THE EFFECTS OF COGNITIVE BIAS AND EMPLOYMENT EQUITY POLICY INTERVENTIONS IN THE HIRING PROCESS

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ABSTRACT

There has been considerable debate in Canada over whether or not the Employment Equity Act has been successful in achieving its objective – to achieve a more equitable labour market by removing systemic discrimination against Aboriginal people, people with disabilities, women, and visible minorities. Over 30 years since its inception, employment outcomes have improved for some groups but not all – most notably First Nations people.

This research draws upon cognitive bias theories and an online decision experiment to examine Canadian recruiters' decision-making in the early stages of an applicant screening process. The study investigates the potential for subconscious biases in recruiter decision-making, and whether or not different employment equity priming interventions influence recruiter decisions.

Results suggest evidence of preferential hiring for minority applicants when participants were primed to focus on employment equity and/or diversity. Implications for Canadian policy makers, researchers, and organizations are discussed.

ACKNOWLEDGEMENTS

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LIST OF ABBREVIATIONS

AANDC   Aboriginal Affairs and Northern Development Canada

ACHRJ   Alberta Commission on Human Rights and Justice

BES   Boreal Equipment and Supply

CA   Chartered Accountant

CGA   Certified General Accountant

CHRC   Canadian Human Rights Commission

CHRP   Certified Human Resource Professional

CMA   Certified Managerial Accountant

CN   Canadian National Railway Co.

CPA   Certified Professional Accountant

EEA   Employment Equity Act

EO   Equitable Opportunity

ESDC   Employment and Social Development Canada

HR   Human Resources

HRSDC   Human Resources Skills Development Canada

LPM   Linear Probability Model

SSRL   Social Sciences Research Laboratory

UNHRC   United Nations Human Rights Council

WGAPE   Working Group on Aboriginal Participation in the Economy

1 INTRODUCTION

1.1 OVERVIEW

Growing public concern about economic and social disparities in Canada in the mid-20th century led the federal government to begin exploring systematic ways to address the sources of these inequalities (Agocs C. , 2002). Research on the Canadian labour economy in particular highlighted significant employment disparities among four specific groups: women, Aboriginal peoples, people with disabilities, and visible minorities, the latter defined as "persons, other than aboriginal peoples, who are non-Caucasian in race or non-white in colour" (Statistics Canada, 2015). Individuals in these demographic groups were being excluded from the workforce at levels far higher than could be explained by differences in their marketable skills or willingness to work (Agocs C. , 2002).

Supported by an increasing body of empirical evidence, the disparate Canadian labour market outcomes between these race and gender groups were believed to be largely a result of systemic discrimination, that is: "those patterns of organizational behaviour that are part of the social and administrative structure and culture and decision-making processes of the workplace… that create or perpetuate relative disadvantage for members of some groups and privilege for members of other groups" (Agocs C. , 2002, pp. 257-258). Recognizing the detrimental effects that unequal access to the labour market has on economic and social outcomes for these groups, understanding and developing ways to address systemic labour market discrimination became a prominent focus of Canadian academics, advocates, and policy-makers.

1.2 INTRODUCTION TO CANADIAN EMPLOYMENT EQUITY

The Royal Commission on Equality in Employment, chaired by Judge Rosalie Silberman Abella was established in 1984 to find "the most effective, efficient, and equitable means of promoting employment opportunities… and eliminating systemic discrimination" (Abella, 1984, p. 5). The employment practices of a number of crown and government-owned organizations were examined in detail, and members of each of the four designated groups were consulted on their job seeking, workforce, and post-employment experiences in the Canadian labour market. These

methods served to paint a clear picture of the Canadian labour market climate and its reception of the four underrepresented groups. As the Commissioner concluded,

> It is not that the individuals in the designated groups are inherently unable to achieve equality on their own, it is that the obstacles in their way are so formidable and self-perpetuating that they can not be overcome without intervention. It is both intolerable and insensitive if we simply wait and hope that the barriers will disappear with time. Equality in employment will not happen unless we make it happen (Abella, 1984, p. 7).

In light of these findings, and after a period of political deliberation, the federal Employment Equity Act was created in 1986 and later revised in 1994 (S.C. 1995, c. 44). The purpose of this Act, which is still in existence today, is to eliminate workplace discrimination against four designated groups: women, Aboriginal people, visible minorities, and people with a disability. The legislation targets the employment policies and practices of workplaces across the country in attempts to foster more equitable labour market outcomes.

The Act states that all federally regulated organizations are required to monitor and report their inclusion of each of the four designated groups in their workplaces, and to adopt "positive" policies and practices that promote workplace diversity and/or correct discriminatory practices. It also specifies that these organizations must communicate their employment equity agenda to all of their employees. This ensures that employment equity practices are not limited to management-level decisions but are adopted throughout the entire workplace; particularly by those front-line employees who make the decisions about which applicants make it to the interview stage and who will ultimately be hired. Individuals who make these early-stage selection decisions are referred to as "recruiters" and are the primary focus of this study.

The underlying rationale behind Employment Equity is that improved employment outcomes for each of the four groups will follow from the ground-level implementation of the Act, facilitated by the creation and formalization of policies and practices that address systemic discrimination within each organization. This behaviour-based approach targets the root causes of workplace discrimination and bias, and has often been positioned relative to the output-based affirmative action doctrine in the United States, which explicitly assigns workforce composition targets

and/or hiring quotas to close the employment gap: "The Abella Commission's formulation of employment equity made for a made-in-Canada solution to the problem of systemic discrimination, one that sought to avoid the political backlash over affirmative action in the U.S." (Grundy & Smith, 2011, p. 340).

1.3 PROBLEM STATEMENT

While the reporting process makes it relatively easy to observe whether or not organizations are in compliance with the federal Employment Equity Act, a major assumption of Canada's employment equity policy approach is that the policies that are adopted by these organizations will actually influence the "culture and decision-making processes of the workplace" (Agocs C. , 2002). That is, recruiters will make their decisions in line with their organization's stated employment equity policy, either through the influences of their work environment (culture) or compliance with accepted practices (processes).

Like all human beings, however, recruiters are susceptible to cognitive biases, including those subconscious biases they may not even realize they hold (Dovidio & Gaertner, 2000). When recruiters' biases are acted upon in their decision-making about prospective employees, this is discriminatory hiring, whether recruiters are aware of their biases or not. It may be the case that organizations' employment equity policies do nothing to discourage discrimination and that recruiters will continue to make discriminatory hiring decisions, even subconsciously, despite federal government and organizational policies.

There is some empirical evidence to suggest this may be the case. Despite the Employment Equity Act being in place for over 25 years, relatively poor labour market outcomes continue to be observed among three of the four designated groups. As of 2011 visible minority women experienced unemployment rates around 11% while non-visible minority women experienced rates as low as 7% (Statistics Canada, 2015). Similarly, in 2011, the unemployment rate for persons with disabilities was 11%, compared with 6% among those who did not report having a disability. Although this gap appears to be closing, especially among university graduates, disabled persons continued to report experiencing discrimination in their search for work in the same period (Turcott, 2015).

Aboriginal people in particular continue to experience chronically high unemployment rates compared to non-Aboriginal people in Canada (Mendelson, 2006). This is especially prevalent among First Nations people who, despite notable improvements in education and skill building, find themselves employed at a far lower rate than the rest of the population (Gerber, 2014). These employment outcomes have very real financial, social, and emotional implications for the First Nations individuals, families, and communities who deal with them. If employment discrimination does contribute to these outcomes to this day, this brings the effectiveness of the Employment Equity Act into question.

It is unclear whether or not the Act has been successful in achieving its goals of removing systemic discrimination from the Canadian labour market, even if we primarily focus on organizations that fall under the scope of the federal legislation (Agocs C. , 2002; Aboriginal Commission on Human Rights and Justice, 2010; Adkins, 1999; Doyle-Bedwell, 2008; Voyageur, 1997; Human Resources and Skills Development Canada , 2012). Policy research to date has focused on high-level program evaluations, overall labour market outcomes of each group, and qualitative case studies of the impacts on particular individuals and populations, often taking a "leap of faith between causes and remedies" (Kalev, Kelly, & Dobbin, 2006, p. 591). Research has thus far ignored the ground-level decision-making processes used to achieve these outcomes – the critical details of policy implementation.

1.4 RESEARCH QUESTIONS AND DESIGN OVERVIEW

This research fills this gap in the existing knowledge by examining the potential impact of employment equity policy intervention on recruiters' hiring behaviours, with a particular focus on the outcomes for First Nations applicants. Specifically, I pose the following two research questions:

> **Research Question 1**: Can racial discrimination be observed in recruiters' applicant screening decisions?

> **Research Question 2**: Do employment equity interventions influence recruiters' applicant screening decisions?

To answer these questions, I use a behavioural decision experiment to test the effects of employment equity interventions on the behaviours of Human Resources practitioners and other

hiring professionals across Canada. To answer the first research question, I investigate the effects of applicant characteristics, specifically race and qualification, on recruiters' screening decisions. To answer the second question, I observe the effects of priming recruiters with different employment equity statements on the same screening outcomes.

This study focuses solely on the resume screening process where job applications are reviewed and evaluated for the first time, and where candidates are selected for interviews or next stages in the employer's hiring process. While this first stage may seem far removed from final labour market outcomes, observing the effects of employment equity policy interventions on these first-stage employment outcomes is critical to help us better understand the potential impact of organizational-level policy interventions in the Canadian labour market, if there are any at all.

1.5 ORGANIZATION OF THESIS

The research is presented in the following four chapters. Chapter Two provides a review of relevant discrimination, employment equity, and decision-making literatures. The research methods and details of the experiment design are discussed in detail in Chapter Three. Chapter Four presents the results of the experiment, and Chapter 5 discusses the implications of the findings for public policy and human resources practice, as well as the limitations of this study and potential future research.

2 LITERATURE REVIEW

2.1 EMPLOYMENT DISPARITY AND CANADA'S FIRST NATIONS PEOPLES

Canada is among the top 10 wealthiest nations in the world, also ranking "above the average in housing, subjective well-being, personal security, health status, social connections, environmental quality, jobs and earnings, education and skills" (Organization for Economic Co-operation and Development, 2018). Canada has simultaneously held a reputation for being one of the more inclusive of the developed nations, often proclaiming that embracing multiculturalism and valuing diversity are key aspects of its national identity (Right Honourable Justin Trudeau, 2015; Ibbitson, 2017). However, measures of the country's socioeconomic inequality and disparity in labour market outcomes between and among different groups suggest this reputation may not be so well-deserved (Lum, 1995; Mikkonen & Raphael, 2010).

Perhaps the most striking example of employment disparity in Canada is found between Indigenous peoples (particularly First Nations people) and the rest of the Canadian population. As of 2006, while non-Aboriginal men and women experienced unemployment rates of 5.2% and 5.9%, respectively, First Nations men and women experienced rates as high as 24.3% and 18.3%, respectively (Gerber, 2014). It has also been found that First Nations people tend to be unemployed for longer periods of time than non-First Nations people and that First Nations women face particularly harsh labour market disadvantages: "Whereas people who identify as North American Indian on the census are the most disadvantaged among Aboriginals, Indian women fare worse than men. On the lowest rung of the ladder are Indian women, who suffer multiple jeopardy based on race, ethnicity (Aboriginal identity), and gender" (Gerber, 2014, p. 121).

Involuntary and prolonged joblessness has been linked to severe mental and physical health problems across North America (Bowman, 1984; Levi, et al., 1984; Liem & Rayman, 1984; Tefft, 2011; Turner, 1995). The same has been found in Canada (Mikkonen & Raphael, 2010; D'Arcy, 1985). As Mikkonen and Raphael note, "lack of employment is associated with physical and mental health problems that include depression, anxiety and increased suicide rates" (2010, p. 17). These negative effects of joblessness do not stop at the individuals who find themselves without work. There is strong evidence of generational unemployment effects as children of

chronically unemployed individuals experience similar mental and physical health issues as their parents (Margolis & Farran, 1984).

The United Nations' 2014 report on the circumstances of Indigenous peoples in Canada highlighted what many individuals and advocate groups have upheld for decades; "The human rights problems faced by indigenous peoples in Canada… have reached crisis proportions in many respects" as substance abuse, suicide rates, incarceration, and many other damaging social patterns continue to be strikingly higher in Aboriginal populations than among their non-Aboriginal neighbours (Anaya, 2014, p. 6). The Canadian Human Rights Commission (2010) and the Working Group on Aboriginal Participation in the Economy (2001) note the importance of addressing employment inequality to improve these and other social outcomes among Aboriginal peoples in Canada.

2.2   DISPARITY THROUGH DISCRIMINATION: EVIDENCE AROUND THE WORLD

Disparate employment outcomes between groups of individuals are typically attributed to two factors: average group differences in productivity, known as a human capital gap; and average group differences in treatment, known as a discrimination gap (Darity & Mason, 1998).

Regarding the former, employment inequality is often argued to be the result of exceptionally low education outcomes in underrepresented populations. Concerning Canada's First Nations peoples, it is important to note that lower education outcome themselves are a product of both the historic and on-going effects of colonialism and the residential school system, as well as overt and systemic discrimination against Indigenous peoples that endures to this day. Nevertheless, human capital theories suggest that disparate outcomes between groups may be the result of lower educational attainment, skills, and qualification, which leads to lower productivity and less accumulation of marketable skills (Darity & Mason, 1998).

The human capital perspective has proven inadequate for fully explaining known employment gaps; even holding education and qualification constant, minority job seekers still tend to be selected for employment to a lesser extent than other demographic groups (Bertrand & Mullainanthan, 2004; Derous, Nguyen, & Ryan, 2009; Kang, DeCelles, Tilcsik, & Jun, 2016). Moreover, high school completion rates and levels of post-secondary enrolment for First Nations people have seen major improvements over the past two decades (Gerber, 2014; Mendelson,

2006). First Nations women hold more graduate degrees as a proportion of the First Nations population than their non-Aboriginal counterparts. First Nations men also surpass their non-Aboriginal male counterparts in terms of trades certification (Gerber, 2014). However, employment outcomes for these groups have not improved in line with these accomplishments (Mendelson, 2006; Gerber, 2014).

Others argue that disparities are a result of unequal willingness to participate in the traditional labour market; that underrepresented groups choose either not to work, or to work in underground labour markets (Mendelson, 2006). Again, this explanation does not tell the entire story. First Nations bands and individuals themselves are becoming increasingly entrepreneurial and eager to join the labour market (Mendelson, 2006; Working Group on Aboriginal Participation in the Economy, 2001; Aboriginal Affairs and Northern Development Canada, 2014). The population of self-employed Aboriginal peoples grew in the first decade of the 21st century, while the population of self-employed Canadians overall declined (Canadian Council for Aboriginal Business, 2016). Furthermore, there is an urban migration trend in Canada as many First Nations peoples are moving from traditional reserve lands and remote communities to larger urban centres, often for the purpose of finding work in the mainstream labour market (Guimond, Kerr, & Beaujot, 2003; Statistics Canada, 2013).

Despite this collective shift into the labour market and the strides made in higher education and skill building, First Nations' employment figures have improved only marginally and are nowhere near what we would expect if education and willingness to work were the only factors contributing to disparities in employment outcomes (Wilson & MacDonald, 2010; Walters, White, & Maxim, 2004). Researchers have thus increasingly turned to understanding the possible sources of a "discrimination gap" and how it might contribute to First Nations peoples' relatively poor labour market outcomes.

