Canadian Labour Market and Skills Researcher Network

Working Paper No. 95

Why do some employers prefer to interview Matthew but not Samir? New evidence from Toronto, Montreal and Vancouver

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February 2012

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Abstract

In earlier work (Oreopoulos, 2009), thousands of resumes were sent in response to online job postings across Toronto to investigate why Canadian immigrants struggle in the labor market. The findings suggested significant discrimination by name ethnicity and city of experience. This follow-up study focuses more on better understanding exactly why this type of discrimination occurs -- that is, whether this discrimination can be attributed to underlying concerns about worker productivity or simply prejudice, and whether the behaviour is likely conscious or not. We examine callback rates from sending resumes to online job postings across multiple occupations in Toronto, Montreal, and Vancouver. Substantial differences in callback rates arise again from simply changing an applicant's name. Combining all three cities, resumes with English-sounding names are 35 percent more likely to receive callbacks than resumes with Indian or Chinese names, remarkably consistent with earlier findings from Oreopoulos (2009) for Toronto in better economic circumstances.

If name-based discrimination arises from language and social skill concerns, we should expect to observe less discrimination when 1) including on the resume other attributes related to these skills, such as language proficiency and active extracurricular activities; 2) looking at occupations that depend less on these skills, like computer programming and data entry and 3); listing a name more likely of an applicant born in Canada, like a Western European name compared to a Indian or Chinese name, In all three cases, we do not find these patterns.

We then asked recruiters to explain why they believed name discrimination occurs in the labour market. Overwhelmingly, they responded that employers often treat a name as a signal that an applicant may lack critical language or social skills for the job, which contradicts our conclusions from our quantitative analysis. Taken together, the contrasting findings are consistent with a model of 'subconscious' statistical discrimination, where employers justify name and immigrant discrimination based on language skill concerns, but incorrectly overemphasize these concerns without taking into account offsetting characteristics listed on the resume. Pressure to avoid bad hires exacerbates these effects, as does the need to review resumes quickly. Masking names when deciding who to interview, while considering better ways discern foreign language ability may help improve immigrants' chances for labour market success.

Executive Summary

In earlier work sponsored by Metropolis British Columbia (Oreopoulos, 2009), thousands of resumes were sent in response to online job postings across Toronto to investigate why Canadian immigrants struggle in the labor market. The findings suggested significant discrimination by name ethnicity and city of experience. This follow-up study focuses more on better understanding exactly why this type of discrimination occurs -- that is, whether this discrimination can be attributed to underlying concerns about worker productivity or simply prejudice, and whether the behaviour is likely conscious or not. We examine callback rates from resumes sent to online job postings across multiple occupations in Toronto, Montreal, and Vancouver, and we interview recruiters to explain why they believe name discrimination occurs.

The study found that applicants with English-sounding names are 35 percent more likely to receive callbacks than resumes with Indian or Chinese names. Based on these results, which are similar across Toronto, Montreal, and Vancouver, and on discussions with recruiters, the researchers believe that 'subconscious' or 'implicit' discrimination could be occurring. An applicant's name or country of origin may trigger the perception of lack of language or social skills even if employers and recruiters consciously wish to avoid discrimination. Recruiters' first impression of an applicant's name may make it difficult to realize that other characteristics on the resume offset their initial concerns.

Pressure to avoid bad hires exacerbates these effects – recruiters are more likely to select an applicant who they can easily relate to rather than an applicant who might have excellent qualifications but whose name could imply that they might falter in terms of language abilities. The need to review resumes quickly can also intensify the bias against applicants with foreign-sounding names, as recruiters may not have time to test the language abilities of a qualified candidate with a foreign-sounding name when they have the option to select a candidate with an English-sounding name instead.

For this study, the researchers sent thousands of randomly created resumes by email to job postings in Toronto, Montreal, and Vancouver between February and September 2010. The resumes were designed to plausibly represent typical immigrants that arrived recently under the Canadian Point System from China and India (top source countries for immigrants in all three cities), as well as non-immigrants with and without international sounding names. The researchers collected and analyzed data on callback rates for each type of resume. The researchers also employed a qualitative analysis involving interviews and email questionnaires with prospective employers.

The researchers suggest that masking names when deciding who to interview, training recruiters to be more aware of possible bias and considering better ways

discern language ability may help improve immigrants' chances for labour market success, and that employers would gain from doing this too.

Other points:

• The callback rate for resumes with English-sounding names, Canadian experience, and Canadian education was 13.4 percent. Changing only the name to one with Indian origin lowers the callback rate by 4.2 percentage points, to 9.2 percent, and changing it to one with Chinese origin lowers the callback rate to 10.8 percent.

• Switching applicants' names from English to Greek origins generates lower callback rates (by 2.7 percentage points). The callback rate gap between English and Greek names is about the same as it is between English and Chinese names.

Context
Recent immigrants to Canada struggle in the labour market. Their unemployment rates compared to similarly-aged non-immigrants are almost twice as high and median wages of recent immigrant workers are also about 49 percent lower compared to native-born workers (Canadian Census 2006). Previous research finds little evidence for expecting that this wage gap will significantly narrow with host-country experience. While the immigrant-native wage gap used to disappear (and sometimes even reverse) after 10 to 15 years for immigrants arriving prior to the 1970s, wages of immigrants arriving in the 1990s are still about 25 percent lower than wages of non-immigrants even after 2005 (Frenette and Morissette 2005).

Recent immigrants to other countries such as the United States also experience similar labour market disadvantages (e.g. Lubotsky 2007), but what is particularly noteworthy in the Canadian case is the fact that the immigration policy focuses on attracting immigrants with superior levels of education, experience, and industry demand to offset an anticipated skilled labour force shortage and encourage economic growth. More than half of today's immigrants enter Canada under a point system, which rates applicants based on their highest degree, language ability, age, whether they have work experience at occupations deemed 'in demand', whether they already have a job offer, have worked or studied in Canada previously, and have cash at hand. Virtually every immigrant who enters Canada under the point system now has at least an undergraduate degree. The overall percentage of recent immigrants with an undergraduate degree is about 60 percent, compared to 20 percent for Canadian-born of similar age (Statistics Canada, 2008). Indeed, conditioning on highest degree completed, causes the relative wage gap between recent immigrants and non-immigrants to increase, from 49 percent lower wages for immigrants to 193 percent (Table 1)!

In part because of Canada's high per-capita immigration rate (Dolan and Young, 2004), policy makers are concerned about the lack of immigrant assimilation. It suggests that recent immigrants are not integrating into the high-skilled labour market, despite effort to attract immigrants who will. This raises questions about the role immigration plays in providing Canada with a source of highly skilled individuals to boost economic growth. It also has important implications for the use of government transfer programs, such as social assistance and child tax benefits, as well as for income tax revenues. A number of other countries such as the United Kingdom, Spain, and Germany are also considering or in the process of bringing in a point system as part of a plan to shift their immigration policies more towards a skill-based focus. The international competition to attract skilled immigrants is evidently increasing and more attention is being devoted to a point-system approach to evaluate the desirable characteristics of prospective immigrants. While the United States has traditionally emphasized more the role of family reunification in its immigration policy, some debate has initiated over possible adoption of a point system. So it is also worthwhile to investigate, from the perspective of other countries, why Canada's point system does not appear to be having its desired effect.

The usual suspects to explain the gap include the possibility that employers do not value international education as much as they value Canadian education. International

experience may be treated as inferior to Canadian experience, since less is known about the employer and tasks involved. Other possibilities are that cultural and language differences have grown as the proportion of applications from Europe has decreased and the proportion from Asia and the Pacific Coast has increased. The point system places no role on an applicant's understanding of social etiquette, and concerns about language proficiency may remain.

Oreopoulos (2009) recently carried out the first resume audit study in Canada to look at why skilled immigrants struggle in the labour market. Thousands of resumes were sent online in response to job postings across multiple occupations in the Greater Toronto Area after randomly varying characteristics on the resume to uncover what affects employer's decisions on whether to contact an applicant. The resumes were constructed to plausibly represent recent immigrants under the point system from the three largest countries of origin (China, India, and Pakistan), as well as non-immigrants with and without ethnic-sounding names. In addition to names, several other characteristics were randomized: where applicants received their undergraduate degree, whether their job experience was gained in Toronto or in a foreign city, whether they listed being fluent in multiple languages (including French), whether they had additional education credentials, and whether they listed active extra curricular activities.

One of the most striking results from this work is the substantial difference in callback rates from simply changing an applicant's name. Applicants with English-sounding names received callbacks 40 percent more often than applicants with Chinese, Indian, or Pakistani names. That gap is not far off from the one found in the United States between traditional white and traditional black names (50 percent) (Bertrand & Mullainathan, 2004). Oreopoulos (2009) also observed that employers seemed to care more about experience than education: After listing 4 to 6 years Canadian experience, being internationally educated (whether at a highly ranked school or not) did not affect callback rates substantially. But changing only the location of the applicant's location of job experience (ABC Inc, Toronto versus ABC Inc, Mumbai, for example) lowers the callback rate further from about 10 percent to 5 percent. Overall, the results suggest considerable employer discrimination against applicants with ethnic names and experience with foreign firms.

This earlier audit leaves many unanswered questions, yet the results are so striking that it is important to explore what drives them, and whether they can be replicated for different cities and in other situations. The second study, described in this paper, focuses on these additional questions:
1) Is name discrimination as severe for Vancouver and Montreal as it is for Toronto?
2) Are the returns on international experience lower when considering applicants with international experience and poorer quality experience, or are the returns lower simply from listing experience from a different country?
3) Would providing local accreditation for an applicant's international education lower the callback rate gap, as recent laboratory experimental work suggests (Deitz et al, 2008)?
4) Would name discrimination still arise when using non-English European names?

5) Is the discrimination observed likely intentional or unintentional?

The current study extends previous work to answer these questions, and focuses overall on what factors most likely explain labour market differences between immigrants and natives. This extended research aims to narrow policy options for addressing these gaps. The goal is to estimate how important overall discrimination is in explaining labour market differences, and why employers discriminate in the first place.

Our analysis includes two approaches for evaluating reasons why immigrants and visible minorities struggle in the labour market: a field experiment and qualitative interviews with employers and other individuals about the results. As in Oreopoulos (2009), the field experiment involved sending resumes in response to job postings in Toronto to determine which randomly listed characteristics most affect the likelihood of an interview callback. We now include Montreal and Vancouver to the sample to explore whether differences arise or whether the Toronto results are representative. The jobs targeted are generally restricted to those requiring at least a Bachelor's degree and approximately 4-6 years work experience (since virtually all immigrants currently allowed into Canada under the point system must have this). We randomize name, as before, but explore differences in callback rates between English and Greek names in addition to English and Indian or Chinese names.[1] We do this to examine whether the gap in callback rates between English and Chinese or Indian names may be due to discrimination against visible minorities, or due to preferences towards applicants with common English names.

We also explore the role of accreditation by assigning some resumes with international education certificates by the "Canada International Skills Certification Board". Deitz et Esses (2008) find that such certification reduces discrimination found by undergraduate students in judging whether to follow-up with applicants from South Africa with white or African names. One concern with this earlier work is that students were specifically asked to focus on the quality of the resume, potentially priming subjects to focus on productivity stereotypes. Our field setting explores real-world behavior by recruiters making actual interview decisions with more consequence than students in a lab setting.

We look at the offsetting effects of several additional characteristics not previously examined. These include noting permanent resident status, in order to address employer concerns that resumes with only international experience may not have legal working status. We add Canadian references to some resumes to explore whether reasons for preferring applicants with Canadian experience include the hassle of contacting previous employers that may be non-English-speaking and outside the country. And we further examine the extent to which experience from large and well-recognized firms improves callback rates relatively more for international applicants than native applicants.

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[1]Pakistan is a minor source country for Vancouver and Montreal immigrants, and there are fewer large international companies to choose from for Pakistan in developing experience profiles (we need to select among these large firms in better determining the impact of experience on the resumes). For these reasons, and because the earlier study indicated no substantial differences in the callback rate between Pakistan, China, and India, Pakistan was not included in this project.

Our study also involves interviews with recruiters and human resource professionals to discuss why immigrant discrimination occurs. We used the findings from Oreopoulos (2009) as an introduction to ask recruiters why they think name affects the callback rate, all else equal. Face-to-face interviews were conducted and data from email questionnaires was collected.

