LABOR MARKET DISCRIMINATION AGAINST VENEZUELANS IN PERU: EVIDENCE FROM A CORRESPONDENCE STUDY

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ABSTRACT

Through a correspondence study in Peru between July and September of 2021, we analyze the probability of Peruvian and Venezuelan applicants receiving callbacks to participate in a second stage of a job selection process. We studied the difference in the response rate by nationality, and tested potential mechanisms to reduce it, like holding a temporary residence permit (PTP) or having previous work experience in Peru. We find evidence of discrimination towards Venezuelan immigrants, as they have 4 percentage points less probability of receiving a callback than their Peruvian counterpart (a 43% difference with the control group rate). While previous work experience in Peru offsets the gap, holding a PTP does not ameliorate employment discrimination.

INTRODUCTION

Between February 2017 and July 2020, an estimated 793,000 Venezuelan citizens entered Peru, making it the country with the second-largest number of Venezuelan migrants. According to Peru's National Superintendency of Migration, 75% of Venezuelan migrants were located in Lima in 2019 (Superintendencia Nacional de Migraciones, 2020).[1]

The 2018 Survey of the Venezuelan Population residing in Peru indicates that close to 33% of them hold university degrees, considerably higher than the rate for Peruvians, at 18%. Furthermore, as Torres & Galarza (2024) argue, the Venezuelan migration process to neighboring Latin American countries is quite particular. Unlike most of the migratory processes studied, Venezuelan migrants share the same language, religion and colonial history with native Peruvians, which should reduce communication and cultural problems. However, the employment indicators for Venezuelans are not encouraging. In 2019 just 6% of Venezuelans had a formal employment contract (Dávalos, 2020). This figure lies well below the 27% of Peruvian workers who work formally (INEI, 2019b). Added to this is the significant earning gap between Peruvians and Venezuelans (Torres & Galarza, 2021).

This study seeks to identify differential treatment between Venezuelan and Peruvian job applicants in the Lima labor market in 2021 and to test for mechanisms to counteract it. Following the studies of Bertrand and Mullainathan (2004) for the USA, and Galarza and Yamada (2017) for Peru, we carried out a correspondence study in Lima. The experiment involved responding to job postings by submitting résumés in which (fictitious) applicants with similar educational and professional backgrounds but differed in nationality. The central premise is that if there were no differential treatment (discrimination), then Venezuelan and Peruvian applicants ought to have the same probability of being contacted by phone or email to participate in a second stage of a job selection process ("callback"). We measured differential treatment (employment discrimination) in terms of the gap between the number of callbacks received by Peruvians and the number received by Venezuelans. Further, we explore the role of

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[1] Dávalos (2020) noted that 18% of this population were in poverty and 4% were in extreme poverty before the pandemic.

having prior work experience in the country or holding a residence permit in closing the gap.

This work complements the literature on migrant and labor discrimination. It closely relates to Oreopoulos (2011) and Baert & Vujić (2016) correspondence studies for immigrants to Canada and Belgium, respectively; and it fits within Neumark (2018) review of experimental studies on labor market discrimination.

Currently, there is no information on the applicant selection gaps in Peru's labor market between natives and immigrants. Our study sheds light on this issue by measuring the gap in access to job opportunities. Thus, it will aid understanding of the problem and propose potential metrics that can be used to improve the situation of immigrants in the Peruvian labor market.

Our estimates of the gap in callback rate are consistent with findings from studies conducted in other countries. Venezuelan immigrants experience employment discrimination in Metropolitan Lima. A Venezuelan applicant with neither previous work experience in Peru nor a temporary residence permit needs to make, on average, more than three times (39) as many applications as a Peruvian (12) before receiving a callback. As to the mechanisms, on the one hand, we find that having previous work experience in Peru closes the gap in callback rates. On the other, holding a temporary residence permit has no effect on the gap. This suggests that recruiters obtain more information from signals "from the field", namely experience in other firms in the country, than from "formal" signals, namely government documentation.

This paper is divided into five sections. The second one presents the literature review, which covers the findings of similar studies that are relevant to this research. The third details the analytical framework, explains the methodology, and provides tentative responses to the research questions posed. The fourth section presents the results and lists the limitations of the research. The fifth section presents our conclusions.

LITERATURE REVIEW

There is an extensive economic literature on employment discrimination and its costs. Heckman (1998) stated that "market discrimination" is in evidence when two people with identical characteristics are treated differently by a firm due to characteristics unrelated to their productivity, such as ethnicity or gender. Several authors have explored the problem of employment discrimination. Becker (1971) showed the first signs of segmented markets. He discussed the existence of particular groups (ethnic, religious, or nationality) that are *preferred* by a specific employer; and as a corollary, there will be individuals outside that favored group who have poorer prospects of success in finding work.

Arrow (1973) and Phelps (1972) state that, in the absence of individual information about applicants, employers base their hiring decisions on statistical information concerning the groups to which they could belong. Therefore, the hiring decision can be optimally based on the employer's *stereotypes* about an ethnic or social group.

In turn, Becker (1971) argued that discrimination carries an economic and social cost not only for those discriminated against but for the discriminators too, in the form of a loss of productive efficiency caused by not selecting the most suitable employees. In addition, discrimination prompts the affected group to seek alternative incomes, which can directly increase the size of the informal sector.[2]

The earliest empirical studies on the extent of discrimination, such as that by Reimers (1983), focused on estimating economic outcomes at the individual level. In these calculations, discrimination was identified from the differential between the majority group and the discriminated group, that could not be explained by productivity *proxies*. Bertrand & Duflo (2017) argue, however, that this methodology has limitations. For instance the estimated coefficient (for the discriminated group in particular) may be subject to omitted variable bias.[3] Although attempts are made to address this issue by incorporating individual characteristics relevant to productivity, these very controls may themselves be affected by discrimination. Thus, at present, experimental economics

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[2]In our case, employment discrimination would leave Venezuelan migrants exposed by preventing them from accessing vital services through regular channels, while also causing them to congest public infrastructure without being able to contribute the tax revenues that finance it (Loayza, 2008). This form of discrimination also adversely affects economic growth as the increase in the informal economy causes productivity to stagnate (Loayza, 1996).

[3]The researchers attempted to address this by saturating the regression with as many relevant individual productivity characteristics as possible. However, it is impossible to take into account all the characteristics that employers observe; in addition, adding so many control variables could encumber interpretation of the results.

offers two methods to study employment discrimination: *audit studies* and *correspondence studies*.

