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## Job-Interview Referrals Help Brazilians Find Formal-Sector Jobs

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# POLICY BRIEF

## Job-Interview Referrals Help Brazilians Find Formal-Sector Jobs

*Christopher O'Leary, Tulio Cravo, Ana Cristina Sierra, and Leandro Justino Veloso*

### BRIEF HIGHLIGHTS

- *The National Labor System (SINE in Portuguese) operates 1,500 employment centers throughout Brazil, delivering unemployment insurance and active labor programs.*
- *SINE provides over 5 million job-interview referrals every year to Brazilians seeking employment in formal-sector jobs.*
- *Relative to matched comparison groups with similar characteristics, SINE job-interview referrals increase employment and shorten the time until reemployment.*
- *SINE job-interview referrals are most helpful to less-skilled or low-educated job seekers, who make up the biggest proportion of SINE customers.*
- *Self-referrals by cell phone app to job interviews became an option in April 2017, and usage has increased rapidly.*
- *Impact estimates affirm the value of professional job intermediation provided by SINE.*

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**B**razil has the world's eighth-largest economy and a population of 212 million people. Its labor force exceeds 100 million, but only about 60 percent of Brazilian workers are in formal-sector jobs potentially requiring federal income- and payroll-tax payments. The informal sector has declined as a share of employment over the past 20 years, while the formal sector has grown steadily. This growth has been facilitated by the National Labor System (SINE in Portuguese), which operates 1,500 employment centers throughout the country, delivering unemployment insurance (UI) and active labor market programs.

This policy brief reports on results from a study supported by the Inter-American Development Bank on the effectiveness of SINE job-interview referrals. Impact estimates were produced in a comparison-group design evaluation using program administrative data and matching to create comparison groups. Our estimates are broadly consistent with international evidence, but we examine a wider range of program outcomes than similar studies done in other Latin American and Caribbean (LAC) countries (Chacaltana and Sulmont 2003; Pignatti 2016). Evidence from our evaluation suggests:

- Job-interview referrals from SINE increase the probability of finding a job within three months and reduce the number of months needed to find reemployment.
- Referrals shorten the average tenure on the next job and result in lower monthly reemployment earnings.
- SINE increases the rate of job placements for workers with lower educational attainment and skill levels, but it does not significantly increase the rate of job placements among the most qualified workers.
- SINE staff-assisted job-interview referrals result in higher rates of job placements than online self-referrals to job interviews.

### Samples for Analysis

The SINE customer pool includes mostly lower-educated, low-skilled job seekers who have transient attachment to the formal job market. Consequently, our samples for analysis mostly include job seekers having formal-sector work histories with high rates of job turnover. Nonetheless, our samples for analysis are large enough to estimate impacts of job-interview referrals for several subgroups with a wide variety of customer characteristics. We merge the full population of unemployed SINE customers—94 percent of all SINE registrants are unemployed—with longitudinal data on employment and earnings from RAIS (Relação Anual de Informações Sociais—Annual Social Information Report), using monthly data from 2012 through 2016.

Staff at SINE centers ensure that nearly every job seeker registered for work search gets at least one recorded job-interview referral from the agency. This fact complicates the creation of useful comparison groups for impact estimation. Our research design follows the example of Sianesi (2004), who drew monthly comparison samples to evaluate active labor market programs in Sweden, where nearly all customers get at least

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**Customers of the Brazilian public employment service are likely to be low educated, young, and lacking in accumulated work experience in formal-sector jobs.**

one service from the public employment agency. The rule for including an observation in a monthly comparison-group sample is that no job-interview referrals can have been received in the sampling month. Using this monthly approach, and applying a statistical technique called propensity score matching to select similar comparison individuals, we found that the observable characteristics of job-referral recipients and matched nonrecipients agreed closely.

### Employment, Earnings, and Job Tenure

We estimate impacts of SINE job-interview referrals on the following four outcomes, each of which involves different sample restrictions:

- 1) *Employment within three months of referral*—the participant sample is restricted to job-interview referrals during or before September 2016 to permit three months' observation of employment.
- 2) *Reemployment monthly earnings*—the natural logarithm of real wages on the last job before registration compared to the first job after job-interview referral.
- 3) *Time until employment*—calculated as the date of starting a new job minus the date of ending the previous job.
- 4) *Mean tenure*—computed as the difference in the duration of the last job before referral and the first job afterward. The sample is restricted to workers who had at least two complete jobs in the sample period so that the tenure of both jobs is measurable. The sample size remains relatively large because of high job turnover.

