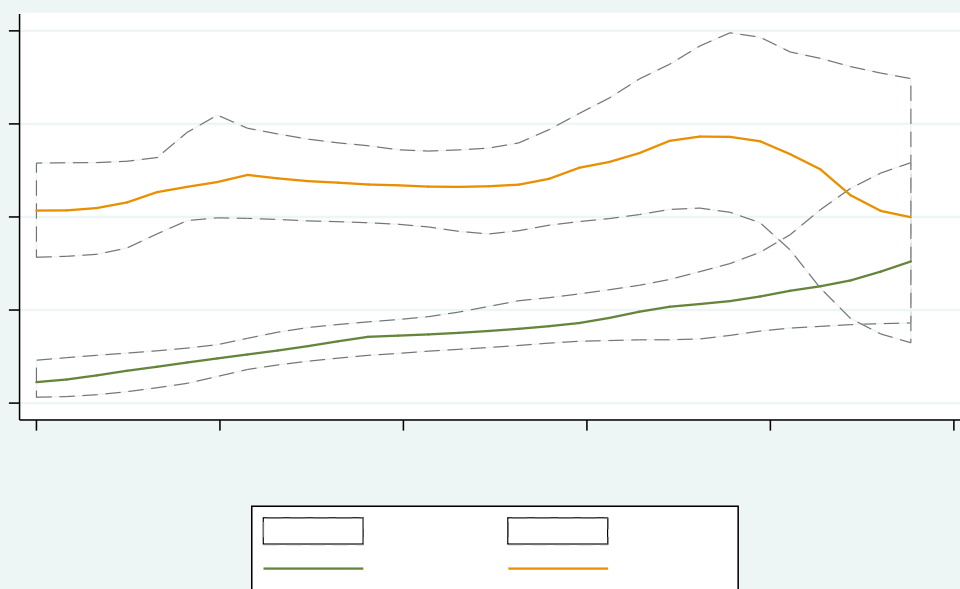
Distribution of predicted likelihood of application
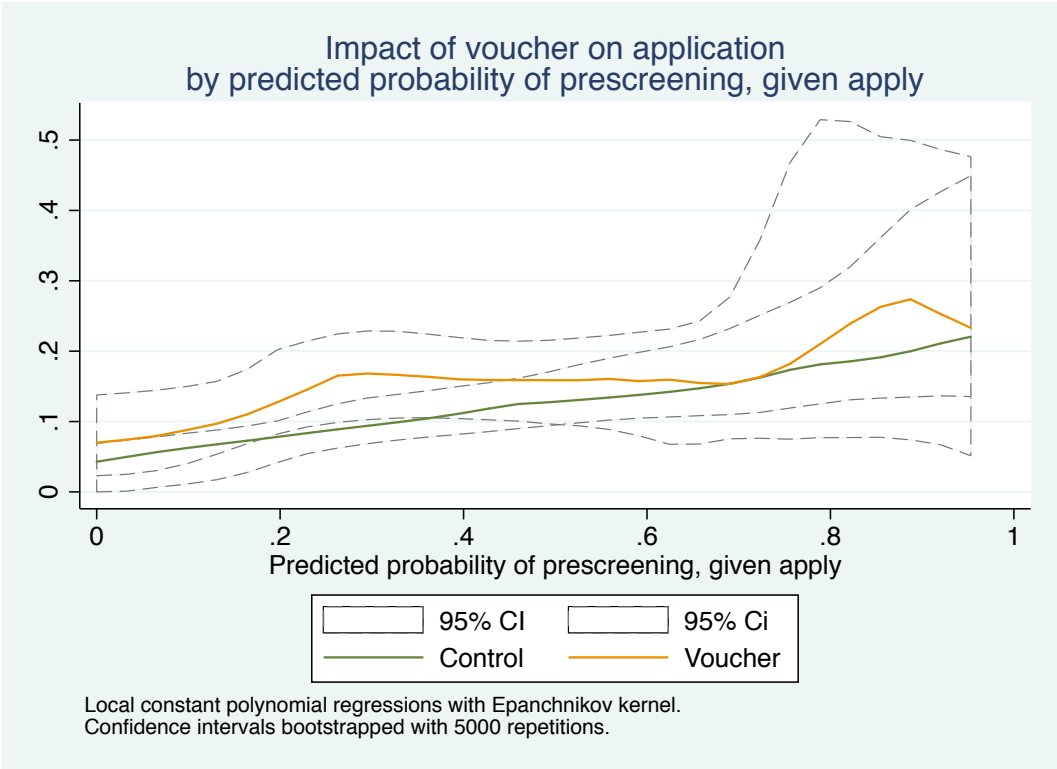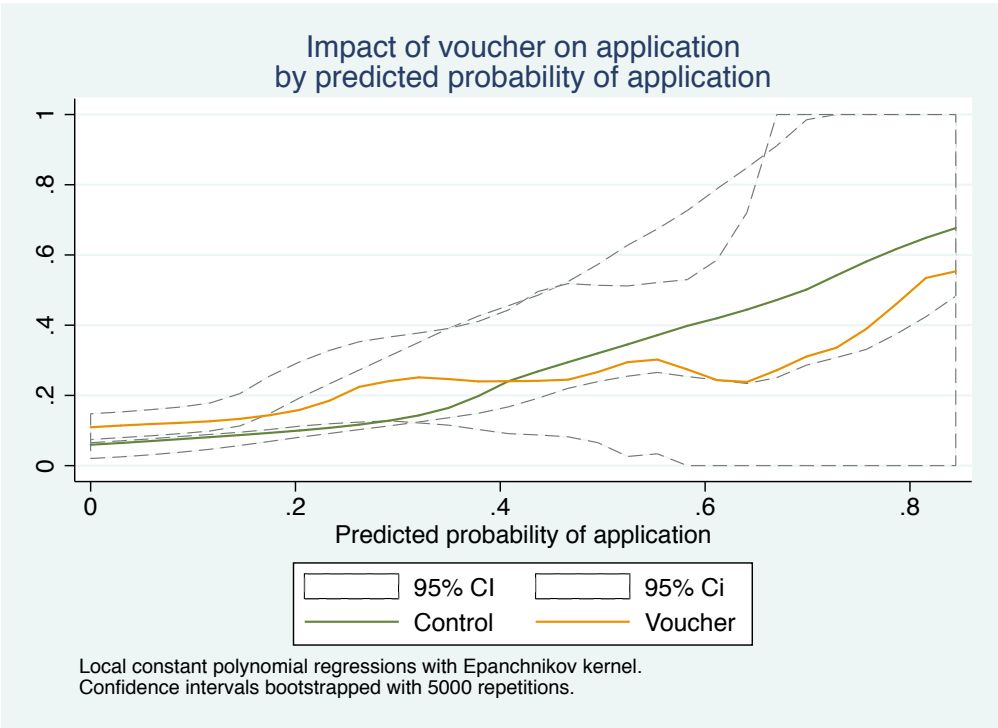By