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A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree
in Psychology

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A MODEL OF PERCEIVED UNDEREMPLOYMENT
AMONG IMMIGRANTS IN CANADA

(Spine title: A Model of Underemployment among Immigrants in Canada)

(Thesis format: Monograph)

by

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Graduate Program in Psychology

A thesis submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

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**A Model of Perceived Underemployment among
Immigrants in Canada**

is accepted in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

Date

Chair of the Thesis Examination Board

Abstract

Although the Canadian labour market relies heavily on immigrants, they are not being effectively integrated into the workforce. Recent estimates indicate that over 50% of recent immigrants with a university degree are overqualified for their jobs, and most of these individuals will remain in positions for which they are overqualified for the duration of their lives in Canada (Li, Gervais, & Duval, 2006).

While previous research has shown that underemployment is a pervasive problem among immigrants in Canada, to date we know relatively little about the predictors and outcomes of immigrant underemployment. To increase our understanding of immigrants' experiences of underemployment, the overarching goal of this dissertation was to develop a conceptual model of perceived underemployment among immigrants in Canada. Three studies were conducted with samples of employed immigrants. In the first study, a preliminary examination of the predictors and outcomes of perceived underemployment was conducted using an online survey completed by 190 immigrants. In the second study, data were analyzed from an Immigration Labour Market Survey completed by 199 immigrants. In the third study, a comprehensive investigation was conducted via an online survey completed by 75 immigrants.

Taken together, results from the three studies demonstrate that perceptions of underemployment among immigrants are predicted by job characteristics (e.g., wages, working in a lower-skill job and/or different industry than one's preferred job), unemployment history, and credential recognition. Demographic characteristics do not predict perceived underemployment. Outcomes of perceived underemployment among immigrants include individual-relevant outcomes (e.g., satisfaction with immigration

decision) and organization-relevant outcomes (e.g., job attitudes and withdrawal behaviours). In addition, there was consistent support for a mediational model in which the relation between job characteristics and organization-relevant outcomes is partially mediated by perceived underemployment.

An important contribution of the current research was an examination of whether the attributions that immigrants make for their employment situation interact with perceived underemployment in predicting negative outcomes. Results suggest that, among individuals high in perceived underemployment, the tendency to view one's situation as personally controllable is associated with a lower likelihood of regretting one's immigration decision and contemplating leaving Canada. The implications of these findings for organizations and for government programs are discussed.

Keywords: attribution theory, credential recognition, immigrants, job attitudes, overqualification, perceived discrimination, return migration, underemployment

Acknowledgments

First, I extend my deepest thanks to my advisors, Victoria Esses and Joan Finegan, for their excellent mentorship. Vicki and Joan, thank you for helping me become a better researcher, and for encouraging me to pursue a program of research that I am passionate about. I am incredibly grateful for your unwavering support, and for the many opportunities you have provided me with during my time at Western.

I would also like to thank my committee members (John Meyer and Mitch Rothstein) and examiners (Jeff Hopkins, Susan Pepper, and Jeffrey Reitz) for their insightful comments and suggestions that contributed significantly to this dissertation.

I am very grateful to Sohail Khan from Skills International who helped make Study 1 possible, and to Laureen Rennie from the Region of Peel who shared the datafile used in Study 2. I would also like to acknowledge the Social Sciences and Humanities Research Council of Canada for funding this research.

Thank you to the past and present members of the ELSIR lab and Finegan lab, as well as to the Rothstein and Dietz labs, for your enthusiastic contributions to my research, and for your friendship throughout the years. A special thanks to the many research assistants who helped with various aspects of the coding required for this dissertation: Lisa Bitacola, Dan Dick, Samantha Proffitt, Mariam Soliman, and Tasha Williamson.

Finally, I would like to express a heartfelt appreciation to my family and friends for their support. To my husband, Harris Rubin: thank you for your love and encouragement, for making me laugh every day, and for never growing tired of listening to me talk about my research.

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CHAPTER 1: GENERAL INTRODUCTION

In the past ten years, over 50% of the individuals who have immigrated to Canada have been economic immigrants, selected for their skills and ability to contribute to Canada's economy (Citizenship & Immigration Canada, 2008; 2009). Yet despite their advanced university degrees and extensive work experience, many of these individuals are underemployed or working in a job for which their education, skills, and previous work experience are underutilized (Li, Gervais, & Duval, 2006). Researchers and policy makers alike agree that the underutilization of immigrants' skills in the Canadian labour market has become a pressing issue (Reitz, 2005). Indeed, recent evidence suggests that, although the Canadian labour market relies heavily on immigrants to meet its needs, over 50% of recent immigrants who hold a university degree are overqualified for their jobs (Li et al., 2006). Of those, 72% will remain in positions for which they are overqualified for the duration of their lives in Canada (Li et al.). In contrast, only 28% of non-immigrants with university degrees are overqualified, and only 36% of those individuals will remain overqualified (Li et al.). In sum, there are a disproportionate number of underemployed immigrants compared to non-immigrants.

Given its prevalence, it is not surprising that the economic impact of immigrant underemployment in Canada is extensive. Using different methodologies, Watt and Bloom (2001) and Reitz (2005) both calculated that immigrant underemployment costs the Canadian economy over \$2 billion annually. Although staggering, the economic impact is only the tip of the iceberg: underemployment may also have serious social and political repercussions (Reitz, 2005, p. 3). Extant research suggests that underemployment leads to lower levels of psychological well-being (e.g., Bolino &

Feldman, 2000; Jones-Johnson & Johnson, 1992; Winefield, Winefield, Tiggemann, & Goldney, 1991), and negative job attitudes (e.g., job dissatisfaction and turnover intentions; Bolino & Feldman, 2000; Borgen, Amundson, & Harder, 1988; Maynard, Joseph, & Maynard, 2006).

Research examining underemployment specifically among immigrants has demonstrated that underemployment causes significant scarring on immigrants' career trajectories because immigrants have a more difficult time than non-immigrants moving into adequate employment once underemployed (Waldinger, Bozorgmehr, Lim, & Finkel, 1998). In addition, because the majority of underemployed immigrants are racial minorities, underemployment could increase the level of prejudice and intergroup conflict in Canada (Reitz, 2005). For example, if a prospective employer fails to recognize an individual's foreign credentials, the individual might believe that she was a target of discrimination, a feeling that could foster intergroup tension. Finally, research suggests that the psychological and health consequences associated with underemployment can spill over to the underemployed individual's family members (Dean & Wilson, 2009). Ultimately, the consequences of underemployment may culminate in immigrants' desire to leave Canada, affecting our ability to recruit and retain immigrants in the future.

In light of the importance of immigrants to the Canadian labour market, and the economic, social, and political ramifications of underemployment, it is essential that we gain a better understanding of the underemployment of immigrants, including its predictors and outcomes. As such, the purpose of my doctoral dissertation is to develop a theoretically and empirically grounded model of perceived underemployment among immigrants.

Conceptualizing Underemployment

Like many constructs in the social sciences, underemployment has been conceptualized and measured in various ways. Economists and sociologists typically define underemployment dichotomously (underemployed or not) in terms of income loss or possessing more education than a job requires. As such, they measure "objective" indicators of underemployment such as earning a lower salary than in a previous job (Zvonkovic, 1988). In contrast, social psychologists and organizational behaviour researchers give more weight to individuals' perceptions of whether or not they are underemployed (i.e., perceived underemployment; Maynard et al., 2006).

Based on his extensive review of the general underemployment literature, Feldman (1996) suggested that underemployment comprises five dimensions (see Table 1). First, the individual may have more formal education than the job requires (e.g., a person with a bachelor's degree working in a job that requires only a high school education). Second, the individual may have higher-level work skills or experience than the job requires (e.g., a person with 20 years of experience working in an entry-level position). Third, the individual may be involuntarily employed in a field outside of his or her area of formal education or training (e.g., a person with an English degree working in a marketing job). Fourth, the individual may be involuntarily engaged in part-time, temporary, or intermittent employment (e.g., a person working 20 hours per week desires a full-time position). Finally, the individual may earn low pay relative to his/her previous job or to others with the same formal education or training (e.g., a person earns \$15 per hour in his/her current job, despite earning \$20 per hour in a previous job). In each case, an individual may be underemployed on one or more of these dimensions.

Table 1

Dimensions of Underemployment (Feldman, 1996, p. 388)

-
1. Person possesses more formal education than the job requires
 2. Person possesses higher-level work skills and more extensive work experience than the job requires
 3. Person is involuntarily employed in a field outside his/her area of formal education
 4. Person is involuntarily engaged in part-time, temporary, or intermittent employment
 5. Person earns wages 20% less than in a previous job (for new graduates, 20% less than the average person graduating in his/her cohort in the same major or occupational track)
-

There are two noteworthy issues regarding these five dimensions. The first issue is that most of these dimensions can be conceptualized both objectively and subjectively. That is, while we could objectively determine whether an individual possesses more education than the job requires, we could also ask an individual his or her perception regarding whether this is the case. Typically, researchers interested in perceived underemployment (also referred to as perceived overqualification) focus on measuring the first two dimensions outlined above: possessing surplus education and work skills/experience (e.g., see Maynard et al., 2006). The second issue is that it is possible to operationalize most of these dimensions both dichotomously and continuously. For example, in the case of the former, an individual either possesses (or does not possess) more formal education than the job requires. In the case of the latter, the extent of overeducation is a matter of degree. For instance, an individual with a doctorate who is working in a job that requires only a high school education could be considered "more underemployed" than an individual with a bachelor's degree who is working in the same job. Similarly, when thinking about perceived underemployment, we could either ask individuals whether they possess higher-level work skills than their job requires (*yes* or *no*) or we could ask them to indicate the extent to which they possess higher-level work skills than their job requires.