Audit Studies measure discrimination through the difference in the rate of job offers received by a pair of real individuals, or *auditors*: one belonging to the majority group and the other to the discriminated group. This method requires auditors to go through all stages of the selection process, including interviews. Pager (2003), for example, grouped two white and two African American men to apply in person for jobs in Milwaukee. Within each subgroup, one was randomly assigned a criminal record. Pager finds that an African American male with no criminal record had almost the same probability of receiving a callback as a white male with a criminal record. For their part, Neumark et al. (1996) observed gender discrimination in the hiring of waiters and waitresses in Philadelphia. The study finds discrimination against women in high-priced restaurants.

The literature also highlights the persistent biases immigrants face in hiring processes. For example, Dias (2024) conducted a large-scale field experiment in the United States to examine hiring biases against Hispanic and Eastern European immigrants. The study finds that immigrant applicants received significantly fewer responses from employers compared to native-born candidates—11.9% for immigrants versus 15.1% for natives. This suggests that being an immigrant is a key factor contributing to discrimination, independent of race, and highlights nativity status as an important trigger for employment bias.

Complementing these findings, Schmaus and Kristen (2021) provide evidence of accent-based discrimination in Germany. Their study shows that candidates with a foreign accent, specifically Turkish, received significantly fewer responses compared to those with a German accent. This indicates that an accent can serve as an ethnic marker that influences hiring decisions. Interestingly, the study also found that discrimination was less pronounced in larger companies with standardized hiring procedures, underscoring the importance of institutionalizing and formalizing selection processes to help reduce bias.

Veit and Thijsen (2021) study how birthplace and ethnic origin affect job opportunities in five European countries. They found that candidates born abroad and belonging to culturally distinct ethnic groups face higher levels of discrimination compared to those born in the host country. The bias was particularly evident in countries like the

Netherlands and Norway. The study emphasizes that discrimination against immigrants is shaped by both the cultural context of the host country and the perception of "otherness" towards certain ethnic groups.

Lancee (2021) presents an international comparative analysis of ethnic discrimination in the labor market, spanning six countries and 53 ethnic groups. The study reveals that discrimination against ethnic minorities varies considerably across national contexts and ethnic groups. The study highlights that ethnic discrimination is not uniform; instead, it is influenced by cultural, institutional, and psychological factors that vary depending on the country.

According to Heckman (1998) and Moreno et al. (2012), however, audit studies are based on strong assumptions, such as that of homogeneity between the two auditors from the same group or that the auditors strive to get the job as much as actual applicants. In the case of Peru, Moreno et al. (2012) carried out a *pseudo-audit study* to measure racial and gender discrimination in Metropolitan Lima, which did not consist of actors undergoing the selection process but real applicants who were enrolled in an intermediary state service. Their main findings are that there is positive discrimination against women in sales positions and negative discrimination against indigenous women in positions that usually specify "*buena presencia*" (a smart appearance) as a requirement.[4]

Correspondence studies, on the other hand, avoid some of the limitations of audit studies by using fictitious applicants. Typically, fake applicant résumés are created and sent to employers in pairs: one for an applicant from the minority group and another for an applicant with similar characteristics but who does not belong to that same group. Then, discrimination is measured by comparing the total number of calls each applicant receives. This ensures greater comparability between the two group, which facilitates the argument that any difference observed is caused solely by discrimination against the minority group (Bertrand & Duflo, 2017).

There is a vast literature on the use of correspondence studies *to detect different types of employment* discrimination. For example, in the United States, Bertrand and Mullainathan (2004) measure racial discrimination by sending different employers fictitious résumés that were classified into two groups: one with names characteristic of

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[4]They also found that, on average, women's income expectations are 7% lower than those of comparable men; however, this gap is not repeated between ethnic groups.

white people and another containing names more associated with African American people. They found that the "white names" received 50% more calls for interviews. This gap was uniform regardless of occupation, industry, or company size. In turn, Tilcsik (2011) conducted a study to measure discrimination against homosexual people. The study finds that a heterosexual applicant has an 11.5% probability of being invited to an interview, while an equally qualified homosexual applicant has a probability of only 7.2%; that is, there is a significant gap of more than 4 percentage points.[5,6]

In the case of discrimination against immigrants, Angel de Prada et al. (1995) conducted an audit study to measure discrimination against Moroccans in Spain. The authors observed unequal treatment in the three stages of the selection process.

Several studies have identified that work experience within the receiving country has a positive effect in reducing the selectivity gap. For example, Oreopoulos (2011) showed that the value employers placed on work experience in Canada significantly helped to reduce the employment gap caused by discrimination against immigrants.[7] For Belgium, Baert and Vujić (2016) found that participation in volunteer experiences within the receiving country significantly reduced the employment discrimination endured by immigrants.

There have been important correspondence studies carried out in Peru, such as that of Galarza and Yamada (2017), who analyzed workplace discrimination based on ethnicity, gender, and level of beauty in Lima. Their results reveal the presence of discrimination based on all three of three dimensions, and that the largest percentage callback gap is attributed to level of beauty.[8]

To the best of our understanding, however, there have been no *correspondence studies on labor discrimination* against Venezuelan immigrants, let alone experiments that discern the potentially ameliorating effects of holding a *Temporary Residence Permit* or having prior work experience in the country.

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[5]Moreover, this gap varied geographically and according to the laws against sexual-orientation discrimination in each state. The widest gaps were observed in Ohio (8.6pp) and Texas (8.3pp).

[6]Bertrand and Duflo (2017) and Neumark (2018) conducted a comprehensive review of correspondence studies.

[7]Oreopoulos (2011) conducted a correspondence study in Toronto to estimate discrimination against immigrants, especially Asians. He used education and experience abroad as well as the names of the fictitious applicants as signals in the résumés. The results show that 15.7% of applicants with education and experience in Canada and with Anglo-American names received a callback from employers, compared to 6% of those with education and experience abroad and names characteristic of China, India, or Pakistan.

[8]A related study is that of Agüero et al. (2020), which analyzes the effect of "Beca 18", a government scholarship program, on ethnic discrimination in the Peruvian labor market. The researchers found that stating program participation in a résumé has a negative effect because it signals low socioeconomic status, but that the positive effect for skill is greater. In this way, participation in the Beca 18 program reduces the ethnic discrimination endured by poor, talented students in the labor market.