voucher, among all applicants
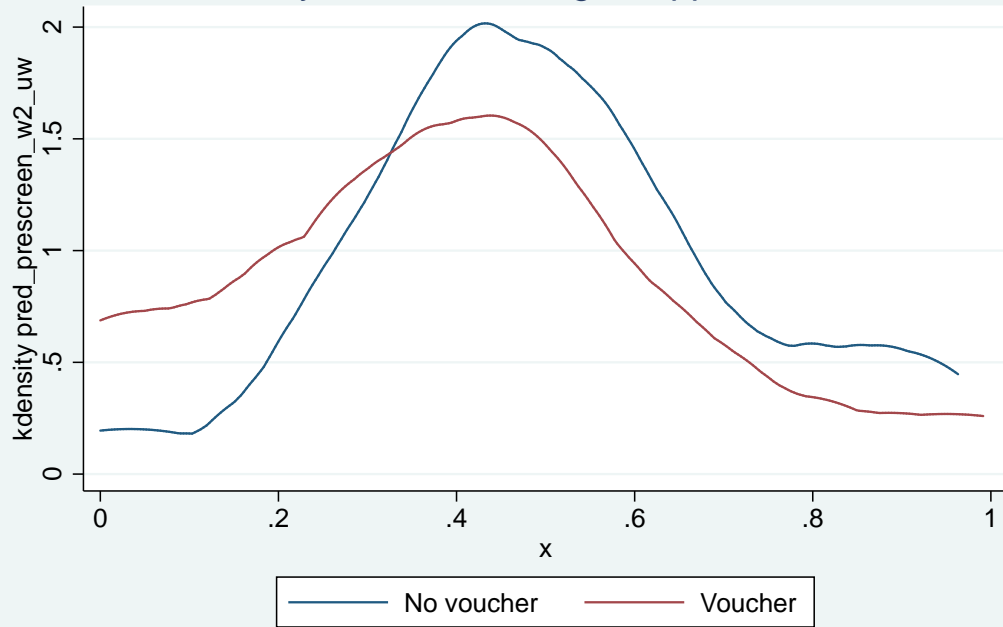
Impact of voucher on attendance
by predicted probability of attendance