Theories of Job-Applicant Discrimination

The main outcome from our quantitative analysis is whether or not a resume application generates a callback, defined here as communication from the application's corresponding prospective employer (or agent) indicating interest in meeting or discussing more an applicant's credentials). The resume audit study approach does not provide a means to test differences in eventual earnings or other actual job characteristics, but a callback is often the first step required to eventually receive a job offer. Some researchers see the callback as the most important step on the way towards obtaining a job (e.g. see Bertrand and Mullainathan, 2004). The approach is also appealing because the investigator knows exactly what information prospective employers have when making the callback decision.

Results from this study are presented in terms of estimated callback rates, or estimated differences in callback rates between different types of resumes. Callback rates are the fraction of callbacks received after applying to a fixed group of job postings using the same resume. An obvious reason why callback rates might differ across resumes is that they signal varying sets of skill. Classical economic theory suggests that, conditional on having to pay the same to any individual hired for a position, employers will prefer to hire the applicant expected to be the most productive. Some components of the resume may signal desirable skills more than others. Our study helps quantify the magnitude to which characteristics, such as location of experience, language ability, and schooling attainment, influence reactions of prospective employers.

Labour market theories of discrimination can be categorized between those driven by productivity (or profit) concerns and those that do not. Discrimination driven by productivity concerns, called statistical discrimination, arises when employers use observable characteristics as signals for inferring unknown information (Phelps 1972). For example, with limited time and budget, employers may make marginal decisions on whom to interview by using resume name or country of education/experience to predict an applicant's language skills.[2]

Our audit study helps uncover or rule out statistical discrimination. Since productivity expectations are determined <u>conditional</u> on other information on the resume, listing resume characteristics that correlate with unlisted skills reduces uncertainty and the need

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[2] Another model of statistical discrimination focuses on productivity variance. Even if abilities between two groups are, on average, the same, risk averse employers will prefer the group with lower ability variance, all else equal (Aigner and Cain 1977). Our qualitative research found no evidence of this behaviour. Many recruiters interviewed mentioned lower expectations of language ability for immigrants but no one expressed a concern about more uncertainty for whether an applicant's language skill was exceptionally good or bad.

to infer. Internationally-named applicants with only Canadian experience and education, for example, are most likely Canadian born and should generate fewer language skill concerns than applicants with international experience or education. If employers are statistically discriminating, the callback gap between internationally educated or internationally named resumes and native resumes should fall from adding information related to unobservable skill. In this study's context, we explore whether the callback rate falls from listing multiple language fluency (including French), active extracurricular activities, job experience at large multinational firms, education from highly ranked schools, or graduate education from Canada. We also explore how the callback rate changes when replacing a Canadian experienced and educated resume name with one of Greek origin, to increase the likelihood that the applicant is Canadian born and to minimize language and communication concerns.[3]

Another form of discrimination may arise when employers prefer to hire individuals of similar ethnic or language backgrounds, even when the employer has no reason to expect productivity to differ. This taste-based model of discrimination leads to lower profits because, at the margin, some workers are hired who are less productive than others employers could have been hired, or are paid more for the same productivity output that could have been produced by paying someone else to do the job. Economists have tried to explain how this type of discrimination could be sustained by turning to market-imperfections, such as monopoly in the product market or monopsony in the labour market.

Discrimination causes immigrants to miss out on hiring opportunities in situations where they are most qualified for a job. Employers may miss out too, by hiring less qualified workers. The costs to employers from not interviewing an immigrant, however, are likely not as large as the costs to immigrants from not being selected. Screeners typically must sort through hundreds of resumes to identify a handful of candidates to interview. The process involves considerable ambiguity: in the search for a "good" job applicant, there is no such thing as a simple formula to be followed to determine which candidates are above the bar. The chance that a marginal candidate not picked would have been hired and would have significantly outperformed the next best candidate is probably small.

Many social scientists have begun modeling discrimination through unconscious mistakes generated by subtle biases or stereotypes. A number of researchers suggest that the conditions by which employers sort through resumes make it more likely that name discrimination is unintentional (Stanley, Phelps, and Banaji 2008). Social psychologists differentiate between explicit attitudes, which describe one's expressed views, and implicit attitudes, which are unconscious mental associations between a target (such as immigrants) and a given attribute (such as "poor communication skills"). Implicit

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[3] Greek named resumes are selected as an example of applicant who are likely to be considered second or longer-established Canadians. Greece was a considerable immigration source country for Canada in earlier periods of immigration, but hasn't been for several decades. Between 2000 and 2009, 2,233 people emigrated from Greece to Canada. This is in contrast to the large numbers of people who emigrated from China (343,869) and India (273,640) during the same period.

attitudes may operate subconsciously, and cause people to make decisions in ways that oppose their own conscious and deliberative views (Ranganath, Smith, and Nosek 2006). Chugh (2004) argues that time pressure, stress, and ambiguity in whether to place resumes on the "yes" pile or the "no" pile all make it more likely that employers use automatic implicit attitudes to decide.

Implicit attitudes can be measured. The Implicit Association Test (IAT) (www http://implicit.harvard.edu) relies on test takers' speed of response to represent the strength of their unconscious mental associations. Rooth (2009) matches self-reported racial attitudes and IAT scores of employers to callback outcomes from an audit study he carried out that looks at discrimination between resumes with common Swedish names and Arab-Muslim names. Those with more negative implicit association measures are less likely to callback Arab-Muslims, while self-reported measures of explicit association have little explanatory power. Bertrand, Chugh, and Mullainathan (2005) report similar results from a study involving picking qualified candidates from a set of resumes with White and African-American names. They find a negative correlation between the number of African-American resumes selected by a given subject and that subject's IAT score. The correlation is largest among those subjects that report feeling most rushed during the task.

In the framework of implicit discrimination, 'subconscious' statistical discrimination can arise. Employers may believe they are rejecting an applicant out of language skill concerns when in fact their implicit biases are driving the decision. An applicant's name or country origins may trigger particular stereotypes that cause employers to overweight these concerns and underweight the offsetting factors on the resume. Several modern theories of prejudice align with this model. Crandall and Eshleman (2003), for example, suggest that the path from stereotypes to discriminatory behavior is affected by both justification and suppression factors. Esses, Dietz, and Bhardwaj (2006) describe Crandall and Eshleman's theory in relation to job applications:

> Although individuals who make hiring decisions and who assess the quality of applicants for a position may consciously attempt to avoid bias and discrimination in decision making, their attitudes and beliefs may influence assessments and decisions nonetheless. The assessment of immigrant skills is likely to be influenced by latent prejudice for several reasons. First in many cases rules (i.e. organizational policies) or norms do not exist for the assessment of internationally-earned skills. The resulting ambiguity may lead to weaker suppression effects on the expression of prejudice. In other words the assessment of foreign skills often takes place in a vacuum of explicit rules and norms, which otherwise might have counteracted prejudicial tendencies to discount foreign skills. Second, and related to the previous reason, the foreignness of immigrants and their internationally acquired skills may lead to concerns about a lack of fit with local work environments and demands. The notion of fit is commonly evoked as an antecedent of business performance and it may have its validity if it is well defined (e.g. fit on specific organizational values). In the treatment of immigrants however the

fit argument is often thoughtlessly and generically applied – immigrants are simply culturally different (i.e. the mere categorization as an immigrant becomes grounds for declaring a lack of fit). Even if fit criteria are defined (e.g. friendliness with customers), immigrants may be judged as not having the right fit on the basis of stereotypes about immigrants rather than substantive and explicit assessments of fit criteria. For example attributing values to an individual based on group membership is stereotyping. Thus, lack of fit arguments can become seemingly but not substantively legitimate rationalizations or justifications for the discounting of immigrant skills and the resulting employment discrimination against immigrants.

Erroneous statistical discrimination can also arise from thinking in categories. Fryer and Jackson (2007) and Mullainathan (2002) note that types of experiences that are less frequent in the population are more coarsely categorized and more often lumped together. As a result, decision makers make less accurate predictions when confronted with such objects. This can result in discrimination against minority groups even when there is no malevolent taste for discrimination. Employers less used to seeing internationally-named or internationally educated applicants with adequate language skills are more likely to lump all such applicants, even those whose other listed characteristics offset these concerns into one category. This leads to a more general pattern of rejection for these applicants regardless of what other skills are listed.

Our baseline results hold constant many characteristics that often differ across resumes, which help minimize the possibility of statistical discrimination. Every resume sent has, on average, the same style, address, method of submission, years of listed experience, description of experience, and a Bachelor's degree. We systematically vary the applicant's name, location and quality of experience and education to measure overall discrimination by these characteristics. To examine why differences in callback rates might arise by these factors, we then estimate the effects from adding information that should reduce concerns about language or communication skills and increase an employers' impressions of likely productivity. Since concern over language or other skills not easily conveyed on a resume can never fully be ruled out, our qualitative analysis is designed to complement our audit study findings by asking recruiters why differences in callback rates may arise. We probe interviewees as to why name-based discrimination might exist and relate their explanations back to our quantitative findings.

Study Design

Resume audit

Thousands of randomly created resumes were sent by email in response to job postings across multiple occupations in Toronto, Montreal, and Vancouver between February and September 2010. The resumes were designed to plausibly represent typical immigrants that arrived recently under the Canadian Point System from China and India (top source countries for immigrants in all three cities), as well as non-immigrants with and without international sounding names. They were constructed after consulting actual resumes of recent immigrants and online submissions. The sample of jobs we applied to represent all jobs posted during this period that accepted applications via direct email and generally

required three to seven years of experience and an undergraduate degree. Positions that specifically required at least a graduate degree, North American experience or education, or French as a second language were ignored. With few exceptions, four resumes were sent to each employer over a 2 to 3 day period in random order.

- Type 0 represented an applicant with an English-sounding name, Canadian undergraduate education, and Canadian experience
- Type 1 had instead a Chinese, Indian, or Greek name, but still listed Canadian undergraduate education and Canadian experience
- Type 2 included a Chinese or Indian sounding name, international undergraduate degree, and Canadian experience
- Type 3 included a Chinese or Indian name, international education, and some or only international experience

The English-sounding names on Type 0 resumes were picked randomly from a list of the most popular Anglophone surnames in Canada (Smith, Martin, Brown, Wilson, and Johnson), and matched randomly with one of four possible male names (Greg, John, Matthew, or Michael) or four possible female names (Alison, Carrie, Emily, and Jill) used previously by Bertrand and Mullainathan (2004). We also include resumes with Greek names: Nicole and Lukas Minsopoulos. The other resumes of Type 1 to 3 had names picked randomly among a list of 24 popular male and female names from China and India. In some cases we use names with Chinese last names and English first names picked from these same lists. Table 2 shows the number of resumes sent by name and type. Email addresses were set up for all names using both gmail.com and yahoo.ca accounts.

Work experiences were constructed from actual resumes accessible online. The descriptions were sufficiently altered to create distinct sets that would not be associated with actual people, but we also tried to maintain original overall content and form. Each resume listed the job title, job description, company name, and city location for an applicant's three most recent jobs covering 4 to 6 years, with the first job beginning in the same year as the applicant's undergraduate degree completion. The city listed was always the same (except for Type 3 resumes). Experience sets were constructed for 20 different occupation categories, almost all the same ones used by the online job site workopolis.com. Within each category, we created four different experience sets, whose job titles and corresponding job descriptions were randomly assigned to one of the four resumes sent to a single employer. It is worth emphasizing that this randomization not only made years of experience the same across immigrant and non-immigrant resumes (on average), but it also made the description of this experience the same. For some experience sets, international companies were chosen wherever possible to keep the experience sets identical across immigrant and non-immigrant resumes except for location (for example ABC Inc., Toronto versus ABC Inc., Mumbai). In cases where no obvious international company was available, we picked closely related companies in size and industry.

Since virtually all immigrants who arrived recently under the point system had at least a Bachelor's degree, all resumes generated in this study did so as well. A job posting's occupation category determined the set of degrees to randomly pick. For example, resumes generated for a position as a Financial Analyst had either a Bachelor of Arts in Economics or one in Commerce while those for a Software Developer position had a Bachelor's degree in Computer Science or one in Computer Engineering. Alma mater was picked randomly from a list of about four universities in the same country or city as the applicant's corresponding name and in the same proximity to the applicant's location of experience. About half of the universities were listed in the 2008 QS World University Rankings' top 200. The other universities were less prestigious. Manipulation of this characteristic helps examine whether employers prefer applicants with degrees from Canada even in cases where, all else constant, other applicants have international degrees from more selective or better quality schools.

To assess whether additional Canadian educational credentials may offset lower callback rates from having international experience or international schooling, 20 percent of resumes, except those of Type 3, were randomly assigned Canadian Master's degrees from universities near the job posting's city: Toronto, Montreal, or Vancouver. Master's degrees were occupation specific and completed during the same three-year period as the applicants' most recent (Canadian) experience, so that it looked like the applicant was enrolled part-time while working full-time. Some job postings also indicated that specific certificates or credentials (other than a Bachelor's degree) were required, or at least strongly preferred (two common instances were Certified General Accountant (CGA) and software experience such as Flash).