In my doctoral dissertation, I conceptualize underemployment as a psychological construct involving the *perception* that one is employed in a lower quality job than some referent (e.g., the employment situation of others with the same education or work

experience; an individual's own past work situation). To reduce confusion with more objective conceptualizations, I refer to this construct as *perceived underemployment*.¹

I chose to focus on perceived, rather than objective, underemployment because research has shown that individuals are likely to feel and act based on their perceptions of a situation, regardless of the accuracy of those perceptions (Zalesny & Ford, 1990). To illustrate, it is possible that individuals who are underemployed according to objective indicators (e.g., they possess more formal education than their job requires) do not feel underemployed (e.g., because they find their job challenging). Similarly, individuals who are not objectively underemployed (e.g., their education credentials are consistent with what is required for their job) may nevertheless feel that they are underemployed (e.g., because they find their job boring). Indeed, there is some evidence to suggest that perceptions of underemployment, rather than objective indicators of the construct, are better predictors of important outcomes such as job dissatisfaction (Khan & Morrow, 1991). Given my interest in perceived underemployment, I operationalize and measure the construct continuously, consistent with past research (e.g., Bolino & Feldman, 2000; Khan & Morrow; Maynard et al., 2006). In addition, operationalizing underemployment continuously (rather than dichotomously) provides statistical advantages such as increased effect size, power, and measurement reliability (MacCallum, Zhang, Preacher, & Rucker, 2002).

Past Research on Underemployment

Since the 1930s when many countries experienced widespread joblessness as a result of the Great Depression, the unemployment rate has been considered the primary

¹ Some researchers refer to this construct as perceived overqualification (e.g., Maynard, Joseph, & Maynard, 2006).

indicator of labour market performance. As such, academics, politicians, and the popular media have focused their attention on documenting and understanding the causes of unemployment and its consequences, both on individual workers and on society more broadly. In comparison, we know relatively little about the phenomenon of underemployment, and even less as it applies specifically to immigrants.

To date, the most thorough and integrative review of the general underemployment literature was conducted by Feldman in 1996. By reviewing existing literature on unemployment, career development, organizational decline, and underemployment (where available), Feldman presented a series of testable hypotheses about potential antecedents and consequences of underemployment (see Figure 1). His propositions are reviewed here briefly.

As Feldman (1996) explains, there has been little research examining the antecedents of underemployment (in any population). As such, his propositions regarding the antecedents of underemployment are based on research examining unemployment and career development. Based on his review of these literatures, Feldman proposed that the following factors should predict individuals' susceptibility to underemployment: economic factors (the overall economy, as well as at the industry and company level), job characteristics (e.g., hierarchical level in the organization), career history variables (e.g., layoff history), job search strategies (e.g., intensity of search), and demographic variables (e.g., age).

Compared to the scant research on the antecedents of underemployment, considerable attention has been given to its consequences. As a result, the majority of the outcomes Feldman outlines in his model are based on existing empirical evidence. These

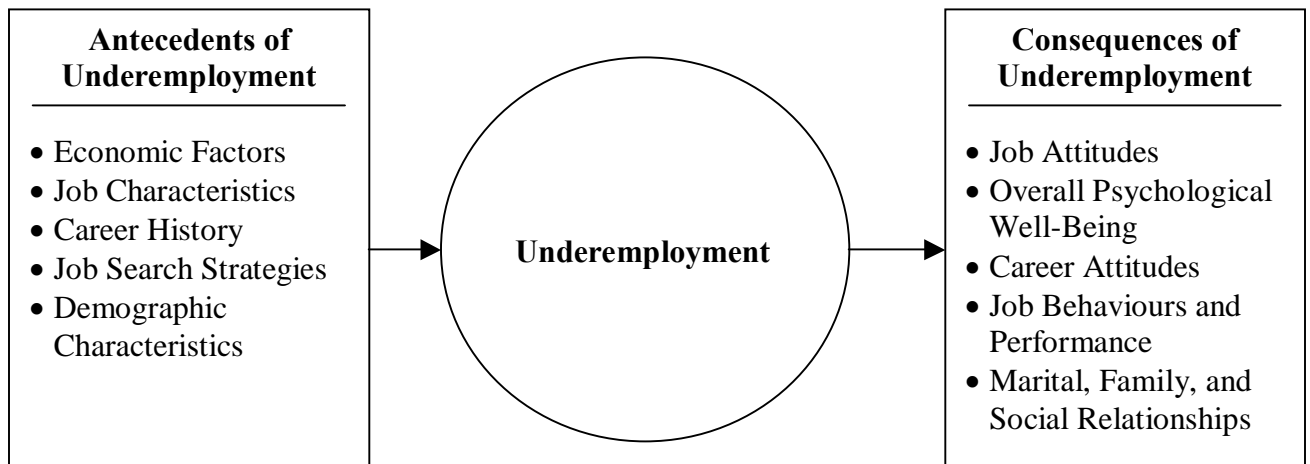


Figure 1. Model of proposed antecedents and consequences of underemployment

(Feldman, 1996, p. 391).

include: job attitudes (e.g., job satisfaction), job behaviours (e.g., turnover), career attitudes, overall psychological well-being, and quality of marital, family, and social relationships.

The most documented outcome of underemployment is job dissatisfaction. Research conducted with diverse samples has consistently found a robust, negative relation between underemployment and job satisfaction (e.g., Feldman, Leana, & Bolino, 2002; Feldman & Turnley, 1995; Johnson & Johnson, 2000; Khan & Morrow, 1991). Recently, in a series of two studies conducted with employees in a variety of organizations, Maynard and colleagues (2006) demonstrated that various conceptualizations of underemployment (e.g., perceived underemployment², involuntary job-degree mismatch, involuntary part-time employment, and underpayment) were negatively related to multiple facets of job satisfaction. Interestingly, although perceived underemployment was negatively related to each of the job satisfaction facets examined, it was most strongly related to satisfaction with the nature of the work.

Given the robust relation between underemployment and job satisfaction, it is not surprising that research has also demonstrated that underemployment is associated with lower affective organizational commitment (Feldman et al., 2002; Feldman & Turnley, 1995; Maynard et al., 2006), higher turnover intentions (Borgen et al., 1988; Maynard et al.) and increased job search behaviours (Tan, Leana, & Feldman, 1994). In sum, there is a body of evidence suggesting that underemployment is associated with negative job attitudes and behaviours.

² Maynard and colleagues use the term perceived overqualification, defined as "the extent to which an employee feels that he or she has surplus education, experience, and/or KSAs [Knowledge, Skills, and Abilities] relative to the requirements of his or her position" (2006, p. 518).

In addition, Feldman postulates that underemployment may be associated with more negative attitudes toward one's career (including lower career investment) and more careerist activity (e.g., turning to non-performance based behaviours such as manipulative interpersonal behaviour to obtain better jobs). Feldman bases these hypotheses on indirect findings; to date, they have not been empirically examined.

Importantly, the negative consequences of underemployment extend beyond the working realm. Evidence suggests that underemployment is associated with several indicators of health and well-being, including psychosocial stress (i.e., psychosomatic stress, frustration, hostility, and insecurity; Jones-Johnson & Johnson, 1992), depression (Johnson & Johnson, 1996), psychological well-being (Johnson & Johnson, 1996) and physical health (Friedland & Price, 2003). In addition, extrapolating from research on workers who experienced lay-offs, unemployment, and economic losses, Feldman (1996) hypothesized that underemployment may be associated with decreased quality of marital, family, and social relationships. Ultimately, the effects of underemployment radiate out and may negatively influence social relations outside the family (Feldman, 1996, p. 400).

It is important to note that there are several limitations to the existing literature on underemployment. First, despite increased attention to the topic of underemployment in recent years, the majority of researchers have continued to focus on its consequences, particularly on job attitudes and overall mental health. Although Feldman's model includes many testable hypotheses about potential antecedents of underemployment, in the fourteen years that have passed since Feldman's publication, little progress has been made toward understanding these factors.

Second, as several underemployment researchers have lamented (e.g., Feldman, 1996; Feldman & Turnley, 1995; Maynard et al., 2006), the majority of research in this area has been atheoretical. Although researchers have mentioned the potential utility of various theoretical frameworks (e.g., equity theory, attribution theory; Feldman, 1996) typically the focus has been on the documentation of empirical relations, with theoretical rationales imparted post hoc (Feldman, 1996). To truly advance our understanding of underemployment, we need to design studies that test specific theoretical propositions.

Third, the majority of research on underemployment has been conducted using samples of recent high school and college graduates (Feldman & Turnley, 1995; Nabi, 2003; Winefield et al., 1991), laid-off blue collar workers (Leana & Feldman, 1995; Liem & Liem, 1988), and expatriates (Bolino & Feldman, 2000; Feldman et al., 2002; Lee, 2005). Although evidence suggests that underemployment is a widespread problem among immigrants, researchers have not paid attention to this group. Ultimately, we know little about the antecedents and consequences of underemployment among immigrants, and there are limitations in the extent to which we can generalize findings from studies conducted using samples of relatively homogeneous groups of non-immigrants (e.g., laid-off blue collar workers).

Underemployment Among Immigrants

Recent immigrants to Canada (i.e., those who have lived in Canada for less than ten years) are more highly educated than non-immigrants. As of 2006, among 25 to 54 year olds, the proportion of recent immigrants to Canada with a university degree was twice as high as that of non-immigrants (Federation of Canadian Municipalities, 2006). Yet despite their educational attainment, extant research demonstrates that immigrants to

Canada experience disproportionately high levels of both unemployment and underemployment (e.g., Galarneau & Morissette, 2004; Gilmore, 2009; Li et al., 2006).³ For instance, in his analysis of the most recent census data, Gilmore found that, in 2008, the proportion of immigrants with university degrees who were overqualified for their current jobs was 1.5 times higher than the proportion of non-immigrants who were overqualified. Among university-educated immigrants who had lived in Canada for less than five years, two-thirds (68%) were working in jobs that required at most a college education or apprenticeship, compared to 41% of their non-immigrant counterparts.⁴

Using data from Statistics Canada's Survey of Labour and Income Dynamics, Li and colleagues (2006) also found far higher rates of overqualification among immigrants. In their study, an overqualified worker was defined as an individual who held a university degree and had, within a specified eight-year period (1993-2001), worked for at least one month in an occupation that required at most a high school education (as classified by the National Occupational Classification; Human Resources and Skills Development Canada, 2009a). Individuals living in Canada for ten years or less had a much higher incidence of overqualification (52%) than non-immigrants (28%). They were also twice as likely as non-immigrants to remain overqualified for 100% of their work period.

The only empirical examination of the factors that predict the likelihood of immigrants experiencing underemployment was conducted by Galarneau and Morissette (2004), who examined the 2001 census data from individuals who had been living in

³ This trend has also been documented in other countries, including Australia (Wooden, 1993) and the United States (De Jong & Madamba, 2001).