2.3 DISCRIMINATION IN THE HIRING PROCESS

In the 1990s, researchers began using experimental and quasi-experimental techniques to investigate discriminatory behaviours at the level of the organization or individual. In their 2004 study "Are Emily and Greg more Employable than Lakisha and Jamal? A Field Experiment on Labour Market Discrimination", Marianne Bertrand and Sendhill Mullainathan investigate the influence of race in the labour market. Using identical resumes but changing applicants' names

to either an African-American- or White-sounding name, they analysed relative call-back numbers to confirm that racial discrimination was still at play in organizations in the Boston and Chicago areas. Even controlling for industry, occupation, and company size, White names received 50 percent more call-backs than African-American ones, despite having equal qualifications (Bertrand & Mullainanthan, 2004).

Derous and Nguyen (2009) also studied the effects of race in resume evaluations in a similar study. These researchers constructed resumes to project Arab, mixed White-Arab, and White race profiles, and asked participants in both American and Dutch samples to evaluate each applicant's suitability for a number of jobs at varying levels of "cognitive demand." It was generally found that, "job suitability ratings were significantly lower for the highly Arab identified profiles than for the mixed Arab-White and White profiles in both American and Dutch samples," indicating that racial discrimination was at play in participants' evaluation decisions (Derous, Nguyen, & Ryan, 2009). Studies by Dovidio and Gaertner (2000) come to similar conclusions. More recent research suggests that "white-sounding" resumes receive more call-backs than "unwhitened" resumes, and that minority applicants actively engage in resume whitening due to the perception that labour market discrimination exists against minorities (Kang et al., 2016).

2.4   ECONOMIC THEORIES OF DISCRIMINATION

Economists have typically attempted to explain labour market discrimination through two general theories: the "taste for discrimination" approach, credited to Gary Becker and his work (2010); and the statistical discrimination approach explored by Kenneth Arrow (1998) and Edmund Phelps (1972). Both approaches assume that firms are profit or utility maximizing and that their recruiters are rational economic agents that make their hiring decisions based on this goal. The differences are in the way firms – or more specifically, their employees who make hiring decisions – evaluate the costs and benefits of hiring minority applicants.

2.4.1   Taste for Discrimination

The taste for discrimination theory posits that discriminatory hiring decisions can be attributed to recruiters' internally held assumptions that there is a "non-pecuniary" cost, e.g. lower productivity or customer aversion, associated with hiring a member of a particular race group,

compared to the recruiter's own identity group (Rosburg, 2011). This theory has largely been used to explain wage disparities but can also be applied to hiring outcomes. For example, a recruiter may avoid hiring a member of a visible minority group for fear that adding that person to the workforce will decrease morale and cohesion among existing majority-race employees, or that hiring the same member for a customer relations position will decrease sales or profits. Essentially, recruiters prefer some race groups to others and justify this "taste" by considering perceived nonmonetary costs of hiring minority applicants in their evaluations: "it arises due to preferences, not due to lack of information" (Bartoš, Bauer, Chytilová, & Matějka, 2016, p. 1438).

It has been argued that in a competitive labour market, any taste for discrimination would be expected to diminish over time as firms and as recruiters realize that their perceived costs to hiring a minority race applicant are actually zero – or possibly negative – and that by overlooking applicants on the basis of a characteristic that has nothing to do with their qualifications or productivity, the discrimination is actually *costly* to the organization (Rosburg, 2011). In turn, labour market outcomes for minority groups would be expected to adjust to more equitable levels.

Overt prejudice is also both socially and legally unacceptable in the 21st century. The costs of actively discriminating against any group, especially those protected under the Employment Equity Act, range from $10,000 for a single violation, up to $50,000 for repeated or continuous violations (Employment Equity Act, 1994), not to mention the potential damage to the organization's reputation. There is little financial or social incentive for an organization, and its recruiters, to consciously discriminate today, though it is entirely possible that discriminatory outcomes may still occur as a result of recruiters' subconscious biases.

2.4.2 *Statistical Discrimination*

The statistical discrimination approach does not assume that recruiters specifically prefer their race group (or any race group) to another. Rather, the idea is that recruiters' incomplete information about minority applicants leads them to resort to stereotypes, or the known average characteristics of the applicant's race group, to evaluate individual applicants' relative

qualifications for the job. In other words, race and gender are considered proxies for unobservable characteristics of interest (Phelps, 1972).

More recently, statistical theories of discrimination based on the model of the purely rational economic agent have been criticized for failing to account for how these stereotypes are formed, and why they perpetuate even when people are presented with information that challenges their accuracy. The field of behavioural economics, particularly the work of Daniel Kahneman and Amos Tversky, provides valuable insights into why and how recruiters continue to resort to race and gender stereotypes, even when they have no incentive to do so and are presented with evidence to the contrary.

2.4.3 Cognitive Bias

Cognitive bias theories build on the economic approaches described above, but drop the assumptions that individuals are perfectly informed and are purely rational in their decision-making. Using their combined knowledge in psychology and economics, and building on other research in behavioural economics, they explore the influences on and behaviours of the non-rational economic agent and imagine the implications on their decision-making. This perspective both inspired and laid the foundation for the current research.

In general, cognitive bias theorists divide human thinking into two systems: System 1 and System 2. System 1 is the automatic, intuitive, and emotion-driven thinking that guides easy tasks, such as walking at a normal pace or recognizing colours; it operates "with little or no effort and no sense of voluntary control" (Kahneman, 2011, p. 20). Simultaneously, System 2 is the engaged, calculated, and reason-driven thinking that individuals use to approach complex tasks like calculating a complex math problem or evaluating job applications. Many different cognitive biases can arise from these processes (see Ariely, 2009; Kahenman, 2011 for a discussion of multiple cognitive biases such as the anchoring effect, availability bias, framing, etc.); however, discriminatory judgments in the hiring process can be best described by what Kahneman and Tversky refer to as representativeness: where individuals resort to easily accessed stereotypes when making judgments about another person, despite obvious logical or statistical information contradicting these stereotypes (Tversky & Kahneman, 1974).

To illustrate, in one of many tests of the representativeness bias, participants were given a description of a woman named Linda, which among other information, described her as an individual who was interested in social justice and philosophy in the 1970s (Tversky & Kahneman, 1974). Participants were also given a list of careers that Linda might have eventually held, including "bank teller" and "feminist bank teller". Participants were asked to decide which of those careers was *most likely* for Linda. Despite the fact that there is obviously a much higher probability of Linda being a bank teller (a relatively large group of people), than of being a feminist bank teller (a smaller sub-population of the same group), participants still tended to guess that Linda was a feminist bank teller. This result has been observed repeatedly, even among professional statisticians who should easily see the differences in these probabilities.

The representativeness bias suggests that participants' conclusions about Linda were based on an easily available stereotype that she was a feminist, based on her previous association with social justice and philosophy. The fact that participants resorted to an easily accessible stereotype over logic and reason to make their judgments about her was telling; the erroneous beliefs of System 1 dominated the decision space without System 2 recognizing an error was being made (Tversky & Kahneman, 1974).

In line with economic theories of statistical discrimination and the representativeness bias, if a recruiter is repeatedly exposed to negative stereotypes of First Nations applicants – such as anecdotal stories of poor performance or lower educational attainment – these impressions may become part of a recruiter's intuitive beliefs about First Nations people and influence their decision in the hiring process. Just as participants in the Linda test resorted to stereotypes about Linda being a feminist to determine that she was a feminist bank teller, recruiters may resort to stereotypes about First Nations applicants' human capital or productivity levels to determine they are not suitable for a posted position, despite them actually being a qualified candidate.

More recent research has added to our understanding of discriminatory decision-making by considering the scarcity of attention recruiters may have to give applicants in the screening process. Building on the taste for discrimination and statistical discrimination approaches and using the theories suggested by behavioural economists, Vojtech Bartos and colleagues consider the implications of the time and resource constraints associated with applicant screening decisions and explore how these constraints might interact with cognitive biases such as

representativeness, which they call "attention discrimination" (Bartoš, Bauer, Chytilová, & Matějka, 2016). They posit that because of these constraints, decision makers must "optimize how much information to acquire based on expected net benefits" (p. 1439), and that in order to do so they rely on group attributes (stereotypes), such as race indicators on applicants names or experiences, to evaluate the suitability of each applicant and whether they are worthy of follow-up or an interview (Bartoš, Bauer, Chytilová, & Matějka, 2016). These effects lead recruiters to tend to overlook even well qualified minority applicants at the outset of the screening process, which has obvious implication for their employment outcomes.

While overt racism is not as prevalent in organizations today as in the past, "averse racism" – subconscious prejudice that is acted upon without conscious intent – has still been observed against some minority groups. Researchers have investigated the nature of discrimination among recruiters in a study that followed the same general design as those previously outlined, but with an added element: participants knew they were making recruitment decisions for an imaginary job as part of a study, and were asked to disclose whether they considered themselves racially biased or not (Dovidio & Gaertner, 2000). Those who reported themselves as racially non-biased were still found to make discriminatory hiring decisions, despite comparable job qualifications of both minority and Caucasian applicants (Dovidio & Gaertner, 2000). Similar results were found in another experiment conducted by Pager, Bonikowski, and Western (2009).

Considering the above theories and mounting empirical evidence that discrimination persists in labour markets around the world today, I expect to also observe discrimination (a representativeness bias) against First Nations applicants in my study. While I will also test this expectation to determine whether it holds, the primary research question to be investigated is whether an employment equity intervention is effective at influencing subconscious human behaviours and reducing hiring discrimination against First Nations applicants. As will be outlined in the next section, this was one of the primary intentions of the federal government's employment equity policy and corresponding legislation.

2.5 CANADA'S RESPONSE: THE FEDERAL EMPLOYMENT EQUITY ACT

Born from a Royal Commission Report, the Employment Equity Act (EEA) was originally established in 1986 and later revised in 1994 to address concerns about its scope, implementation, and enforcement. The EEA requires federally regulated organizations – the federal public

service, businesses in federally regulated industries, and any organization that conducts business with or on behalf of the federal government – to monitor inclusion of each of the four designated groups (i.e., women, Aboriginals, visible minorities, and disabled persons) in their workforce. These employers are required to report this "workforce representation" by salary range, occupation, and according to those hired, promoted, and terminated, to the Canadian Human Rights Commission (Employment Equity Act, 1994).

Underrepresentation of any of the four designated groups is identified through comparisons of the organization's reported representation figures to that of minority representation in the local, provincial, and national labour markets. Based on these findings, employers are required to explain to the Commission how they will correct any underrepresentation, including the specific policies and programs they will undertake. Employers are ultimately responsible for putting those policies and practices into action. In other words, they must "make reasonable progress towards implementing employment equity" (Employment Equity Act, 1994). These initiatives often include plans for staff training, recruitment strategies, and other positive internal policies that improve the organization's employment equity culture.

While employment equity in Canada is often equated to affirmative action policy in the U.S. and numerical representation reporting is similar in both countries, there are fundamental differences in how these approaches attempt to tackle labour market discrimination. Affirmative action directly intervenes in organizations' hiring practices by requiring that they meet prescribed minority representation goals. This strategy ensures that employment outcomes adjust towards more representative levels for each minority group (Agocs C. , 2002; Kelly & Dobbin, 1998). Not surprisingly, affirmative action has been met with considerable opposition from politicians and employers across the U.S.

In comparison, the EEA does not impose set minority employment quotas or targets for employers to fulfil. Canada's approach targets each employer's organizational culture and aims to foster a diverse and inclusive labour market climate by requiring organizations to adopt formalized policies and practices that proactively promote equity in their workplaces. In practice, the goal is to focus employee behaviours towards greater diversity and inclusion of underrepresented groups. The idea is that both overt and systemic discriminatory attitudes and behaviours will be corrected in organizations across the country, and employment outcomes for

underrepresented groups will improve as a result (Agocs C. , 2002; Lum, 1995). As Hoque and Noon state about similar equal opportunity (EO) legislation in Britain,

> "It would also be reasonable to argue that EO policies and practices are unlikely to secure equal treatment on their own unless employers also develop an environment and culture that enables equality of opportunity to flourish. However, an important precursor to the development of such an environment – or indeed an important indicator that such an environment exists – is that a formal written EO policy, backed up by substance, is in place. An environment within which equality of opportunity is genuinely promoted is unlikely to emerge without the fundamental procedural and institutional support of a substantive EO policy." (2004, p. 498)

In their study they find that in general organizations with EO policies saw more equitable treatment among visible minority and white employees compared to workplaces without EO policies, but that some organizations' EO policies are "empty shells", i.e. formal policies that are not actually put into practice as intended or advertised (Hoque & Noon, 2004). They find that many policies "lack substance" and do not actually do much to improve disparate employment outcomes, a finding that is supported in previous research conducted by Lum (1995). In a similar study of the effects of Canada's EEA on employee selection, Leck and Saunders (1992) find that the degree of "formalization" and "comprehensiveness" of an employment equity program did have an impact on the effectiveness of that program in improving minority representation in an organization. They argue that "it is the *content* of the employment equity program that is responsible for the slow progress" in some organizations' employment equity outcomes, compared to others (p.46).

2.5.1 Implementation of Employment Equity

Most Canadian organizations subject to the EEA have not only developed internal policies to guide their own employees towards non-discriminatory workplace behaviour, but also advertise these policies to the public and to potential employees (Lum, 1995). The most common example of this strategy is the employment equity statement: the short paragraph outlining the company's employment equity philosophy and hiring standards, which is often found embedded in postings

for vacant positions. A scan through any Canadian job search website shows that, more often than not, organizations subject to the EEA advertise their commitment to employment equity with these statements on their job postings.

This strategy arguably puts an organization's employment equity policy into concrete practice starting at the initial recruitment of candidates. By advertising their commitment to employment equity, organizations assure members of underrepresented groups that they will be considered fairly in the hiring process, regardless of race, gender, or disability. This relatively small initiative may increase the number of applications from these groups, thus making it easier for organizations to attract a greater number of qualified candidates and work toward more representative workplace diversity – the primary objective of the EEA (Leck & Saunders, 1992; Kang, DeCelles, Tilcsik, & Jun, 2016). For example, a First Nations person who has experienced unfair treatment from organizations they have applied to in the past may be more inclined to apply to work for a company that assures they will be treated fairly throughout the recruitment and selection process.

These statements may also help to reinforce employment equity policies to the people who are in charge of recruitment and hiring and indicates a more direct attempt to comply with Section 14 of the EEA. As Leck and Saunders (1992) state, "personnel in these positions should be aware of their organization's policies and practices as well as their obligations to fulfil the requirements of the Employment Equity Act" (p.34). Since recruiters are usually the ones writing and reviewing job descriptions and postings, inclusion of equity statement on these postings may remind them to be conscious of hiring for diversity or, at the very least, to avoid making discriminatory hiring decisions by making recruiters conscious of their potential biases.

2.5.2 Employment Equity Statements as Priming Mechanisms

Consistent with the idea that the inclusion of employment equity statements on job postings may have an impact on recruiters' behaviour, cognitive biases theories may suggest that equity statements can be considered "priming" mechanisms. Priming is an event, action or process through which certain ideas on a subject are evoked, which ultimately influences the decisions or behaviours of those who are being primed (Kahneman, 2011). In other words, priming mechanisms prompt people to think or act on something in a way that they may not have

otherwise, had it not been suggested in the first place. In thinking of the two Systems, priming induces a state of cognitive ease for System 1, in which you are "likely to be relatively casual and superficial in your thinking" (Kahneman, 2011, p. 60). In this state, System 2 may fail to recognize that a higher degree of cognitive strain is necessary to accurately evaluating or analysing the situation, and so the primed person is likely to act or decide according to what was suggested.