Language skills and extra-curricular activities were also manipulated to help explore whether language or cultural concerns underlie callback differences. We randomly selected 20 percent of resumes to list fluency in multiple languages. Resumes with English soundings names listed fluency in English and French. The other resumes listed fluency in English, French, and the applicant's mother tongue (Mandarin, Cantonese, or Hindi), depending on the applicant's ethnic origin of name. In addition, 75 percent of resumes listed active extra curricular activities. One of three possible sets was chosen listing characteristics such as volunteer initiative (e.g. Big Brother/Sister, Habitat for Humanity), social interests (e.g. competitive squash player, classical pianist) and proactive work skills (e.g. excellent common sense, judgment, and decision-making abilities). Table 3 shows average frequencies of these and other characteristics on the resumes sent, for each type.

Clearly, resumes had to look different when sending to the same employer, so we also randomized each applicant's cover letter (a short, general message sent as a part of the email text), and the email subject line and the resume file name (resumes were saved as pdf files unless word documents were specifically requested). We randomized each resume's layout, residential address and telephone number. Each applicant listed three previous jobs, with earlier years of experience being over 2, 3, or 4 years for each particular job, and with the most recent job always being listed as starting from 2006 to present. We also randomized each applicant's email address (s.shreya6@gmail.com or

shreya.sharma48@yahoo.ca for example) and resume profile, which was listed near the top of the resume. Profiles mentioned general and specific skills, such as "highly motivated" and "fast learner". Some bullet points were occupational specific ("six years experience in customer service and sales environment", for example). Within each occupation, profiles were selected randomly from 5 sets. Appendix A provides further details about each resume characteristic used in the study.

A program by Lahey and Beasley (2007) was used to randomly select the characteristic codes of each resume. Microsoft Office was then used to transform these choices into text and mail-merge them onto actual resume templates. Some resume sets were dropped to avoid repeating names sent to the same employer. When a job posting was identified for the study (from a newspaper ad or internet site), a research assistant would open a dialog window prompting for the job's corresponding occupation. Phone numbers or email addresses on the post were used to check that someone had not applied to this employer previously. A second window allowed the user to enter the job title, the job posting's source, the company name, contact information, and whether additional certificates needed adding. The program then updated the data collection spreadsheet and created four resumes that could be edited for cosmetic quality (e.g. to ensure they fit cleanly on one or two pages). The output also included instructions for what cover letter, subject line, and file name to use. The resumes were saved as pdf files and emailed from the addresses of the corresponding names to the employer over a 2 to 3 day period in random order. Any applications whose corresponding email bounced, indicating it was never received, were dropped from the sample.

Employers who telephoned an applicant received the same automatically generated message mentioning the number dialled and a request to leave a message. Messages and emails were recorded and redirected to a single email address. Responses were classified as callbacks if the employer requested an applicant to contact them (not just for clarification). Employers who contacted an applicant twice were contacted themselves during off-hours by email or phone-message and told that the applicant had accepted another position and was no longer looking for employment. In general, resumes were only sent to employers that accept resumes in pdf or word format via direct email. Postings were ignored if they required a Master's degree, North American experience, more than 6 years experience.

With random assignment, simple comparisons of callback rates can identify relative effects of the different resume characteristics. More generally, we estimate regressions using versions of the following linear probability model:

$$(1) \quad y_{ij} = \delta_0 + \delta_1 \operatorname{Re}sume\_Type_{ij} + \delta_2 X_{ij} + \delta_3 [\operatorname{Re}sume\_Type_{ij} * X_{ij}] + e_{ij}$$

Where y_{ij} is an indicator variable for whether resume i sent to job posing j generated a call back, $\operatorname{Re}sume\_Type_{ij}$ is an indicator variable for resume type, with the indicator for Type 0 being omitted. X_{ij} is a vector of other resume characteristics. Equation (1) allows

for interactions between resume type and other characteristics. This allows us to estimate, for example, whether callback differences between resumes with English and Chinese-sounding names become smaller when additional language skills or educational credentials are listed. Standard errors are corrected for possible heteroskedasticity and clustering by job. Subgroup analyses are carried out to examine differences by city, experience quality, and accreditation status.

Qualitative complementary study

Based on Oreopolous' (2009) study results, and with early findings from the current project, we were left with the question of why resumes with English-sounding names are the most likely to be selected for an interview. We determined that qualitative fieldwork, especially discussions with experienced human resources professionals, would be necessary in order to understand the types of motivations that exist for choosing to interview people with English-sounding names. An obvious difficulty with this approach is that interviewees may be reluctant to discuss their views about resume discrimination truthfully (Neves 2010). For this reason, we asked participants why they thought other recruiters might discriminate. We also constructed questions to draw out opinions about our quantitative results.

Nine interviews were conducted with people who make hiring decisions as recruiters or managers at mid-sized to large organizations. Interviews focused on responses to these three questions:

1) What professional motivations exist for choosing people with English-sounding names for interviews?
2) Would it work to mask names on resumes?
3) What can government agencies do to ensure equitable hiring?

Participants were located by contacting organizations that had posted job advertisements during the same period as the resume audit study's quantitative component, and through our professional networks. The initial requests for interviews were made by email and followed up with telephone calls. It should be noted that we experienced low response rates to our interview participant recruitment, and in cases we were met with suspicion and concern.

The first interview participant emphasized that choosing international names meant there was a risk that the applicant wouldn't speak English well, an attribute that was essential for positions in the participant's field. This initial response was to be one of the most prevalent of all of the qualitative responses. The second interview participant stated that she was more likely to invite a person with a non-English name for an interview because she thought that people who had immigrated or who were from a less dominant ethnic group in Canada deserved to attain a good job, as well. This was a less common theme, but one that also assumes that people with names that are not English-sounding were not born in Canada. Some participants described scenarios where they had seen ethnicity-based hiring decisions made by other HR professionals, and that they were disappointed but not surprised by our study's findings.

Because of the challenge of accessing interview participants, we decided to employ a second approach to the qualitative inquiry, in the form of an email questionnaire. (See Appendix B to read the questionnaire.) Via email, we asked 300 HR professionals to write one or two paragraphs to explain why resumes with English names are frequently selected over otherwise identical resumes. Initially, we received 18 responses of varying lengths. In an effort to increase the number of respondents, gift certificates for a bookstore were tested as a reward, but the reward system was discarded when it was found to be of no significant benefit.

Working iteratively, the questionnaire was refined to ask about the possibility of masking names on resumes, and if participants thought the behavior of choosing resumes with English-sounding names was intentional. Recipients of the email were assured that it was not their own behaviors, but their understanding of the recruitment industry's generalized activities that were of interest. We received six responses to the second email; in all 24 participants responded to the questionnaire. Some of these responses are two-fold, as people responded to more specific questions we posed in reaction to their initial responses. Likely due to the specificity of the questions, categories of responses from both the email questions and the interviews were quickly saturated.

Study Results

Resume audit results overall
Combining all three cities, resumes with English-sounding names are 35 percent more likely to receive callbacks than resumes with Indian or Chinese names (Table 4, Column 6). This gap is remarkably consistent with earlier findings from Oreopoulos (2009) for Toronto in better economic circumstances that also led to a slightly higher callback rate overall. The callback rate for Type 0 resumes, with English-sounding names, Canadian experience, and Canadian education is 13.4 percent (Column 1). Changing only the name to one with Indian origin lowers the callback rate by 4.2 percentage points, to 9.2 percent (s.e. = 1.2 percentage points), and changing it to one with Chinese origin lowers it to 10.8 percent respectively (significant at the 10 percent level).

Interestingly, switching applicants' names from English to Greek origins generates lower callback rates (by 2.7 percentage points). The callback rate gap between English and Greek names is about the same as it is between English and Chinese names and significant at the 10 percent level. These results raise the question of whether recruiters have similar language or other skill concerns about applicants with Greek names as they might with applicants with Chinese names. On the other hand, if the Greek applicant is viewed as more likely native born with little difference in English proficiency compared to the English-named applicant, one interpretation of the findings is that recruiters appear to place a premium towards wanting to interview applicants with English names rather than a discount towards Chinese or Indian names. As described in the next section, the interview data supports this claim: recruiters describe quick selections of resumes with English-sounding names, because communication challenges are less likely.

Because it is common for second generation Canadians as well as immigrants to use English first names with Chinese last names, it is relevant to test the success of this type of name (e.g. Eric and Michelle Wang) on resumes. The callback rate among Type 1 resumes with English first names and Chinese last names is 12.2 percent – not significantly different from the 13.4 percent callback rate among those with first and last English names (e.g. John and Carrie Martin), but also not significantly different from the 10.6 percent callback rate among those with first and last Chinese names (e.g. Lei and Na Li). Oreopoulos (2009), with a larger sample size and more names, finds a marginally significant difference in callback rates for English-Chinese-named resumes compared to all English-named resumes (13.4 percent versus 15.8 percent). The rate is still higher than that for applicants with Chinese first and last names (10.8 percent). Having one English component in a name increases the likelihood of callbacks.

Being educated at a Canadian university does not seem to make a substantial difference in online job applications, as there is only a small difference in callback rates between Type 1 and Type 2 resumes (1.4 percentage points), which systematically differ only by whether they list a Bachelor's degree from a Canadian (Type 1) or foreign (Type 2) university. Both sets of resumes include Canadian names and internationally-gained experience. Thus, conditional on listing 4 to 6 years of Canadian experience, employers do not seem to care whether an applicant's education is from a foreign institution or not, when deciding whether to contact them for an interview. This result is also consistent with Oreopoulos (2009).

Switching from job experience acquired in Canada to job experience acquired from India does seem to matter a lot. Listing any experience in India compared to all Canadian experience leads to a callback rate drop from 9.0 percent to callback rate for resumes that list almost all job experience from India falls to 5.7 percent. It does not appear to matter whether the resume includes some previous Indian experience or all. This contrasts to the findings from Oreopoulos (2009), which showed a further drop when listing only international experience, compared to 9.0 percent for resumes with all Canadian experience. Our results from listing Chinese experience for Chinese-named and Chinese educated applicants show no drop in callback rates. Interestingly, however, doing so among applicants with Chinese last names and English first names causes the callback rate to fall substantially to 3.9 and 2.2 percent for resumes with some or all Chinese experience respectively. These rates are significantly lower than the equivalent resumes with all Chinese names and the lowest we found among our resume types and name categorizations.

Comparing between cities

Our study's data collection period (February to September 2010) was one characterized by conditions of high unemployment and poor economic conditions compared to the previous study's data collection conditions. Thus, it is not surprising that the current study finds a smaller overall Toronto callback rate for Type 0 resumes (with English names, Canadian experience and education) of 9.4 percent compared to 15.8 percent. The relative name effects, however, are very similar. In Oreopoulos (2009), English-named

resumes with Canadian experience and education were 40 percent more likely to receive a callback rate than resumes with Indian, Chinese, or Pakistani names. Our study finds a 47 percent callback premium for English names relative to Indian and Chinese names. The estimates are less precise because of the smaller sample. Nevertheless, the relative differences in callback rates across all resume types are very similar. Callback rates are substantially lower for internationally-named resumes which include any or all international experience. Tables 5, 6, and 7 show the same results as shown in Table 4, but separately for Toronto, Montreal, and Vancouver respectively. The sample in Table 5 is comparable with the baseline results in Table 4 of Oreopoulos (2009), since it excludes internationally-named resumes with accreditation, Canadian references, and permanent resident status.

The overall callback rates from the Montreal sample (Table 6) are higher than those for Toronto. This finding is not driven by differences in occupation-specific callback rates since the distribution of resumes sent by occupation category is similar across all cities and conditioning on occupation category does not change the estimates substantially. The Montreal resumes are all in English and the sample includes only English job postings. The callback rate for English-named resumes with Montreal experience and education is 19.8 percent. While the callback rates are generally higher for all resume types, the relative response rates for internationally-named and internationally educated resumes compared to English named Type 0 resumes are more similar than they are for Toronto. The callback rates for Type 0 resumes compared to Type 1 resumes with Chinese and Indian names are 39 percent more in Montreal and 47 percent more in Toronto. Type 0 resumes are roughly 2.0 to 2.5 times more likely to receive a callback rate compared with Type 3 resumes with international experience for both cities.