⁴ Among immigrants who had spent between five and ten years in Canada, 63% were overqualified for their jobs. This number reduced to 55% for individuals who had lived in Canada for more than ten years (Gilmore, 2009).

Canada for two to six years, were of key working age⁵ and held a university degree. Consistent with the results found by Gilmore (2009) and Li and colleagues (2006), results demonstrated that immigrants were over twice as likely as their non-immigrant counterparts to be overqualified for their job (i.e., working in jobs requiring no more than a high school education).^{6,7} In their examination of how various demographic factors influenced the likelihood of experiencing underemployment, Galarneau and Morissette found that the proportion of immigrants in Canada for two to six years with a university degree who were working in an occupation below their education level was higher among: women (compared to men); visible minorities (compared to non-visible minorities); individuals with degrees in education, the humanities, or the social sciences (compared to those with degrees in engineering, computer science, or mathematics); individuals from South Asia and Southeast Asia; individuals with master's or doctoral degrees (compared to those with bachelor's degrees); and individuals whose mother tongue was not one of Canada's official languages (compared to those for whom English or French was their mother tongue).

Although the studies conducted by Gilmore (2009), Li and colleagues (2006) and Galarneau and Morissette (2004) highlight discrepancies between the labour market outcomes of immigrants and non-immigrants, they are solely descriptive in nature and they focus exclusively on objective indicators of underemployment found in census data and labour market surveys (e.g., whether university-educated individuals are working in a job that requires at most a college or high school diploma). In addition, given the authors'

⁵ Individuals who ranged in age from 25 to 54.

⁶ As categorized according to the National Occupational Classification (Human Resources and Skills Development Canada, 2009).

⁷ Specifically, the proportion of immigrants who were overqualified was 25% for men and 38% for women. The corresponding figures for their non-immigrant counterparts were 12% and 13% respectively.

conceptualizations of underemployment, the construct was operationalized dichotomously.

Similar limitations arise from the few academic investigations of underemployment among immigrants. For the most part, researchers have focused on documenting the prevalence of underemployment in different immigrant groups, such as across immigration generations (Slack & Jensen, 2007), or between visible minority immigrants and non-visible minority immigrants (De Jong & Madamba, 2001). Like the studies reviewed above, these academic investigations used objective indicators of underemployment (e.g., objectively overeducated for the job) to classify each individual as underemployed or not. Although these studies are interesting, they do not greatly increase our understanding of the antecedents and consequences associated with immigrant underemployment.

To illustrate, consider Aycan and Berry's (1996) investigation of the impact of economic integration on psychological well-being and adaptation. The researchers surveyed 110 Turkish immigrants in Montréal and categorized each participant as either unemployed, underemployed, or satisfactorily employed. To make the distinction between underemployed and satisfactorily employed, respondents were asked whether they were involved in jobs at the level for which their training had equipped them (p. 244). If they responded 'yes' they were classified as satisfactorily employed. If they responded 'no' they were asked to indicate whether the demands of the job were above or below their training. Respondents who selected 'below' were categorized as underemployed. (No respondents selected 'above'). When testing their hypotheses, employment status was treated as a continuous variable (unemployed, underemployed, or

satisfactorily employed). Although Aycan and Berry found that employment status was associated with psychological well-being and adaptation to life in Canada, I believe that these findings should be interpreted with caution. Given how it was measured, employment status was a categorical variable and, as such, a more appropriate analysis may have been to examine whether the three groups (unemployed, underemployed, or satisfactorily employed) differed on psychological well-being and adaptation to life in Canada.

Taking a completely different approach, some academic researchers have studied immigrant underemployment using qualitative approaches, typically in the form of in-depth interviews (Dean & Wilson, 2009; Este & Tachble, 2009; Krahn, Derwing, Mulder, & Wilkinson, 2009). Although these studies are useful in providing detailed descriptions of personal experiences with underemployment and general challenges to labour market integration, issues arise regarding the generalizability of findings. Each of these studies was conducted with a very specific group of immigrants; for example, Sudanese refugee fathers (Este & Tachble), or skilled individuals living in the Dixie-Bloor neighbourhood in Mississauga, Ontario for less than three years (Dean & Wilson). Ultimately, although they provide insight that can inform empirical investigations, these studies do little in the way of explaining why underemployment occurs and what consequences are associated with it.

In sum, the research that has been conducted on immigrant underemployment has yielded consistent findings regarding the prevalence of underemployment among immigrants. However, there are several shortcomings associated with this small body of work. Importantly, with the exception of Aycan and Berry's study, researchers have

focused exclusively on objective indicators of underemployment, to the exclusion of perceived underemployment. In addition, the research has been primarily descriptive in nature, with little regard for explanatory processes.

By conducting the three studies described below, my dissertation seeks to address these limitations in the existing literature, contributing to our understanding of perceived underemployment among immigrants.

Overview of the Current Research

The overarching goal of my dissertation was to develop a comprehensive conceptual model of perceived underemployment among immigrants (see Figure 2). To this end, I conducted three studies.

In Study One (see Chapter 2), I conducted an initial examination of the predictors and outcomes of perceived underemployment among immigrants using a sample of 190 employed immigrants recruited from former clients of Skills International, an organization that connects skilled immigrants with employers seeking to fill job openings. Specifically, I examined the relation between perceived underemployment and some of the primary variables with which it has been associated in non-immigrant samples (e.g., job satisfaction) and I tested novel propositions regarding variables that are uniquely relevant to an immigrant sample (e.g., satisfaction with decision to immigrate to Canada). I also examined the unique variance in perceived underemployment accounted for by several predictor variables.

In Study Two (see Chapter 3), I analysed data from the Region of Peel's Immigration Labour Market Survey (Region of Peel, 2009). This comprehensive study included data on a variety of key variables from 199 employed immigrants. These data

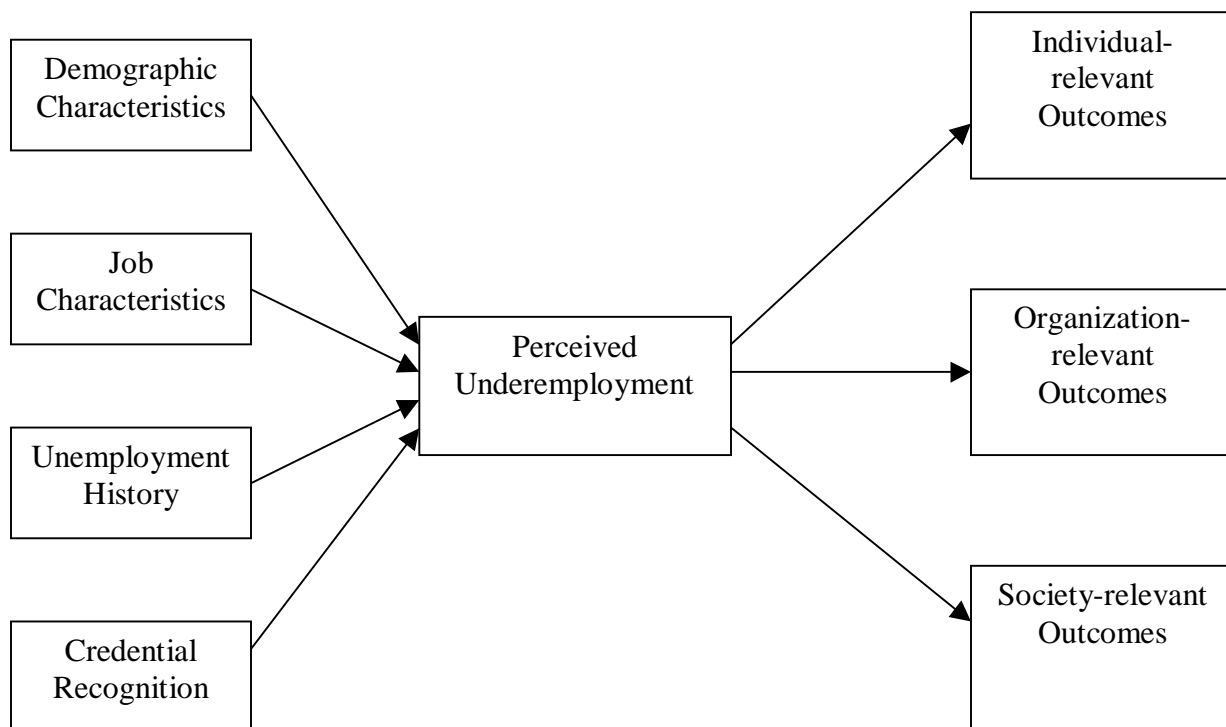


Figure 2. Conceptual model of the predictors and outcomes of perceived underemployment.

were used to examine: 1) whether the findings from Study One would replicate, 2) the relation between perceived underemployment and some additional predictor and outcome variables, 3) the unique variance in perceived underemployment accounted for by several predictor variables, and 4) whether perceived underemployment mediates the relation between its predictors and outcomes.

In Study Three (see Chapter 4), I conducted a comprehensive study among a sample of 75 immigrants recruited through advertisements and social media sites. In this study, I examined whether the findings from Studies One and Two would replicate. I also examined the relation between perceived underemployment and several additional predictor and outcome variables. In addition, drawing on attribution theory (Weiner, 1986), I examined whether the attributions that individuals make for their employment situation interact with perceived underemployment in predicting negative outcomes. This was intended to not only increase our understanding of factors that contribute to the possible negative outcomes of perceived underemployment, but also to suggest ways in which we might attenuate the relation between perceived underemployment and its negative effects.

CHAPTER 2: STUDY ONE

Introduction

The purpose of Study One was to conduct an exploratory investigation of the relation between perceived underemployment and some of the primary variables in my model. The rationale for conducting this study was two-fold. First, as discussed previously, the majority of research on underemployment has focused on the experiences of non-immigrants or has failed to take immigrant status into consideration. As such, it was important to see if the relations between perceived underemployment and the predictors and outcomes with which it has been previously associated hold in an immigrant sample. Second, many of the predictors and outcomes of interest in the current study have not been investigated by previous researchers. Because researchers have focused fairly exclusively on the consequences of underemployment, there is little empirical evidence regarding Feldman's proposed antecedents of underemployment. In addition, not all of the variables of relevance to an immigrant sample have been studied in non-immigrant samples. For example, variables such as English language proficiency and length of time spent in Canada might be important predictors of underemployment among immigrants, yet they have not been studied. Thus, I sought to examine whether (and how) these factors were associated with perceived underemployment. Similarly, outcomes such as satisfaction with immigration decision have not been investigated, and are particularly relevant to the success of Canada's immigration policy.