The 'priming effect' is illustrated in an experiment involving a refreshment station in a university break room with pay-per-use contributions to the refreshment fund. In this study, students were given unlimited access to tea and milk in a common break room, provided they contributed to a cash donation jar on the counter for the tea and/or milk that they used (Bateson, Nettle, & Roberts, 2006). As it goes in many break rooms, this fund operated on the honour system where students were free to leave an amount they considered appropriate for the goods that they used. Donations were not monitored or enforced. During the experiment one of two banners was posted above the donation jar, each on separate occasions, with the image on the banner showing either a pair of human eyes staring back at the onlooker, or a picture of flowers. This first image was meant to prompt students into feeling like they were being watched or that their generosity to the fund was being monitored. The second, less imposing image was intended to have little to no effect on participants. These two images were alternated week-by-week over 10 weeks. It was found that on weeks with the "eyes" image, students donated more to the tea and milk fund than on weeks with the "flowers" image. This suggested that seeing the on-looking eyes primed employees into thinking they were being monitored, encouraging them to contribute more to the fund than they would if they had no one paying attention to their level of generosity (Bateson, Nettle, & Roberts, 2006). Priming effects have been demonstrated in many other experiments (see Kahneman, 2011 for descriptions of these studies).

In the same manner, equity statements included in job postings may act as priming mechanisms for recruiters in the screening process. Recruiters often read these statements prior to making selection decisions, as they are likely to review the job posting before screening begins (Gatewood & Field, 2001). Thus, it is possible that the statements on the job posting could influence the way recruiters view each pool of applications, ultimately shaping their hiring choices. For instance, upon being primed that their organization is committed to the equal

workplace treatment of women, Aboriginal peoples, visible minorities, and persons with a disability, a recruiter may consider applications from members of these groups more positively, leading them to shortlist these applicants when, in the absence of a priming statement, they may not have. If the recruiter is susceptible to a representativeness bias against these applicants, an intervention like an employment equity statement could potentially reverse or mitigate the influence of this subconscious bias through similarly subconscious corrective measures.

It may also be the case that the intervention will have no effect at all. Research has often shown that even when participants have been informed of their biases, are aware they are being manipulated, or are considered experts, it has not completely mitigated the effect of different forms of cognitive bias (Kahneman, 2011; Dovidio & Gaertner, 2000; Ariely, 2009). As Kang et al. find in their research on the effects of resume whitening in the labour market, "pro-diversity employers' statements are not actually associated with reduced discrimination" (Kang, DeCelles, Tilcsik, & Jun, 2016).

Research has also suggested that employment equity policies may have unintended consequences. One major study investigated whether the presence of "diversity structures" in organizations does anything to improve attitudes and behaviours towards underrepresented groups in the workplace (Kaiser, et al., 2013). Through six related experiments the researchers find that diversity structures can create an "illusion of fairness" in the organization and actually lead recruiters to become more prone to discriminatory behaviour (p. 504). Another study examines the effectiveness of three diversity policy approaches – including employee training and feedback relating to recruiter biases – and finds that these policies "may activate rather than reduce bias" (Kalev, Kelly, & Dobbin, 2006, p. 593). These findings have major implications for the potential effectiveness of the EEA in Canada.

2.5.3 Employment Equity Outcomes to Date

Labour market and employment outcomes have improved for some of the four designated groups in recent years. For instance, visible minorities today make up a much larger proportion of the working population than ever before, and women's representation in the workforce is almost equal to that of men's (Human Resources and Skills Development Canada , 2012). Concerning Aboriginal peoples, research investigating the impact of employment equity policy on their

labour market outcomes has been relatively limited and has focused heavily on qualitative situational analyses, case studies, and descriptive empirical trends since the adoption of the EEA (Aboriginal Commission on Human Rights and Justice, 2010; Adkins, 1999; Doyle-Bedwell, 2008; Voyageur, 1997).

There is general consensus among Canadian employment equity researchers that despite its sound intention, the true causal impacts of the EEA remain unclear (Agocs C. , 2002; Grundy & Smith, 2011; Lum, 1995; Leck & Saunders, 1992). All of these researchers are concerned with assessing the effectiveness of employment equity policy to date and point to inconsistent outcomes across each of the designated groups over the past two decades as an indication that the EEA has not worked as it was originally intended. Lum explains that, "employers are following the letter of the law but certainly not the spirit of the legislation" (1995, p.69). As for *why* the EEA may have been unsuccessful so far, there are two different, but complementary explanations.

The first explanation proposes that implementation and enforcement measures, weakened by repeated political interference throughout the 1980s and 1990s, do not provide nearly enough disincentive for organizations to avoid non-compliance (Agocs C. , 2002; Grundy & Smith, 2011). These researchers cite the EEA's particularly benign consequences for non-compliance with the EEA: namely low fines for failing to report, and almost non-existent fines for failing to adopt meaningful employment equity practices. As Carol Agocs (2002) explains, "The results of employment equity policy are disappointing because the policy is not being implemented by employers and effectively enforced so that there are consequences for employers' failures to comply" (p. 256). The second explanation is that the design of the EEA itself is inherently flawed; numerical representation approaches and data collection methods provide an incomplete picture of diversity and equity in the workforce (Grundy & Smith, 2011). These researchers point to issues of non-rigorous standards of reporting among employers, and inconsistent group membership definitions.

Considering these criticisms and the aforementioned literature on the ineffectiveness of organizations' employment equity policies, my study examines the effect of one common employment equity intervention – the inclusion of equity statement on job postings – on early-stage hiring outcomes. The next chapter describes the research design and methodology used to determine the influence of these interventions on Canadian recruiters' hiring behaviours.

3 METHODOLOGY

3.1 INTRODUCTION

The research described in the previous chapter highlights how decision-making experiments can be particularly useful in understanding discriminatory behaviours in the hiring process. Most of these studies were conducted through field experiments with a similar design: each responded to actual job postings from real organizations using manufactured applications which clearly projected differences in either gender or race, or both. "Call-back" numbers for each of the manufactured applicants were then recorded and analysed to illuminate discriminatory hiring behaviours, if they were present.

Experimental approaches to exploring discriminatory behaviour have some clear advantages over methods that rely on individual microdata or macro statistics to infer labour market discrimination. A field experiment allows researchers to achieve some measure of both external and internal validity. Researchers can directly observe the decision-making behaviours of actual recruiters (or selected participants), rather than inferring behaviours from highly confounded secondary data. Randomized designs provide an additional level of control over factors such as organizational culture, applicant-job fit, and resume format and style, among others, since these factors are either controlled for, or directly incorporated into the study design.

This study adopts a similar approach to prior studies, with two key adjustments:

The decision environment is simulated: Instead of responding to real job postings with fake resumes for recruiters to review alongside applications submitted by actual job seekers (with unknown qualifications and characteristics), the applications created here are reviewed by selected participants who are knowingly acting in a simulated decision-space. This simulated space allows for greater control over factors like applicants' *relative* qualifications, the hiring organization's culture and location, as well as resume screening time and decision tasks, making it easier to mitigate any potential unintended effects of these factors on decision outcomes. It also allows for the collection of additional information on recruiter demographics and their pre-existing attitudes about diversity. These benefits lend to greater internal validity, albeit at the expense of some realism (external validity). Lastly, using a simulated environment has the ethical

advantage of not wasting real organizations' valuable time and resources on experiments in which they do not consent to take part.

A priming mechanism is added: One contribution of this study over and above previous research is that a priming mechanism has been added to determine the effect (if any) of employment equity policy intervention on recruiters' screening decisions. Considering the works of Hoque and Noon (2004) and Leck and Saunders (1992), I also explore whether the content of organizations' employment equity messaging matters, applied in the Canadian context.

3.2 DESIGN

3.2.1 Overview of three decision experiments

Participants who were solicited and agreed to participate in this study were randomly assigned to one of three different online decision experiments. Across each decision experiment, participants were instructed to imagine themselves on a hiring committee for a fictitious company, Boreal Equipment and Supply (BES). All participants were presented with the same job posting for a vacant position within BES. While the job duties and requirements were held constant across the three experiments, each experiment included one of three possible employment equity statements (priming interventions), described below.

A review of Canadian job advertisements from a variety of sectors, industries, and locations was compiled from a number of Canada's most popular job-search websites (i.e., indeed.com, Career Beacon, monster.ca, saskjobs.ca). The search revealed that employment equity policy statements can be broadly categorized into two distinct approaches, which constituted two of the decision experiments. The first is the "Regulatory" approach and the second is the "Diversity" approach. The third decision experiment was used as a control group, and included the complete absence of an equity policy statement ("None" or "No Statement").

3.2.1.1 The Regulatory Approach

The fact that the Employment Equity Act exists at all is a clear sign that workforce diversity is a value that is not held to the same level by every Canadian employer. As such, some federally regulated employers may adopt employment equity policies and practices out of necessity to comply with legislation, rather than as a result of an internally-driven diversity agenda.

While we cannot judge the intention or motivation of a company by the statement they include on their job advertisements, many employment equity statements have a distinct flavour that clearly places the policy's focus on legal compliance with the Employment Equity Act. For instance, Canadian National (CN) Rail provides an example of what might be considered a compliance-oriented statement on their job postings: "CN is an employment equity employer and we encourage all qualified candidates to apply" (Canadian National Railway Co., n.d.).

3.2.1.2   The Diversity Approach

In contrast to the Regulatory approach, other federally regulated (and non-regulated organizations) have adopted their own workforce diversity plans, whether prompted by the Employment Equity Act or because they believe it is the "right" thing to do. Other organizations may simply believe that it is a good business practice to achieve a diverse workforce (Jain & Verma, 1996), potentially because they believe it will increase organization performance (the business case). Whatever the reason, these organizations may signal a much more inclusive approach to workforce diversity in their statements than the regulatory approach previously outlined. These organizations adopt statements that openly acknowledge their commitment to diversity and inclusion by drawing upon the benefits for their organizations.

An example of this approach can be found on University of Saskatchewan job postings: "The University of Saskatchewan is strongly committed to a diverse and inclusive workplace that empowers all employees to reach their full potential. All members of the university community share a responsibility for developing and maintaining an environment in which differences are valued and inclusiveness is practiced. The university welcomes applications from those who will contribute to the diversity of our community..." (University of Saskatchewan, 2014).

3.2.1.3   No Statement (control group)

There are many organizations in Canada that are not bound by the EEA, do not have formal employment equity or diversity policies in place, and/or simply do not include equity statements on their job postings, choosing instead to achieve their equity and diversity goals in other ways. These organizations are not necessarily engaged in discriminatory hiring practices, but are also not outwardly signaling to the public or potential applicants that they are actively committed to achieving an equitable workforce. Examples of these organizations can be found in studies

conducted by Kim Hoque and Mike Noon (Hoque & Noon, 2004; Noon & Hoque, 2001) and by Lum (1995).

The differences in presence and content of the Regulatory and Diversity statements might lead recruiters to consider their organization's commitment to diversity differently. A job posting with no equity or diversity statement at all offers no apparent priming mechanism – a reliable control from which the effects of the other approaches can be compared in the analyses.

3.3 SCENARIO

Each participant was randomly assigned to only one of the three priming approaches: No Statement, Regulatory, and Diversity. These statements (or lack thereof) can be found in the job postings presented in Appendices A, B, and C.

The Regulatory statement was adapted from the statement found on CN Rail online job postings described earlier, with the added element of explicitly listing the four employment equity groups. This acts as a reminder from the organization that participants have a legal obligation to *not* discriminate against those applicants, reducing the potential impact of participants' ignorance of the EEA in their decisions. The result is as follows: "BES is an equal opportunity employer and welcomes applications from persons of Aboriginal ancestry, persons with disabilities, members of visible minorities, and women."

Similarly, the Diversity statement was adapted from the University of Saskatchewan online job postings, focusing participants' attention on the organization's standards of behaviour and their cultural commitment to employment equity, rather than on legal compliance: "BES is committed to a diverse and inclusive workplace. All members of BES share a responsibility for developing and maintaining an environment in which differences are valued and inclusiveness is practiced."

The reader will note that the two equity statements are roughly the same length and general composition, limiting the potential for other style and formatting elements to affect the results. The font, size and style were kept consistent with the rest of the text so not to draw undue attention to the manipulation and reveal the experiment's purpose. Preliminary testing further refined the best representations of each approach and confirmed their salience in the job posting.

Once participants were given the study instructions and were randomly assigned to one of three job posting conditions, they were asked to review 12 applications to the position and make two distinct screening decisions (outlined later) based on the applicant information provided. Each application or resume reflected a particular combination of race, qualification, and applicants' decision to self-identify as a member of a designated employment equity group (these manipulations are outlined in more detail in section 3.3.2). Examples of three particular combinations of race, self-identification, and qualification level are provided in Appendices D, E, and F.

Participants' screening decisions were recorded alongside information about how long, how often, and what order they viewed applications and made their decisions. A short post-experiment survey collected demographic and additional information on their experiences with hiring and employment equity policies. The decision experiment instructions and survey questions are presented in Appendix G.

This study design is highly complex, as it adopts both a between- and within-subjects design. The presence of discriminatory hiring behaviour is observed through within-subjects analysis; i.e. the effects of race, qualification, and self-identification across applicants *within* each statement type (decision experiment). The influence of employment equity policy is then observed through between-subjects analysis; i.e. the effects of employment equity statements across participants *between* each statement type (decision experiment). Figure 3.1 below illustrates the overall structure of this design.

	Between Subjects (Statement Types)		
	(One job posting for all three versions)		
	Regulatory	*Diversity*	*None*
Within Subjects (Applicant Types) — Resume Combinations (based on independent variables)	1	1	1
	2	2	2
	3	3	3
	4	4	4
	5	5	5
	6	6	6
	7	7	7
	8	8	8
	9	9	9
	10	10	10
	11	11	11
	12	12	12

Presented in a randomized order for each participant.

Participants randomly assigned and distributed equally between these three versions

FIGURE 3.1: ILLUSTRATION OF EXPERIMENT DESIGN

Many judgements were made regarding the design details of the job posting and applications. Some trade-offs were necessary to maintain an acceptable scope and degree of both internal and external validity (realism) for the purposes of this study. The rationales for these decisions are outlined in more detail in the following sections.

3.3.1 Job Posting Characteristics

3.3.1.1 Sector

For this study a fictitious private sector company was chosen instead of a public sector organization or agency. While more government agencies and public sector organization are subject to the EEA, many private sector employers are also subject to the EEA, and today, private sector companies employ the majority of workers in Canada: approximately 11.9 million workers as of January 2018, compared to the 3.7 million public sector workers in the same time period (Statistics Canada, 2018). Using a private sector company provides three main advantages. First, it presents a more familiar decision environment for participants, who are more likely to be employed by a private sector organization. Second, using a private sector firm reflects the national labour market more appropriately, which creates greater external validity when drawing conclusions about the implications for the labour market as a whole. Lastly, public sector organizations are less susceptible to competition and the vagaries of the market, which may radically alter recruiters' decision-making processes.

3.3.1.2 Location

Job location was kept constant in all decision-making scenarios. Since the sample of participants is drawn from across Canada, individuals' familiarity with one particular city or town would necessarily vary among them and could potentially have a significant impact on their screening decisions. For example, if BES is located in Calgary, Alberta, a participant who is also from Calgary may be more familiar with the city's local labour market and may look for certain applicant characteristics that another participant from say, Gander, Newfoundland would not know to consider. Choosing one Canadian city that all participants are equally familiar with is impossible due to Canada's vast geography, not to mention the regional diversity in political and economic philosophies and climates.