Relative callback differences across resume types are generally lower in Vancouver compared to Toronto and Montreal (Table 7). The gap between resumes with English versus Chinese and Indian names is only 20 percent and not significantly different at the 5 percent level. However, the relative gap between Type 0 and Type 2 resumes (internationally educated, Canadian experienced) is similar with the other cities. The average callback rate falls in Vancouver in a relatively similar way to other cities when switching between English and Indian experience (column 2), but actually rises for resumes with Chinese experience (column 3). These estimates are imprecise, but suggest generally lower discrimination for Chinese-named or experienced resumes in Vancouver.

Making sense of English first names and Chinese last names

As was noted in the overview of findings, callback rates differ between Canadian experienced and educated applicants (Type 1) with Chinese first and last names and those with English first names and Chinese last names (see Table 8). The callback rate for all Chinese-named applicants in the full sample is 10.8 percent (Column 1, panel 1) and the rate for those with English first names is 1.4 percentage points higher but not significantly different at the 5 percent level. None of the differences are significant when separating results out for males (column 2) and females (column 3) and for Toronto (panel 2), Montreal (panel 3), and Vancouver (panel 4). Resumes sent in Vancouver with

the name "Michele Wang" are 7.3 percentage points more likely to receive a callback than resumes with names such as Min Liu (with mean callback rate 11.1), but this estimate is very imprecise, with a standard error of 6.2 percentage points. The combined sample results are more accurate and suggest a small increase in the callback rate from a Chinese applicant listing an English first name, but one that does not remove the overall lower callback rate compared to applicants with English first and last names. These results are consistent with the findings in Oreopoulos (2009).

Can including other resume data reduce discrimination?

If remaining concerns about language or other traits not directly observed explain the callback rate gaps discussed above, adding additional information related to these concerns should help reduce the gap. Table 9 shows whether this pattern occurs when conditioning on whether the applicant: is female; graduated from a top 200 work ranking university (according to the 2010 QS University World Rankings); listed active social extracurricular activities (e.g. volunteer work, competitive sports, travel); fluency in French, English, and a mother tongue (applicable for Indian and Chinese-named resumes); graduated with a occupation-related Canadian Master's degree; with job experience from large, mostly multi-national firms; listed a reference with a Canadian phone number; listed her education accredited with the Canada International Skill Certification Board (resume types 2, 3, and 4 only); or listed legal permanent residency status (resume types 2, 3, and 4 only). We restrict the sample to Toronto and Montreal, where the callback rate differences are the largest. The first panel shows the callback rate between Type 0 resumes and other types with and without these dummy variable controls. The results clearly indicate that conditioning on these factors overall has virtually no impact on callback rate by name, source country of education, or experience. In other words, taking into account whether resumes include or exclude this information has no role in the impact name, country of education, or experience, has on reducing the likelihood of a response.

Panel 2 of Table 10 shows the estimated effect of listing each trait for each resume type separately. Under the model of statistical discrimination, the impact from listing language fluency for internationally-named resumes should be greater than that for English-named resumes. The estimates show that listing this information does indeed improve the likelihood of a callback rate, in some cases. But the predicted impact is actually larger for English-named Type 0 resumes than for the other resume types. Thus, while we estimate employers place a premium on listing French and other language fluency, the fact that the premium is larger for English-named resumes leads to no relative improvement in callback rates for resumes with Chinese or Indian names. We do, however, find a relatively larger callback rate from listing extracurricular activities for Canadian-educated and experienced resumes with Chinese or Indian names (4.4 percentage point higher callback rate) and for those with international education (3.0 percentage point higher callback rate) compared to the impact from listing extra curricular activities for English-named ones.

The point estimates from listing a Bachelor's degree from a higher ranked school are surprisingly negative, though not statistically significant. International applicants, in particular, with degrees from highly selective schools are no more likely to receive callbacks than applicants from schools far less known and less selective. This result reinforces similar findings in Oreopoulos (2009). Also consistent with the previous study (though also still surprising) is that adding a Canadian Master's degree or experience from a large national or international firm has no significant effect on the callback rate. One possible explanation is that recruiters care far more about experience than education for applicants who are not recent graduates.

Adding Canadian references for resumes with all or some international experience to indicate to employers they can contact someone in Canada, listing permanent residency status to indicate an applicant is legally allowed to work in the country, or attaching accreditation to an international degree has no significant impact on raising callback rates among resumes of Type 2 or 3 with international education and/or experience. The point estimates are all close to zero.

Qualitative Study Results

Our audit study finds evidence of resume discrimination by name and country of education and experience even after experimentally conditioning on all of these characteristics: listing extra curricular activities, multiple language fluency, job description, resume style, additional credentials, university quality, and previous size of firm worked. We still, however, could not rule out that concerns remain for employers about an applicant's skills that are not fully conveyed by a resume. In response to this possibility, we conducted qualitative interviews and collected responses to a short answer questionnaire in order to gain perspective from recruiters about what they think drives the results of the resume audit.

Of note was the dearth of respondents to the email questionnaires; few people were interested in discussing their experiences of making selections from resumes for interviews, including the significance of names in hiring practices. Of the many managers and recruiters who were contacted, few were willing to discuss the potential reasons for the study's quantitative findings, either in person, or via email. This is the case even though participants were guaranteed anonymity for reporting findings.

Besides the low response rate, we also saw a trend early in the data collection process that persisted throughout our analysis of the responses to the email questionnaire and interviews. Most participants immediately assumed that having a name that didn't sound English meant that the applicant was a recent immigrant who was likely to have communication issues. This assumption was the initial response of more than half of the email questionnaire respondents, and many of the interview participants. Even though many of the respondents (in both the interviews and the emails) have international names, yet spoke or wrote with a confident Anglophone-Canadian accent, the most commonly offered explanation for preferring resumes with English names was that weeding out immigrants who couldn't communicate clearly in English was a major concern.

The interview participants' explanations and the responses to the email questionnaire complemented each other and together told a rich story about the pressures and motivations for selecting resumes with English names for job interviews. After hearing from 33 respondents (9 interviews and 24 email questionnaires), we determined that our qualitative work was no longer returning new insights, and our initial categories for analysis were saturated. We analyzed the qualitative data sets by reading through each questionnaire response and each set of interview notes, while classifying their contents into a series of themes. Though dissimilar in length, both sets of data offer insights as to how a resume, and more specifically a name, is dealt with during callback selection processes. The findings from the interviews and email questionnaire offer insight to contextualize the resume audit's callback rates as well as to suggest <u>why</u> decision makers often discriminate based on names and international experience.

The qualitative findings are of two types. First, we contextualize some of the pressures and challenges that may contribute to name-based discrimination when selecting resumes, and next we provide some of the explanations for the results of the resume audit as were offered by the interview and questionnaire participants. The excerpts that follow are drawn from both the interviews and the responses to the email questionnaire. Email responses are marked as 'E' and interviews are marked as 'I' followed by a number to note their chronological order.

Contextualizing hiring decisions

To better understand some of the quotidian challenges of making selections from resumes, types of pressures faced in recruitment environments were described by many of the participants. First, respondents stated they go must through resumes very quickly:

> I4. "I look at a resume for up to a minute. Resumes that list work experience in other countries take a bit longer to figure out."

> I9. "When we are looking at resumes, our software lets us see key terms highlighted. For example, if we're looking for someone who can do support in a Microsoft Windows environment, we likely have a good resume if "Windows" comes up highlighted multiple times. You look from top to bottom. I spend about 30 seconds on each resume."

> I3. "I'm down to about 7 seconds. [The information I'm looking for] needs to pop out so I'm very much onto keyword skimming. I'm almost like a Googlebot, like when you put in a search query. I have to do it really fast. I don't have time to waste. That's why I get so frustrated by CVs that make no sense. I do realize how unfair the whole process is."

Participants described their reviews of vast numbers of resumes in a single day, sometimes to select candidates by the end of a workday. This type of time pressure is common, so it is necessary for recruiters to have individualized, quick routines for selecting resumes.

As well, there are difficulties with evaluating the qualifications of someone with international experience and training:

> I4. "Resumes that list work experience in other countries take a bit longer to figure out. They require more time to decipher the job description, and to Google the previous employers. That said, without hiring immigrants, we wouldn't be able to run our stores because there are no Canadian tailor programs, and in our stores, one-quarter of our staff works in the tailor shop."

> I6. "International resumes tend to put their pictures on, or they tend to put their birthdays, and it's not the same way as we do it in Canada, but we don't tend to discount them. We want them and they're as scarce as hell. On the phone they may react differently, too…"

> I2. "In the last competition I was hiring for, I was actually looking at the resumes and I was thinking to myself, especially if they had experience from outside of Canada, take a closer look, are they really qualified? And I found it really difficult because I don't understand the experience in many cases. I read them, and I read them, and I ask, What does it mean?! For example, it is very common in the Middle East for senior level people to do everything from soup to nut. It doesn't mean they're not doing the senior level work, but they're also doing things that you just normally wouldn't expect here, to be in a job at a senior level. If you just are looking at it and just are going based on what you know, you're probably going, "what does that mean?" "

As recruiters peruse resumes describing work experiences from outside of Canada, their training allows them to quickly select (in or out) candidates with international experience, depending on the objectives of each competition. Though the name is just one resume element, alongside descriptions of work experience, it can be read as a quick indicator of "foreignness", especially when other elements of the resume support the same reading.

Besides time pressure, and an experienced eye to swiftly make sense of resume content, a recruiter is examining resumes with knowledge of organizational attitudes, individual managers' preferences, and their own efforts to make successful hires. According to some participants, past negative hiring experiences can result in less openness to people with international names:

> I7. "The lesson and outcome of hiring someone who left the company angrily is to not hire anyone of the same ethnicity. The same politics work against all of us" [participant is from India and said having an Indian name has worked against the participant many times].

> I8. "The reason someone with only foreign experience might not get selected is based on past issues when a poor hiring decision was made is

that a poor hire didn't mix well with others, caused issues for their manager, wasn't familiar with North American styles of business, was too pushy, or might not be easily managed by a woman or a younger person. The people who work together tend to form cliques and you want to hire someone who will fit in, by culture and language as well as effort."

Another interview participant describes a company-wide feeling of uncertainty about hiring internationally trained professionals, after a major international hiring campaign yielded no long-term employees:

I6. "We had an international campaign a couple of years ago because there are shortages within the industry. We went internationally to hire as many as we could. It was an expensive initiative, an expensive campaign. It took us about a year because relocating families around the globe takes about a year to process. Out of that entire campaign, we probably hired 50 from across the country. And these were from different countries: India, China, South Pacific region, and the Middle East, as well. Of those 50, not one is here today. 75% didn't last the first year, despite the transition training that we provided, the welcome to Canada sessions. It's been two years now, and not one of them is still with us.

There are a number of reasons why: they couldn't adjust, a lot of the countries that we had hired from don't view women on an equal footing, and so a lot of those individuals refused to take orders, and that caused huge messes and whatnot. So now, what we're finding is this backlash. The managers who were handling these individuals are saying "I don't want to look at anyone from that part of the world ever again. Let's just stay to what we know."

Go for the safer option even though you know it's not going to be a stellar performer, but at least you know what you're getting. Or you think you know what you're getting: John Smith."

Explanations for hiring decisions
As mentioned, an initial and significant finding based on both the interviews and the questionnaire responses is that participants assume that an international name means that the applicant has recently immigrated to Canada and may not communicate clearly, or may cause other challenges in the workplace. Of twenty-four questionnaire responses, fourteen participants suggested that people (including themselves) assume that an international name can be equated with limited English skills:

E1.5 "The problem is the ability to communicate in English. Foreign sounding names may be overlooked due to a perception that their English language skills may be insufficient on the job site."

E1.9 "One reason for this to occur would be people's fear of strong accents

not being understood by customers and/or co-workers."

E2.1 "Name suggests candidate is not fluent in English, is the candidate eligible to work in Canada, will the candidate need extensive time off to return home to visit family/friends, will the employer be required to provide additional time off in recognition of cultural holidays"

E2.4 "Reasons a Christian [i.e. English] name may facilitate an interview are;
 1. the comfort factor in the increased chances of social compatibility
 2. greater chances of knowledge of Canadian work culture"

E1.4 "People with English names are frequently selected over otherwise identical candidates whose name was of Chinese, Indian or Pakistani origins due to usually 2 things- communication skills- that is the ability to convey clear and concise words in English and the other is presentation skills"

I9. "A good recruiter will call everyone because there may be times that people aren't represented as you'd picture them from their resume. … When you're calling someone with an English sounding name, you know what you're getting into. You know that you can call Bob Smith, and you can talk to him as quickly as you want to. It's less work because you know that his English will be fine. It also indicates that he's white looking. The brown guy who was born here is not less desirable in the workplace, but it takes something more to know for sure that he speaks English without an accent. We'd have to make a phone call and test the water."