Thus, Study One was an initial investigation of some of the proposed predictors and outcomes of perceived underemployment among immigrants in Canada. Data were collected via an online survey completed by employed skilled immigrants who were

previous clients of an organization that connects internationally trained professionals with employers. The large majority of participants were university-educated.

In this study, the categorization of variables as predictors or outcomes was based on logic and informed speculation. On the one hand, some variables of interest have clear temporal precedence over perceived underemployment. As such, they were considered predictors. These variables include the following: demographic variables (e.g., gender), participants' pre-migration educational attainment, English language proficiency, and characteristics of participants' current job (e.g., wages and skill level). On the other hand, there is preliminary evidence to suggest that several variables of interest in the current study (e.g., job satisfaction) are outcomes of perceived underemployment. For the most part, this evidence is in the form of results from mediation analyses conducted on data collected cross-sectionally. For instance, past research has demonstrated that perceived underemployment fully mediates the relation between job characteristics (e.g., hierarchical job level) and job attitudes (e.g., job satisfaction; Bolino & Feldman, 2000). Thus, in the current study, job satisfaction, turnover cognitions, and turnover intentions were considered outcomes of perceived underemployment. These initial speculations about causality will be explored more fully in Studies Two and Three.

In what follows, I describe the variables included in this study and their hypothesized relations with perceived underemployment.

Predictors of Underemployment

Characteristics of current job. Many of the job characteristics included in the current study are indicators of objective underemployment and, as such, correspond to the dimensions of underemployment outlined by Feldman. These dimensions are:

employment status (e.g., full-time vs. involuntary part-time), underpayment, possessing higher-level work skills than the job requires, and employment in a field outside one's area of formal training/education.

In the current study, I sought to examine the relation between these objective indicators of underemployment and individuals' perceptions of underemployment because these relations have not been examined among immigrants. Although I expected my results to be consistent with those obtained using non-immigrant samples, objective indicators are typically weakly correlated with perceived underemployment (e.g., Maynard et al., 2006) so it was important to examine this issue empirically because it is possible that immigrants who are underemployed according to objective indicators do not perceive themselves as underemployed because their expectations of skill utilization in the Canadian labour market differ from those of non-immigrants. The converse is also true. Immigrants who are not underemployed according to objective indicators (e.g., because they are working full-time in a field consistent with their training) may nonetheless perceive themselves as underemployed (e.g., due to relatively low tenure in their current organization).

Employment status. Employment status comprises multiple indicators, including the stability of an individual's job position (e.g., temporary/contract vs. permanent) and the number of hours an individual works per week (e.g., part-time hours vs. full-time hours). Past researchers have found fairly weak relations between perceived underemployment and indicators of employment status. For instance, in two studies of employees from a variety of organizations, Maynard and colleagues (2006) found that the correlation between perceived underemployment and whether or not individuals were

involuntarily engaged in part-time work ranged from .17 in one sample to .26 in another. Consistent with these findings, in the current study I predicted that higher status would be associated with lower perceived underemployment.

Hypothesis 1: Individuals working in temporary/contract positions will be higher on perceived underemployment than individuals working in permanent positions.

Employees engaged in part-time, temporary, or intermittent work likely perceive themselves as underemployed when they would prefer to have full-time, permanent, or continuous employment (but not necessarily when they are similarly employed by choice; Maynard et al., 2006). As such, compared to individuals' actual employment status, the match between individuals' actual and preferred employment status may be a better predictor of perceived underemployment.

Hypothesis 2: Individuals who are involuntarily employed part-time will be higher on perceived underemployment than individuals who are either working full-time or who are voluntarily employed part-time.

Wages. Economists typically define underemployment by examining individuals' wages. Conventionally, an individual is considered underemployed when he or she currently earns 20% less than he or she did in a previous job (or for new graduates, 20% less than the average graduate in his/her cohort in the same major or occupational track; Feldman, 1996). Due to the difficulties inherent in controlling for wage differences based on immigrants' region of origin, in the current study, I was limited to examining individuals' absolute wages, rather than comparative wages.

Hypothesis 3: Wages will be negatively correlated with perceived underemployment such that higher wages are associated with lower perceived underemployment.

Current and preferred job: Skill level and industry. Skill level refers to the amount and type of education and training required to enter and perform the duties of an occupation (Human Resources and Skills Development Canada, 2009a, NOC Classification Criteria, para. 2). As Feldman (1996) explains, possessing higher-level skills than one's job requires is an indicator of objective underemployment.

Hypothesis 4: Individuals whose current job requires a lower skill level than their preferred job (taking into account their qualifications) will be higher on perceived underemployment than individuals whose current job requires the same skill level as their preferred job.

Research has shown that, compared to their non-immigrant counterparts, immigrants are more likely to hold employment in jobs unrelated to their formal training and education (Boyd & Schellenberg, 2007; Boyd & Thomas, 2001). Feldman (1996) outlines how such occupational mismatch can lead individuals to feel underemployed: If an individual with a Master's in English has difficulty finding a job in his or her field, he or she may obtain a position in sales which also requires a Master's degree (in this case an MBA). Although such a position may be desirable to an individual with an MBA in marketing, it may be undesirable to an individual with a Master's in English, and lead this individual to feel underemployed. As such, the match (or lack thereof) between the industry in which individuals are currently employed and the industry in which they

prefer to be employed (given their qualifications) should be associated with perceived underemployment.

Hypothesis 5: Individuals whose current job is in a different industry than their preferred job will be higher on perceived underemployed than individuals whose current job is in the same industry as their preferred job.

Demographic characteristics. Recall that compared to the research on outcomes of underemployment, far less attention has been paid to researching its antecedents (Feldman, 1996). As such, to inform his model of underemployment, Feldman turned to existing research on unemployment, career development, and organizational decline. In all three literatures, demographic characteristics are key predictor variables. Thus, in his model, Feldman proposes that demographic variables such as gender, age, and education predict underemployment. In the current study I examined gender, age, length of residency in Canada, and educational attainment.

Gender. Few researchers have examined whether there are gender differences in underemployment, and the research that does exist has yielded mixed results. While there is some evidence to suggest that women have higher levels of objective indices of underemployment (e.g., inequitable pay; Tipps & Gordon, 1985), research on gender differences in perceived underemployment is lacking. Although Feldman (1996) proposed that women should be higher on perceived underemployment than men, empirical studies by Maynard and colleagues (2006) and Feldman and his colleagues (2002) found no gender differences in perceived underemployment.

When looking at research examining the effects of gender on the labour market outcomes of immigrants in Canada, evidence suggests that men have far better outcomes

than women. In their analysis of data from the Longitudinal Survey of Immigrants to Canada, Shields, Phan, Yang, Kelly, Lemoine, and colleagues (2010) found gender differences in the labour market outcomes of individuals who immigrated to Canada in the Skilled Worker category. After four years in Canada, women who immigrated to Canada in the Skilled Worker category had higher unemployment rates (16.5%) than men (11.4%). Similarly, among individuals who were employed four years after their arrival in Canada, 81.8% of women were engaged in full-time work, versus 94.6% of men. In their analyses, women also lagged behind men on outcomes such as the average number of months it took to find a job after arriving in Canada, and average hourly wage. In contrast, there was no significant difference between the percentage of women (71.2%) and men (66.8%) who were employed in a job that was related to their training or field of study.

As a result, because immigrant women's labour market outcomes in Canada continue to lag behind men's (Shields et al., 2010), I hypothesize that, compared to men, women will be higher on perceived underemployment.

Hypothesis 6: Women will be higher on perceived underemployment than men.

Age. In his model of underemployment, Feldman (1996) proposes that underemployment should be positively correlated with age. His prediction is based on research demonstrating that, although older blue collar workers are less likely to be unemployed than their younger colleagues (because they have more job security), when older workers are laid off, age bias contributes to difficulties in re-entering the labour market (e.g., Kaufman, 1982, as cited in Feldman, 1996).

Empirical research examining the effects of age on underemployment has produced mixed results. Consistent with Feldman's predictions, in Galarneau and Morissette's (2008) analysis, among university-educated immigrants who had been living in Canada for five years or less, the proportion of individuals who held jobs requiring no more than a high school education differed depending on age. Among individuals aged 25 to 34, 27% of men and 38% of women were underemployed. These rates were almost identical among individuals aged 35 to 44 (27% of men and 39% of women). The likelihood of being underemployed was higher among individuals between the ages of 45 and 54 (32% of men and 45% of women).

In contrast, using a diverse sample of employees, Maynard and colleagues (2006) found a weak negative correlation (-.15) between age and perceived underemployment. Similarly, in a recent study of Canadians, almost 50% of individuals under the age of 30 experienced overqualification during a six-year period (1996-2001), compared to less than 20% of individuals aged 50 and over (Li et al., 2006).⁸

Because the sample in the current study is very similar to that examined by Galarneau and Morissette (i.e., recent, university-educated immigrants), I predict that age will be positively correlated with perceived underemployment.

Hypothesis 7: Age will be positively correlated with perceived underemployment such that, as age increases, perceived underemployment will increase.

Length of residency in Canada. In 2008, the percentage of immigrants who had lived in Canada for less than five years who were working in temporary employment positions (16%) was double that of non-immigrants (8%; Gilmore, 2009). The percentage

⁸ In Li et al.'s (2006) study, an overqualified worker (hereafter underemployed) was defined as an individual who held a university degree and had, within a specified eight-year period, worked for at least one month in an occupation that required at most a high school education

of immigrants who had lived in Canada between five and ten years who were working in temporary employment positions (12%) fell somewhere between the two. A similar pattern emerges when looking at the percentage of immigrants working in jobs for which they are over-educated. Among university-educated immigrants who had lived in Canada for less than five years, two-thirds (68%) were working in jobs that required at most a college education or apprenticeship, compared to 41% of their non-immigrant counterparts. Once again, the percentage of over-qualified immigrants who had lived in Canada between five and ten years (63%) fell between the two (Gilmore, 2009). Indeed, evidence suggests that the quality of immigrants' employment situation in Canada improves as the length of their residency in Canada increases.