Instead of selecting a real Canadian city, I chose to present participants with an obviously fake location name: Townsville, Canada. With this approach, we can be certain that all participants share equal familiarity with Townsville (i.e. none, since it does not exist). The same reasoning applies to province-specific familiarity, and so an indication of province was omitted altogether. "Canada" was specified to reiterate to the participant that they are hiring within the country; given that the EEA is federal legislation (not provincial), this is arguably the most relevant approach for this study.

The company name, Boreal Equipment and Supply, may lead participants to understand the company operates somewhere within Canada's Boreal region. While this type of cue contradicts some of the location-neutral efforts just described, including this aspect was necessary to keeping the simulation as realistic as possible. I posit that the North American Boreal Zone is expansive enough that most participants from across the country should be somewhat familiar with its characteristics; all three territories and seven of the ten provinces in Canada have at least some Boreal Zone within their geographic boundaries. Thus, participants are given enough information about the general location and purpose of the organization to engage in the simulated decision environment in a meaningful and realistic way, without encouraging them to consider the political or economic characteristics of a particular Canadian city or province.

3.3.1.3 Vacant position

The vacant position was chosen to meet two criteria. The first criterion is to address similar issues as noted in the location selection previously: the position should be familiar to recruiters

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from a wide variety of backgrounds, locations, and sectors (participant recruitment is outlined in more detail later). The second criterion is that the distinction between a *well qualified* applicant and a *minimally qualified* applicant should be easily demonstrated through one definite and recognizable applicant characteristic. This would avoid inviting participants' subjective discretion about applicants' relative qualifications. For example, managerial positions are often evaluated on soft skills such as the capacity to lead, communicate, and organize. These traits are difficult to quantify, which makes it difficult to compare applicants without resorting to subjective judgments.

What profession could be found in most organizations and across any field or sector in Canada, where relative qualification could also be clearly signalled through one characteristic? Most organizations have at least one person responsible for the company's financial bookkeeping or accounting. Accounting is also a regulated profession in all provinces, requiring members to hold official Certified Professional Accountant (CPA) designations. This provides a clear binomial qualification identifier; whether the applicant holds a CPA designation (1), or not (0). The accounting position of *Cost Analyst* was chosen as the vacant position for this experiment. Preliminary testing confirmed that the CPA designation was a salient indicator of the relative qualification for the job.

It may be worth noting that the position was originally created as *Junior* Cost Analyst, reflecting an entry-level position as opposed to a mid-level position. However, preliminary testing of the job ads revealed that it was perceived as unlikely that a person would make the effort and take the risk to move laterally to another entry-level position, or that a professional designation would be required for this type of position. So, the vacant position was raised to a mid-level Cost Analyst job to reflect a more realistic opportunity for prospective applicants. An added benefit of this change was that I could further distinguish a minimally qualified applicant from a well-qualified applicant with an additional characteristic via applicants' current job titles in their work history; attaching a "Junior" or equivalent seniority label to the beginning of the job title would reflect the former, and omitting the Junior label or including a "Senior" or similar label would reflect the latter.

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3.3.2 Independent Variables

All other decision information was presented through individual applicant characteristics embedded in each resume. There are three key characteristics under consideration in this study: race, qualification, and self-identification. The construction of each variable is outlined in detail below.

3.3.2.1 Race

There are three race groups considered in this experiment: First Nations, South Asian, and Caucasian. Since discriminatory hiring behaviour has historically favoured Caucasian applicants, who make up a large majority of the Canadian population, this group is an obvious choice for this study.

The EEA designates Aboriginal people in general as an underrepresented labour market group. In Canada this includes Metis, Inuit, and First Nations people. Recognizing that these three indigenous groups are distinct in terms of their culture, demography, and socioeconomic challenges, it was appropriate to either include them all as their own race groups or choose just one. For the sake of simplicity and considering the previous chapter's commentary on First Nations peoples' exceptionally challenging socioeconomic situation, this study focuses only on First Nations applicants.

Finally, the South Asian category represents applicants that are considered members of a visible minority under the Employment Equity Act. This race group is added to this study for a few reasons. First, accounting for another designated Employment Equity Act group eliminates the possibility that *non-Caucasian* race effects will be captured in the First Nations outcomes alone. In other words, this ensures that any perceived discrimination against First Nations applicants is not, in fact, a broader discrimination against non-Caucasian applicants in general. In this way, the South Asian category provides a type of control – and an important one as results will later show. Secondly, it allows for a deeper exploration of the choice preferences among recruiters, especially when they are asked to either comply with employment equity legislation or hire for diversity. For example, when encouraged to hire in the spirit of diversity and inclusiveness, are recruiters more likely to choose a First Nations applicant or a member of a visible minority group, and is this result the same for participants who are reminded of their organization's legal

obligations or commitment to diversity? As the reader will see in the next chapter, this distinction also brings forth some interesting results. Lastly, adding a visible minority race category may help disguise the purpose of this study from participants and give the decision scenario a more realistic edge.

Why South Asian? Since the visible minority race category is intended to reflect an alternative choice for a designated employment equity group to First Nations' applicants, this group had to be: 1) easily identifiable as a member of a visible minority; and 2) comparable to the First Nations population in terms of size. Through extensive pre-experiment testing it was confirmed that South Asian place-names, schools, and other characteristics are easily recognizable as belonging to a visible minority in Canada. As far as population size is concerned, according to Statistics Canada, the Canadian population that reports being of South Asian origins is most comparable in terms of size to the population that reports being of North American Indian origins (Statistics Canada, 2009). Moreover, like "First Nations" is an overarching term for many unique indigenous peoples and nations across Canada, South Asian as a racial categorization includes people from a number of communities, cultures, and backgrounds who share other historical, social, and racial characteristics, and who originate from a relatively large but particular geopolitical area.

In most of the previous studies on discrimination in the hiring process, applicant first and/or last names were used as the primary race indicator on each of the resumes. This approach is not adopted here. While it is necessary to clearly project the applicant's race in studies like these, it has been suggested that doing so via applicant names has considerable potential to make the purpose of the study salient to participants (Riach & Rich, 2004). Instead, race was projected through applicants' high schools, past employers, references, volunteering, and awards, described in detail later.

3.3.2.2 Qualification

Two levels of qualification are included in this study. While all applicants are qualified for the posted job, half are considered *minimally qualified* and the other half are considered *well qualified*. Discriminatory screening behaviour can be clearly observed if minimally qualified applicants from one race group are consistently chosen over well-qualified applicants of another group. Using only one level of qualification makes distinguishing discriminatory behaviour from

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other types of preference choices much more difficult. Moreover, it would be unrealistic to conduct a within-subject resume screening experiment with applicants who are all qualified at the same level, and it would also be highly unlikely that numerous applicants who are not at all qualified would apply for the position. This approach improved the realism and external validity of the study.

As of October 1st 2014, the regulatory body Chartered Professional Accountants Canada completed the unification of three separate accounting entities across the country: Certified Managerial Accountants (CMA), Chartered Accountants (CA) and Certified General Accountants (CGA). For professionals under each of these three designation titles, their qualifications are now preceded with "CPA". For example, Certified Managerial Accountants are now CPA (CMA), and so on. In this experiment well-qualified applicants show that they hold one of these three CPA designations, while less qualified applicants do not. Preliminary testing confirmed that this designation was an appropriate indication of relative qualification.

3.3.2.3 Self-identification

The final manipulation in this study is applicant self-identification: whether or not an applicant chooses to openly identify themself as belonging to a designated group under the Employment Equity Act. Since self-identification is voluntary, this variable is intended to capture its potential effect on recruiters' screening behaviours. Kang et al. find that "what matters in getting a job is not one's racial minority status itself but, rather, the degree to which that status is salient and the type of racial minority that one is perceived to be" (2016). In the Canadian context, does a First Nations person who explicitly identifies as being an Aboriginal applicant tend to have better or worse outcomes than a First Nations person who does not outwardly identify with a designated employment equity group? While not a primary focus of this research, this potential effect could provide important insights.

In this study self-identification is conveyed through a checkbox at the bottom of each application. Applicants that self-identify display a checked box for either the "Aboriginal person" (First Nations) option or the "visible minority" (South Asian) option, depending on their race. Applicants who do not self-identify simply have unchecked boxes. Since Caucasians as a race group are not designated under the Employment Equity Act, this self-identification variable does

not apply to this group. Thus, Caucasian applications always have unchecked self-identification boxes.

In all, there are 12 possible combinations of the three key characteristics at their various levels. Table 3.1 provides an overview of these combinations. Five variations of each combination were constructed to enhance the generalizability of the results (i.e., beyond just one particular resume combination), meaning a total of 60 applications were created for this experiment.

TABLE 3.1: APPLICANT RACE, SELF-IDENTIFICATION, AND QUALIFICATION COMBINATIONS

Combination	Race	Self-identification	Qualification Level
1	First Nations	Self-identifies	Most
2	First Nations	Doesn't self-identify	Most
3	First Nations	Self-identifies	Least
4	First Nations	Doesn't self-identify	Least
5	South Asian	Self-identifies	Most
6	South Asian	Doesn't self-identify	Most
7	South Asian	Self-identifies	Least
8	South Asian	Doesn't self-identify	Least
9	Caucasian	N/A	Most
10	Caucasian	N/A	Most
11	Caucasian	N/A	Least
12	Caucasian	N/A	Least

3.3.3 Control Variables

There are many personal and professional characteristics other than race, qualification, and self-identification that are projected in typical job applications and resumes in the real world. These include variation in types of schooling, volunteer activity, interests and awards, communication styles, etc. While these characteristics are of no interest in this study, including them and having acceptable variability among applicants was necessary to presenting a realistic decision scenario. That said it was also necessary to mitigate any potential effects of these characteristics on participant screening decisions. This section explains how these characteristics were included and controlled in this study.

3.3.3.1 Resume format and style

Resume format and writing style have been found to influence recruiters' evaluations of applicants (Riach & Rich, 2004). To remove this effect in this study, applications were presented to recruiters as if they had been completed using a standardized online application form. This

practice is becoming increasingly common in workplaces across North America as employers struggle to manage high applicant volumes. All applications were formatted exactly the same (see Appendices D, E and F); only the content varied. Writing tense (i.e., past and present) and sentence structure were also randomized to add variability among applicants' language and reduce any potential effects of communication style.

3.3.3.2 Gender

While it has been shown that gender has a significant effect on hiring outcomes (Cole, Feild, & Giles, 2004) this particular relationship is not a priority for the purposes for this study and is omitted here to reduce complexity. To make gender a non-factor, only female applicants are presented. Females were chosen because, despite having higher university graduation rates, First Nations women continue to face much more persistent labour market challenges than their male counterparts (Walters, White, & Maxim, 2004; Gerber, 2014). This strategy also avoided confounding the design – participants who receive equity priming may choose female applicants over males, as women are also one of the four designated Employment Equity groups.

3.3.3.3 First and Last Names

As mentioned above, names in this experiment were designed to be race-neutral. A list of 60 first names was compiled by conducting an online search for female South Asian names (e.g. those from Bangladesh, India, Pakistan, etc.), and selecting ones that also sound North American so they could be used as Caucasian and First Nations applicants as well. In some cases, alternate spellings of the same name were taken as two separate name options, as is common.

A list of 60 last names was compiled by again doing an online search for North American-sounding South Asian last names, as well as North American sounding First Nations last names. This last search was primarily done on the Aboriginal Veterans Affairs website, using a list of notable Canadian Aboriginal veterans.

The legitimacy of all first and last names was confirmed through input from friends and colleagues of South Asian and First Nations decent, as well as through preliminary testing, described later. All names were confirmed to be race-neutral when presented unattached to other race-specific variables.

3.3.3.4 Email address

For additional variability, 18 different email address formats were used, since it would be unrealistic for every applicant to use the same domain and address format. Some applicants' emails use a firstname_lastname@gmail.com, others a lastnamefirstname@workplace.ca, and others a firstname.middleinitial.lastname@hotmail.com format, and every combination in between. To mitigate the potential effect of email address on selection decisions, these combinations were randomly assigned to each applicant.

3.3.3.5 Start Date

All start dates fall between zero to eight weeks from the job posting date to minimize the effect of this characteristic on outcomes. For variability, the format of the date provided was randomized. Some were presented in MM/DD/YYYY form, others stated "Immediately" or "Right away", and others in Month, Day form.

3.3.3.6 Age and timeline

Although not stated explicitly in any application, all applicants in this study reflect an individual around the ages of 25 - 30. This information can be inferred from the applicants' university graduation year and the dates of employment at both jobs listed in the Employment History section. A list of several possible graduation dates and employment intervals was compiled, which were randomly applied to each applicant.

3.3.3.7 High School

A list of 15 high schools was created for each race group, using an online search for Canadian, First Nations, and South Asian high schools. Some creative discretion was used to avoid presenting a school that would be familiar to participants (and influence their screening decisions as a result), and to project race signals more blatantly, when necessary. Each applicant was randomly assigned a school within the race group they were meant to represent.

3.3.3.8 University

Since the impact of the prestige of institutions on selection outcomes is not of interest here, it was important to keep each university as comparable to others in this way as possible. A list of 16 post-secondary schools with roughly equal prestige was compiled using MacLean's magazine

2013 Top Ten Canadian Universities (Dehaas, 2012). These were randomized among applicants, along with variations in possible degree titles, e.g. B. Comm (Acct), B. Acc, etc.

Thus, all South Asian applicants attend a Canadian university in this decision experiment. It is well known that comparing post-secondary qualifications on an international scale is not straightforward, and many employers (and universities) consider foreign credentials differently than those from more familiar Canadian institutions. Canadian law also requires certain institutions to give preference to hiring Canadian citizens and permanent residents. These types of effects could potentially confound the results of this experiment, so here it is implied that all South Asian applicants had immigrated to Canada after high school and before completing their accounting degree.

3.3.3.9 Employment History

Each application listed two past jobs in the Employment History section, including job titles, employers, periods of employment, and three job duties. As mentioned earlier, periods of employment were randomized to remove the effects of applicants' age or career timelines. As for the job itself, the following lists were created:

- 20 current job titles, with 5 associated job duties
- 20 previous job titles, with 5 associated job duties
- 40 current employers (the same list for every applicant)
- 45 previous employers:
    - 15 projecting a "First Nations" employer (e.g. Gitkan Wet'suwet'en Resources)
    - 15 projecting a "South Asian" employer (e.g. Savkur International Agencies)
    - 15 projecting a "Caucasian" employer (e.g. Hillside Home Care)

Job titles and duties were compiled using online job search websites, the Government of Canada Job Bank and Careers resources, and payscale.com. Each job level (current and previous) shared roughly the same compensation level to ensure all were comparable. Lists of employers were compiled using a similar search, and with some creative discretion mentioned previously.

Each applicant was randomly assigned a current job and employer from these lists, along with 3 of the 5 possible job duties. Writing tense and style were adjusted according to the random assignment mentioned earlier. Applicants' job duties and the order in which they were listed were also randomized.

3.3.3.10 Awards and volunteer

Each application included a Skills and Qualifications section, where proficiencies, awards, and volunteering were listed. Proficiency levels in common office and accounting programs and practices were constant among all applicants. Lists of awards were compiled within each race group, again using an online search and some creative discretion. Volunteering lists were created in the same manner. These traits were randomly assigned to each applicant according to their race, and again were adjusted to reflect their randomly assigned writing style and tense.