Local constant polynomial regressions with Epanechnikov kernel.
Confidence intervals bootstrapped with 5000 repetitions.

Impact of voucher on attendance
by predicted probability of prescreening conditional on applying

redicted probability of prescreening given pply

Local constant polynomial regressions with Epanechnikov kernel.
Confidence intervals bootstrapped with repetitions

Impact of voucher on application
by predicted probability of application

Local constant polynomial regressions with Epanchnikov kernel.
Confidence intervals bootstrapped with 5000 repetitions.

Impact of voucher on application
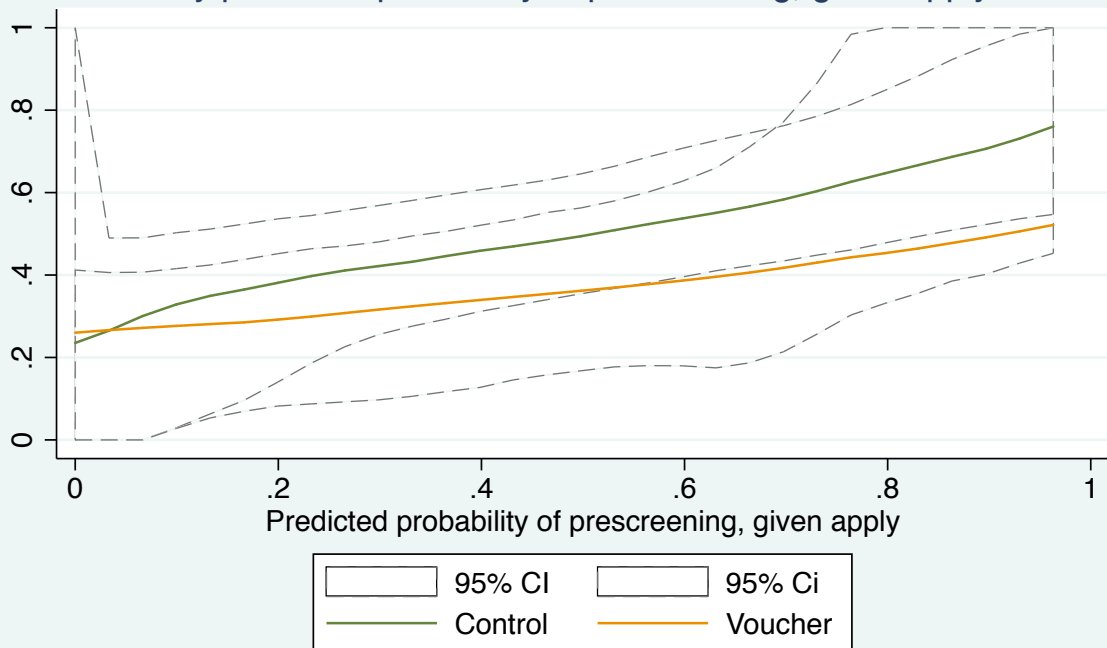by predicted probability of prescreening, given apply

Local constant polynomial regressions with Epanchnikov kernel.
Confidence intervals bootstrapped with 5000 repetitions.

Impact of voucher on prescreening
by predicted probability of prescreening, given apply

Predicted probability of prescreening, given apply

95% CI   95% Ci
Control   Voucher

Local constant polynomial regressions with Epanchnikov kernel.
Confidence intervals bootstrapped with 5000 repetitions.