Employment discrimination against Venezuelan migrants

Drawing from Heckman's definition, employment discrimination against Venezuelans in Peru can be identified if, on average, employers treat two applicants with identical characteristics differently solely due to nationality. According to Rydgren (2004), one of the causes of discrimination against immigrant groups is that people come to *false* conclusions about individuals based on their knowledge of the social group to which they belong: that is, they resort to *stereotypes*. Thus, an important consideration when tackling the vulnerability experienced by immigrants is the demystification of stereotypes around these groups (Berganza & Solórzano, 2019). Therefore, Venezuelans who wish to reduce employment discrimination should send signals that these negative stereotypes do not apply to them. This study analyzes two of those signals that Venezuelan immigrants could present to counteract employment discrimination in Peru: (i) holding the temporary residence permit, and (ii) having prior work experience within the country.

Temporary residence permit (PTP)

The PTP is a document that, in 2021—when this study was conducted—accredited the regular migration status of Venezuelans in Peru (Supreme Decree No. 001-2018-IN, January 23, 2018). One of the eligibility requirements for this document is proof of legal entry to Peru, as well as having no criminal record nationally or internationally. In this regard, the PTP can also serve as an indicator of legality and the desire to work formally.

Freier & Pérez (2021), through in-depth interviews, argued that Venezuelan immigrants experience criminalization and discrimination in their daily lives in Peru. They found evidence that discrimination is manifested primarily in accusations of committing illegal acts.[9] In this context, presenting a signal of legality could help to reduce these stereotypes, at least in the workplace.[10]

Although not holding the PTP is not synonymous with criminality, doing so does mean that a person does not have a criminal record. Therefore, Venezuelan citizens can use the PTP as a signal of legality. As a result, it might be expected that obtaining the PTP will

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[9]The forms of demonstration are varied; Venezuelans state that they are labeled murderers, thieves, and prostitutes, and accused of selling poisoned food. The authors pointed out that a much of this labeling occurs in the workplace.

[10]The study by Baert & Verhofstadt (2015) shows the advantage of not having a criminal record when applying for a job. Through a correspondence study, the authors identified employment discrimination against former juvenile delinquents in Belgium, and found this to be consistent regardless of the field in which the individuals applied. Along similar lines, Rovira (2019) also observed employment discrimination against people with criminal records in Spain. In the case of highly qualified people the gap was 36%, while for semi-qualified people it was 25%, although this is not significant.

significantly increase their likelihood of receiving callbacks from employers to continue with the selection process.

Prior work experience in Peru

Work experience in the receiving country is an important consideration in the selection processes. Candidates who have it send a signal of adaptation to the new environment or, at least, of having been exposed to the peculiarities of working in the host-country society. Research bears out the positive effect of previous work experience in the country where one is applying for a job. Oreopoulos (2011) provided evidence of employers' positive valuation of migrants who have prior experience within Canada.[11] He found that it increased the number of callbacks received from 6% to 11%—an effect that was even greater than that of education in the country. Using a similar methodology for Belgium, Baert & Vujić (2016) included as a treatment the completion of volunteer activities within the country. They detected that participation in such activities narrowed the callback gap dramatically, arguing that they send a significant signal to employers that migrants have already adapted to Belgian society.[12]

Thus, work experience within the host country helps migrants get familiar with its processes (Handy & Greenspan, 2009). In addition, it facilitates a reduction in the human capital and productivity gaps vis-a-vis nationals. This sends out an important signal to employers and, potentially, reduces the gap caused by discrimination (Baert & Vujić, 2016). Given this evidence, for Venezuelan immigrants, getting work experience in Peru can play a role in reducing the callback gap in selection processes.

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[11]Notably, the descriptive study by Torres and Galarza (2021) found that work experience in Venezuela appears not to be recognized in the Peruvian labor market.
[12]In this experiment, the results showed that there was no significant difference in the number of callbacks received between a migrant and a national when both have previously carried out volunteer activities.

The Experiment

To detect *discrimination based on nationality in Lima´s labor market, we carried out a correspondence study. The* design is very similar to that employed in the experiments conducted by Bertrand and Mullainathan (2004) and Galarza and Yamada (2017), involving the creation of fictitious résumés and submitting them to real job selection processes: one for an applicant from the discriminated group and another for one with similar characteristics but who does not belong to that group.

We use two fictitious résumés for each selection process. The first corresponds to a Peruvian applicant, while the second belongs to a Venezuelan applicant. The Venezuelan applicant could have prior work experience in Peru or in Venezuela, and could state to hold a temporary residence permit or not state it.[13] Otherwise, both meet the following characteristics: (i) they are men, (ii) their names and surnames are quite common in Latin America (and seek to avoid any indication of specific ethnic origin), (iii) they are 25 years old, (iv) they studied Business Administration at a private university and graduated from a five-year program in 2017, (v) they have three years of experience as administrative assistants at companies of the same size (by number of employees), (vi) they have not been unemployed at any time since they began their professional experience, (vii) they have an advanced level of English and Microsoft Office skills, (viii) their résumés do not display a photo, which might give indications of ethnicity or level of beauty, (ix) they have similar soft skills, (x) they have not participated in volunteer activities, and (xi) the structure and appearance of their resumes is the same (Appendices 1 and 2 show a pair of résumés).

As can be seen in Table 1, we created a total of five (5) groups of résumés.[14] Of these groups, we submitted four pair combinations (of résumés) to each job opening. We created only one Peruvian applicant, with three years of work experience in Peru,[15] who serves as the benchmark against whom we compare the four different types of Venezuelan applicants.

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[13] Not stating holding a temporary residence permit left it up to the recruiter to assume whether the applicant held it, had other documentation such as a foreigner's ID ("carnet de extranjería"), or had no legal documentation.

[14] Namely, Peruvian (G1); Venezuelan without A PTP and without work experience in Peru (G2); Venezuelan without PTP and with work experience in Peru (G3); Venezuelan with PTP and without work experience in Peru (G4); and Venezuelan with PTP and with work experience in Peru (G5).

[15] We did not take into account the case of a Peruvian applicant with experience in Venezuela or that of a Peruvian applicant with a PTP, as this document is not issued to Peruvian citizens.