3.3.3.11 References

Each application included a section for two professional references. The first referee was associated with their current position, and so their name was designed to be race neutral. The second referee was associated with their previous job, and so their first and last name was designed to project the applicant's race. Lists of 40 possible first and last names for each group and reference were compiled in the same manner as applicant names were. These were again randomly assigned to each applicant.

3.3.3.12 Versions and Assignment

As previously highlighted, to eliminate the possibility of a specific trait combination or unintended characteristic having an effect on decision outcomes, 5 versions of each of the 12 combinations were created; e.g. 5 different versions of a well-qualified, self-identifying First Nations applicant; 5 different versions of a less qualified Caucasian applicant; etc. In total there were 60 possible resumes (5 versions of 12 combinations). Each participant was randomly assigned 1 of the 5 versions of each applicant combination.

3.3.4 Dependent Variables (Decision Tasks)

3.3.4.1 Shortlist

Participants' first task was to shortlist the top six of the 12 applicants given to them, i.e. choose half of the group to move on to the interview stage, while the other half would be considered unsuccessful. Since exactly six applicants are distinctly most qualified for the job, and the other six least qualified, this decision is clear if it was based solely on qualification. This presents the first opportunity to observe discriminatory hiring behaviour.

3.3.4.2 Rank

Participants were then asked to rank the top three of the six applicants they had just shortlisted. Identifying the best candidates going forward to the interview process reflects common practice in resume screening, and provides an additional opportunity to look deeper into recruiter preferences. For example, if a minimally qualified race group makes the top-three candidate list or is chosen as the top candidate on a consistent basis, this is a strong indication of bias in favour of applicants of that particular race. Alternatively, if a well-qualified race group is repeatedly excluded from the top-three shortlist or as a top candidate, this is a strong indication of discrimination against applicants of that race group.

3.4 DATA COLLECTION

3.4.1 Preliminary Tests and Pilot Testing

Once all 3 job postings and 60 applications had been finalized, they were tested by two Edwards School of Business classes at the University of Saskatchewan in an in-class screening exercise in February 2015. These sessions vetted three things: 1) saliency of all key characteristics and non-critical traits among screening participants; 2) suitability of the job posting, organization, and job requirement; and 3) content and suitability of each employment equity statement.

After incorporating pre-testing feedback, the Social Sciences Research Laboratory (SSRL) at the University of Saskatchewan was hired to code the experiment using Qualtrics survey software and host the survey online. The online experiment and survey was piloted with an Edwards School of Business fourth-year Human Resources class between February 26 and March 10, 2015. Piloting was also open to Johnson-Shoyama Graduate School of Public Policy students and faculty for design and delivery input.

3.4.2 Participant Recruitment

Actual data collection for this study targeted hiring professionals across Canada with at least one of the following qualifications:

Human Resources experience or credentials: HR practitioners or HR certified professionals are expected to have a thorough understanding of the Employment Equity Act and acceptable hiring practices in Canada; or

General hiring experience: Many managers and other senior-level professionals have been involved in hiring decisions but do not necessarily have experience or knowledge in HR or with employment equity policy.

Both groups were included to reveal potential differences in hiring behaviour between HR professionals and non-expert hiring managers. The online format allowed us to target both groups and to broaden the sample.

Participants were initially recruited through an advertising link to the online experiment, which was shared through various provincial HR Association mailing lists. The response rate from this method was too small for this experimental design; only 16 experiments were completed. Thus, the survey research company Probit was hired to assist with recruitment, sampling, and pre-screening to secure a larger pool of of suitable participants (Probit, 2018).

3.4.3 Collection Process

Data collection started in April 2015 and ended in August 2015. Prospective participants were screened for one of the two required qualifications (HR certification or hiring experience). Those who met the criteria were invited to complete the experiment and survey from any location with an internet connection at any time within this period. After giving their consent, participants were given the experiment scenario and instructions. Each participant was then randomly assigned to one of the three job postings (statement types) and was given 12 randomly assigned applications to screen for the position. They were asked to make two selection decisions: first to select six applicants to shortlist, and then to rank the top three candidates from those six.

After completing the two decision tasks, participants completed a brief post-experiment questionnaire. This survey collected information on demographic and professional characteristics, which can be used to control for individual differences. This included information on their HR credentials and experience, involvement in hiring decisions, experience and familiarity with employment equity policies, and their knowledge of the experiment purpose. The experiment and survey took place in one session designed to take 20 – 30 minutes. While time limits were not enforced, I did collect information on completion time, as well as information on the:

- Number of views and time spent reviewing the job posting, for each participant;

- Number of views and time spent reviewing each application, for each participant; and

- Order in which applications were presented, in both the first and second decision task, for each participant.

By collecting this information, it is possible to control for any additional unintended influences on participants' screening decisions, though the reporting of results presented in this thesis focus primarily on key variables of interest.

3.5 DATA TRANSFORMATION

Experiment data was cleaned, coded, and analysed using Excel 2011 and Stata 13. To ensure accuracy, all transformed and merged datasets were manually vetted against raw data, Master Keys, and original applications on multiple occasions.

All key applicant characteristics were treated as categorical variables and were assigned a code of 0, 1, 2..., n. A 0 baseline observation was applied to all variables. For example: the 60 possible first names were coded 0 through 59, the two qualification levels were coded 0=*minimally qualified* and 1=*well qualified*, and so on. Each application was assigned a unique number, and an Applicant Characteristic Master Key was created to record each application's number and characteristic data.

The participant's assigned job posting was assigned a code: 0=*No statement*, 1=*Regulatory*, 2=*Diversity*. Decision outcomes were also treated and coded as categorical variables as follows:

- Shortlist: 0=*not shortlisted,* 1=*shortlisted*
- Top Three: 0=*not ranked in top three,* 1=*ranked in top three*
- Top Candidate: 0=*not top candidate*, 1=*top candidate*

This dataset was transformed from wide to long form using Stata's *reshape long* command, so that every participant-application event became a single observation. In other words, 12 observations were recorded for each participant, one for every application that they reviewed, while participant's survey responses, assigned priming type, and session data (e.g. duration of experiment, number of times they viewed the job posting, etc.) were repeated across each of these observations. Lastly, the Applicant Characteristic Master Key was combined with this experiment data by merging it to the experiment results dataset based on each applicant's unique

identification number. In the final dataset, each observation included an application number, the corresponding applicant characteristics, the participant's decision(s) on that particular application, and the participant's survey responses and session data.

3.6 DATA ANALYSES

Participant survey responses and experiment data were first explored through descriptive statistics to provide an understanding of the participant sample and to highlight any issues or limitations of the data. For example, participants' knowledge of the purpose of the experiment could have an effect on their screening decisions, as could their experience with hiring, or the total time they took to complete the experiment. Stata's *graph* function was used to explore various screening decision outcomes for each race and qualification group, and compare these outcomes across each of the three job postings, and by other variables of interest. This process aimed to paint a general picture of choice preferences among participants and highlight any differences in these preferences between each of the three experiments (statement types).

It was apparent in these early stages that an applicant explicitly identifying as a member of an employment equity group had somewhat of an influence on recruiters' screening behaviours towards them, but it was difficult to say exactly how. This impact appeared to differ depending on the priming circumstance, and in some cases based on the applicant's ethnicity itself. At the same time, the increasing complexity of this study was becoming an issue; comparing three decision outcomes across three applicant race categories, two self-identification categories, two qualification levels *and* between three employment equity priming experiment pushed the limits of my statistical capabilities and went beyond the scope of the initial research questions.

To facilitate the analysis, I treated race as the primary characteristic and self-identification as secondary by combining these two variables to make one race/self-identification variable with five categories: Caucasian applicants for which self-identification does not apply, First Nations applicants who self-identify, First Nations applicants who do not self-identify, South Asian applicants who self-identify, and lastly South Asian applicants who do not self-identify. This new variable made it possible to investigate the impact of self-identification while keeping the research focused on the primary variables of interest (applicant race and qualification).

Linear probability modelling was used to explore the specific influences of race/self-identification and qualification on the likelihood of an applicant being shortlisted in the top six, ranked in the top three, and selected as the top candidate; stated as follows,

$$Y_{xn} = \beta_0 + \beta_1(Qual) + \beta_2(R2) + \beta_3(R3) + \beta_4(R4) + \beta_5(R5) + \beta_6(Qual * R2)$$
$$+ \beta_7(Qual * R3) + \beta_8(Qual * R4) + \beta_9(Qual * R5) + \varepsilon$$

Where,

Y_{xn} = 1 when the applicant is successful at screening decision x (top six, top three, top candidate) in decision experiment n (No Statement, Regulatory Statement, Diversity Statement), and

β_1 = the effect of being most qualified, compared to being least qualified

and, relative to the qualified or unqualified Caucasian applicant:

β_2 = the marginal effect of being a First Nations applicant who self-identifies

β_3 = the marginal effect of being a First Nations applicant who does not self-identify

β_4 = the marginal effect of being a South Asian applicant who self-identifies

β_5 = the marginal effect of being a South Asian applicant who does not self-identify

β_6 = the additional effect of being most qualified for a First Nations applicant who self-identifies,

β_7 = the additional effect of being most qualified for a First Nations applicant who does not self-identify,

β_8 = the additional effect of being most qualified for a South Asian applicant who self-identifies, and

β_9 = the additional effect of being most qualified for a South Asian applicant who does not self-identify.

In total, 18 linear probability models were run using Stata's *regress_(absorb)* function. This type of modelling allows for relatively straightforward multivariate analysis of a categorical dependent variable, while controlling for respondent fixed effects such as years of human resources experience, exposure to employment equity policies, and knowledge of the experiment purpose.

Linear probability modelling was used here primarily for its ease of interpretation. The complexity of this between- and within-subjects experiment and the many variables of interest made logit and probit results more difficult to interpret. At first, I attempted ordered logistic regression and multi-level mixed-effects ordered logistic regression using Stata's *ologit* and *meologit* commands, respectively, under a variety of variable combinations and controls. These models often produced incomplete results and, even when they were successful, interpreting coefficients and comparing between the three experiments (statement types) was particularly unintuitive, and did not focus attention on answering the primary research questions. Linear probability modelling offered a relatively simple solution to ease interpretation and is well suited for the applied nature of this research.

4 RESULTS

4.1 PARTICIPANTS

219 participants completed the online experiment and survey. 88% were recruited through the Probit recruitment blitz while 12% were recruited through the initial HR association advertising campaign. Since each participant made screening decisions on 12 separate applications and each of those decisions is considered a single within-subject observation in this study, 2628 observations were recorded overall. As designed, participants were randomly distributed relatively equally across the three experiments. The distribution of participants' random assignments is presented in Table 4.1 below.

TABLE 4.1: PARTICIPANT DISTRIBUTION ACROSS THREE EXPERIMENTS

Statement Type	Frequency	Percent of Total
None	79	36
Regulatory	74	34
Diversity	66	30
Total	**219**	**100**
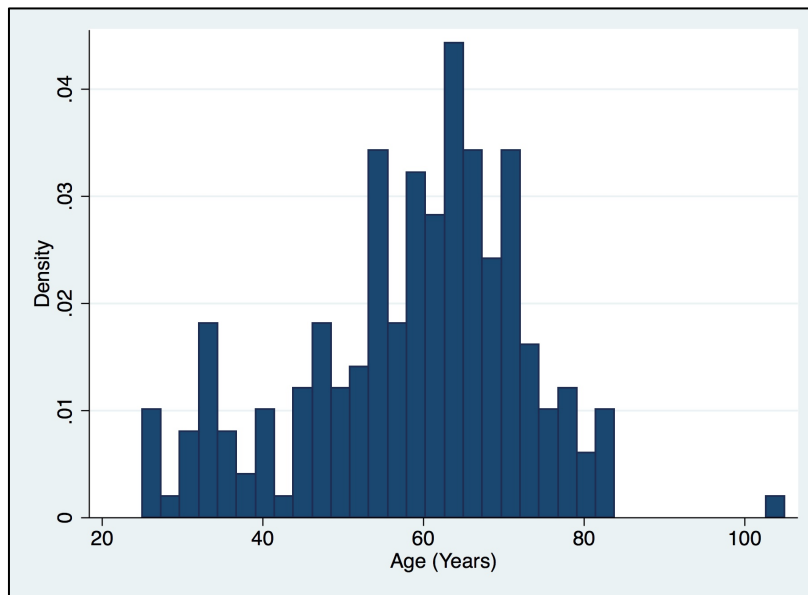
FIGURE 4.1: PARTICIPANTS' AGE DISTRIBUTION

The sample was almost equally split between male (52%) and female (48%) participants. The average participant was around 58 years old (see Figure 4.1 above), with 78% being primarily of British, French, or North American origins (Table 4.2).

TABLE 4.2: PARTICIPANTS' SELF-REPORTED ETHNIC ORIGINS

Origins	Primary		Secondary	
	Freq	*Percent*	*Freq*	*Percent*
British Isles	113	52%	0	0%
French	10	5%	11	10%
North American	45	21%	32	29%
North American Aboriginal	2	1%	8	7%
Caribbean	0	0%	0	0%
Latin, Central and South American	0	0%	0	0%
Western European	22	10%	21	19%
Northern European	7	3%	16	14%
Eastern European	10	5%	15	13%
Southern European	1	0%	2	2%
Other European	1	0%	0	0%
African	0	0%	0	0%
Arab	0	0%	0	0%
West Asian	0	0%	1	1%
South Asian	2	1%	0	0%
East and Southeast Asian	0	0%	2	2%
Oceania	1	0%	0	0%
Other	3	1%	4	4%
Total	*217*	*100%*	*112*	*100%*

This participant sample was moderately experienced, with over 60% of participants having 10 or more years of experience in recruitment and hiring, and 30% having 20 years or more (Table 4.3). That said, over 80% reported they had never received a CHRP designation (Table 4.3), indicating this participant pool is experienced with recruitment and hiring, but not necessarily with formal human resources training.

Experience	With Hiring			As a CHRP		
	Freq	*Percent*	*Cum*	*Freq*	*Percent*	*Cum*
None	12	6%	6%	174	81%	81%
Less than 5 years	40	19%	24%	7	3%	84%
5 to 9 years	32	15%	39%	4	2%	86%
10 to 14 years	45	21%	60%	7	3%	89%
15 to 19 years	24	11%	71%	1	0%	89%
20 years or more	62	29%	100%	23	11%	100%
Total	*215*	*100%*		*216*	*100%*	

In terms of participants' experience and familiarity with Employment Equity laws and practices, 62% report working in a federally regulated workplace, which would be directly subject to Employment Equity regulations. 63% view their organizations as being strongly committed to employment equity, as shown in Figure 4.2 below, and 60% say their organizations advertise their commitment to employment equity or workplace diversity by including an employment equity statement on their job postings.
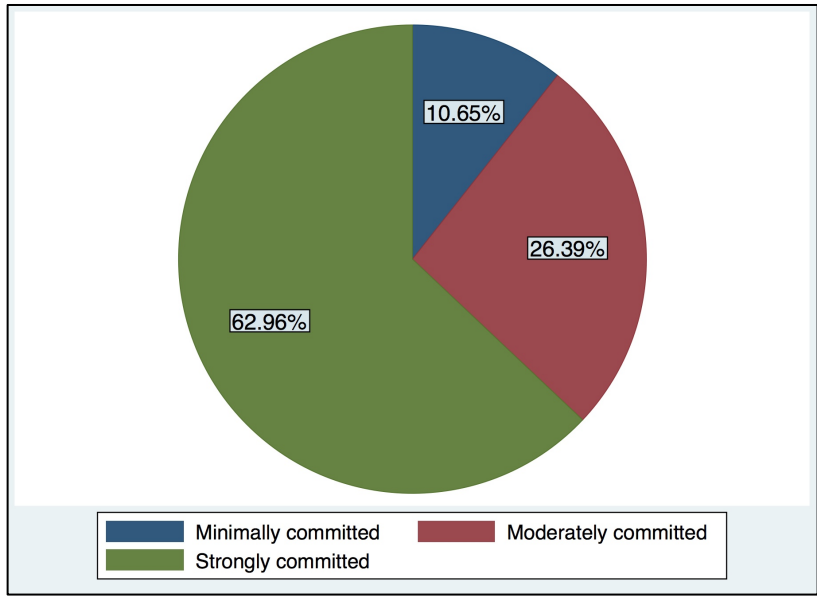
FIGURE 4.2: PARTICIPANTS' WORKPLACE COMMITMENT TO EMPLOYMENT EQUITY

4.1.1 Knowledge of experiment purpose

When participants were asked what they thought the experiment was about, roughly 40% recognized that it had something to do with discrimination. Despite the efforts made to mask this focus, this figure is quite high. Further, in the initial descriptive and graphical analyses, comparing participants who did recognize the theme to those who didn't showed some interesting differences in their screening decision outcomes.