Only one participant clearly articulated the point that someone who is Canadian could have a name that appears international or foreign.

I2. "I don't necessarily think if I see those names… that they're not Canadian. To me, my family, my best friend, have names like that. To me, that's not foreign. It doesn't seem foreign to me. I think more and more, that's true over time. Don't you think so?"

Although some HR professionals are less inclined to interview people with international names, others offer positive reasons for selecting applicants who are immigrants, or hiring based on ethnicity. Although in these cases the hiring outcome may be more positive for internationally trained individuals, selecting resumes based on an ethnicity indicated by name continues:

I4. "In terms of ethnicity in our hiring preferences, we are likely to choose people who will work well with the local population. For example, in Vancouver, we have many Asian applicants, and they are hired increasingly, as our clients are increasingly Asian. However, in Montreal,

many of our staff and our clients are Persian. It is important in certain demographics that we hire the best person. We find that ethnic people never leave the company, plus do work and are more committed. "

I7. "People who have immigrated to Canada tend to be harder workers, so are preferable hires, although it's difficult to imagine hiring someone with a long first name, as it might be impractical in terms of answering the phone and saying it. People with easy-to-use shorter names are easier to hire and work with."

I7. Participant believes that women work harder, and prefers hiring women, and has for 25 years. Gender-biased hiring can be extended to race-biased hiring: "If hiring were based on merit, 70% of the workforce would be Chinese."

I6. "In our world, if you look at our make-up, we're probably more minority dominated than we are not. Numbers cross borders very well. … We zero in more on the technical than the name… And fortunately there is some reverse discrimination at play here: Asians are known to be apt with numbers."

While the resume audit demonstrates higher callback rates for English-sounding names, according to these participants, in some cases, callback rates for international names may be increased because of their foreignness. Purposeful, name-based discrimination is still at work, but in the above examples, it favours internationally named participants. As noted in the resume audit findings, "positive" discrimination toward internationally named applicants does not yield nearly as high callback rates as does selection for English-sounding names.

A common theme in both the interviews and the questionnaire responses is that in many hiring situations, the profitability of a company, its "bottom line," is what dictates purposeful selection strategies in either direction, whether preferring English names on resumes, or preferring international names.

E1.1 Choosing individuals who will sell predominantly to their own cultural language or ethnic group is a good idea. I am told the rate-of-sales-per-call goes up significantly, so much so that sometimes experience isn't needed, just the group affinity and a modicum of product knowledge, and the competition can be displaced...

Your study while significant and I hope helpful will never overcome the barriers I have set out, because they are functional to the profitability of a company; they are, to a great extent, not just prejudices.

E1.17 employers may want to keep names [on resumes] and use it to potentially identify "risk factors" to their existing team even though this is

unreliable and unfair.

I7. Participant stated that he wouldn't hire a salesman named Mohammad to contact businesses owned by people who are Jewish. Participant added that this is one example where the ethnicity of a person's name demonstrates their fit with clients. The bottom line of the business dictates that you hire people who will be the most effective in the position, and this can include race and indicators of race.

In terms of participants explaining the results of the resume audit, many do suggest that discrimination exists, of both the statistical and 'subconscious' statistical types. Here are some examples of ways that people describe biases they've seen, in terms of preferring resumes with English names:

E1.1 Some groups of customers are zenophobic [sic]. Most people are to some extent.

E1.3 Call the non-English name a possible trigger for some. I don't believe the language, social skills, or even local experience and education even come into play in these cases where candidates are not given the opportunity to prove otherwise. It can be spelled out on paper and I don't think it matters in some cases.

E1.8 "I personally am guilty of gravitating towards Anglo names on resumes and I believe that it's a very human condition –[a result of] resistance to change."

I4. From my own experience with my name, I know that people are uncertain of my gender before they meet me, and they want to know about my cultural background once they do. They are surprised that a woman has a position like this in a menswear company, and they ask me where I'm from, and if I'm Catholic. It feels insulting. Yes, discrimination exists in professional interactions including hiring, even if we don't want to acknowledge it.

Discussion and Conclusions

Our baseline audit study results reinforce and extend previous findings in Oreopoulos (2009) of discrimination by name, country of education, and country of experience for resumes with 4-6 years experience and Bachelor's degrees sent in response to online job postings in Toronto. Canadian-born individuals with English-sounding names are significantly more likely to receive a callback for an job interview after sending their resumes compared to internationally-born individuals, even among those with international degrees from highly ranked schools or among those with the same listed job experience but acquired outside of Canada. We find that employers value Canadian experience more than Canadian education when deciding to interview applicants with

international backgrounds, suggesting that employers are more interested in internationally-born applicants with more Canadian experience. We also replicate the results that employers discriminate substantially by name, with English names about 45 percent more likely to receive a callback from an application than resumes with Chinese or Indian names. We even find a similar gap from switching English-names to Greek names.

Our analysis extends this research by collecting data from job applications in Montreal and Vancouver. The results are generally quite similar across all three cities. The callback rate premium for Canadian experienced and educated resumes with English names compared to resumes with Chinese or Indian names, internationally educated, or internationally educated and internationally experienced, are very similar for Toronto and Montreal (about 45 percent, 55 percent, and 200 percent respectively). The premiums for Vancouver are somewhat lower (20 percent, 62 percent, and 69 percent respectively), although we cannot reject they are the same as the other two cities at the 5 percent significance level. Only a small fraction of callbacks were by Asian or Indian individuals, identified by name or accent.

When asked what explains these findings, recruiters overwhelmingly responded that employers often treat name, country of education or experience as a signal that an applicant may lack critical language skills for the job. When asked specifically about why otherwise <u>identical</u> resumes except for name would generate a different response, two typical responses were:

> "people with English names are frequently selected over otherwise identical candidates whose name was of Chinese, Indian or Pakistani origins due to usually 2 things- communication skills- that is the ability to convey clear and concise words in English and the other is presentation skills"

> "When you're calling someone with an English sounding name, you know what you're getting into. You know that you can call Bob Smith, and you can talk to him as quickly as you want to. It's less work because you know that his English will be fine."

Some recruiters also pointed out that they often face more pressure to avoid bad hires than they are awarded for exceptional ones. This leads to risk aversion and exacerbates the impact from even small signals of lower expected productivity.

Our empirical evidence, however, does not easily corroborate with the view that all the discrimination we observe is statistical, driven by language skill concerns. Our resumes all equate, on average, description of job experience, years schooling, style of resume, and cover email. The statistical discrimination model predicts that adding information related to important characteristics not listed on the resume should reduce the degree of discrimination, yet we find virtually no evidence of this. Listing fluency in French, English, and mother tongue increases callback rates, but more for English-named applicants. Prominently recognized or large firms also did not reduce the gap in callback

rates. We find no obvious pattern between the English-named applicant premium and the degree of language skill required to perform successfully on the job. The only result clearly consistent with the statistical discrimination model is an improvement in relative response rates from adding extracurricular activities to ethnically-named applicants, but this occurs only for those with Canadian education and experience.

We find no evidence that providing accreditation to immigrants' schooling improves outcomes. Noting that an international applicant's university is accredited by the "Canada International Skills Certification Board" has no impact on callback rates, in contrast to laboratory experiments by Deitz et Esses (2008). Trying to assure employers of legal working status by noting permanent residency status on the resume also has no impact. Listing Canadian contacts for references, to address the possibility that employers do not want to bother contacting international references also has no effect. University credentials from some of the most selective schools in China and India also played no role in callback response.

An interesting (and unexpected) finding is that switching applicants' names from English to Greek origins generates lower callback rates. The callback rate gap between English and Greek names is about the same as it is between English and Chinese names and significant at the 10 percent level. We believe employers likely view Greek-named applicants as Canadian born with little difference in English proficiency compared to the English applicant. A reinterpretation of the gap between English-named applicants and those with Indian or Chinese names therefore is that recruiters place a premium towards wanting to interview applicants with English names rather than a discount towards Chinese or Indian names.

Surprisingly no recruiters interviewed explicitly acknowledged the possibility that information on the resume could offset or address their stated language concerns, despite efforts to point this possibility out. We stated concisely that resumes under consideration were otherwise identical except for name, with Canadian experience and education, yet a majority of respondents seemed to assume we were referring to immigrants, and justified the results based on language concerns. Those who expressed these concerns also failed to acknowledge that the cost to acquire more information about language skill is small. If employers were interested in a candidate were it not for remaining language concerns, they could contact the applicant by phone to determine whether an interview would be worthwhile. The cost is relatively small.

Our contrasting quantitative and qualitative results, taken overall, are consistent with a model of 'accidental' or 'erroneous' statistical discrimination, where employers justify name and immigrant discrimination based on language skill concerns, but incorrectly overemphasize these concerns without taking into account offsetting characteristics listed on the resume. Several, relatively recent, theories of implicit discrimination and categorization help explain this behaviour. Crandall and Eshleman (2003) describe how employers may believe they are rejecting an applicant out of language skill concerns when in fact their implicit biases are driving the decision. An applicant's name or country origins may trigger particular stereotypes that cause employers to overweight these

concerns and underweight the offsetting factors on the resume. While recruiters may consciously attempt to avoid discrimination and missing out on the best hire, subconscious beliefs and attitudes may influence assessments and decisions nonetheless. Pressure to avoid bad hires exacerbates these effects, as does the need to review resumes quickly.

Two other audit studies provide further evidence of implicit discrimination. Rooth (2009) matches self-reported racial attitudes and IAT scores of employers to callback outcomes from an audit study he carried out that looks at discrimination between resumes with common Swedish names and Arab-Muslim names. Those with more negative implicit association measures are less likely to callback Arab-Muslims, while self-reported measures of explicit association have little explanatory power. Bertrand, Chugh, and Mullainathan (2005) report similar results from a study involving picking qualified candidates from a set of resumes with White and African-American names. They find a negative correlation between the number of African-American resumes selected by a given subject and that subject's IAT score. The correlation is largest among those subjects that report feeling most rushed during the task.

One direct policy recommendation that arises from concluding that implicit discrimination drives at least some of the results in the study is that employers should consider masking names on applications before making initial interview decisions. Masking names is easily implemented for employers who collect applications online. Recruiters can also request that applicants list name and contact information on a separate page at the end of a resume, which can then be ignored or removed during the initial process of deciding whom to interview. It would not be difficult to explore this practice on a trial basis, to determine whether such practice leads to better hiring or turns out to be onerous for little perceived benefit. As a related example, Goldin and Rouse (2000) document how blind auditions procedures (e.g. auditioning behind a screen) fostered impartiality in hiring and increased the proportion of women in symphony orchestras.

It should not be overlooked, however, that many recruiters are clearly concerned that immigrants may lack critical language skills for performing well on the job. Even if our results are driven by incorrectly failing to condition on offsetting features on the resume, it appears that many employers' unconditional concerns are based on real productivity worries. We cannot rule out that the stated reasons for discrimination belie underlying prejudice. Nevertheless, employers state they value workers with strong communication skills and it may be worth considering additional ways to rank applicants under the point system higher for having these skills.

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Appendix A: Resume Characteristics

i. Resume Data

The following resume characteristics were used for the study:

A. The first category is the ethnicity code, which determines whether a resume corresponds to an applicant with "Canadian" (English or Greek name with Canadian experience and education) or foreign ethnicity. In this study the foreign ethnicity category is restricted to either Chinese or Indian. For each job posing, four resumes are created. The first (Type 0) has a "Canadian" ethnic code, Canadian experience and Canadian education. The second (Type 1) has a foreign ethnic code, randomly chosen between Chinese or Indian, and Canadian experience and education. The third (Type 2) has a foreign ethnic code, Canadian experience, and foreign education. The fourth has a foreign ethnic code, foreign experience, and either some (Type 3) or all (Type 4) foreign experience. Whether the resume is Type 3 or Type 4 is chosen at random (50% chance of choosing each).

B. The second variable lists the possible names under each ethnicity code. Three common male and three common female English names are used for the "Canadian" case, plus one Greek male and female name to compare results between foreign-sounding applicants and English-sounding local applicants with foreign-sounding applicants and Greek-sounding local applicants. Indian and Chinese names are also picked from lists of common names. For one of the four Chinese male and female cases I use a common English-sounding first name and a common Chinese-sounding last name (for comparison to applicants that list traditional names). Names are chosen randomly from each ethnicity category.

C. The third category is email addresses. A gmail.com and yahoo.ca email address are created corresponding to each name used in the study. All incoming emails are forwarded to a central account for processing data collection.