Table 1 – Treatment Arms

Peruvian	Venezuelan		States to hold a temporary residence permit
G1	vene	peru	
	G2	G3	**No**
	G4	G5	**Yes**

We obtained job postings from the virtual platforms with the largest numbers of vacancies for administrative assistants: *Boomeran*, *Computrabajo*, and *Indeed.*[16]

It is important to clarify that the résumés do not explicitly state whether the foreign applicants' education has been officially recognized in Peru. However, the occupations in our study do not require permission from the government to be performed (as doctors or lawyers do). Furthermore, we argue that the nature of the occupation analyzed reduces problems of evaluating the quality of the work (which could be easily evaluated in subsequent, personal interviews).[17]

Regarding the specific logistics of sending résumés, on each submission day we collected the job postings from the selected platforms and sorted them randomly. On day 1 of the study, we started by submitting to job opening 1 the résumés from the Peruvian applicant and the Venezuelan applicant from the G2 group; then, we submitted to job opening 2 the résumés of G1 along with the Venezuelan applicant from G3; then, we submitted to job opening 3 the résumés of G1 along with the Venezuelan applicant from G4; and we submitted to job opening 4 the résumés G1 along with the Venezuelan applicant from G5. Once the cycle was over, we repeated the process until we had submitted applications to each of the jobs posted across all three platforms that day. On the second day, we continued where we had finished the first day. This procedure was repeated throughout the experiment.

We submitted the résumés for each pair to the same job listing through the same virtual platform. Each submission was carried out on the same day, but hours apart; the order in

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[16]To this end, in advance, we monitored the traffic for each weekday that the jobs were published on these platforms, between July and September 2021, for administrative assistant vacancies. The results are presented in Appendix 3.

[17] This also addresses possible differences in expectations about the quality of Venezuelan education, compared to Peruvian education.

which the résumés for the same pair were sent was determined randomly on the first occasion and then it took turns.

To illustrate the submission sequence, Appendix 4 presents a hypothetical case. On the first day, seven job postings were found across the three platforms. These were randomly ordered and then numbered, such that the posting by Firm 1 came first, followed by Firm 2, and so on up to Firm 7. Thereafter, the pairing of the Peruvian applicant (G1) with the Venezuelan applicant G2 was assigned to the offer from Company 1, and the previously mentioned cycle was respected.

After this ordering process, it was randomly designated that, for the first cycle, the résumé of the Venezuelan would be sent first in the first, second, and fourth pair, while that of the Peruvian would be sent first in the third pair. For the next cycle, the order was reversed: the résumé of the Peruvian would be sent first in the first, second, and fourth pair, and that of the Venezuelan for the third. This process is repeated over the course of three days, and on each successive day the cycle is continued where the previous day ends. Next, we created a database in which to record the following information: (i) the pair of résumés sent, (ii) the platform through which the applications were sent, (iii) the date of publication of the job posting, (iv) the date of application, (v) the firm that advertised the job, (vi) whether the job was remote or in-person, (vii) whether the Peruvian applicant received a callback for the next stage of selection, and (viii) whether the Venezuelan applicant received a callback for the next stage of selection.

We considered callbacks carried out by telephone and by email. To this end, we created five email addresses (one for each fictitious applicant) as well as five profiles on each of the three virtual platforms, linked to the corresponding email address and résumé. We only considered callbacks related to moving forward in the application process, not calls that required further information on the résumé.

To keep track of the telephone callbacks we obtained two cell phones, each with its own SIM card. We only needed two because all Venezuelan applicants were registered using the same cell number; this was possible because at no time did we send applications from two different Venezuelans for the same job. We answered all incoming calls in order to confirm and register the callback as well as the application to which it corresponded. The cell phones were used solely for the purposes of this experiment.[18]

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[18]In an exceptional case in which a call was missed, we returned the call in order to confirm and record the information.

DESCRIPTIVE STATISTICS

We employed the abovementioned methodology from July to September 2021. Over that three-month period we found a total of 794 suitable job postings, to each of which we submitted two résumés: one from the fictitious Peruvian applicant and another from a fictitious Venezuelan applicant. Thus, a total of 1,588 resumes were sent.

Of the group of five fictitious Venezuelan applicants, we sent 196 résumés from Group 2 (G2), 197 from Group 3 (G3), 196 from Group 4 (G4), and 205 from Group 5 (G5). These differences were down to obstacles encountered following the randomization of the vacancies: mainly, job postings that expired in the period between the submission of the first and the second résumé. Appendix 5 provides detailed information on the number of résumés sent.

Figure 1. Callback rate by applicant group
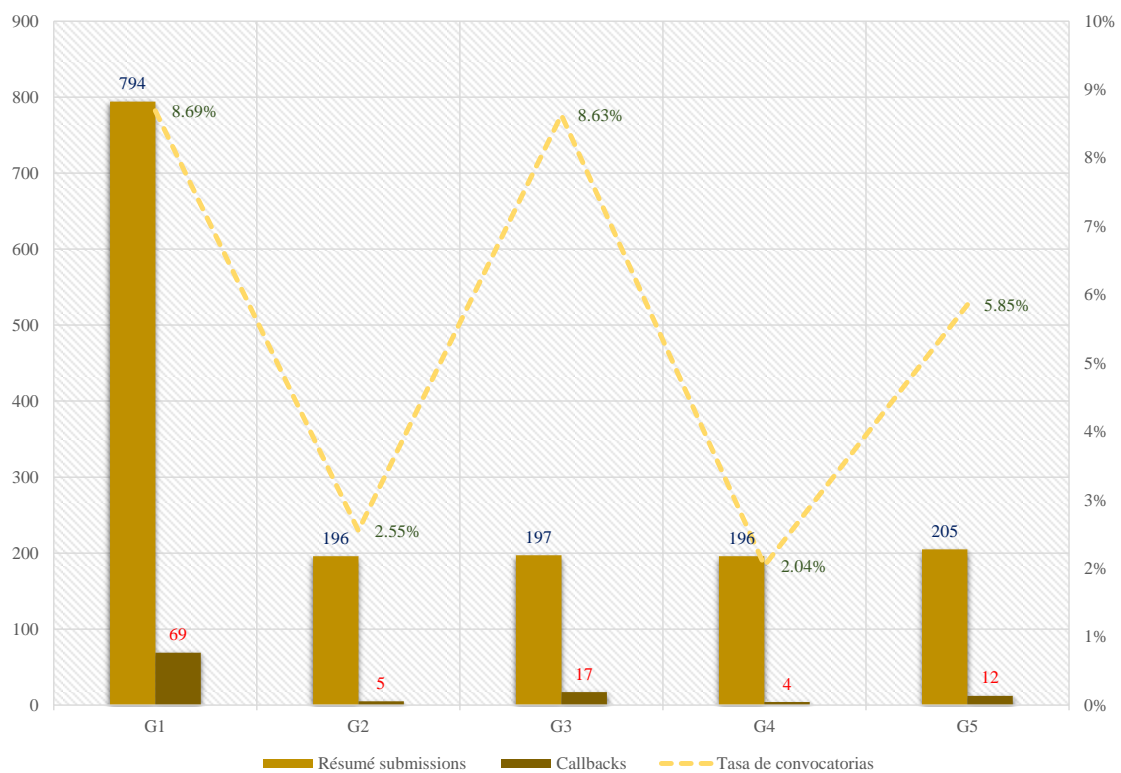
Compiled by authors

Figure 1 shows the number of applications (résumé submissions), the number of callbacks (responses to these submissions), and the callback rate (response rate) for each group in the experiment.