Put broadly, participants who were aware the study had to do with discrimination appeared to focus more on race, and less on qualification, than participants who did not know what the study was about. They did not necessarily make discriminatory decisions, but clearly gave qualification less weight in their screening evaluations. This may be expected from a survey design perspective; participants have a social desire to not be viewed as discriminatory and thus focus their experiment behaviour on being particularly inclusive to minority applicants, regardless of their qualification level. Future analyses of this data should explore this issue further.

4.2 DECISION EXPERIMENT OUTCOMES

See Appendix H for tables of descriptive statistics. The graphs below present the results of the 18 linear probability models at various stages of the screening process, and under the three types of employment equity priming. The term shortlisting is used throughout these last chapters as a general term for both the top six and top three decision outcomes. Although these two variables are modelled separately, conceptually, they are varying degrees of the same outcome. Further, the results show that there is less difference between the first two shortlisting decisions, but that distinguishing general shortlisting from that of ultimately choosing a top candidate shows important differences in recruiters' decision-making behaviour.

4.2.1 Can racial discrimination be observed in the way recruiters make screening decisions?

If discrimination against one of the race/self-identification groups in this study is present, we would expect to see negative and significant effects associated with that race/self-identification group ($\beta_2, \dots \beta_5 < 0$; $p < 0.1$). Conversely, we would expect to see positive and significant effects associated with bias in favour of a group ($\beta_2, \dots \beta_5 > 0$; $p < 0.1$).

When recruiters were not primed with a statement, there is no evidence of discrimination against non-Caucasian applicants (First Nations or South Asian) when recruiters are merely shortlisting. As shown in Table 4.4, there are no significant effects associated with any race/identification manipulation with or without qualification interactions in these models.

TABLE 4.4: LINEAR PROBABILITY MODELS PREDICTING APPLICANT SUCCESS IN THREE DECISION OUTCOMES, NO PRIMING

Screening Outcome	Top Six		Top Three		Top Candidate	
Model	1A	2A	3A	4A	5A	6A
	Without interaction	*With interaction*	*Without interaction*	*With interaction*	*Without interaction*	*With interaction*
Qualification (0=least, 1= most)	0.384***	0.418***	0.270***	0.285***	0.114***	0.127***
Main Race-Identification effects *(ref: Caucasian)*						
First Nations, self-identifies	0.013	-0.019	0.016	-0.038	-0.038	-0.032
First Nations, does not self-identify	0.038	0.095	-0.003	0.025	-0.051*	-0.019
South Asian, self-identifies	0.051	0.082	0.035	0.089	0.032	0.019
South Asian, does not self-identify	0.013	0.057	-0.028	-0.013	-0.019	-0.006
Interactions with Qualification						
First Nations, self-identifies		0.063		0.108		-0.013
First Nations, does not self-identify		-0.114		-0.057		-0.063
South Asian, self-identifies		-0.063		-0.108		0.025
South Asian, does not self-identify		-0.089		-0.032		-0.025
Constant	0.289***	0.272***	0.109***	0.101***	0.038***	0.032***
Observations	948	948	948	948	948	948
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000
R-squared	0.149	0.153	0.104	0.110	0.054	0.056
Root MSE	0.483	0.483	0.427	0.427	0.280	0.280

* p < 0.1; ** p < 0.05; *** p < 0.01; respondent fixed effects absorbed in all models

When recruiters are asked to select a top candidate, at first glance it appears there is some evidence of discrimination against First Nations applicants who do not self-identify; a First Nations applicant who does not self-identify is 5.1 percentage points less likely to be chosen as

the top candidate than an otherwise identical Caucasian applicant, but only in the model without qualification interactions. When we include a qualification interaction to consider the additional impact of being well-qualified, the First Nations effect is not significant. These results suggest that being either a South Asian or First Nations applicant does not significantly decrease the likelihood of being selected as the top candidate in this study when no priming statement is present.

4.2.2 *Do employment equity statements change the way recruiters make screening decisions?*

If the presence and content of a priming statement has an influence on participants' decisions in this study, we would expect to see different effects of race/self-identification, and potentially qualification, across experiments. If an equity statement prompts participants *not* to discriminate against a race/self-identification group that the control participant group *did* appear to discriminate against, this may provide some evidence that employment equity policy interventions may be working as intended. Since there did not appear to be discrimination in the control participant experiment (with no statement), it is also possible that equity statements could have effects that go beyond simply correcting discriminatory behaviour. For instance, statements may prompt participants to favour one race/self-identification group over another even when qualifications are lacking.

As will be highlighted, both the Regulatory and Diversity statements do appear to influence recruiters' screening decisions, although in slightly different ways, and more so when recruiters are shortlisting applicants than when they are selecting a top candidate.

4.2.2.1 Shortlisting under Regulatory priming

Under a regulatory priming statement, if we do not include a race-qualification interaction effect in the model, recruiters appear to favour shortlisting non-Caucasian applicants over Caucasian applicants overall (see Table 4.5 below). However, this changes when we consider the interaction effect between race and qualifications; the impact of race/self-identification on screening success becomes significant only for South Asian applicants who self-identify. These applicants are 18 and 15 percentage points more likely to be shortlisted in the top six and top three candidates, respectively, than otherwise identical Caucasian applicants. There appears to be

no additional advantage to being well-qualified (no significant interaction coefficients). This indicates that the Regulatory statement may work to encourage diversity in hiring, in this case specifically for South Asian applicants who in their applications explicitly identify themselves as a visible minority.

TABLE 4.5: LINEAR PROBABILITY MODELS PREDICTING APPLICANT SUCCESS IN TWO SHORTLIST OUTCOMES, REGULATORY PRIMING

Screening Outcome	Top Six		Top Three	
Model	*1B*	*2B*	*3B*	*4B*
	Without interaction	*With interaction*	*Without interaction*	*With interaction*
Qualification (0=least qualified, 1= most qualified)	0.383***	0.405***	0.221***	0.182***
Main Race-Identification effects (ref: Caucasian)				
First Nations, self-identifies	0.095*	0.088	0.084*	0.041
First Nations, does not self-identify	0.054	0.101	0.037	0.014
South Asian, self-identifies	0.135***	0.182***	0.125***	0.149**
South Asian, does not self-identify	0.081*	0.061	0.098**	0.027
Interactions with Qualification				
First Nations, self-identifies		0.014		0.088
First Nations, does not self-identify		-0.095		0.047
South Asian, self-identifies		-0.095		-0.047
South Asian, does not self-identify		0.041		0.142
Constant	0.248	0.236	0.075	0.095
Observations	888	888	888	888
Prob>F	0.000	0.000	0.000	0.000
R-squared	0.156	0.159	0.088	0.093
Root MSE	0.481	0.482	0.429	0.429

* p < 0.1; ** p < 0.05; *** p < 0.01; respondent fixed effects absorbed in all models

4.2.2.2   Shortlisting under Diversity priming

Some of the main effects of minority race again appear positive and significant, at least when shortlisting the top three candidates, for participants who were primed with a Diversity statement. However, these effects are mostly not significant when we consider qualification interactions – except for First Nations applicants who self-identify. For this group, although being a First

Nations applicant shows no advantage or disadvantage in terms of screening success, being well-qualified increases the likelihood that they are shortlisted over well-qualified Caucasian applicants by an additional 21 percentage points, in terms of both the top three and top six screening decisions, as shown in Table 4.6 below. This indicates that the Diversity statement may be working to encourage recruiters to hire well-qualified First Nations applicants, so long as they make it clear they identify as an Aboriginal person on their resumes.

TABLE 4.6: LINEAR PROBABILITY MODELS PREDICTING APPLICANT SUCCESS IN TWO SHORTLIST OUTCOMES, DIVERSITY PRIMING

Screening Outcome	Top Six		Top Three	
Model	1C	2C	3C	4C
	Without interaction	*With interaction*	*Without interaction*	*With interaction*
Qualification (0=least qualified, 1= most qualified)	0.283***	0.242***	0.215***	0.159***
Main Race-Identification effects (ref: Caucasian)				
First Nations, self-identifies	0.083	-0.023	0.080*	-0.023
First Nations, does not self-identify	0.000	-0.023	0.034	0.023
South Asian, self-identifies	0.083	0.053	0.133***	0.083
South Asian, does not self-identify	0.061	0.098	0.072	0.068
Interactions with Qualification				
First Nations, self-identifies		0.212**		0.205**
First Nations, does not self-identify		0.045		0.023
South Asian, self-identifies		0.061		0.098
South Asian, does not self-identify		-0.076		0.008
Constant	0.321***	0.341***	0.086***	0.114***
Observations	792	792	792	792
Prob>F	0.000	0.000	0.000	0.000
R-squared	0.086	0.094	0.079	0.087
Root MSE	0.501	0.500	0.433	0.433

*$p < 0.1$; ** $p < 0.05$; *** $p < 0.01$;* respondent fixed effects absorbed in all models

4.2.2.3 Top Candidate Selection

As shown in Table 4.7 below, when selecting the top candidate there are no significant effects associated with any race/self-identification group in the models that include qualification interactions among participants who were primed with the Diversity statement. The Regulatory priming experiment, however, appears to show some interesting results: while recruiters seem to favour self-identifying South Asian applicants in general (who are 8.8 percentage points more likely to be chosen as top candidate than Caucasian applicants when both are least qualified), the additional effect of being well-qualified for South Asians actually *decreases* the likelihood they will be chosen by 10.1 percentage points, relative to well-qualified Caucasians. These effects for self-identifying South Asians ultimately cancel each other out such that we observe neither a strong preference for, nor discrimination against, well-qualified South Asian applicants compared to similar Caucasian applicants, while less qualified South Asian applicants remain more likely to be chosen as top candidate than similar Caucasian applicants.

TABLE 4.7: LINEAR PROBABILITY MODELS PREDICTING APPLICANT SUCCESS IN TOP CANDIDATE OUTCOME, REGULATORY AND DIVERSITY PRIMING

Statement Type	Regulatory		Diversity	
Model	*5B*	*6B*	*5C*	*6C*
	Without interaction	*With interaction*	*Without interaction*	*With interaction*
Qualification (0=least qualified, 1= most qualified)	0.077***	0.074**	0.098***	0.098***
Main Race-Identification effects (ref: Caucasian)				
First Nations, self-identifies	0.010	-0.007	0.027	0.000
First Nations, does not self-identify	0.003	-0.007	0.011	0.015
South Asian, self-identifies	0.037	0.088**	0.049	0.061
South Asian, does not self-identify	0.010	-0.020	0.019	0.030
Interactions with Qualification				
First Nations, self-identifies		0.034		0.053
First Nations, does not self-identify		0.020		-0.008
South Asian, self-identifies		-0.101*		-0.023
South Asian, does not self-identify		0.061		-0.023
constant	0.033*	0.034	0.015	0.015
Observations	888	888	792	792
Prob>F	0.003	0.003	0.000	0.001
R-squared	0.024	0.033	0.037	0.040
Root MSE	0.282	0.282	0.282	0.283

* p < 0.1; ** p < 0.05; *** p < 0.01; respondent fixed effects absorbed in all models

5 DISCUSSION

5.1 DISCRIMINATION IN THE RESUME SCREENING PROCESS

Overall, my results do not suggest the strong presence of discrimination against either First Nations or South Asian applicants, although there is some evidence to suggest that screening decisions were not based on qualification alone, as there were many *least* qualified applicants who were successful at every stage in the screening process, under every priming type (see Appendix H). In the control group there initially appeared to be discrimination against First Nations applicants when participants were asked to select a top candidate, however this race effect was ultimately not significant when race-qualification interaction terms were added. If participants of this study reflect the attitudes of employers across Canada, these results may speak to how far the country has progressed in terms of combatting workplace discrimination; participants in this study needed no reminder of their legal obligations or the benefits to diversity for them to avoid bias or discrimination against these applicants in their screening decisions.

That said, if we recall that over 40% of participants in this experiment recognized discrimination as the theme of the research, these results are not surprising. The transparency of this study's purpose may have been enough to prompt participants to be especially attentive to their cognitive biases and to be diligent in making clearly non-discriminatory decisions, as was described in terms of social desirability in Chapter 4. It may also be the case that the complexity and sample size of this study impacted these results. Both caveats are discussed as limitations of this research later in section 5.4.1.

5.2 EFFECTS OF EMPLOYMENT EQUITY PRIMING IN SCREENING DECISIONS

Participants who were primed with a Regulatory or Diversity statement appeared to not only avoid discrimination against minority applicants, they also showed a preference for selecting these applicants when compared to the participants who received no priming with an equity statement. This will come as good news to organizations that are making efforts to comply with employment equity legislation, and to policy makers and researchers interested in assessing the impacts of this legislation. However, since evidence of discrimination against visible minority and Aboriginal applications in this study is relatively weak, it is difficult to say if these particular policy interventions are effective in removing these biases. They do, however, seem to improve

the likelihood that a minority applicant will be selected. The results also confirm what research by Hoque and Noon (2004) and Leck and Saunders (1992) suggests – that the content of an equity policy matters in terms of how recruiters respond to its messaging. The Regulatory and Diversity priming statements did not appear to have the same effect on recruiters' screening decisions, although it is difficult to determine exactly why the outcomes were different across statements, which is discussed later in this chapter (see Section 5.4.2).

In this study the Regulatory statement was associated with a general preference for South Asian applicants in every stage of the screening process. This behaviour is consistent with what we understand about other screening decisions to date (Bartoš, Bauer, Chytilová, & Matějka, 2016). Research has pointed to similar outcomes with college admission affirmative-action policies in the U.S., finding that admissions officials have a strong preference for visible minority applicants, even those with lower qualifications than non-minority applicants (Bunzel, 1996; Cancian, 1998; Espenshade, Chung, & Walling, 2004; Long, 2004). As Bunzel describes, "membership in [an ethnic] minority group can be an important factor in whether a candidate is chosen over others who may have better academic qualifications" (1996, pp. 50-51). If the same weight on minority ethnicity is also placed on applications in the Canadian labour market when recruiters are primed with a regulatory employment equity statement, this may help to explain the preference for South Asian applicants among participants in this study.