Hypothesis 8: Length of residency in Canada will be negatively correlated with perceived underemployment such that as the length of time that immigrants have lived in Canada increases, perceived underemployment will decrease.

Educational attainment. Consistent with Feldman's (1996) proposition that underemployment should be negatively correlated with education, in their study of Canadians, Li and colleagues (2006) found a negative association between educational attainment and objective underemployment such that higher university certification was associated with a lower likelihood of experiencing underemployment. Specifically, in their analysis of data from Statistics Canada's Survey of Labour and Income Dynamics, Li and colleagues found that 30% of workers with a bachelor's degree or less were overqualified for their current jobs, while only 19% of individuals with a Master's or Doctorate degree were overqualified. In addition, workers with a bachelor's degree were

twice as likely as those with higher degrees to remain overqualified for their entire careers.

Similar findings emerge from Galarneau and Morissette's (2004, 2008) examinations of Canada census data from university-educated immigrants of key working age (25-54) who had been living in Canada for five years or less. Galarneau and Morissette found that, in both 2001 and 2006, higher education seemed to protect a sizeable proportion of immigrants from falling into jobs requiring low education. Compared to workers with bachelor's degrees, immigrants with a master's or doctorate were less likely to hold a job requiring no more than a high school education. Among both men and women, individuals with a doctorate were 25% as likely as individuals with bachelor's degrees to hold low-education jobs.

Hypothesis 9: There will be a significant effect of educational attainment on perceived underemployment such that, compared to individuals with lower levels of educational attainment, those with higher levels of educational attainment will be lower on perceived underemployment.

English language proficiency. In an increasingly knowledge-based economy, proficient oral and written communication in one of Canada's official languages should increase the likelihood that immigrants acquire a job that corresponds to their education level and previous work experience. Indeed, Galarneau and Morissette (2004) found that university-educated immigrants whose mother tongue was neither English nor French were more likely to hold low-education jobs. Moreover, the disparities they observed remained after controlling for region of origin, experience, educational level, field of study, and visible minority status. Similarly, data from the Longitudinal Survey of

Immigrants to Canada (Statistics Canada, 2003) demonstrated that, while only 25% of immigrants who were not proficient in one of Canada's official languages indicated that they had a similar job pre- and post-migration, this number increased to 40% among immigrants who were proficient in either English or French.

While English language proficiency is an important predictor of labour market outcomes, so too is the extent to which individuals speak English with a foreign accent. In their examination of the effects of accent on employment discrimination in the U.S., Hosoda and Stone-Romero (2010) found that, in comparison with Standard American English-accented applicants and French-accented applicants, Japanese-accented applicants were less likely to be selected for a job that had high communication demands, even after controlling for applicant understandability. Likewise, research has demonstrated that, compared to job applicants without foreign accents, job applicants with foreign accents are viewed as more suited for low status jobs (and less suited for high status jobs; Kalin, Rayko, & Love, 1980).

Hypothesis 10: English language proficiency will be negatively correlated with perceived underemployment such that higher language proficiency is associated with lower perceived underemployment.

Hypothesis 11: The extent to which individuals speak English with a foreign accent will be positively correlated with perceived underemployment such that stronger accents are associated with higher perceived underemployment.

Outcomes of Underemployment

Individual-relevant outcomes.

Satisfaction with immigration decision. In Houle and Schellenberg (2010) analysis of immigrants' subjective assessments of life in Canada, results demonstrated that 87% of immigrants felt that, if given the chance again, they would make the same decision to come to Canada. In other words, the large majority of respondents were satisfied with their immigration decision. Although Houle and Schellenberg did not investigate how underemployment influences satisfaction with immigration decision, they did investigate how satisfaction is affected by relative material well-being. The authors found that, compared to individuals who report that their material well-being is better in Canada than it was in their region of origin, those who say their material well-being is worse are less likely to say that they would make the same immigration decision again. Extrapolating from these findings, I predict that there will be a negative association between perceived underemployment and immigrants' satisfaction with their immigration decision and likelihood that they would make the same decision to come to Canada.

Hypothesis 12: Perceived underemployment will be negatively correlated with satisfaction with immigration decision such that higher perceived underemployment is associated with a lower likelihood of making the same immigration decision again.

Perceived employment-related discrimination. Evidence suggests that members of stigmatized groups are highly sensitive to the possibility that they are being discriminated against (Major, Quinton, & McCoy, 2002, p. 221). As such, individuals

may attribute negative outcomes to discrimination. When immigrants feel underemployed, they likely search for attributions that explain why they find themselves in their current employment situation. One such explanation may be that they have been the targets of employment-related discrimination. Thus, it is plausible that perceived underemployment increases perceptions of employment-related discrimination. Indeed, research suggests that skilled immigrants to Canada often face prejudice and discrimination, particularly when searching for a job or on-the-job (Esses, Dietz, & Bhardwaj, 2006). Similarly, evidence suggests that nearly one in four visible minorities in Canada (the majority of whom are immigrants) believe they have experienced discrimination at work within the past 5 years (Banerjee, 2008). Although evidence from the Ethnic Diversity Study suggested that there was no relation between income inequity and perceptions of workplace discrimination (Banerjee), previous researchers have not examined whether perceived employment-related discrimination is an outcome of perceived underemployment. I believe that the perception of discrimination is an important outcome to consider, given its well-documented effects on immigrants' health and well-being (e.g., Jasinskaja-Lahti & Liebkind, 2001; Jasinskaja-Lahti, Liebkind, Jaakkola, & Reuter, 2006; Jasinskaja-Lahti, Liebkind, & Perhoniemi, 2006), life satisfaction (e.g., Vedder, van de Vijver, & Liebkind, 2006; Vohra & Adair, 2000; Ying, 1998), and assessment of life in Canada (Houle & Schellenberg, 2010).

Hypothesis 13: Perceived underemployment will be positively correlated with perceived employment-related discrimination such that higher perceived underemployment is associated with higher perceived discrimination.

Organization-relevant outcomes.

Job satisfaction. An inverse relation between perceived underemployment and job satisfaction has been found in diverse samples, including expatriates (Bolino & Feldman, 2000), recent business college graduates (Feldman & Turnley, 1995), and re-employed executives (Feldman et al., 2002). Feldman (1996) suggests that this relation exists because, compared to individuals who are "satisfactorily employed," underemployed workers receive fewer extrinsic rewards (e.g., salary) and intrinsic rewards (e.g., sense of accomplishment) from their jobs. Moreover, the rewards underemployed workers do receive are likely much less than they were expecting to receive. This may be particularly true among skilled immigrants.

Hypothesis 14: Perceived underemployment will be negatively correlated with job satisfaction such that higher perceived underemployment is associated with lower job satisfaction.

Turnover cognitions and intentions. Research has demonstrated that underemployed individuals report greater turnover intentions and engage in more job search behaviours. Maynard and colleagues (2006) found that perceived underemployment was related to higher intentions to turnover while Burris (1983) found that underemployed workers were less likely to give their current jobs an opportunity to improve before leaving. Similarly, Tan and colleagues (1994) found that recently laid-off workers who found themselves underemployed in their new job positions were more likely to continue searching for a job. I predict that these relations will be evident among immigrants, many of whom are likely working in "survival jobs" as they continue to search for jobs that are commensurate with their training and work experience.

Hypothesis 15: Perceived underemployment will be positively correlated with turnover cognitions such that higher perceived underemployment is associated with greater turnover cognitions.

Hypothesis 16: Perceived underemployment will be positively correlated with turnover intentions such that higher perceived underemployment is associated with an increased likelihood of looking for another job.

Method

Participants

Participants were recruited through a not-for-profit, London-based organization that provides a web-enabled, searchable database of skilled immigrant job-seekers in Ontario (see Appendix A for ethics approval form). The organization's goal is to connect pre-screened, internationally trained individuals with employers who require their skills. In order to be listed in the database, job seekers must work with an employment preparation agency that specializes in the unique needs of immigrant jobseekers. In addition, they must have an adequate level of English language fluency as assessed by the Canadian Language Benchmark.

Given my interest in the correlates of underemployment, I wanted to survey individuals who were currently employed so that they could report on their current job. Thus, the director of the organization emailed 4756 archived candidates (individuals who had already obtained a job) and invited them to participate in a study about Canadian immigrants' employment expectations and experiences. Three hundred ninety-six individuals began the survey (a response rate of 8.33%). The final sample constituted 190 employed immigrants (115 men, 72 women, 3 undisclosed), based on the inclusion

criteria of being employed, not missing an extensive amount of data, and responding correctly to a quality control question embedded in the questionnaire (i.e., "For quality control purposes, please select 4"). All participants were recent immigrants (i.e., they had lived in Canada for less than 10 years) and had lived in Canada for an average of three years ($M = 34.89$ months, $SD = 25.05$ months). Participants ranged in age from 22 years to 60 years ($M = 40.65$, $SD = 8.14$).

One hundred and fifty participants (78.9%) immigrated to Canada in the Skilled Worker Class, 21 (11.1%) immigrated in the Family Class, and 9 (4.7%) were Refugees or Refugee Claimants.⁹ At the time of this study, individuals who immigrated under the Skilled Worker Class were awarded points based on six criteria that are expected to help individuals become economically established in Canada: education, ability to speak English or French, work experience, age, pre-arranged employment, and adaptability (e.g., previous work or study in Canada; Citizenship and Immigration Canada, 2010a). Under the points system, individuals with a master's or doctoral degree, or more than 17 years of full-time employment were awarded a high number of points, as were individuals between 21 and 49 years of age.

Given that the majority of participants in the current study immigrated to Canada in the Skilled Worker Class, they were highly educated: 90.5% had a minimum of a bachelor's degree from outside of Canada (42.1% bachelor's, 38.4% master's, 10.0% doctorate, medical, dentistry).

⁹ Because 79% of participants (150 respondents) immigrated in the Federal Skilled Worker and Professional Class, and there were few in the other classes, no further analyses were conducted using immigration class.

Participants came from diverse regions of the world (see Table 2). Notably, 30.0% were from Southern Asia, 15.3% were from South America, 10.5% were from Eastern Asia, and 10.5% were from Southeast Asia.