Group 1 (G1), with the single Peruvian applicant, received 69 callbacks (responses) to participate in the next stage of a selection process (out of the total of 794 applications); this equated to a callback rate of 8.69%, the highest among all the groups. Group 2 (G2), pertaining to a Venezuelan without PTP or previous work experience in Peru, obtained five callbacks out of a total of 196 applications—a callback rate of 2.55% (5/196). Interestingly, however, it was Group 4 (G4), a Venezuelan applicant with temporary residence but no prior experience in Peru, who received the fewest callbacks, only four, and thus the lowest callback rate, at 2.04%.[19]

As noted in the methodology section, we recorded supplementary information about jobs to use as potential control variables. The variables we obtained were: (i) the difference in days between publication of the job posting and the application for each job, (ii) a dichotomous variable that indicates whether the applicant's resume was sent first (out of each pair), (iii) the platform through which the applicant's résumé was sent, (iv) whether the work was remote (home-based) or in-person, and (v) the week number in which the application was submitted.[20]

To evaluate the inclusion of potential control variables, we estimate regressions that use the possible control variable as a dependent variable and the treatment variables (possession of a PTP, previous work experience in Peru, and the interaction between the two) as independent variables. In this way, we were able to confirm whether there is a significant difference between the groups of Venezuelan applicants for each variable analyzed.

Table 2 shows the results of the analysis. If the p-value is less than 0.1, it means that the mean of the control variable is significantly different across groups, with a confidence level of 90%. Thus, we decided to incorporate into the regressions a variable to denote the difference in days between publication of the job posting and application, the *Computrabajo* dichotomous variable (which reflects the use of that platform), and the

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[19]Group 3 (G3), Venezuelans with previous experience in Peru but without a PTP, was the Venezuelan group that received the most callbacks (17) and the highest callback rate (8.63%). Finally, Group 5, Venezuelans with both treatments, obtained 12 calls, which equated to a callback rate of 5.85%.

[20]Other data were also recorded but were not used as control variables as they remained the same across all applications. These included the department and the job applied for, which were always Lima and administrative assistant, respectively.

Indeed dichotomous variable (which reflects the use of that platform).[21] In addition, to avoid possible seasonal effects, we also decided to include the week number in which the application was submitted.

Table 2. Potential control variables

Variable	Description	Impact on	*p-value*	Included
Difference in days	Indicates the number of days between publication and application (application lag)	PTP	0.058	Yes
		Exp	0.050	
		PTP*Exp	0.004	
Submitted first	Indicates whether the applicant's CV was submitted first	PTP	0.920	No
		Exp	0.880	
		PTP*Exp	0.676	
Indeed	Indicates whether the application was submitted via the *Indeed* platform	PTP	0.823	Yes *
		Exp	0.477	
		PTP*Exp	0.319	
Computrabajo	Indicates whether the application was submitted via the *Computrabajo* platform	PTP	0.015	Yes
		Exp	0.046	
		PTP*Exp	0.023	
In-person	Indicates whether the post was in-person	PTP	0.614	No
		Exp	0.339	
		PTP*Exp	0.570	
Remote	Indicates whether the post was remote (home-based)	PTP	0.793	No
		Exp	0.801	
		PTP*Exp	0.539	

Note: The p-values shown are the result of regressions performed using the potential control variable as a dependent variable, and PTP, Exp, and PTP*Exp as explanatory variables.

*: It was decided to include this variable because the *Computrabajo* variable was included

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[21]The first two variables present a p-value of less than 0.1 for the three estimation variables. Finally, even though the p-values obtained for the *Indeed* variable are far greater than 0.1, since the *Computrabajo* variable is included as a control variable, we decided to also include the *Indeed* variable.

EMPIRICAL STRATEGY

After determining the three control variables to include, we estimate the causal effects of the different treatments on the probability of receiving a callback for the next stage of a selection process.

Our first specification compares the callback rate of Peruvian and Venezuelan applicants:

$$y_{ijs} = \delta_0 + \delta_1 Venezuelan_i + X_{ijs}'\gamma_c + \mu_s + \varepsilon_{ijs} \dots(1)$$

Where y_{ijs} takes the value of 1 if cantidate i from stratum s received a callback to participate in an interview for vacancy j, and 0 otherwise. X_{ij} is a vector of control variables, and μ_s are strata fixed effects. Standard errors are clustered at the stratum level.

We next study the role of temporary residence and prior work experience in the country in reverting the gap in callback rate:

$$y_{ijs} = \beta_0 + \beta_1 Venezuelan_i + \beta_2 PTP_i + \beta_3 Exp_i + \beta_4 PTP_i Exp_i + X_{ijs}'\beta_c + \mu_s + \varepsilon_{ijs}$$
$$\dots(2)$$

Where the dichotomous variable y_{ijs} takes the value of 1 if cantidate i from stratum s received a callback to participate in an interview for vacancy j, and 0 otherwise. $Venezuelan_i$ takes the value of 1 if applicant i is of Venezuelan nationality, and 0 otherwise. PTP_i takes the value of 1 if applicant i is Venezuelan and holds a temporary residence permit, and 0 otherwise. Exp_i takes the value of 1 if applicant i is Venezuelan and has prior work experience in Peru, and 0 otherwise. Further information about all variables included in the estimation can be found in Appendix 6.