The results also show that Regulatory priming was associated with a higher occurrence of *least* qualified applicants being selected as the top candidate (compared to Diversity priming or none at all). Further, in the LPM results the additional impact of a self-identifying South Asian applicant being well-qualified actually seems to diminish recruiters' preference for selecting them as the top candidate. This outcome may be a signal that Regulatory messaging is confounding recruiters' screening decisions such that they might ignore or *discount* applicants' qualifications when making their decision, which is certainly not the intent of employment equity legislation. By focusing employment equity legislation and organisations' subsequent policy messaging on race – as the Regulatory approach currently does by explicitly listing visible minorities and Aboriginal persons – organizations and their recruiters will likewise continue to focus their attention on prospective employees' racial characteristics.

Compared to participants who were primed with a Regulatory employment equity statement, those who were given a Diversity message exhibited quite different screening behaviours. Diversity priming was associated with a significant advantage for well-qualified, self-identifying First Nations applicants. Considering this with what we understand about the significant payoffs to investment in Aboriginal peoples' training and education, the results suggest that Diversity-oriented policies and messaging may actually help to speed up efforts to close the employment gap between First Nations people and the general Canadian population, compared to more Regulatory-oriented approaches.

Considering the contrast between LPM results from the Regulatory and Diversity approaches, this suggests that federal regulators and organizations are well advised to pay attention to the content and framing of their employment equity policy messaging. This may help to align these approaches with existing behaviours and labour market conditions, but most importantly to make sure they are not encouraging behaviours they do not intend. As has been demonstrated in this study and others, some approaches to diversity messaging may lead to biased screening decisions at the expense of some well-qualified applicants and to the advantage of other applicants who are less qualified. This misses the point of employment equity, which is to foster equitable opportunities for historically underrepresented groups in the workforce, not to build a diverse but less qualified one. Employment equity, diversity, and inclusion policies at all levels may best be designed to draw attention *away* from non-critical applicant characteristics like race and perhaps instead prime recruiters to focus on legitimate indicators of applicants' job suitability, such as their skills, experience, and education.

All of this considered, there may be a case for blind-recruitment techniques, where applicants' ethnic, gender, and other non-critical characteristics are hidden to recruiters throughout the screening process. It appears that the federal government is already moving in this direction, as the Public Service Commission of Canada began pilot testing blind-recruitment strategies across Canada starting in 2016 (Loriggio, 2016). Likewise, the fast-growing potential of software programming continues to offer new and more comprehensive solutions to human behavioural issues like discriminatory hiring.

5.3 THE IMPORTANCE OF EDUCATION AND SKILL BUILDING

Qualification generally played a major role in applicants' likelihood of success at every stage in the applicant screening process. Being notably well-qualified helps remove the potential for discriminatory screening decisions against minorities, even in the absence of employment equity priming.

Consistent with the literature on Aboriginal peoples' in the labour market, the importance of higher education and skill-building in improving employment outcomes for First Nations women cannot be overstated. This research suggests that this may also be true in terms of correcting their underrepresentation in the labour market. Policy makers may wish to continue focusing on closing any remaining human capital gaps that have resulted from the historic and on-going colonization, oppression and exploitation of Indigenous peoples in Canada. The payoff to these types of policies appear to have an even broader impact in closing the employment gap than we may currently understand, and they can also help mitigate any remaining discriminatory bias organizations and recruiters may possess against minority groups.

5.4 LIMITATIONS OF THIS STUDY AND POTENTIAL FUTURE RESEARCH

5.4.1 *Statistical analyses*

There are almost certainly more advanced statistical methods available for making more robust comparisons between the three decision experiments than the separate linear probability models used here. The complexity of the study design and limits to my econometric abilities at this stage of my career required me to simplify my analyses so I could complete my Masters degree. In hindsight and considering the impacts of the interaction effects in this experiment, the complexity of the design, respondent fixed effects, and the relatively few participants in each experiment, all of these factors may have implications for the statistical power of the results. It is possible that either Type I or Type II errors are being made here; we may be observing effects of race, self-identification, and qualification that aren't actually there or dismissing ones that are.

These caveats aside, there was a massive amount of information collected from the online experiment and survey, opening the possibility to dig deeper into the data to control for a variety of respondent characteristics and explore how these characteristics interact with their screening decisions. Chapter 3 describes the significant attention to detail that was paid to designing the

application form, compiling and randomly assigning applicant characteristics, and most importantly, recording each one of these variables and codes. Users of this dataset are again able to control or explore all of these factors in future analyses. Moreover, much of the randomization I employed in the initial design should mitigate the need to control for all these variables in subsequent analyses, though further testing should be done to determine the validity of this assumption.

5.4.2 Content of policy interventions

This study confirmed that the presence and content of employment equity policies play an important role in how recruiters respond in their decision-making. However, since there were only two employment equity policy approaches used here (with multiple framing and content characteristics combined in each), it is difficult to say precisely how or why each had the effect it did.

Looking in retrospect at how these statements were framed, the Regulatory approach takes a legal-compliance perspective (obligation to employment equity) *and* explicitly lists the four employment equity groups (explicit attention to race), while the Diversity approach takes an inclusive and diverse-culture perspective (advantage to employment equity) *and* does not list any group in particular (subtle attention to race). In other words, it is not clear whether the mechanism in the Regulatory policy intervention primed participants to focus on compliance, or race, or both. Researchers may find it helpful to pay greater attention to policy framing in future experiments which may even be designed to pin-point "best" approaches in content and design of federal and organizational employment equity policy for encouraging truly equitable hiring behaviour.

5.5   IN CLOSING

As this research is wrapping up nearly five years since it was first proposed, reviews and reports of workplace discrimination have continued in Canadian conversation (Nightingale, 2017; The Canadian Press, 2017). We are clearly far from having ended labour market discrimination in this country, not even just concerning the four groups in the Employment Equity Act (Lungo, 2017). As Justice Rosalie Silberman Abella stated at the outset of the employment equity agenda, "We need equal opportunity to achieve fairness in the process, and we need employment equity to achieve justice in the outcome" (1984, p. 7). Indeed, there is still much work to be done in terms of achieving justice in the outcome, especially for First Nations women. This research confirmed that employment equity policy in general may help to mitigate discrimination against them, especially when coupled with achievements in higher education and skill building.

If Canadian policy makers wish to continue working toward a workforce that is truly inclusive to First Nations job seekers and other underrepresented groups, formalized employment equity policies may be a useful tool for implementing these policies on the ground level. However, employment equity policies may also have unintended consequences that should be considered. A just Canadian economy and labour market is most effectively built on the strong qualifications and abilities of the people it consists of, not on their racial, gender, or other personal characteristics. Canada's future policy responses to labour market discrimination may be most effective if designed from this perspective.

6 APPENDICES

APPENDIX A: JOB POSTING WITH NO PRIMING STATEMENT

Position: Cost Analyst
Employer: Boreal Equipment and Supply
Location: Townsville, Canada
Term: Full-time, permanent
Compensation: Salaried ($68,000 – $73,000), plus benefits
Date posted: 01/15/2015
Closing date: 03/06/2015

BOREAL
EQUIPMENT
AND SUPPLY

Boreal Equipment and Supply (BES) is a privately owned and operated company located in and around Townsville, Canada. It provides small- to heavy machinery rentals and leasing, basic mechanical servicing, and parts supply for forestry professionals and businesses in the area.

BES is looking for a qualified individual to fill the position of **Cost Analyst.** Reporting to the Senior Analyst, the Cost Analyst works closely with members of the Sales, Operations, and Warehouse teams to collect and monitor labour, capital, and sales information. This information is used to manage costs of product, inventory, and labour throughout the company.

The Cost Analyst's duties include:
- Analyze actual labour, inventory, and overhead cost against budgets and assist in preparing monthly variance reports & analyses
- Offer recommendations on rates, budgets, and forecasts where necessary
- Participate in special projects for cost optimization and process improvements
- Provide support in the development of the annual operating budget

Minimum Requirements:
- Bachelor's degree in Accounting or a related field
- Minimum of 2 years work experience in a related position
- Demonstrated experience with SAP and Microsoft Excel
- Strong analytical and written communication skills

A Chartered Professional Accountant (CPA) designation is considered a major asset.

To apply to this position, please complete the online application found at www.borealequipmentsupply.ca/apply. Questions can be directed to hr@borealsupply.ca.

Position: Cost Analyst
Employer: Boreal Equipment and Supply
Location: Townsville, Canada
Term: Full-time, permanent
Compensation: Salaried ($68,000 – $73,000), plus benefits
Date posted: 01/15/2015
Closing date: 03/06/2015

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Townsville, Canada. It provides small- to heavy machinery rentals and leasing, basic mechanical servicing,
and parts supply for forestry professionals and businesses in the area.

BES is looking for a qualified individual to fill the position of **Cost Analyst.** Reporting to the Senior Analyst,
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and monitor labour, capital, and sales information. This information is used to manage costs of product,
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  monthly variance reports & analyses
- Offer recommendations on rates, budgets, and forecasts where necessary
- Participate in special projects for cost optimization and process improvements
- Provide support in the development of the annual operating budget

Minimum Requirements:
- Bachelor's degree in Accounting or a related field
- Minimum of 2 years work experience in a related position
- Demonstrated experience with SAP and Microsoft Excel
- Strong analytical and written communication skills

A Chartered Professional Accountant (CPA) designation is considered a major asset.

BES is an equal opportunity employer and welcomes applications from persons of Aboriginal ancestry,
persons with disabilities, members of visible minorities, and women.

To apply to this position, please complete the online application found at
www.borealequipmentsupply.ca/apply. Questions can be directed to hr@borealsupply.ca.

Position: Cost Analyst
Employer: Boreal Equipment and Supply
Location: Townsville, Canada
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BES is looking for a qualified individual to fill the position of **Cost Analyst.** Reporting to the Senior Analyst, the Cost Analyst works closely with members of the Sales, Operations, and Warehouse teams to collect and monitor labour, capital, and sales information. This information is used to manage costs of product, inventory, and labour throughout the company.

The Cost Analyst's duties include:
- Analyze actual labour, inventory, and overhead cost against budgets and assist in preparing monthly variance reports & analyses
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- Provide support in the development of the annual operating budget

Minimum Requirements:
- Bachelor's degree in Accounting or a related field
- Minimum of 2 years work experience in a related position
- Demonstrated experience with SAP and Microsoft Excel
- Strong analytical and written communication skills

A Chartered Professional Accountant (CPA) designation is considered a major asset.

BES is committed to a diverse and inclusive workplace. All members of BES share a responsibility for developing and maintaining an environment in which differences are valued and inclusiveness is practiced.

To apply to this position, please complete the online application found at www.borealequipmentsupply.ca/apply. Questions can be directed to hr@borealsupply.ca.

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Application for Employment

BOREAL
EQUIPMENT AND SUPPLY

Applicant Information

First Name	Last Name	Middle Initial
Leena	Vasan	W

E-mail Address	Phone
vasanleena@gmail.com	(752) 624-3923

What position are you applying for?	When can you start?
Cost Analyst	March 2015

Are you legally authorized to work in Canada? ◉ Yes ○ No

What type of employment are you looking for? ○ Part-time ◉ Full-time

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Education

Please list your secondary and post-secondary schooling.

School	Program	Accreditation Obtained
Sir John Franklin High School	N/A	High School Diploma

School	Program	Accreditation Obtained
University of Waterloo	Accounting and Finance	B. Acc. Fin.; CPA (CMA)

Employment History

Please describe your current position.

Job Title	Employer	Start Date	End Date
Senior Procurement Specialist	Juno Investors Group	10/2011	N/A

Job Duties

Assessing requirements and developing specifications for equipment and supplies to be purchased; Establishing and monitoring delivery schedules a

Please describe the job you held before your current position.

Job Title	Employer	Start Date	End Date
Records Clerk	Heartland Hospice Care	07/2008	09/2011

Job Duties

Labeling and organizing electronic storage media, spreadsheets, and other documents; Receiving and registering invoices, forms, records and other

---

Skills and Qualifications

Please list any additional skills, honours, awards, etc. that should be considered.

Proficient in Microsoft Excel and SAP; Received the University of Waterloo Award for Academic Performance; Volunteer with Big Brothers/Big

---

References

First Name	Last Name
Steven	Peterson

E-mail Address	Phone
peterson_steven@junogroup.ca	(609) 526-5519

First Name	Last Name
Kimberly	Richardson

E-mail Address	Phone
richardson.kimberly@heartland.ca	(457) 595-3785

If you wish to identify yourself with any of the groups below, please do so with the box provided.

☐ Aboriginal person   ☐ Visible minority   ☐ Person with a disability

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Application for Employment

BOREAL EQUIPMENT AND SUPPLY

Applicant Information

First Name	Last Name	Middle Initial
Deena	Vares	A

E-mail Address	Phone
vares_deena@hotmail.com	(204) 401-6919

What position are you applying for?	When can you start?
Cost Analyst	March 4, 2015

Are you legally authorized to work in Canada?   What type of employment are you looking for?

◉ Yes   ○ No   ○ Part-time   ◉ Full-time

Education

Please list your secondary and post-secondary schooling.

School	Program	Accreditation Obtained
Nipisihkopahk Secondary School	N/A	High School Diploma

School	Program	Accreditation Obtained
University of New Brunswick (Fredericton)	Commerce (Accounting)	B. Comm (Acct); CPA (CA)

Employment History

Please describe your current position.

Job Title	Employer	Start Date	End Date
Procurement Officer	STJ Transport Inc.	10/2011	N/A

Job Duties

Prepare reports on inventory, procurement, and supplier contract efficiency; Establish and monitor delivery schedules and contact suppliers to resolv

Please describe the job you held before your current position.

Job Title	Employer	Start Date	End Date
Production Scheduler	Aboriginal Economic Development Group	07/2008	09/2011

Job Duties

Assist with scheduling production runs in a cost and time-efficient manner; Prepare and maintain reports on the progress of work and rates of produc

Skills and Qualifications

Please list any additional skills, honours, awards, etc. that should be considered.

Demonstrated ability in Microsoft Office and SAP; Recipient of the University of New Brunsick Aboriginal Student Center Award for Academic F

References

First Name	Last Name
Ron	Richardson

E-mail Address	Phone
richardsonron@stj.ca	(997) 659-8158

First Name	Last Name
Kathy	Cardinal

E-mail Address	Phone
cardinalkathy@aboriginaledg.ca	(868) 809-1480

If you wish to identify yourself with any of the groups below, please do so with the box provided.

☑ Aboriginal person   ☐ Visible minority   ☐ Person with a disability

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BOREAL
EQUIPMENT
AND SUPPLY

Application for Employment

Applicant Information

First Name	Last Name	Middle Initial
Nikki	Auger	K

E-mail Address: nikkiauger@hotmail.com

Phone: (397) 624-2508

What position are you applying for? Cost Analyst

When can you start? April 2015

Are you legally authorized to work in Canada? ⦿ Yes ○ No

What type of employment are you looking for? ○ Part-time ⦿ Full-time

Education

Please list your secondary and post-secondary schooling.

School	Program	Accreditation Obtained
Jhargram Kumud Kumari Institution	N/A	High School Diploma
Universite du Quebec a Montreal	Accounting	B. Acc

Employment History

Please describe your current position.

Job Title	Employer	Start Date	End Date
Junior Procurement Officer	Homestead Wholesale	09/2012	N/A

Job Duties

Purchase general and specialized equipment, supplies, and services; Help prepare reports on inventory, procurement, and supplier contract efficienc

Please describe the job you held before your current position.

Job Title	Employer	Start Date	End Date
Assistant Purchasing Officer	Shatilal Investors Group	06/2008	08/2012

Job Duties

Contact suppliers to schedule deliveries and resolve shortages and other problems; Calculate cost of orders and charge or forward invoices to appro

Skills and Qualifications

Please list any additional skills, honours, awards, etc. that should be considered.