D. The fourth category is the address and phone number used on the study. This information in the design report is blanked out for confidentiality reasons. The study requires four separate addresses for each of the three city sites (Toronto, Montreal, Vancouver) because generally four resumes are sent corresponding to each job posting. Four corresponding local phone numbers for each of the city site are set up using VOIP (Voice over Internet Protocol). A fifth phone number is set up to handle resumes that list a local reference. A standard voice messaging service is used for handling telephone callbacks. All messages are recorded digitally and forwarded to a central email account for data processing (the same account used for reviewing incoming email messages to applicants).

E. The fifth category is the university where the Bachelor's degree was obtained. The possible universities are city-specific. If the ethnicity code is Canadian and the city is Vancouver, for example, degrees from Simon Fraser University and the University of

British Columbia are used. For universities around the Greater Toronto Area and for foreign universities, a variety of 'good' and 'bad' quality universities are chosen for comparison purposes. Universities are picked at random with equal probability.

F. The sixth category is the university where a Canadian Master's degree was obtained, in cases where applicants are to list Canadian Master's degrees (20 percent of cases for Type 0-3 resumes). This variable is also city specific (Toronto, Montreal, or Vancouver).

G. The seventh category is the general applicant profile to be listed on the resume, which is occupation category specific. Most resumes examined on Workopolis.ca list a general profile outlining particular traits and skills an applicant wishes to highlight. Profiles from Workopolis.ca were used to help design this list. Profiles are picked at random with equal probability.

H. The eighth category is the specific Bachelors and (when selected for inclusion) Master's degree to be listed on the resume. The variable is occupation category specific so that the degree type aligns generally with the job being applied. To avoid all applications corresponding to one job posting having the same Bachelor's degree, one of three degrees is picked from the list at random. Some of the degrees are university specific, to avoid listing a degree that is not actually offered by a particular institution (e.g. Bachelor of Commerce from UBC versus Bachelor of Business Administration from SFU). The file indicates the probability by which the degrees are picked (some more common degrees are picked more often than others).

I. The ninth category is the experience profile to be listed on the resume. Each resume lists three past job positions. Titles and duties were created by editing actual profiles from Workopolis.com. Four profiles are needed for each occupation category to ensure each resume matched to one job posting is different. The profiles are labelled Low, Mid, and Top to correspond to low, medium, and high experience quality. This ranking is based more on company than on description.

J. The tenth category lists the company names corresponding to the experience profiles. Companies are also country-specific, depending on the ethnicity code. For large international companies (usually under the TOP experience quality label), the same company name is used whether experience is listed from Canada, China, or India (if international offices exist in each country). In cases where a Canadian company does not operate in China or India, an equivalent company is used, generally the same size and industry.

K. The eleventh category lists the reference information to be used in selected cases of applications listing foreign experience (to explore whether employers react negatively towards applicants with foreign experience because contacting foreign references would be more difficult than contacting local ones). References are listed for 50 percent of Type 3 and 4 cases.

L. The twelfth category lists extracurricular activities. 75 percent of resumes are randomly selected to include these activities. The possible description is resume template specific and only is listed if randomly selected. The purpose of this category is to explore whether indicating on the resume an extroverted personality, or rich social skill set affects callback rate differences.

M. The thirteenth category is language skills. 20 percent of resumes list fluency in multiple languages. For "Canadian" resumes under the ethnicity category, fluency in English and French are used. For foreign resumes, fluency in English and French, along with mother tongue in the corresponding foreign language is used.

N. The fourteenth category lists occupation categories used in the study. These categories are used to determine why type of resume to send in response to a particular job posting.

O. The fifteenth category is citizenship status. 30 percent of resumes with foreign experience are randomly selected to indicate in the profile list that they are Canadian permanent residents. Others do not list this.

P. The sixteenth category is an indicator for whether to list among resumes with foreign educational credentials certification by "the Canada International Skill Certification Board" (see the discussion about Deitz et al. (2008) above). 25% of Type 2-4 resumes list accreditation with this board.

Q. The final category determines the time spent in each job corresponding to the three previous jobs listed on the resume.

Appendix B: Email Questionnaire Requests and Responses

From: Philip Oreopoulos [mailto:philip.oreopoulos@utoronto.ca]
Sent: Monday, May 31, 2010 8:13 AM
Subject: Resume study: Why does name matter?

To Whom It May Concern:

I am a professor of Economics and Public Policy at the University of Toronto. I am currently working on a study that examines a responsibility of many Human Resources professionals: the selection of interview candidates from many resumes.

Indeed, for otherwise identical resumes with 4-6 years of job-related Canadian experience and a Bachelor degree at a Canadian university, an applicant whose first and last name appeared English was 40 percent more likely to be contacted for an interview than someone whose name was of Chinese, Indian or Pakistani origins. Faced with these results, I am trying to better understand what happened - for example, whether this behaviour was due to remaining productivity concerns revealed by the name, or something else, and whether it was accidental or on purpose. Listing active extracurricular activities, volunteer work, and fluency in multiple languages (including English) did not affect the findings, which were similar for many different job types.

It would be invaluable to this study if you would spend a moment considering this question. Your email address was selected from a recent online job posting (not from job postings used in my previous study). Please reply with a paragraph or two of suggestions as to why people with English names are frequently selected over otherwise identical candidates. I am not looking for any incriminating stories, just a better understanding of why you think this preference exists overall.

All responses will be kept confidential. I will use them to ascertain whether any consensus exists and may quote from them anonymously.   Responses will be deleted at the end of the study and you may choose to withdrawal your response at any time before this. Please feel free to email or contact me at 416 946-3776 if you have questions about the research. You may also contact the university's Office of Research Ethics (ethics.review@utoronto.ca, 416946-3273) if you have any questions about your rights as a research participant. You can also find a copy of my earlier report on my webpage (www.economics.utoronto.ca/oreo).

Thank you for your consideration and assistance.

Sincerely,

Philip Oreopoulos
University of Toronto
National Bureau of Economic Research
Canadian Institute For Advanced Research

Table 1
Unemployment and Earnings Differences Between Recent Immigrants and Natives Aged 25 to 39
From the 2006 Census

	(1) Unemployment Rate	(2) Mean Earnings for Positive Earners in Labor Force	(3) Median Earnings for Positive Earners in Labor Force
Non-Immigrants	0.059	39841	30000
Recent Immigrants (0-4 years)	0.104	27462	20181
Ratio (Non-Immig / Immig)	0.57	1.45	1.49
Estimated Ratio, conditional on age, schooling, and city	0.54	2.20	1.93
Sample Size	127149	119275	119275

Notes: The sample in Column 1 includes all individuals from the 2006 Public-Use Canadian Census, aged 25 to 39, in the labor force, and either recorded as a non-immigrant, or a recent immigrant (arrived within the last 5 years). The sample in Columns 2 and 3 is restricted further to individuals with positive earnings. All amounts are in 2005 Canadian dollars. The estimated ratio is computed by first regressing unemployment status or log earnings on immigrant status, plus fixed effects for age, highest degree, and city of residence. The unemployment rate and mean earnings is imputed using the immigrant coefficient from the regression, relative to the actual value for non-immigrants, and the ratio of this is reported in the table. For column 3, quantile regregression around the median is used instead of ordinary least squares.

		Resumes Sent					Callbacks Received				
		Resume Type					Resume Type				
		0 English Name Cdn Educ Cdn Exp	**1** Foreign Name Cdn Educ Cdn Exp	**2** Foreign Name Foreign Educ Cdn Exp	**3** Foreign Name Foreign Educ Mixed Exp	**4** Foreign Name Foreign Educ Foreign Exp	**0** English Name Cdn Educ Cdn Exp	**1** Foreign Name Cdn Educ Cdn Exp	**2** Foreign Name Foreign Educ Cdn Exp	**3** Foreign Name Foreign Educ Mixed Exp	**4** Foreign Name Foreign Educ Foreign Exp
Name Ethnicity and Sex											
English Males	Greg Johnson	254					28				
	John Martin	272					22				
	Matthew Wilson	281					33				
English Females	Alison Johnson	244					45				
	Carrie Martin	259					43				
	Jill Wilson	259					39				
Indian Males	Arjun Kumar		121	108	96	64		14	8	3	3
	Panav Singh		111	87	67	65		4	12	6	2
	Rahul Kaur		149	100	89	71		11	11	4	3
	Samir Sharma		132	86	58	70		8	6	6	3
Indian Females	Maya Kumar		130	104	78	56		18	6	4	3
	Priyanka Kaur		155	82	77	65		11	9	3	4
	Shreya Sharma		118	84	65	71		14	10	3	4
	Tara Singh		120	100	69	68		15	10	5	5
Chinese Males	Dong Liu		132	87	58	55		13	6	5	1
	Lei Li		112	64	97	65		16	6	7	6
	Yong Zhang		135	82	83	53		13	5	2	5
Chinese Females	Min Liu		143	79	82	68		17	3	8	8
	Na Li		117	100	69	60		10	11	7	4
	Xiuying Zhang		148	89	80	81		16	4	5	4
English Chinese Males	Eric Wang		134	82	66	60		13	3	4	0
English Chinese Females	Michelle Wang		145	100	73	75		21	8	4	3
Greek Males	Lukas Minsopoulos		260					25			
Greek Females	Nicole Minsopoulos		282					33			
Toronto		574	1026	545	455	368	54	69	28	28	14
Montreal		470	745	414	343	316	93	108	54	25	26
Vancouver		525	873	475	409	363	63	95	36	23	18
Total		1569	2644	1434	1207	1047	210	272	118	76	58

Notes: Cdn = Canadian, Educ = Country where bachelors degree obtained, and exp = country where job experience obtained. Mixed experience corresponds to first two jobs listed on resume are from foreign country, and most recent (third) job listed is from Canada.

Table 3
Proportion of Resumes sent with Particular Characteristics, by Resume Type

	(1)	(2)	(3)	(4)	(5)	(6)
				Resume Type Sent		
		0	**1**	**2**	**3**	**4**
	Full Sample	**English Name Cdn Educ Cdn Exp**	**Foreign Name Cdn Educ Cdn Exp**	**Foreign Name Foreign Educ Cdn Exp**	**Foreign Name Foreign Educ Mixed Exp**	**Foreign Name Foreign Educ Foreign Exp**
Characteristics of Resume						
Female	0.51	0.49	0.51	0.51	0.49	0.52
Top 200 World Ranking University	0.69	0.85	0.86	0.51	0.49	0.49
Extra Curricular Activities Listed	0.60	0.59	0.61	0.59	0.58	0.60
Fluent in French and other Languages	0.28	0.30	0.27	0.28	0.26	0.26
Canadian Masters Degree	0.17	0.21	0.20	0.21	0.19	0.00
Large Firm Work Experience	0.19	0.19	0.20	0.19	0.16	0.16
List Canadian References	0.07	0.00	0.00	0.00	0.25	0.23
Accreditation of Foreign Education	0.09	0.00	0.00	0.23	0.19	0.18
Permanent Resident Indicated	0.09	0.00	0.00	0.20	0.19	0.21
Name Ethnicity						
English-Canadian	0.20	1.00	0.00	0.00	0.00	0.00
Indian	0.37	0.00	0.39	0.52	0.50	0.51
Pakistani	0.13	0.00	0.25	0.12	0.12	0.14
Chinese	0.27	0.00	0.30	0.35	0.39	0.36
Chinese with English First Name	0.09	0.00	0.11	0.13	0.12	0.13
Greek	0.07	0.00	0.20	0.00	0.00	0.00

Notes: Top 200 World Ranking University according to the 2008 QS World Rankings (http://www.topuniversities.com/).