In (2), β_1 measures the difference in the callback probability between a Venezuelan applicant (without a temporary residence or work experience in Peru) and a Peruvian applicant. A negative sign would reflect employment discrimination against Venezuelan applicants. In turn, β_2 measures the extent to which the probability of a Venezuelan receiving a callback varies when that applicant holds a PTP. Similarly, β_3 measures the change in the callback probability for a Venezuelan who has previous work experience in Peru. The expected sign of these last two coefficients is positive since, for the reasons mentioned in the analytical framework, the two treatments are expected to help reduce the callback gap between Peruvians and Venezuelans. Finally, β_4 measures any further

variation in the callback probability for a Venezuelan who has both a temporary residence and prior experience in Peru.[22]

Table 3: Probability of callback by applicant nationality

	(1)	(2)	(3)	(4)
Venezuelan	-0.039***	-0.039***	-0.039***	-0.039***
	(0.009)	(0.010)	(0.010)	(0.013)
Stratum FFEE	No	Yes	Yes	No
Baseline Covariates	No	No	Yes	No
Firm FFEE	No	No	No	Yes
Observations	1588	1588	1588	1588
Mean Control	0.09	0.09	0.09	0.09

The dependent variable is an indicator that the applicant received a callback. Baseline controls are platform dummies, work from home, dummies for application lag (in days), dummies for application week. Standard errors clustered at the stratum level. Statistically significant at the 0.10(*), 0.05(**) and 0.01(***) of confidence.

Table 3 reports the effect of the applicant's nationality on the probability of receiving a callback. Column 1 presents the difference in means between Venezuelan and Peruvian applicants without any additional control. Column 2 includes fixed stratum effects. In Column 3 we include baseline controls, in addition to stratum fixed effects. In the fourth column we include firm fixed effects, to control for reviewer characteristics. In all the specifications, the results are identical: the average Venezuelan applicant has a 3.9% lower probability of receiving a callback than their Peruvian counterpart (p-value<0.01). This represents a difference of 43% with respect to the probability of receiving a callback vis-a-vis the Peruvian applicant, for whom the callback probability is 9%. While a Peruvian applicant requires 11.1 applications on average to receive a callback, Venezuelan applicants require an average of 19.6 applications to receive a callback.

In Table 4 we explore the role of the PTP and work experience in bridging this gap. The tables breaks down the "average" Venezuelan applicant into the four groups we constructed: with PTP, with work experience in Peru, with both, and with none. In this case, two comparison groups emerge: (1) the Peruvian applicant and (2) the Venezuelan

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[22]The expected sign of this coefficient is unclear. If it is positive, it means that the PTP and previous experience in Peru are complementary, while if it is negative, it indicates that these two treatments are substitutes.

applicant without a PTP or work experience in Peru. All specifications include stratum fixed effects and baseline controls (Specification 3 in Table 2).

The results remain virtually identical across the other specifications. Column 1 shows that, surprisingly, the effect of the PTP is not significant. However, Column 2 shows that previous work experience in the local market has a strong and significant effect. The coefficient is 4.7 percentage points, significant at a confidence level of 99%. This means that a Venezuelan applicant with experience in the local market has almost a 5% higher probability of receiving a callback than the other Venezuelan applicant profiles in the study. That is, experience in the local market closes the gap with the Peruvian applicant to just 1.6 percentage points, which is not statistically different from 0 (p-value = 0.26).

In Column 3 we include both PTP and experience. The results are consistent with the first two columns. The Venezuelan applicant without a PTP or local experience has a 5.5% lower probability of receiving a callback. While holding a PTP has no impact on callback probability (coef=-0.015, p-value = 0.36), local market experience closes the gap to less than one percentage point with an associated p-value of 0.64, making it indistinguishable from zero. In Column 4 we permit the interaction between PTP and Exp, with similar results to the previous column. In this case, it should be stressed that the PTP does not have positive effects even when the applicant has local experience.

Having established that a PTP has no effect on the gap and that the experience in the local market can close it, we go on to analyze whether this effect varies according to lag in submitting the job application. Figure 2 shows the results. To this end, we divide the sample by the median application lag. On the one hand, there are the applications that were sent on the same day or the day after the posting was published, which we call "not lagged." And on the other hand, there are the applications that were sent between two to seven days after publication. We call these "lagged."

Our interest is to determine how experience in the local market affects callback probability when the Venezuelan applicant (1) submits their application with no lag and (2) with a lag. On the left side of the graph, the comparison group is a Peruvian applicant who submits their application with no lag. The graph shows that local work experience closes the call gap regardless of whether or not the Venezuelan applicant sends his application with a lag. On the right side of the graph, the comparison group is a Venezuelan applicant with no local work experience who submits their application

without delay. The effect in this case is similar, whether the worker with local experience submits their application with or without a lag.

Table 4: Probability of Callback: formal vs informal signals

	(1)	(2)	(3)	(4)
Venezuelan	-0.032***	-0.063***	-0.055***	-0.063***
	(0.013)	(0.011)	(0.014)	(0.014)
PTP	-0.015		-0.015	0.000
	(0.016)		(0.016)	(0.016)
Exp		0.047***	0.047***	0.063***
		(0.016)	(0.016)	(0.024)
PTP x Exp				-0.030
				(0.030)
Stratum FFEE	Yes	Yes	Yes	Yes
Baseline Covariates	Yes	Yes	Yes	Yes
Observations	1588	1588	1588	1588
Mean Control	0.09	0.09	0.09	0.09
Ven+PTP=0	0.00		0.00	0.00
Ven+Exp=0		0.26	0.64	0.98
Ven+Exp+PTP+EXP*PTP=0				0.08

The dependent variable is an indicator that the applicant received a callback. Baseline controls are platform dummies, work from home, dummies for application lag (in days), dummies for application week. Standard errors clustered at the stratum level. Statistically significant at the 0.10(*), 0.05(**) and 0.01(***) of confidence.