Procedure

Participants read a letter of information and consent form. Next, participants completed the following measures embedded in a larger online questionnaire that was written in English.

Perceived underemployment. To measure perceptions of underemployment (see Appendix B), 6 items were adapted from a 13-item scale used by Bolino and Feldman (2000) in their study of underemployment among expatriates (see Table 3). Participants responded on 7-point Likert-type scales (1 = *strongly disagree* to 7 = *strongly agree*). Cronbach's alpha for the scale was .85. I used only 6 of Bolino and Feldman's 13 items because the other 7 items were not consistent with my operationalization of perceived underemployment. For instance, several of Bolino and Feldman's items were designed to tap the extent to which expatriates' assignments are challenging (e.g., "I can envision more challenging expatriate assignments than the one I have") and provide learning opportunities (e.g., "I have not learned a great deal new as a result of this overseas assignment").

Characteristics of current job.

Employment status. Participants were asked basic questions about their current job, such as whether or not other employees report to them (and if so, how many),¹⁰ and whether their current position was temporary/contract or permanent (see Appendix C).

¹⁰ Because 84% of participants (159 respondents) did not have direct reports, and few had direct reports, this item was dropped from further analysis.

Table 2

Study One Participants: Region of Origin

Region of Origin	Frequency	Percent
Southern Asia (e.g., India)	57	30.0
South America (e.g., Colombia)	29	15.3
Eastern Asia (e.g., China)	20	10.5
Southeast Asia (e.g., the Philippines)	20	10.5
Eastern Europe (e.g., Romania)	15	7.9
West Central Asia and the Middle East (e.g., Kuwait)	14	7.4
Central America (e.g., El Salvador)	7	3.7
Western Africa (e.g., Nigeria)	6	3.2
Caribbean and Bermuda (e.g., Jamaica)	5	2.6
Southern Europe (e.g., Serbia)	5	2.6
Northern Africa (e.g., Egypt)	4	2.1
Eastern Africa (e.g., Kenya)	2	1.1
Western Europe (e.g., Germany)	2	1.1
Northern Europe (e.g., UK)	1	0.5
Missing Data	3	1.6
Total	190	

Table 3

Underemployment Items

Bolino & Feldman (2000)	Current Study
I am overeducated for this overseas assignment.	I am overeducated for this job.
*This job lets me use my abilities.	*This job lets me use my abilities.
I have more formal education than this assignment requires; that is, someone with less formal education could perform my job well.	I have more formal education than this job requires; that is, someone with less formal education could perform my job well.
I feel overqualified for my current assignment.	I feel overqualified for my current job.
*This job lets me use skills from my previous experience and training.	*This job lets me use skills from my previous experience and training.
I feel underemployed on this assignment.	I feel underemployed on this job.

Note. * denotes reverse-coded items

To examine whether individuals were involuntarily engaged in part-time work I asked participants how many hours they worked per week, on average. I also asked participants whether they wished they worked fewer hours, the same number of hours, or more hours. Participants who worked fewer than 34 hours per week but wished they worked more hours were considered involuntarily engaged in part-time work (coded as 1). Both participants who worked full-time and those who were working part-time but did not desire more hours (voluntarily employed part-time) were coded as 0. Note that there was no difference in perceived underemployment between participants who worked full-time and those who were working part-time voluntarily.

Wages. To measure wages, participants were asked “What is your wage (in Canadian dollars) before taxes and deductions?” Response options were coded as follows: 1 = < \$10.00/hour, 2 = \$10.00 to \$14.99/hour, 3 = \$15.00 to \$19.99/hour, 4 = \$20.00 to \$24.99/hour, 5 = \$25.00 to \$29.99/hour, 6 = \$30.00 to \$34.99/hour, 7 = \$35.00 to \$39.99/hour, 8 = \$40.00 to \$44.99/hour, 9 = \$45.00 to \$50.00/hour.¹¹ Note that, for each response option, annual salary (assuming full-time work) was also listed to assist with correct indication of wages.

Current and preferred job: Skill level and industry. To assess the skill level and industry of their current and preferred job, participants were asked, “Given your qualifications (e.g., education, job experience), what is your preferred job?” and “What is your current job?” Participants’ open-ended responses to these items were coded using the National Occupational Classification (NOC), the authoritative resource on occupational information in Canada (Human Resources and Skills Development Canada, 2009a). The NOC covers approximately 30,000 job titles. Each job title is classified with

¹¹ No participants made more than \$50.00/hour

an eight-digit code according to skill type and skill level. For instance, the code for Dentist ó D013.3113 ó indicates that this job is in the health industry and that it requires a university-level education. Skill level was coded using the skill level categories identified in the NOC (2006; see Table 4). The NOC does not assign a skill level category to management occupations because factors other than education and training (e.g., previous experience) are often significant determinants of employment in management positions. Skill level of current and preferred jobs was coded as follows: NOC Skill Level A (occupations usually require university education) = 4, NOC Skill Level B (occupations usually require college education or apprenticeship training) = 3, NOC Skill Level C (occupations usually require secondary school and/or occupation-specific training) = 2, NOC Skill Level D (on-the-job training is usually provided for occupations) = 1. After the skill levels were coded for both current job and preferred job, they were examined to determine if differences existed. If a participant's current job required the same skill level as his/her preferred job, this item was coded as 0, and if a participant's current job required a lower skill level than his/her preferred job, it was coded as 1.¹² No participants were currently employed in a job that requires a higher skill level than their preferred job.

Similarly, industries of current and preferred job were coded using the nationally accepted industry taxonomy provided by the NOC (2006; see Table 5). After the industries were coded, the two industries were examined to determine differences. If a participant's current job was in the same industry as his/her preferred job, this item was coded as 0, and if a participant's current job was in a different industry than his/her preferred job, it was coded as 1.

¹² Note that, for 80% of participants, the preferred job corresponded to the position they held before immigrating to Canada.

Table 4

National Occupational Classification (NOC) Skill Level Criteria

Skill Level	Education and or Training Required
Skill Level A	University degree (bachelor's, master's, or doctorate) required
Skill Level B	Two to three years of post-secondary education at a community college or institute of technology OR two to five years of apprenticeship training OR three to four years of secondary school and more than two years of on-the-job training, occupation-specific training courses, or specific work experience
Skill Level C	One to four years of secondary school education OR up to two years of on-the-job training, training courses, or specific work experience
Skill Level D	Short-work demonstration or on-the-job training OR no formal educational requirements

Table 5

National Occupational Classification of Industries

A	Management Occupations (e.g., Financial Manager, Health Care Manager)
B	Business, Finance, and Administrative Occupations (e.g., Accountant)
C	Natural and Applied Sciences and Related Occupations (e.g., Chemist, Engineer)
D	Health Occupations (e.g., Physician, Nurse)
E	Occupations in Social Science, Education, Government Service, and Religion (e.g., Teacher, Lawyer)
F	Occupations in Art, Culture, Recreation, and Sport (e.g., Curator, Interior Designer)
G	Sales and Service Occupations (e.g., Cashier, Bartender)
H	Trades, Transport, and Equipment Operators and Related Occupations (e.g., Carpenter, Roofer)
I	Occupations Unique to Primary Industry (e.g., Farmer, Mine Labourer)
J	Occupations Unique to Processing, Manufacturing, and Utilities (e.g., Foundry Worker, Motor Vehicle Assembler)

Demographic characteristics. Participants responded to questions assessing the following demographic information (see Appendix D): gender, ethnicity, region of origin, age, length of residency in Canada, and the immigration class in which they entered Canada.

To measure region of origin, participants were asked to indicate the country in which they were born. These data were categorized using Statistics Canada's 2006 Census Categorization System (Statistics Canada, 2006).

Educational attainment. Educational attainment was measured using two questions. The first question assessed the highest level of formal education participants had obtained outside of Canada. Responses were coded as follows: 1 = college diploma or certificate, 2 = some university, 3 = bachelor's degree, 4 = master's degree, 5 = doctorate or degree in dentistry, medicine, veterinary medicine, optometry, law, or theology.

The second question assessed the highest level of formal education participants had obtained in Canada. An examination of the frequency distribution of this question demonstrated that there was limited variability in responses: 69.5% of participants either had no formal education in Canada or did not answer the question. This likely reflected the fact that participants had only been in Canada for an average of three years. Given the limited variability on this item, it was dropped from further analyses.

English language proficiency. Items from Marian, Blumenfeld, and Kaushanskaya's (2007) Language Experience and Proficiency Questionnaire (LEAP-Q) were used to assess participants' self-reported English language proficiency and the extent to which they spoke English with an accent (see Appendix E). First, participants

were asked to select their level of ability in speaking, understanding, reading, and writing English. Participants responded on ten point scales (0 = *none* to 10 = *perfect*). Because the four items were highly correlated (intercorrelations ranged from .69 to .81) an aggregate of overall English language skills was formed. Cronbach's alpha for the scale was .90. Second, participants were asked how different their accent is compared to English-speaking Canadians (0 = *not at all different* to 10 = *very different*) and how frequently others identified them as a non-native speaker based on their accent when they speak English (0 = *never* to 10 = *always*). These two items were highly correlated, $r(189) = .63, p < .001$, and thus an aggregate was formed. Note that, although all participants had an adequate level of English language fluency as assessed by the Canadian Language Benchmark, there was a considerable range (2.33 to 10.00) in participants' self-reported language proficiency.

Satisfaction with immigration decision. To measure satisfaction with their decision to immigrate to Canada, I adapted an item used in the Longitudinal Survey of Immigrants to Canada (Statistics Canada, 2007a). Participants responded to the following item on a 7-point Likert-type scale (1 = *not at all likely* to 7 = *extremely likely*): "If you had to make the decision again, how likely is it that you would immigrate to Canada?"

Perceived employment-related discrimination. Perceptions of employment-related discrimination in Canada (see Appendix F) were measured by adapting items used in both the Longitudinal Survey of Immigrants to Canada (Statistics Canada, 2007a) and the Ethnic Diversity Survey (Statistics Canada, 2002). To measure perceptions of general employment-related discrimination, participants completed the following item: "In your search for a job and on the job in Canada, do you think you have experienced

discrimination or been treated unfairly by others because of your ethnicity, culture, race or skin colour, language or accent, religion, or immigrant status? (1 = *not at all* to 7 = *definitely*).