Table 4
Callback Rates for Toronto, Montreal, and Vancouver by Resume Type and Ethnic Origin

		(1)	(2)	(3)	(4)	(5)	(6)
			Callback Rate (Difference Compared to Type 0) [Standard Error of Difference] {Callback Ratio: Type 0 / Type}				
			Ethnic Origin				
		English Canada	India	China	Greek	English Chinese	India / China
Type 0	**English Name** **Cdn Educ** **Cdn Exp**	**0.134**					
Type 1	**Foreign Name** **Cdn Educ** **Cdn Exp**		**0.092** (-0.042) [0.012]*** {1.46}	**0.108** (-0.026) [0.014]* {1.24}	**0.107** (-0.027) [0.016]* {1.25}	**0.122** (-0.012) [0.021] {1.10}	**0.099** (-0.035) [0.011]*** {1.35}
Type 2	**Foreign Name** **Foreign Educ** **Cdn Exp**		**0.090** (-0.044) [0.016]*** {1.49}	**0.077** (-0.057) [0.018]*** {1.74}	**NA**	**0.070** (-0.064) [0.025]** {1.91}	**0.085** (-0.049) [0.013]*** {1.58}
Type 3	**Foreign Name** **Foreign Educ** **Mixed Exp**		**0.057** (-0.077) [0.015]*** {2.35}	**0.084** (-0.050) [0.022]** {1.60}	**NA**	**0.039** (-0.095) [0.028]*** {3.44}	**0.066** (-0.068) [0.014]*** {2.03}
Type 4	**Foreign Name** **Foreign Educ** **Foreign Exp**		**0.059** (-0.075) [0.016]*** {2.27}	**0.080** (-0.054) [0.024]** {1.68}	**NA**	**0.022** (-0.112) [0.024]*** {6.09}	**0.065** (-0.069) [0.014]*** {2.06}

Notes: Cdn = Canadian, Educ = Country where bachelors degree obtained, and exp = country where job experience obtained. Mixed experience corresponds to first two jobs listed on resume are from foreign country, and most recent (third) job listed is from Canada. Sample excludes foreign resumes with accreditation, references, and permanent resident status. *** , **, and * indicate callback rate differences compared to Type 0 are statistically significant at

Table 5
Callback Rates for Toronto, by Resume Type and Ethnic Origin

		(1)	(2)	(3)	(4)	(5)	(6)
				Callback Rate (Difference Compared to Type 0) [Standard Error of Difference] {Callback Ratio: Type 0 / Type}			
				Ethnic Origin			
		English Canada	India	China	Greek	English Chinese	India / China
Type 0	**English Name** Cdn Educ Cdn Exp	**0.094**					
Type 1	**Foreign Name** Cdn Educ Cdn Exp		**0.052** (-0.042) [0.017]** {1.81}	**0.080** (-0.014) [0.020] {1.18}	**0.074** (-0.020) [0.021] {1.27}	**0.071** (-0.023) [0.027] {1.32}	**0.064** (-0.030) [0.015]* {1.47}
Type 2	**Foreign Name** Foreign Educ Cdn Exp		**0.068** (-0.026) [0.022] {1.38}	**0.032** (-0.062) [0.022]*** {2.94}	**NA**	**0.024** (-0.070) [0.027]** {3.92}	**0.056** (-0.038) [0.018]** {1.68}
Type 3	**Foreign Name** Foreign Educ Mixed Exp		**0.044** (-0.050) [0.021]** {2.14}	**0.068** (-0.026) [0.035] {1.38}	**NA**	**0.077** (-0.017) [0.054] {1.22}	**0.051** (-0.043) [0.020]** {1.84}
Type 4	**Foreign Name** Foreign Educ Foreign Exp		**0.034** (-0.060) [0.021]*** {2.76}	**0.041** (-0.053) [0.031]* {2.29}	**NA**	**0.000** (-0.094) [0.012]*** NA	**0.036** (-0.058) [0.019]*** {2.61}

Notes: Cdn = Canadian, Educ = Country where bachelors degree obtained, and exp = country where job experience obtained. Mixed experience corresponds to first two jobs listed on resume are from foreign country, and most recent (third) job listed is from Canada. Sample excludes foreign resumes with accreditation, references, and permanent resident status. *** , **, and * indicate callback rate differences compared to Type 0 are statistically significant at the 1%, 5%, and 10% levels respectively.

Table 6
Callback Rates for Montreal, by Resume Type and Ethnic Origin

		(1)	(2)	(3)	(4)	(5)	(6)
				Callback Rate			
				(Difference Compared to Type 0)			
				[Standard Error of Difference]			
				{Callback Ratio: Type 0 / Type}			
				Ethnic Origin			
		English Canada	India	China	Greek	English Chinese	India / China
Type 0	**English Name** **Cdn Educ** **Cdn Exp**	**0.198**					
Type 1	**Foreign Name** **Cdn Educ** **Cdn Exp**		**0.137** (-0.061) [0.027]** {1.45}	**0.148** (-0.050) [0.030] {1.34}	**0.145** (-0.053) [0.035] {1.37}	**0.169** (-0.029) [0.047] {1.17}	**0.142** (-0.056) [0.024]** {1.39}
Type 2	**Foreign Name** **Foreign Educ** **Cdn Exp**		**0.117** (-0.081) [0.034]** {1.69}	**0.150** (-0.048) [0.040] {1.32}	**NA**	**0.065** (-0.133) [0.048]*** {3.05}	**0.132** (-0.066) [0.029]** {1.50}
Type 3	**Foreign Name** **Foreign Educ** **Mixed Exp**		**0.067** (-0.131) [0.031]*** {2.96}	**0.098** (-0.100) [0.042]** {2.02}	**NA**	**0.000** (-0.198) [0.018]*** NA	**0.078** (-0.120) [0.028]*** {2.54}
Type 4	**Foreign Name** **Foreign Educ** **Foreign Exp**		**0.090** (-0.108) [0.036]*** {2.20}	**0.091** (-0.107) [0.043]** {2.18}	**NA**	**0.072** (-0.126) [0.072]* {2.75}	**0.090** (-0.108) [0.030]*** {2.20}

Notes: Cdn = Canadian, Educ = Country where bachelors degree obtained, and exp = country where job experience obtained. Mixed experience corresponds to first two jobs listed on resume are from foreign country, and most recent (third) job listed is from Canada. Sample excludes foreign resumes with accreditation, references, and permanent resident status. *** , **, and * indicate callback rate differences compared to Type 0 are statistically significant at the 1%, 5%, and 10% levels respectively.

Table 7
Callback Rates for Vancouver, by Resume Type and Ethnic Origin

		(1)	(2)	(3)	(4)	(5)	(6)
				Callback Rate (Difference Compared to Type 0) [Standard Error of Difference] {Callback Ratio: Type 0 / Type}			
				Ethnic Origin			
		English Canada	India	China	Greek	English Chinese	India / China
Type 0	**English Name** Cdn Educ Cdn Exp	**0.120**					
Type 1	**Foreign Name** Cdn Educ Cdn Exp		**0.095** (-0.025) [0.021] {1.26}	**0.107** (-0.013) [0.024] {1.12}	**0.119** (-0.001) [0.028] {1.01}	**0.144** (0.024) [0.040] {0.83}	**0.100** (-0.020) [0.019] {1.20}
Type 2	**Foreign Name** Foreign Educ Cdn Exp		**0.094** (-0.026) [0.029] {1.28}	**0.048** (-0.072) [0.025]*** {2.50}	**NA**	**0.116** (-0.004) [0.051] {1.03}	**0.074** (-0.046) [0.022]** {1.62}
Type 3	**Foreign Name** Foreign Educ Mixed Exp		**0.063** (-0.057) [0.026]** {1.90}	**0.085** (-0.035) [0.039] {1.41}	**NA**	**0.000** (-0.120) [0.014]*** NA	**0.070** (-0.050) [0.024]** {1.71}
Type 4	**Foreign Name** Foreign Educ Foreign Exp		**0.059** (-0.061) [0.026]** {2.03}	**0.106** (-0.014) [0.047] {1.13}	**NA**	**0.000** (-0.120) [0.014]*** NA	**0.073** (-0.047) [0.025]* {1.64}

Notes: Cdn = Canadian, Educ = Country where bachelors degree obtained, and exp = country where job experience obtained. Mixed experience corresponds to first two jobs listed on resume are from foreign country, and most recent (third) job listed is from Canada. Sample excludes foreign resumes with accreditation, references, and permanent resident status. *** , **, and * indicate callback rate differences compared to Type 0 are statistically significant at the 1%, 5%, and 10% levels respectively.

Table 8
Callback Rate Differences
between Canadian Educatied and Experienced Applicants with English or Greek Names

	(1)	(2)	(3)
	All Cities		
	Full Sample	Males	Females
Callback Rate for English Named Applicants	0.134	0.103	0.167
Callback Rate for Greek Named Applicants	0.107	0.096	0.117
(difference)	(-0.027)	(-0.007)	(-0.050)
[standard error]	[0.016]*	[0.021]	[0.023]**
	Toronto		
	Full Sample	Males	Females
Callback Rate for English Named Applicants	0.094	0.076	0.113
Callback Rate for Greek Named Applicants	0.074	0.082	0.070
(difference)	(-0.020)	(0.006)	(-0.043)
[standard error]	[0.021]	[0.032]	[0.029]
	Montreal		
	Full Sample	Males	Females
Callback Rate for English Named Applicants	0.198	0.133	0.266
Callback Rate for Greek Named Applicants	0.145	0.143	0.147
(difference)	(-0.053)	(0.010)	(-0.119)
[standard error]	[0.035]	[0.047]	[0.052]**
	Vancouver		
	Full Sample	Males	Females
Callback Rate for English Named Applicants	0.120	0.105	0.137
Callback Rate for Greek Named Applicants	0.119	0.076	0.167
(difference)	(-0.001)	(-0.029)	(0.030)
[standard error]	[0.028]	[0.033]	[0.046]

Notes: Sample includes resumes with Canadian experience and education, with Greek or English names only. *** , **, and * indicate callback rate differences compared to Type 0 are statistically significant at the 1%, 5%, and 10%

Table 9
Estimated Callback Rate Differences
between Canadian Educated and Experienced Applicants with Chinese or English-Chinese Names

	(1)	(2)	(3)
	All Cities		
	Full Sample	Males	Females
Callback Rate for Chinese Named Applicants	0.108	0.105	0.111
Callback Rate for Chinese-Eng. Named Applicants	**0.122**	**0.091**	**0.150**
(difference)	(0.014)	(-0.014)	(0.039)
[standard error]	[0.023]	[0.030]	[0.033]
	Toronto		
	Full Sample	Males	Females
Callback Rate for Chinese Named Applicants	0.078	0.09	0.068
Callback Rate for Chinese-Eng. Named Applicants	**0.07**	**0.069**	**0.074**
(difference)	(-0.008)	(-0.021)	(0.006)
[standard error]	[0.029]	[0.041]	[0.042]
	Montreal		
	Full Sample	Males	Females
Callback Rate for Chinese Named Applicants	0.148	0.157	0.142
Callback Rate for Chinese-Eng. Named Applicants	**0.17**	**0.143**	**0.190**
(difference)	(0.021)	(-0.014)	(0.048)
[standard error]	[0.049]	[0.071]	[0.068]
	Vancouver		
	Full Sample	Males	Females
Callback Rate for Chinese Named Applicants	0.107	0.104	0.111
Callback Rate for Chinese-Eng. Named Applicants	**0.144**	**0.098**	**0.184**
(difference)	(0.037)	(-0.006)	(0.073)
[standard error]	[0.042]	[0.054]	[0.062]

Notes: Sample includes resumes with Canadian experience and education, with Chinese names with and without English first names. *** , **, and * indicate callback rate differences compared to Type 0 are statistically significant at the 1%, 5%, and 10% levels respectively.

Table 10
Estimated Effects on the Probability of Callback from the Inclusion of Specific Resume Characteristics
Toronto and Montreal

	(1)	(2)	(3)	(4)	(5)
	Type 0 **English Name** **Cdn Educ** **Cdn Exp**	**Type 1** **Foreign Name** **Cdn Educ** **Cdn Exp**	**Type 2** **Foreign Name** **Foreign Educ** **Cdn Exp**	**Type 3** **Foreign Name** **Foreign Educ** **Mixed Exp**	**Type 4** **Foreign Name** **Foreign Educ** **Foreign Exp**
	Panel A: Callback Rate Differences With and Without Controls				
Callback Rate (for Type 0) and Unconditional Callback Difference Between other Resume Types	0.141	-0.043 [(0.014)]***	-0.05 [(0.015)]***	-0.074 [(0.014)]***	-0.077 [(0.015)]***
Callback Difference After Conditioning on All Resume Characteristics		-0.042 [(0.014)]***	-0.057 [(0.015)]***	-0.08 [(0.015)]***	-0.082 [(0.016)]***
Resume Characteristic	**Panel B: Resume Characteristic Effects on Callback Rate by Type**				
Female	0.082 [(0.022)]***	0.024 [(0.017)]	-0.001 [(0.020)]	-0.001 [(0.019)]	0.007 [(0.020)]
Top 200 World Ranking University	-0.041 [(0.027)]	-0.028 [(0.023)]	-0.017 [(0.020)]	-0.026 [(0.019)]	-0.011 [(0.020)]
Extra Curricular Activities Listed	0.003 [(0.022)]	0.047 [(0.017)]***	0.033 [(0.019)]*	0.012 [(0.019)]	0 [(0.020)]
Fluent in French and other Languages	0.065 [(0.024)]***	0.017 [(0.019)]	0.058 [(0.024)]**	0.008 [(0.021)]	0.059 [(0.025)]**
Canadian Masters Degree	0.005 [(0.026)]	0.018 [(0.022)]	-0.02 [(0.024)]	0.016 [(0.026)]	NA
Large Firm Experience	-0.018 [(0.026)]	-0.016 [(0.020)]	0.007 [(0.027)]	0.044 [(0.031)]	-0.019 [(0.025)]
List Canadian References				-0.002 [(0.023)]	-0.006 [(0.025)]
Accreditation of Foreign Education			0.007 [(0.024)]	0.003 [(0.025)]	-0.014 [(0.025)]
Permanent Resident Indicated			-0.019 [(0.024)]	0.004 [(0.025)]	0.027 [(0.027)]
Sample Size	1,044	1,216	841	707	591

Notes: Panel A reports callback rate differences by resume type, relative to type 0, with and without including control variables for applicant gender, an indicator that the applicant obtained her bachelors degree from a university ranked in the top 200 according to the QS University World Rankings, and whether the resume listed extracurricular activities, fluency in multiple languages (including French), a Canadian masters degree, Canadian references, Canadian Government accreditation of an applicant's foreign degree, and permanent resident status. Panel B reports coefficient results from regressing callback status on these characteristics. Robust standard errors are reported. Cdn = Canadian, Educ = Country where bachelors degree obtained, and exp = country where job experience obtained. Mixed experience corresponds to first two jobs listed on resume are from foreign country, and most recent (third) job listed is from Canada. ***, **, and * indicate callback rate differences compared to Type 0 are statistically significant at the 1%, 5%, and 10% levels respectively.