Figure 2: Effect of experience in the local market on callback rate by application lag
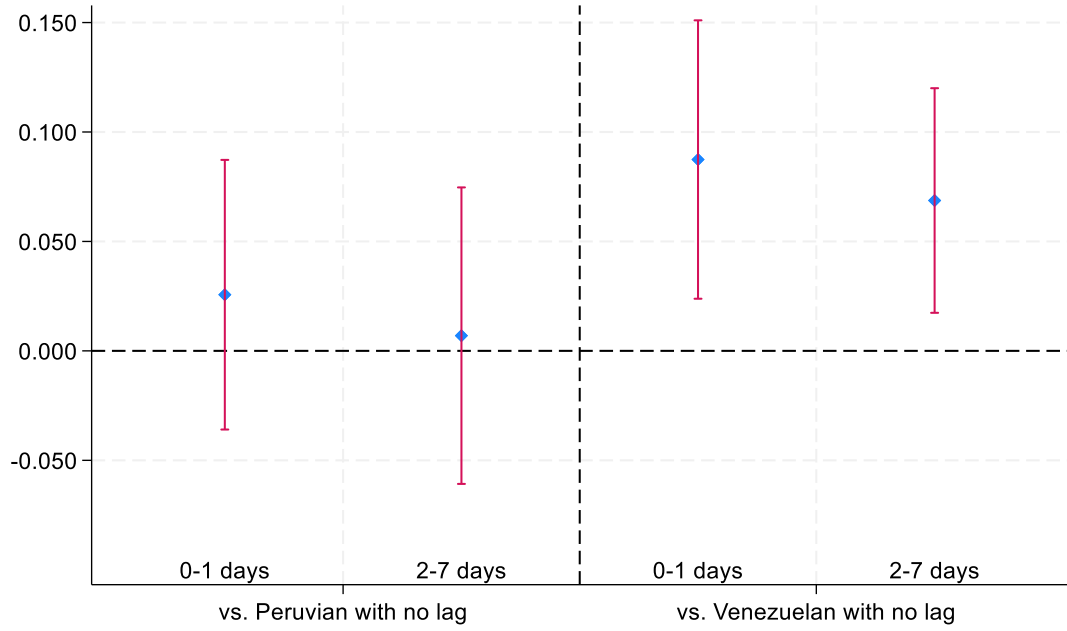
Limitations

Correspondence studies have known limitations. To begin with, the data and results obtained are only from the first stage of the selection process, and all that is measured is the probability of receiving a callback to participate in the next stage of a selection process. That is, there is no guarantee that a callback for the next stage will ultimately translate into a job offer, and there is no information on the quality of the offer or the work conditions. Our study provides no information as to whether an applicant will experience any type of discrimination during the following stages of the process or once being hired.

On the other hand, the experiment was limited to the Metropolitan Lima area between July and September 2021. Therefore, the results are conditioned to this specific labor market and period. Moreover, it cannot be said that the results of this study represent the entire labor market in Lima, since only applications were sent for job postings related to administrative assistant vacancies on three digital platforms.

There are some limitations in our specific setting. First, It is important to highlight that the résumés did not contain further information about whether the migrants had their educational credentials officially recognized by the Peruvian government. Second, our data lacks information on employers' expectations regarding the quality of Venezuelan education. Third, there are some differences in the CVs that, although minor, are worth noting. These differences are necessary, as two exactly identical CVs may raise suspicions among recruiters. For instance, the Peruvian applicant had "calculating hours worked and wages" as a prior task, while the Venezuelan had "support in payroll calculations", which in essence are different descriptions of the same tasks.

There is a potentially in intriguing result: the coefficient on the interaction of PTP and prior work experience in the country, while not significant, is not a precisely estimated zero. We believe this is due to a small sample size but recognize that it could also suggest that the PTP erases part of the gains from having prior work experience in the country. Further research is needed to address if this is so, and the reasons behind it.

Finally, as mentioned above, many applicant characteristics have remained constant, such as gender, age, ethnic origin, level of education, and the résumé's visual appeal. Likewise, the number of years of previous experience in Peru remained constant. Therefore, this study is restricted to analyzing the extent to which the employment discrimination faced

by Venezuelans is reduced by having, specifically, three years of work experience in Peru.

Even with these limitations, our main story holds: there is a statistically significant and sizeable gap in callback rates between Peruvian and Venezuelan applicants, which is erased by having previous work experience in Peru and not by holding the temporary residence permit.

CONCLUSIONS

We implemented a correspondence study to look for evidence of employment discrimination against Venezuelan immigrants in Lima's labor market, and whether holding a temporary residence permit (PTP) or having previous work experience in Peru affects the level of discrimination.

Most of the results are consistent with findings from studies conducted in other countries. We found that Venezuelan immigrants do experience employment discrimination in Metropolitan Lima. In our most flexible specification (Column 4 – Table 3) the Venezuelan applicant with no job experience or residence permit had a 6 percentage point lower probability of receiving a callback than the Peruvian applicant. In this specification, the Peruvian applicant has a 9% callback probability. Thus, a Venezuelan applicant with no prior work experience in Peru or a temporary residence needs to make, on average, more than three times (39) as many applications as a Peruvian (12) before receiving a callback.

However, previous work experience in Peru significantly reduces employment discrimination. This treatment increases a Venezuelan's callback probability by about 6 percentage points, which offsets the gap in callback rates. This effect is sustained whether the application is sent immediately or between 2 to7 days of the vacancy being posted. On the other hand, there was no evidence that holding a temporary residence helps to reduce the difference in callback rates. This finding goes against Baert and Verhofstadt (2015), Pager (2003), and Rovira (2019), all of which found that such a sign of legality increases the probability of being called back. Instead, our results are in keeping with Oreopoulos (2011), who found that previous work experience in Canada was an important means of limiting employment discrimination against migrants.

Finally, it should be noted that in this study a large number of variables have been homogenized, including gender, work experience, level of education, and the job applied for, among others. Although we found evidence of discrimination against Venezuelan immigrants, it would be interesting to observe how such discrimination varies when these characteristics are altered. Finally, we consider it important to include a greater number of regions in Peru, to evaluate whether the evidence of employment discrimination against Venezuelans remains in other parts of the country.

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APPENDICES

Appendix 1. Résumé of the Peruvian applicant

Martín Pablo Flores Salazar
Celular:
Correo electrónico: martin.pabflores@outlook.es
25 años

RESUMEN

Licenciado en Administración de la Universidad San Martín de Porres. Experiencia de 3 años como Asistente Administrativo. Nivel avanzado de inglés y nivel avanzado de Ms Office. Proactivo, responsable y con facilidad para trabajar en equipo.