To measure perceived employment-related discrimination based on specific factors, I asked participants two questions: 1) In your search for a job and on the job in Canada, which of the following factors do you think have led to you experiencing discrimination or being treated unfairly by others? (1 = *not at all* to 7 = *definitely*) and, 2) Since your arrival in Canada how often have you experienced discrimination or unfair treatment in your search for a job and on the job because of the following factors? (1 = *never* to 7 = *all of the time*). For each question, participants indicated the extent to which they had experienced discrimination based on the following factors: a) ethnicity, b) culture, c) race or skin colour, d) language or accent, and e) immigrant status. For each factor, the two items were highly intercorrelated (correlations ranged from .75 to .88), and thus aggregates were formed.

Participants' ratings of perceived employment-related discrimination based on ethnicity, culture, and race or skin colour were highly intercorrelated (correlations among factors ranged from .64 to .74). Thus, I created an aggregate of these three factors, entitled perceived ethnic discrimination (Cronbach's alpha = .92). In sum, the study included four variables examining perceived employment-related discrimination: one item measuring general perceived discrimination, and aggregates measuring perceived discrimination based on ethnicity, perceived discrimination based on language, and perceived discrimination based on immigrant status.

Job satisfaction, turnover cognitions, and turnover intentions. Job satisfaction was assessed using three items from Hackman and Oldham's (1975) measure (e.g., "Generally speaking, I am very satisfied with this job"; see Appendix G). Participants responded on 7-point Likert-type scales (1 = *strongly disagree* to 7 = *strongly agree*). Cronbach's alpha was .89.

Turnover cognitions were measured using one item from Hackman and Oldham's (1975) measure: "I frequently think of quitting." Participants responded on a 7-point Likert-type scale (1 = *strongly disagree* to 7 = *strongly agree*).

Turnover intentions were measured using the following item: "Are you currently looking for another job?" Responses were coded as follows: no = 0, yes = 1.

Additional information. Upon completion of the questionnaire, participants were asked to enter their email address if they would like to be entered into a draw to win a \$50 online gift certificate to Chapters/Indigo. A debriefing sheet was then displayed. In order to identify careless, random, or malicious response patterns, a quality control question was embedded midway through the questionnaire (i.e., "For quality control purposes, please select 4").

Results

Strategy for Analyses

The relations between the variables of interest and perceived underemployment were examined using correlation analyses, independent samples t-tests, and one-way analysis of variance (ANOVA). The specific analysis used for each variable depended on the nature of the variable in question (e.g., categorical versus continuous) and on informed speculation about whether the variable was likely a predictor or outcome of

perceived underemployment. For instance, although gender and turnover intentions are both dichotomous variables, I conducted different analyses to examine their relation with perceived underemployment. Because gender was considered a predictor of perceived underemployment, I conducted a t-test to examine whether women were higher on perceived underemployment than men. In contrast, because turnover intentions was considered an outcome of perceived underemployment, I conducted a Spearman correlation analysis to examine whether higher perceived underemployment was associated with an increased likelihood of looking for another job.

Perceived Underemployment

Recall that perceived underemployment was measured using a 7-point Likert-type scale and that higher numbers reflected greater perceived underemployment. The mean value of perceived underemployment was 4.49 ($SD = 1.50$), which was slightly above the mid-point of the scale (4.00). There was an adequate range of perceived underemployment scores (1.17 to 7.00). Because it was the main variable of interest, an exploratory analysis was conducted to examine the distribution of participants' perceived underemployment scores and to determine if there were any outliers on this variable. An examination of the distribution of perceived underemployment scores demonstrated that this variable was fairly normally distributed. Although the distribution had a slight negative skew it was not skewed enough to be considered an irregularity. There were no outliers.

Refer to Table 6 for correlations between continuous predictor variables and perceived underemployment (plus means and standard deviations). Table 7 depicts intercorrelations among predictor variables.

Table 6

Study One: Correlations Between Continuous Predictor Variables and Perceived Underemployment (plus Descriptive Statistics)

	Correlation with perceived underemployment	<i>M</i>	<i>SD</i>
<i>Characteristics of current job</i>			
¹ Wages (coded 1 ó 10)	-.41**	3.55	1.86
<i>Demographic characteristics</i>			
² Age (coded 1 ó 10)	.12	5.73	1.64
Length of residency in Canada (possible range: 1 ó 120 months)	-.07	34.89	25.05
<i>English language proficiency (possible range: 0 ó 10)</i>			
English language skills	.13	8.57	1.25
Accent	-.12	5.57	2.70

** $p < .01$.

¹ Wages were coded as follows: 1 = < \$10.00/hour, 2 = \$10.00 to \$14.99/hour, 3 = \$15.00 to \$19.99/hour, 4 = \$20.00 to \$24.99/hour, 5 = \$25.00 to \$29.99/hour, 6 = \$30.00 to \$34.99/hour, 7 = \$35.00 to \$39.99/hour, 8 = \$40.00 to \$44.99/hour, 9 = \$45.00 to \$50.00/hour, 10 = > \$50.00/hour.

² Age was coded as follows: 1 = 19 or under, 2 = 20 to 24, 3 = 25 to 29, 4 = 30 to 34, 5 = 35 to 39, 6 = 40 to 44, 7 = 45 to 49, 8 = 50 to 54, 9 = 55 to 59, 10 = 60 and over.

Table 7

Study One: Intercorrelations Among Predictor Variables

	Wages	Age	Length of residency in Canada	English language skills	Accent
Industry match (0 = same, 1 = different)	-.11	.11	.01	.20**	-.04
Full- / Part-time (0 = full-time or voluntary part-time 1 = involuntary part-time)	-.41**	.10	.02	.02	-.05
Permanent / temp/contract (0 = permanent, 1 = temporary)	-.24**	.15*	-.05	-.10	-.03
Skill level change (0 = same level, 1 = lower level)	-.30**	.13	-.08	.01	-.01
Gender (0 = male, 1 = female)	-.09	-.11	.11	-.03	.03
Age	-.07				
Length of residency in Canada	.17*	.30**			
English language skills	.02	.02	-.09		
Accent	.08	.06	.15*	-.39**	

* $p < .05$, ** $p < .01$.

Predictors of Underemployment

Characteristics of current job.

Employment status. An independent samples t-test revealed that there was no difference in perceived underemployment between individuals working in temporary/contract positions and those working in permanent positions, $t(173) = -0.51, p = .61$. Thus, Hypothesis 1 was not supported.

An independent samples t-test revealed that there was a significant difference in perceived underemployment between individuals who were involuntarily employed part-time and those who were either employed full-time or voluntarily employed part-time. Participants who were involuntarily employed part-time ($M = 5.27, SD = 1.13$) were significantly higher on perceived underemployment than those who were either employed full-time or voluntarily employed part-time ($M = 4.32, SD = 1.52$), $t(188) = -3.44, p = .01$. Thus, Hypothesis 2 was supported.

Wages. A Pearson's correlation analysis demonstrated that there was a significant relation between wages and perceived underemployment such that higher wages were associated with lower perceived underemployment, $r(183) = -.41, p < .001$. Thus, Hypothesis 3 was supported.

Current and preferred job: Skill level and industry. An independent samples t-test revealed that individuals whose current job requires a lower skill level than their preferred job ($M = 4.88, SD = 1.47$) were significantly higher on perceived underemployment than individuals whose current job requires the same skill level as their preferred job ($M = 4.08, SD = 1.42$), $t(183) = -3.74, p < .001$. Thus, Hypothesis 4 was supported.

An independent samples t-test revealed that individuals whose current job is in a different industry than their preferred job ($M = 4.73$, $SD = 1.52$) were significantly higher on perceived underemployment than individuals whose current job is in the same industry as their preferred job ($M = 4.20$, $SD = 1.44$), $t(178) = -2.37$, $p = .02$. Thus, Hypothesis 5 was supported.

Demographic characteristics. An independent samples t-test revealed that there was no difference between women and men's level of perceived underemployment, $t(185) = -0.04$, $p = .97$. Thus, Hypothesis 6 was not supported.

Pearson's correlation analyses demonstrated that the relations between perceived underemployment and participants' age and length of residency in Canada were not significant, all $r_s < .13$, $p_s > .08$. Thus, Hypotheses 7 and 8 were not supported.

A one-way ANOVA was conducted to determine if perceptions of underemployment varied as a function of ethnicity. The effect was not significant, $F(5, 172) = 0.70$, $p = .63$.

Educational attainment. A one-way ANOVA was conducted to determine if perceptions of underemployment varied as a function of the highest level of education participants obtained outside of Canada. The effect was not significant, $F(4, 180) = 0.64$, $p = .63$. Thus, Hypothesis 9 was not supported.

English language proficiency. Pearson's correlation analyses demonstrated that the relations between perceived underemployment and participants' self-reported English language skills and accent were not significant, all $r_s < .14$, $p_s > .07$. Thus, Hypotheses 10 and 11 were not supported.

All predictors. Perceived underemployment was regressed simultaneously on all of its significant predictors (i.e., wages, industry match, skill level change, and whether or not participants were involuntary employed part-time). I examined the total amount of variance in perceived underemployment explained by the predictor variables, as well as the regression coefficients for each predictor (holding the others constant). Results of the simultaneous regression analysis are presented in Table 8. The overall model was significant, $F(4, 170) = 11.51, p < .001$, and accounted for 21.30% of the variance in perceived underemployment. Wages and skill level change each predicted unique variance in perceived underemployment.¹³

Outcomes of Underemployment

Refer to Table 9 for correlations between perceived underemployment and outcome variables (plus means and standard deviations). Refer to Table 10 for correlations between predictors and outcomes, and to Table 11 for intercorrelations among outcome variables.

Individual-relevant outcomes.

Satisfaction with immigration decision. A Pearson's correlation analysis demonstrated that there was a significant relation between perceived underemployment and satisfaction with immigration decision such that higher perceived underemployment was associated with a lower likelihood of making the same immigration decision again, $r(186) = -.37, p < .001$. Thus, Hypothesis 12 was supported.

¹³ The importance of wages and skill level change in predicting perceived underemployment was corroborated by results from a relative weights analysis. Relative weight (or importance) is defined as "the proportionate contribution each predictor makes to R², considering both its unique contribution and its contribution when combined with other variables" (Johnson, 2000, p. 1).