Subgroup impacts are estimated after partitioning the sample into groups by sex, age, race, skill level (educational attainment), long-term unemployed (12 months) status, UI benefit receipt status, and mode of job referral (staff assistance or online self-service).

### Employment within Three Months

Impact estimates suggest that SINE job-interview referrals increase the probability of having a job within three months of the referral by 19.7 percentage points. Figure 1 shows the estimated impact of referrals, along with confidence intervals, for the full sample and several subgroups. Note that separate matching of SINE referrals and RAIS outcomes was done for each subgroup. This shows that subgroup impact estimates within a category do not necessarily bound the full sample estimate. Although job referrals increase the chance of reemployment for all groups, we find the strongest impacts for men and unskilled workers, and the smallest for job seekers getting only online self-service. Impacts for other groups are similar to the overall estimate.

### Reemployment Earnings

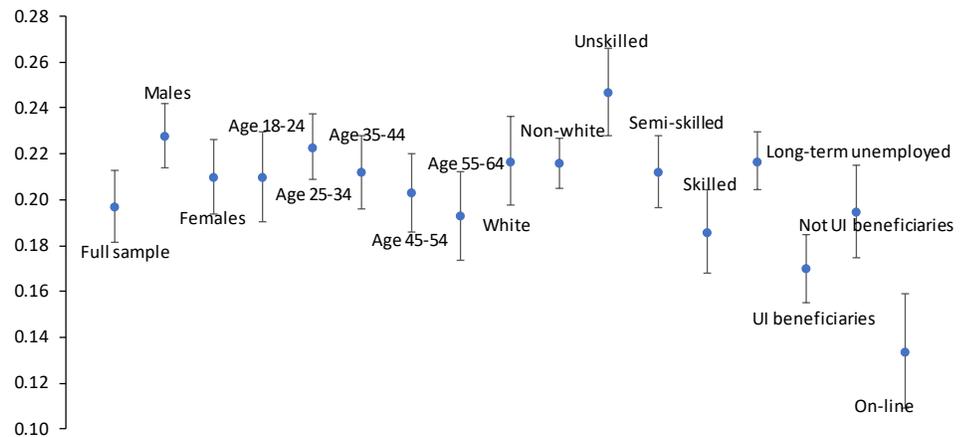
Earnings are measured in logarithms, so effects can be interpreted as percentage changes. SINE referrals reduce monthly reemployment earnings by a little under 4 percent, and this effect is not much different across subgroups, except for the most highly skilled, who suffer significantly larger earnings reductions from a SINE job referral. This difference may be explained by the higher previous wage among the more skilled, who tend to seek stable employment in higher-paying jobs for which the SINE referral process may not work well. In contrast, SINE job referrals reduce earnings the least for unskilled job seekers.

### Time to Reemployment and Job Tenure

We estimate that SINE job-interview referrals reduce the time to employment by about 0.9 months. However, the reduction is significantly larger for women and younger

**We estimate that job-interview referrals by SINE increase the likelihood of finding a formal-sector job within three months by nearly 20 percentage points.**

**Figure 1 Impacts of Job Referral on Probability of Employment within Three Months**



workers. There are no differences by skill level, but the reductions are larger for the long-term unemployed. The bigger reductions for less-advantaged groups may result from quicker matching into low-wage, high-turnover jobs, which are easier to find.

Overall, job referrals lead to tenure on the new job of 4.1 months less than tenure on the prior job. SINE job referrals have smaller effects on tenure for the least skilled, for the youngest, and for nonwhite racial groups. Again, this pattern could be attributable to the less-advantaged matching to formal-sector jobs that are short-term opportunities.

### Program Features and Interactions

We also examined differences in the effects of SINE job-interview referrals by UI beneficiary receipt status and by whether job-interview referrals took place through in-person staff interactions or online. Compared to nonbeneficiaries, those receiving UI benefits showed a slightly lower probability of reemployment within three months, a slightly smaller reduction in reemployment monthly earnings, a significantly shorter time until reemployment, and an insignificantly smaller reduction in tenure on the new job. These differences are consistent with UI beneficiaries having higher reservation wages and being more selective in accepting new jobs.