EXPERIENCIA PROFESIONAL

CPM GROUP   Septiembre 2019 – Actualidad
Asistente Administrativo
- Elaborar los reportes de productividad, lead time y puntualidad
- Calcular horas y salarios de los empleados
- Archivo y registro de documentos
- Coordinar la generación de pedidos de compra
- Apoyar en la elaboración de presupuestos a clientes externos e internos

CEMENTOS PACASMAYO   Mayo 2018 – Septiembre 2019
Asistente Administrativo
- Atención de llamadas externas, internas, nacionales e internacionales
- Coordinación y atención de requerimientos internos en la Sede Lima
- Recepción de documentos nacionales e internacionales
- Renovación de suscripciones para los usuarios de la empresa
- Creación y seguimiento de pedidos logísticos

EDUCACIÓN

Universidad San Martín de Porres
Egresado de Administración   2013 – 2017

IDIOMAS
Inglés: Nivel Avanzado
Centro Cultural Británico

OFIMÁTICA

Ms Office Profesional (Excel, Word, Power Point): Nivel Avanzado

REFERENCIAS PERSONALES

A disponibilidad

Appendix 2. Résumé of the Venezuelan applicant with work experience in Peru and a PTP

Andrés Alejandro Gonzales Soto

Celular:
Correo electrónico: andresa.gonzsoto@outlook.com
Edad: 25 años
Nacionalidad: Venezolana
Documento: Permiso temporal de permanencia vigente.

RESUMEN

Egresado de Administración con 3 años de experiencia como Asistente Administrativo. Soy proactivo, responsable y con orientación al logro. Idioma inglés a nivel avanzado y dominio de Ms Office a nivel avanzado. Cuento con el permiso temporal de permanencia vigente.

EXPERIENCIA PROFESIONAL

CALIDRA PERÚ S.A.C.   Octubre 2019 – Actualidad   (Lima, Perú)
Asistente Administrativo
- Analizar efectividad de ventas
- Manejo de reportes de venta y seguimiento de indicadores
- Mantenimiento de registros financieros actuales y anteriores
- Redacción de informes para gerencia

PRIMAX S.A.   Abril 2018 – Octubre 2019   (Lima, Perú)
Asistente Administrativo
- Gestionar órdenes de compras y órdenes de pagos
- Apoyo en la elaboración de planillas
- Control de asistencia de personal
- Realización de cuadre de ventas

EDUCACIÓN

Universidad Católica Andrés Bello
Egresado de Administración   2013 – 2017

IDIOMAS

Inglés: Nivel Avanzado
Centro de Idiomas de la Universidad Católica Andrés Bello

OFIMÁTICA

Ms Office Profesional (Excel, Word, Power Point): Nivel Avanzado

REFERENCIAS PERSONALES

A disponibilidad

Source: Compiled by authors

Appendix 3. Number of jobs posted by job search platforms in April 2021

	Administrative Assistant													
Place	Metropolitan Lima / Callao							Province						
Plataform	M	T	W	Th	Fr	S	Sun	M	T	W	Th	Fr	S	Sun
Bumeran	11	4	3	4	7	1	1	3	1	2	1	0	1	1
Computrabajo	16	18	19	16	8	6	8	5	4	1	4	2	0	1
Indeed	4	8	12	6	8	3	2	2	2	1	1	0	0	0
Buscojobs	0	0	1	1	2	0	0	0	0	0	0	0	0	0
Laborum	1	2	0	0	1	0	0	1	0	2	0	0	0	0

Source: Compiled by authors

Appendix 4. Résumé submission cycle: example

Day	Job posting	Platform	Peruvian	Venezuela	Submitted first
1	Firm 1	Bumeran	G1	G2	Venezuelan
1	Firm 2	Computrabaj	G1	G3	Venezuelan
1	Firm 3	Bumeran	G1	G4	Peruvian
1	Firm 4	Indeed	G1	G5	Venezuelan
1	Firm 5	Computrabaj	G1	G2	Peruvian
1	Firm 6	Computrabaj	G1	G3	Peruvian
1	Firm 7	Indeed	G1	G4	Venezuelan
2	Firm 8	Bumeran	G1	G5	Peruvian
2	Firm 9	Bumeran	G1	G2	Venezuelan
2	Firm 10	Bumeran	G1	G3	Venezuelan
2	Firm 11	Indeed	G1	G4	Peruvian
2	Firm 12	Indeed	G1	G5	Venezuelan
2	Firm 13	Computrabaj	G1	G2	Peruvian
2	Firm 14	Indeed	G1	G3	Peruvian
3	Firm 15	Computrabaj	G1	G4	Venezuelan
3	Firm 16	Bumeran	G1	G5	Peruvian
3	Firm 17	Computrabaj	G1	G2	Venezuelan
3	Firm 18	Bumeran	G1	G3	Venezuelan
3	Firm 19	Bumeran	G1	G4	Peruvian
3	Firm 20	Indeed	G1	G5	Venezuelan

Source: Compiled by authors

Appendix 5. Overview of application characteristics

Characteristics	Subgroup	Number	Percentage
Applicants	Peruvians (G1)	794	50.00%
	Venezuelans	794	50.00%
Venezuelan applicants	No PTP or experience in Peru (G2)	196	24.69%
	Experience in Peru only (G3)	197	24.81%
	Only PTP (G4)	196	24.69%
	PTP and experience in Peru (G5)	205	25.82%
Résumé submitted first	Peruvian	396	49.87%
	Venezuelan	398	50.13%
Platforms	Bumeran	207	26.07%
	Computrabajo	364	45.84%
	Indeed	223	28.09%
Forms of work	In-person	384	48.36%
	Remote	29	3.65%
	Not specified	381	47.98%
Others	Post: Administrative assistant	794	100.00%
	Department: Lima	794	100.00%
	Formal enterprises	794	100.00%

Source: Compiled by authors

Appendix 6. Description of variables and their coefficients

Variables	Description	Result/Coefficient	
Dependent variable			
Callback	1, if the applicant received a callback 0, otherwise	Likelihood of callback	
Explanatory variables			
Venezuelan	1, if the applicant is Venezuelan 0, otherwise	The effect of being Venezuelan on the callback probability	
PTP	1, if the individual is Venezuelan and has a PTP 0, otherwise	The effect of having a PTP on callback probability	
Work experience in Peru	1, if the individual is Venezuelan and has previous work experience in Peru 0, otherwise	The effect of having previous work experience in Peru on callback probability	
PTP * Experience	1, if the individual is Venezuelan, has a PTP, and has previous work experience in Peru 0, otherwise	The effect of having both a PTP and previous work experience in Peru on callback probability	
Control variables			
Difference in days	Number of days between job application date and job posting date (application lag)	The effect of the number of days between publication and application on callback probability	
Indeed	1, if the application was made through *Indeed* 0, otherwise	The effect of applying through the *Indeed* platform on callback probability	
Computrabajo	1, if the application was made through *Computrabajo* 0, otherwise	The effect of applying through the *Computrabajo* platform on callback probability	
Week i	Week number in which the application was made (i=[2,12])	The effect of applying in week i on callback probability	

Source: Compiled by authors