Table 11
Callback Rates for Toronto, by University

Resume Type		University	Callback Rate	Resumes Sent	F-Test (p-value)
		(1)	(2)	(3)	(4)
Type 0	**English Name**	University of Toronto*	0.105	285	0.3632
	Cdn Educ	University of Waterloo*	0.083	289	
Type 1	**Foreign Name**	University of Toronto*	0.054	349	0.2933
	Cdn Educ	University of Waterloo*	0.074	337	
Types 2-4	**Indian Name**	Indian Institute of Management*	0.067	195	0.7485
	Foreign Educ	Indian Institute of Technology*	0.043	163	
		University of Calcutta	0.053	188	
		University Of Pune	0.064	173	
Types 2-4	**Chinese Name**	Jinzhong University	0.028	109	0.0949
	Foreign Educ	Lanzhou University	0.053	133	
		Peking University*	0.081	124	
		Tsing Hua University*	0.018	113	

Notes: Resume types are the same as indicated in Table 10. The F-Test corresponds to the test that all callback rates by university are the same, and is calculated after regressing callback status (0 or 1) on dummy variables for each university where the applicant obtained her bachelors degree from, using robust standard errors. * indicates a university ranked in the top 200 according to the 2010 QS University World Rankings.

Table 12
Callback Rates for Montreal, by University

Resume Type		University	(1) Callback Rate	(2) Resumes Sent	(3) F-Test (p-value)
Type 0	English Name Cdn Educ	Concordia University McGill University*	0.181 0.216	243 227	0.3463
Type 1	Foreign Name Cdn Educ	Concordia University McGill University*	0.125 0.157	263 267	0.2938
Types 2-4	Indian Name Foreign Educ	Indian Institute of Management* Indian Institute of Technology* University of Calcutta University Of Pune	0.088 0.073 0.106 0.108	147 110 132 130	0.7467
Types 2-4	Chinese Name Foreign Educ	Jinzhong University Lanzhou University Peking University* Tsing Hua University*	0.114 0.178 0.063 0.097	105 118 96 103	0.0638

Notes: Resume types are the same as indicated in Table 10. The F-Test corresponds to the test that all callback rates by university are the same, and is calculated after regressing callback status (0 or 1) on dummy variables for each university where the applicant obtained her bachelors degree from, using robust standard errors. * indicates a university ranked in the top 200 according to the 2010 QS University World Rankings.

Table 13
Callback Rate Differences by O*NET Skill Characteristics

		(1)	(2)	(3)	(4)	(5)	(6)
		O*NET Defined Occupation Requires:					
		Speaking Skills		Writing Skills		Social Skills	
		< Median	>Median	< Median	>Median	< Median	>Median
Resume Type							
Type 0 Callback Rate	English Name Cdn Educ Cdn Exp	0.114	0.16	0.11	0.172	0.141	0.141
Type 1 Callback rate difference btw. Type 0	Foreign Name Cdn Educ Cdn Exp	-0.038 [(0.020)]*	-0.05 [(0.019)]***	-0.02 [(0.018)]	-0.068 [(0.020)]***	-0.048 [(0.019)]**	-0.04 [(0.019)]**
Type 2 Callback rate difference btw. Type 0	Foreign Name Foreign Educ Cdn Exp	-0.017 [(0.022)]	-0.076 [(0.019)]***	-0.03 [(0.019)]	-0.074 [(0.022)]***	-0.027 [(0.022)]	-0.076 [(0.019)]***
Type 3 Callback rate difference btw. Type 0	Foreign Name Foreign Educ Mixed Exp	-0.05 [(0.021)]**	-0.092 [(0.019)]***	-0.047 [(0.019)]**	-0.102 [(0.021)]***	-0.071 [(0.020)]***	-0.078 [(0.020)]***
Type 4 Callback rate difference btw. Type 0	Foreign Name Foreign Educ Foreign Exp	-0.07 [(0.021)]***	-0.084 [(0.020)]***	-0.037 [(0.021)]*	-0.115 [(0.021)]***	-0.095 [(0.020)]***	-0.06 [(0.022)]***

Notes: Callback differences are estimated after dividing the baseline sample by whether resumes were sent to jobs corresponding to O*NET defined occupation skill requirements above or below the median. Cdn = Canadian, Educ = Country where bachelors degree obtained, Eng. = English, and exp = country where job experience obtained. Mixed experience corresponds to first two jobs listed on resume are from foreign country, and most recent (third) job listed is from Canada. *** , **, and * indicate callback rate differences compared to Type 0 are statistically significant at the 1%, 5%, and 10% levels respectively. Sample restricted to Toronto and Montreal.

Table 14
Callback Rate Differences for Resumes Sent to Jobs with Different Language-Skill Requirements

(1)	(2)	(3)	(4)	(5)
Language Requirement Decile	Sample Occupations	Callback Rate for English Name Cdn Educ & Exp	Callback Diff. for Foreign Name Cdn Educ & Exp	Ratio
1	Programmer Maintenance Technician	0.095	-0.024 [(0.032)]	1.3
2	Accountant Web Developer	0.098	-0.011 [(0.035)]	1.1
3	Bookkeeper Systems Administrator	0.109	-0.019 [(0.032)]	1.2
4	Admin. Assistant Office Administrator	0.146	-0.075 [(0.028)]***	2.1
5	Electrical Engineer Design Assistant	0.185	-0.066 [(0.038)]*	1.6
6	Sales Representative Quality Analyst	0.099	-0.004 [(0.038)]	1.0
7	Financial Analyst Project Manager	0.184	-0.063 [(0.041)]	1.5
8	Account Manager Receptionist	0.083	-0.021 [(0.031)]	1.3
9	HR Manager Collection Officer	0.154	-0.062 [(0.039)]	1.7
10	Executive Recruiter Community Counsellor	0.155	-0.02 [(0.047)]	1.1

Notes: Job postings applied to were matched to Speaking, Writing, and Social O*NET defined occupation skill requirements (each with a 1-7 point continuous scale). All three measures were added to create an aggregate score, and used to separate the sample into deciles. Callback differences are estimated as in Table 4 Column 7. Cdn = Canadian, Educ = Country where bachelors degree obtained, Eng. = English, and exp = country where job experience obtained. *** , **, and * indicate callback rate differences compared to Type 0 are statistically significant at the 1%, 5%, and 10% levels respectively. Sample restricted to Toronto and Montreal.

Table 15
Callback Rates from Stated Equal Opportunity Employers for Toronto, Montreal, and Vancouver by Resume Type and Ethnic Origin

		(1)	(2)	(3)	(4)	(5)	(6)
				Callback Rate (Difference Compared to Type 0) [Standard Error of Difference] {Callback Ratio: Type 0 / Type}			
				Ethnic Origin			
		English Canada	India	China	Greek	English Chinese	India / China
Type 0	**English Name** **Cdn Educ** **Cdn Exp**	**0.109**					
Type 1	**Foreign Name** **Cdn Educ** **Cdn Exp**		**0.122** (0.013) [(0.043)] {0.89}	**0.098** (-0.011) [(0.047)] {1.11}	**0.181** (0.072) [(0.064)] {0.60}	**0.095** (-0.014) [(0.070)] {1.15}	**0.113** (0.004) [(0.037)] {0.96}
Type 2	**Foreign Name** **Foreign Educ** **Cdn Exp**		**0.087** (-0.022) [(0.046)] {1.25}	**0.061** (-0.048) [(0.044)] {1.79}	**NA**	**0.000** (-0.109) [(0.027)]***	**0.075** (-0.034) [(0.037)] {1.45}
Type 3	**Foreign Name** **Foreign Educ** **Mixed Exp**		**0.036** (-0.073) [(0.037)]** {3.03}	**0.157** (0.048) [(0.065)] {0.69}	**NA**	**0.1** (-0.009) [(0.100)] {1.09}	**0.086** (-0.023) [(0.040)] {1.27}
Type 4	**Foreign Name** **Foreign Educ** **Foreign Exp**		**0.051** (-0.058) [(0.045)] {2.14}	**0.040** (-0.069) [(0.048)] {2.73}	**NA**	**0** (-0.109) [(0.027)]***	**0.046** (-0.063) [(0.038)]* {2.37}

Notes: Cdn = Canadian, Educ = Country where bachelors degree obtained, and exp = country where job experience obtained. Mixed experience corresponds to first two jobs listed on resume are from foreign country, and most recent (third) job listed is from Canada. *** , **, and * indicate callback rate differences compared to Type 0 are statistically significant at the 1%, 5%, and 10% levels respectively.

Table 16
Callback Rates for Montreal by Whether Job Posting Stated Bilinguel Skills Required

	(1) French/Engl. Required	(2) Not Specified	(3) French/Engl. Required	(4) Not Specified
Type 0 English Name Cdn Educ Cdn Exp	0.156	0.299	0.129	0.307
Type 1 Foreign Name Cdn Educ Cdn Exp	-0.037 [(0.026)]	-0.095 [(0.053)]*	-0.035 [(0.026)]	-0.097 [(0.053)]*
Type 2 Foreign Name Foreign Educ Cdn Exp	-0.051 [(0.028)]*	-0.084 [(0.058)]	-0.048 [(0.028)]*	-0.085 [(0.058)]
Type 3 Foreign Name Foreign Educ Mixed Exp	-0.091 [(0.026)]***	-0.197 [(0.052)]***	-0.089 [(0.026)]***	-0.197 [(0.052)]***
Type 4 Foreign Name Foreign Educ Foreign Exp	-0.062 [(0.029)]**	-0.215 [(0.053)]***	-0.058 [(0.029)]**	-0.215 [(0.053)]***
List French and Engl. Fluency on Resume			0.054 [(0.017)]***	-0.015 [(0.034)]
Sample Size	1,357	535	1,357	535

Notes: Cdn = Canadian, Educ = Country where bachelors degree obtained, and exp = country where job experience obtained. Mixed experience corresponds to first two jobs listed on resume are from foreign country, and most recent (third) job listed is from Canada. Sample includes Montreal only. Standard errors in brackets. *** , **, and * indicate callback rate differences compared to Type 0 are statistically significant

Table 17
Callback Rates for Manual Sample, by Resume Type and Ethnic Origin

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				Callback Rate (Difference Compared to Type 0) [Standard Error of Difference] {Callback Ratio: Type 0 / Type}			
				Ethnic Origin			
	English Canada	India	China	English-Chinese	China / English-Chinese	India / China	India / China / English-Chinese
Type 0 English Name **Cdn Educ** **Cdn Exp**	0.096						
Type 1 Foreign Name **Cdn Educ** **Cdn Exp**		**0.085** (-0.011) [0.037] {1.13}	**0.050** (-0.046) [0.035] {1.92}	**0.095** (-0.001) [0.068] {1.01}	**0.062** (-0.034) [0.034] {1.55}	**0.070** (-0.026) [0.030] {1.37}	**0.073** (-0.023) [0.029] {1.32}

Notes: Cdn = Canadian, Educ = Country where bachelors degree obtained, and exp = country where job experience obtained. *** , **, and * indicate callback rate differences compared to Type 0 are statistically significant at the 1%, 5%, and 10% levels respectively.