Starting in 2014, job seekers registered with SINE could refer themselves for job interviews based on vacancy postings in the SINE online system. Self-referrals require that the job candidate attest to satisfying the necessary job qualifications. Among the 5.8 million SINE job referrals in 2014, about 153,000 (2.6 percent) were online self-referrals, and the number peaked one year later at 243,000. Personal computer (PC) online self-referrals experienced a 13.4 percentage point increase in the probability of employment within three months. Although there were no significant differences by the type of referral on the change in reemployment earnings or time to reemployment, self-referrals led to jobs with about two months' shorter tenure. Figure 2 shows the dramatic rise in self-referrals resulting from the introduction of a cell phone app starting in April 2017, and the consequent decline in PC self-referrals. Preliminary estimates order the effectiveness of referral mode as: SINE staff, PC, cell phone app. These results affirm the value of professional job intermediation provided by SINE.

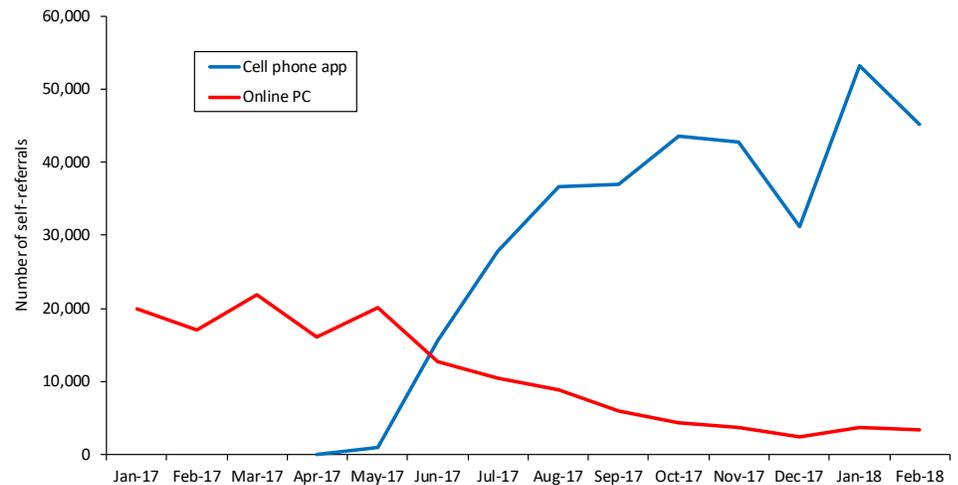
### Summary and Policy Considerations

In recent years, interest in active labor market policies has increased throughout the LAC region as a means to reduce poverty by increasing formal-sector employment. Evaluations in Peru, Colombia, and Mexico suggest that the public employment service

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**We estimate SINE job-interview referrals reduce the time to employment by about 0.9 months. However, the reduction is significantly larger for women and younger workers.**

**Figure 2 Self-Referrals to Job Interviews by Online PC and Cell Phone App**



is an important partner in this effort. We add to this base of evidence by providing new research results for Brazil.

We estimate that job-interview referrals by SINE increase the likelihood of finding a formal-sector job within three months by nearly 20 percentage points. This estimate is consistent with, but larger than, estimates for public employment services in Europe, the United States, and other LAC countries. Furthermore, job seekers referred by SINE were estimated to find jobs nearly one month more quickly than those in a similar comparison group not referred by SINE. Thus, SINE is achieving its goals of improving the probability of employment and reducing job-search time.

However, consistent with evidence from other LAC countries, SINE interview referrals result in jobs that pay lower wages than for the comparison group. As in other LAC countries, customers of the Brazilian public employment service are likely to be low educated, young, and lacking in accumulated work experience in formal-sector jobs.

Our study provides evidence that SINE is a successful reemployment service provider for the low-wage labor market. We also identified a market opportunity for SINE to list more jobs for higher-skilled workers. SINE job developers are working continuously with employers to improve the quality of job listings, with the aim of improving service to the higher-skilled segment of the workforce. Our analysis suggests that customized services to different demographic groups could improve outcomes. For example, a better matching algorithm for high-skilled workers might lure more high-paying firms to list job-vacancy openings, thereby reducing any stigma SINE might have from a history of service to the low-wage labor market.

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