Competent with Microsoft Excel and SAP; Volunteer at the Townsville Hindu Cultural Society; Recipient of the Universite du Quebec a Montrea

References

First Name	Last Name
Anthony	Thibadeaux

E-mail Address: thibadeauxanthony@homestead.ca

Phone: (894) 695-8198

First Name	Last Name
Greeshma	Kohli

E-mail Address: kohli.greeshma@shatilalgroup.ca

Phone: (380) 454-5074

If you wish to identify yourself with any of the groups below, please do so with the box provided.

☐ Aboriginal person   ☐ Visible minority   ☐ Person with a disability

Page 1: Welcome and Consent

Page 2: Scenario

Boreal Equipment and Supply (BES) is a privately owned and operated company that provides machinery rentals and leasing, basic mechanical servicing, and parts supply for forestry and logging professionals and businesses. Its head office is located in Townsville, Canada, with four locations scattered across the greater Townsville region. BES currently employs 80 full-time and 35 part-time people across all divisions and locations.

Despite general stagnation in the forestry sector in other parts of Canada, the logging industry continues to thrive in Townsville and surrounding area. With its added sales and services since the 1980's, BES has begun to attract clients from outside the industry including environmental consulting groups, mining and construction companies, and hunting/fishing outfitters. With this growth, overhead is beginning to expand at the head office in Townsville. As mid- to upper-level roles are created and filled, many entry-level positions are becoming vacant. Due to the high volume of applications in recent years, BES has adopted a standardized online application process for all entry-level positions.

You are a member of the Human Resources team at BES, and you have been chosen to sit on the hiring committee for the position of Cost Analyst. You have been asked to review the responding applications and give your recommendations on suitable candidates. Your extensive experience in recruitment and hiring makes you a respected member of this three-person team.

Click "Open Job Posting" to view the job posting. It will appear in a new window so you can keep it open and refer to it throughout your participation.

Page 3: Shortlist (Top Six) Decision

Below are 12 applications to the posted position. Please review them and select the 6 candidates you think should be shortlisted by clicking the box beside them in the list below. (This should take you approximately 10 minutes to complete.)

Q3 I wish to shortlist these six applicants:

- (Applicant 1)
- (Applicant 2)
- (Applicant 3)
- (Applicant 4)
- (Applicant 5)
- (Applicant 6)
- (Applicant 7)
- (Applicant 8)
- (Applicant 9)
- (Applicant 10)
- (Applicant 11)
- (Applicant 12)

Page 4: Rank (Top Three and Top Candidate) Decision

Below are the 6 applicants you chose to shortlist. Please select and rank the top three candidates for the position: Drag and drop the top candidate into the "Candidate 1" folder, drag and drop the second best candidate into the "Candidate 2" folder, and drag and drop the third best candidate into the "Candidate 3" folder. (This should take you approximately 5 minutes to complete.)

Q4 Please select and rank the top three candidates for the position:

Candidate 1	Candidate 2	Candidate 3
_____ Applicant 1 (1)	_____ Applicant 1 (1)	_____ Applicant 1 (1)
_____ Applicant 2 (2)	_____ Applicant 2 (2)	_____ Applicant 2 (2)
_____ Applicant 3 (3)	_____ Applicant 3 (3)	_____ Applicant 3 (3)
_____ Applicant 4 (4)	_____ Applicant 4 (4)	_____ Applicant 4 (4)
_____ Applicant 5 (5)	_____ Applicant 5 (5)	_____ Applicant 5 (5)
_____ Applicant 6 (6)	_____ Applicant 6 (6)	_____ Applicant 6 (6)

Page 5 onward: Post-Experiment Survey

Q5 What do you think this experiment was about? If you don't know, leave blank.

Q5.5 How did you hear about this experiment[1]?

- Through my Provincial HR Association
- Through the Canadian HR Reporter
- It was forwarded to me by a friend/colleague
- Other (Please Specify) _____

Q6 How long have you been a Certified Human Resources Professional (CHRP)?

- I have never been a CHRP
- Less than 5 years
- 5 to 9 years
- 10 to 14 years
- 15 to 19 years
- 20 years or more

Q7 How many years' experience do you have working in recruitment and selection?

- None at all
- Less than 5 years
- 5 to 9 years
- 10 to 14 years
- 15 to 19 years
- 20 years or more

Q8 What sector do you currently work in?

- Public Sector/Government
- Private Sector
- University/College
- Non-profit
- I am a student
- Other _____

---

[1] Probit experiment data was also collected in a separate dataset.

Q9 What industry does your organization operate in?

- Agriculture
- Forestry, fishing, mining, quarrying, oil and gas
- Utilities
- Construction
- Manufacturing
- Trade
- Transportation and warehousing
- Finance, insurance, real estate and leasing
- Professional, scientific and technical services
- Business, building and other support services
- Educational services
- Health care and social assistance
- Information, culture and recreation
- Accommodation and food services
- Public administration
- Other services

Q10 Is your organization federally regulated under the Canada Labour Code?

- Yes
- No
- I don't know

Q11 Which statement best describes your organization's commitment to employment equity/workplace diversity?

- My current organization is minimally committed to employment equity/workplace diversity.
- My current organization is moderately committed to employment equity/workplace diversity.
- My current organization is strongly committed to employment equity/workplace diversity.

Q12 On a scale of 1 to 5, how familiar are you with your organization's employment equity policy?

	1 Not at all familiar	2	3	4	5 Very Familiar	N/A: My organization does not have an employment equity policy
Enter Rating						

Q13 On a scale of 1 to 5, how much consideration do you give your organization's equity policy in hiring decisions?

	1: I don't consider it at all	2	3	4	5: I consider it above everything else	N/A: I am not involved in hiring decisions
Enter Rating						

Q14 Does your organization advertise their commitment to employment equity/workplace diversity by including an employment equity statement on job postings?

- Yes
- No
- I don't know

Q15 What are your primary ethnic origins? Select up to two.

- British Isles origins
- French origins
- North American origins
- North American Aboriginal origins
- Caribbean origins
- Latin, Central and South American origins
- Western European origins
- Northern European origins
- Eastern European origins
- Southern European origins
- Other European origins
- African origins
- Arab origins
- West Asian origins
- South Asian origins
- East and Southeast Asian origins
- Oceania origins
- Other origins

Q17 What is your gender?

- Male
- Female

Q18 What year were you born?

Q19 What are the first 3 digits of your postal code?

End of survey.

APPENDIX H: DESCRIPTIVE STATISTICS

APPENDIX H TABLE 1: APPLICANT SUCCESS IN THREE SCREENING OUTCOMES, BY PRIMING TYPE AND QUALIFICATION

Experiment	Obs.	Qualification	Top Six		Top Three		Top Candidate	
			Freq.	*% of successful*	*Freq.*	*% of successful*	*Freq.*	*% of successful*
No priming	948	Most qualified	328	69%	181	77%	66	85%
		Least qualified	146	31%	53	23%	12	15%
		Total successful	*474*	*100%*	*234*	*100%*	*78*	*100%*
Regulatory Priming	888	Most qualified	307	69%	157	73%	53	74%
		Least qualified	137	31%	59	27%	19	26%
		Total successful	*444*	*100%*	*216*	*100%*	*72*	*100%*
Diversity Priming	792	Most qualified	254	64%	140	72%	52	80%
		Least qualified	142	36%	55	28%	13	20%
		Total successful	*396*	*100%*	*195*	*100%*	*65*	*100%*

APPENDIX H TABLE 2: APPLICANT SUCCESS IN THREE SCREENING OUTCOMES, BY QUALIFICATION AND RACE/SELF-IDENTIFICATION, NO PRIMING

Qualification	Race/self-identification	Top Six		Top Three		Top Candidate	
		Freq.	*% of total*	*Freq.*	*% of total*	*Freq.*	*% of total*
Most qualified	Caucasian	109	*23%*	61	*26%*	25	*32%*
	First Nations, no self-id	53	*11%*	28	*12%*	6	*8%*
	First Nations, self-id	58	*12%*	36	*15%*	9	*12%*
	South Asian, no self-id	52	*11%*	27	*12%*	10	*13%*
	South Asian, self-id	56	*12%*	29	*12%*	16	*21%*
Least qualified	Caucasian	43	*9%*	16	*7%*	5	*6%*
	First Nations, no self-id	29	*6%*	10	*4%*	1	*1%*
	First Nations, self-id	20	*4%*	5	*2%*	0	*0%*
	South Asian, no self-id	26	*5%*	7	*3%*	2	*3%*
	South Asian, self-id	28	*6%*	15	*6%*	4	*5%*
	Total	474	*100%*	234	*100%*	78	*100%*

APPENDIX H TABLE 3: APPLICANT SUCCESS IN THREE SCREENING OUTCOMES, BY QUALIFICATION AND RACE/SELF-IDENTIFICATION, REGULATORY PRIMING

Qualification	Race/self-identification	Top Six		Top Three		Top Candidate	
		Freq.	*% of total*	*Freq.*	*% of total*	*Freq.*	*% of total*
Most qualified	Caucasian	95	*21%*	41	*19%*	16	*22%*
	First Nations, no self-id	48	*11%*	25	*12%*	9	*13%*
	First Nations, self-id	55	*12%*	30	*14%*	10	*14%*
	South Asian, no self-id	55	*12%*	33	*15%*	11	*15%*
	South Asian, self-id	54	*12%*	28	*13%*	7	*10%*
Least qualified	Caucasian	35	*8%*	14	*6%*	5	*7%*
	First Nations, no self-id	25	*6%*	8	*4%*	2	*3%*
	First Nations, self-id	24	*5%*	10	*5%*	2	*3%*
	South Asian, no self-id	22	*5%*	9	*4%*	1	*1%*
	South Asian, self-id	31	*7%*	18	*8%*	9	*13%*
	Total	444	*100%*	216	*100%*	72	*100%*

APPENDIX H TABLE 4: APPLICANT SUCCESS IN THREE SCREENING OUTCOMES, BY QUALIFICATION AND RACE/SELF-IDENTIFICATION, DIVERSITY PRIMING

Qualification	Race/self-identification	Top Six		Top Three		Top Candidate	
		Freq.	*% of total*	*Freq.*	*% of total*	*Freq.*	*% of total*
Most qualified	Caucasian	77	*19%*	36	*18%*	15	*23%*
	First Nations, no self-id	40	*10%*	21	*11%*	8	*12%*
	First Nations, self-id	51	*13%*	30	*15%*	11	*17%*
	South Asian, no self-id	40	*10%*	23	*12%*	8	*12%*
	South Asian, self-id	46	*12%*	30	*15%*	10	*15%*
Least qualified	Caucasian	45	*11%*	15	*8%*	2	*3%*
	First Nations, no self-id	21	*5%*	9	*5%*	2	*3%*
	First Nations, self-id	21	*5%*	6	*3%*	1	*2%*
	South Asian, no self-id	29	*7%*	12	*6%*	3	*5%*
	South Asian, self-id	26	*7%*	13	*7%*	5	*8%*
	Total	396	*100%*	195	*100%*	65	*100%*

APPENDIX I: LP MODELS PREDICTING THE LIKELIHOOD OF APPLICANT SUCCESS IN THREE DECISION OUTCOMES

	Model 1- Shortlist			Model 2- Shortlist			Model 3- Top Three			Model 4- Top Three			Model 5- Top Candidate			Model 6- Top Candidate		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Statement Type	NON	REG	DIV	NON	REG	DIV	NON	REG	DIV	NON	REG	DIV	NONE	REG	DIV	NONE	REG	DIV
Qualification	0.384	0.383	0.283	0.418	0.405	0.242	0.270	0.221	0.215	0.285	0.182	0.159	0.114	0.077	0.098	0.127	0.074	0.098
	0.000	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.003*	*0.000*	*0.000*	*0.000*	*0.000*	*0.024*	*0.005*
Main effects																		
R2	0.013	0.095	0.083	-0.019	0.088	-0.023	0.016	0.084	0.080	-0.038	0.041	-0.023	-0.038	0.010	0.027	-0.032	-0.007	0.000
	0.788	*0.051*	*0.119*	*0.776*	*0.201*	*0.763*	*0.704*	*0.051*	*0.085*	*0.519*	*0.507*	*0.728*	*0.164*	*0.722*	*0.378*	*0.413*	*0.866*	*1.000*
R3	0.038	0.054	0.000	0.095	0.101	-0.023	-0.003	0.037	0.034	0.025	0.014	0.023	-0.051	0.003	0.011	-0.019	-0.007	0.015
	0.420	*0.265*	*1.000*	*0.154*	*0.140*	*0.763*	*0.939*	*0.390*	*0.461*	*0.667*	*0.825*	*0.728*	*0.064*	*0.905*	*0.706*	*0.623*	*0.866*	*0.722*
R4	0.051	0.135	0.083	0.082	0.182	0.053	0.035	0.125	0.133	0.089	0.149	0.083	0.032	0.037	0.049	0.019	0.088	0.061
	0.282	*0.005*	*0.119*	*0.217*	*0.008*	*0.482*	*0.403*	*0.004*	*0.004*	*0.132*	*0.015*	*0.202*	*0.246*	*0.192*	*0.102*	*0.623*	*0.029*	*0.155*
R5	0.013	0.081	0.061	0.057	0.061	0.098	-0.028	0.098	0.072	-0.013	0.027	0.068	-0.019	0.010	0.019	-0.006	-0.020	0.030
	0.788	*0.095*	*0.257*	*0.393*	*0.375*	*0.192*	*0.494*	*0.024*	*0.120*	*0.830*	*0.658*	*0.296*	*0.487*	*0.722*	*0.529*	*0.870*	*0.614*	*0.477*
Interaction effects																		
R2				0.063	0.014	0.212				0.108	0.088	0.205				-0.013	0.034	0.053
				0.502	*0.889*	*0.047*				*0.196*	*0.310*	*0.027*				*0.817*	*0.552*	*0.379*
R3				-0.114	-0.095	0.045				-0.057	0.047	0.023				-0.063	0.020	-0.008
				0.227	*0.330*	*0.670*				*0.494*	*0.584*	*0.805*				*0.247*	*0.721*	*0.900*
R4				-0.063	-0.095	0.061				-0.108	-0.047	0.098				0.025	-0.101	-0.023
				0.502	*0.330*	*0.570*				*0.196*	*0.584*	*0.286*				*0.643*	*0.075*	*0.706*
R5				-0.089	0.041	-0.076				-0.032	0.142	0.008				-0.025	0.061	-0.023
				0.347	*0.676*	*0.478*				*0.704*	*0.101*	*0.935*				*0.643*	*0.284*	*0.706*
constant	0.289	0.248	0.321	0.272	0.236	0.341	0.109	0.075	0.086	0.101	0.095	0.114	0.038	0.033	0.015	0.032	0.034	0.015
	0.000	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*	*0.009*	*0.005*	*0.003*	*0.007*	*0.003*	*0.037*	*0.085*	*0.450*	*0.156*	*0.145*	*0.538*
n	948	888	792	948	888	792	948	888	792	948	888	792	948	888	792	948	888	792
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.003	0.001
R-squared	0.149	0.156	0.086	0.153	0.159	0.094	0.104	0.088	0.079	0.110	0.093	0.087	0.054	0.024	0.037	0.056	0.033	0.040
Root MSE	0.483	0.481	0.501	0.483	0.482	0.500	0.427	0.429	0.433	0.427	0.429	0.433	0.280	0.282	0.282	0.280	0.282	0.283

Respondent fixed effects absorbed in all models; Reference race/identification category = Caucasian (self-identification not applicable); *p-values in italics*

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