Table 8

Study One: Summary of Simultaneous Regression Analysis for Perceived Underemployment

Variable	<i>B</i>	<i>SE B</i>
Wages	-0.26**	0.06
Skill level change	0.43*	0.22
Industry match	0.31	0.22
Involuntary part-time status	0.44	0.29

* $p = .05$, ** $p < .01$.

Table 9

Study One: Correlations Between Perceived Underemployment and Outcome Variables (plus Descriptive Statistics)

	Correlation with perceived underemployment	<i>M</i>	<i>SD</i>
<i>Satisfaction with immigration decision</i> (possible range: 1 ó 7)	-.37**	4.34	2.15
<i>Perceived employment-related discrimination</i> (possible range: 1 ó 7)			
General perceived discrimination	.21**	4.14	2.30
Perceived discrimination based on ethnicity	.12	2.51	1.62
Perceived discrimination based on language	.03	3.56	2.08
Perceived discrimination based on immigrant status	.17*	3.34	2.24
<i>Job satisfaction, turnover cognitions, and turnover intentions</i>			
Job satisfaction (possible range: 1 ó 7)	-.60**	4.29	1.63
Turnover cognitions (possible range: 1 ó 7)	.42**	3.07	1.98
¹ Turnover intentions (coded 0 ó 1)	.46**	1.63	0.48

* $p < .05$, ** $p < .01$.

¹ Turnover intentions were coded as follows: 0 = not searching for another job, 1 = searching for another job

Table 10

Study One: Correlations Between Predictors and Outcomes

	Satisfaction with immigration decision	General perceived discrimination	Perceived discrimination - ethnicity	Perceived discrimination - language	Perceived discrimination - immigrant status	Job satisfaction	Turnover cognitions	Turnover intentions (0 = no search, 1 = search)
Industry match (0 = same, 1 = different)	-.22**	.01	.12	-.05	.00	-.14	.10	N/A
Full- /part-time (0 = full-time or voluntary part-time, 1 = involuntary part- time)	-.16*	.08	.08	-.08	.03	-.24**	.13	N/A
Permanent /temp (0 = perm., 1 = temp.)	-.02	.03	.02	.06	.00	-.11	-.03	N/A
Skill level change (0 = same level, 1 = lower level)	-.27**	-.07	.05	.07	.03	-.27**	.11	N/A
Gender (0 = male, 1 = female)	.02	.12	-.04	.12	.10	.00	.00	N/A
Wages	.32**	-.05	-.01	-.03	.02	.45**	-.24**	-.51**
Age	-.21**	.14	.18*	.01	.12	-.13	.05	.15*
Length of residency	-.03	.16*	.30**	.19*	.07	.14	.02	-.07
English language skills	.06	.15*	.17*	-.18*	.17*	-.03	-.08	.04
Accent	-.06	.01	-.07	.38**	-.09	.04	-.05	-.13

* $p < .05$, ** $p < .01$. Note. N/A denotes instances where both predictor and outcome variables were dichotomous and thus correlational analyses were not conducted.

Table 11

Study One: Intercorrelations Among Outcome Variables

	1.	2.	3.	4.	5.	6.	7.
1. Satisfaction with immigration decision							
2. General perceived discrimination	-.22**						
3. Perceived discrimination based on ethnicity	-.13	.61**					
4. Perceived discrimination based on language	-.03	.43**	.44**				
5. Perceived discrimination based on immigrant status	-.19*	.43**	.33**	.20**			
6. Job satisfaction	.45**	-.19**	-.07	-.09	-.14		
7. Turnover cognitions	-.22**	.13	.13	.03	.03	-.39**	
8. Turnover intentions (0 = not searching for another job, 1 = searching for another job)	-.27**	.12	.13	-.06	.06	-.39**	.39**

* $p < .05$, ** $p < .01$.

Perceived employment-related discrimination. A Pearson's correlation analysis demonstrated that there was a significant relation between perceived underemployment and overall perceptions of employment-related discrimination such that higher perceived underemployment was associated with higher levels of perceived discrimination, $r(187) = .21, p = .004$. Thus, Hypothesis 13 was supported. Higher perceived underemployment was also associated with higher levels of perceived employment-related discrimination based on immigrant status, $r(180) = .17, p = .02$. Perceived underemployment was not associated with perceptions of employment-related discrimination based on ethnicity or language, all $r_s < .12, p_s > .12$. In sum, higher levels of perceived underemployment were associated with the extent to which participants believed they had experienced employment-related discrimination in general and based on their immigrant status.

Organization-relevant outcomes.

Job satisfaction. A Pearson's correlation analysis demonstrated that there was a significant relation between perceived underemployment and job satisfaction such that higher perceived underemployment was associated with lower job satisfaction, $r(188) = -.60, p < .001$. Thus, Hypothesis 14 was supported.

Turnover cognitions and intentions. A Pearson's correlation analysis demonstrated that there was a significant relation between perceived underemployment and turnover cognitions such that higher perceived underemployment was associated with higher turnover cognitions, $r(186) = .42, p < .001$. Thus, Hypothesis 15 was supported.

A Spearman correlation analysis demonstrated that there was a significant relation between perceived underemployment and turnover intentions such that higher perceived

underemployment was associated with an increased likelihood of looking for another job, $r(187) = .46, p < .001$. Thus, Hypothesis 16 was supported.

Refer to Table 12 for a summary of the results from Study One.

Intercorrelations among Variables Associated with Perceived Underemployment

There are two noteworthy observations regarding the intercorrelations among variables associated with perceived underemployment. First, perceived underemployment is consistently associated with the outcome variables, whereas the objective indicators of underemployment are not. For example, while perceived underemployment is correlated with general perceived employment-based discrimination, no relations were observed between objective indicators of underemployment and this outcome. Thus, when it comes to predicting certain outcomes, it may be more useful to examine individuals' perceptions of underemployment, rather than objective indicators of the construct.

Second, the pattern of relations between job satisfaction and the variables associated with perceived underemployment largely mirrors the pattern of relations between perceived underemployment and these variables (but in the opposite direction). For instance, the strength of the association between turnover cognitions and job satisfaction ($r = -.39$) and turnover cognitions and perceived underemployment is very similar ($r = .42$). Likewise, the strength of the association between satisfaction with immigration decision and job satisfaction ($r = .45$) and satisfaction with immigration decision and perceived underemployment is also quite similar ($r = -.37$). These results are not surprising given the high correlation between job satisfaction and perceived underemployment ($r = -.60$).

Table 12

Study One: Summary of Results

Hyp. #	Prediction	Supported
1.	Individuals working in temporary/contract positions will be higher on perceived underemployment than individuals working in permanent positions	No
2.	Individuals who are involuntarily employed part-time will be higher on perceived underemployment than individuals who work full-time or are voluntarily employed part-time.	Yes
3.	Wages will be negatively correlated with perceived underemployment.	Yes
4.	Individuals whose current job requires a lower skill level than their preferred job will be higher on perceived underemployment than individuals whose current job requires the same skill level as their preferred job.	Yes
5.	Individuals whose current job is in a different industry than their preferred job will be higher on perceived underemployed than individuals whose current job is in the same industry as their preferred job.	Yes
6.	Women will be higher on perceived underemployment than men.	No
7.	Age will be positively correlated with perceived underemployment.	No
8.	Length of residency in Canada will be negatively correlated with perceived underemployment.	No
9.	Educational attainment will be negatively correlated with perceived underemployment.	No
10.	English language proficiency will be negatively correlated with perceived underemployment.	No
11.	The extent to which individuals speak English with an accent will be positively correlated with perceived underemployment.	No
12.	Perceived underemployment will be negatively correlated with satisfaction with immigration decision.	Yes

Hyp. #	Prediction	Supported (Yes or No)
13.	Perceived underemployment will be positively correlated with perceived employment-related discrimination.	Yes
14.	Perceived underemployment will be negatively correlated with job satisfaction.	Yes
15.	Perceived underemployment will be positively correlated with turnover cognitions.	Yes
16.	Perceived underemployment will be positively correlated with turnover intentions.	Yes

Discussion

Several tentative conclusions about the nature of perceived underemployment among immigrants can be drawn from the results of this initial study. First, as hypothesized, results demonstrate that objective indicators of underemployment predict perceptions of underemployment among immigrants. Indeed, perceived underemployment is higher among individuals who are: working part-time involuntarily, in a job with a lower skill level than one's preferred job, or in a job that is in a different industry than one's preferred job. In addition, perceived underemployment is negatively correlated with wages.

Second, contrary to my hypotheses, perceived underemployment was not associated with demographic characteristics (gender, age, length of residency in Canada, educational attainment) or English language proficiency. These findings depart from results obtained in studies in which underemployment was operationalized more objectively (e.g., Galarneau & Morissette, 2004, 2008; Li et al., 2006; Shields et al., 2010). In concert, these discordant findings suggest that, although factors such as educational attainment and gender are associated with the likelihood of objective underemployment among immigrants, they might not be associated with immigrants' subjective perceptions of underemployment. As such, results highlight the importance of examining perceptions of underemployment from the perspective of immigrants themselves, rather than merely focusing on objective indices of underemployment.

Third, the current findings increase our understanding of the nature and consequences of perceived underemployment among immigrants. As hypothesized, perceived underemployment was associated with satisfaction with immigration decision

and perceived employment-related discrimination. Indeed, these results demonstrate the importance of examining variables that are relevant specifically to an immigrant population.

Fourth, as expected, perceived underemployment was associated with job satisfaction and turnover cognitions and intentions. Although this finding is consistent with previous research (e.g., Maynard et al., 2006; Tan et al., 1994), the current study is the first to demonstrate this relation among immigrants. As noted in the results section, the correlation between perceived underemployment and job satisfaction was quite strong ($r = -.60$). This finding is fairly consistent with that observed by previous researchers working with other samples (e.g., college alumni, non-faculty college employees, and expatriates); the correlation between job satisfaction and underemployment was $-.46$ and $-.55$ in two studies by Maynard and colleagues (2006), and $-.58$ in a study by Bolino and Feldman (2000).

Given that the percentage of shared variance between perceived underemployment and job satisfaction is 36%, it is not surprising that the pattern of relations between job satisfaction and the variables significantly associated with perceived underemployment largely mirrored the pattern of relations between perceived underemployment and these variables. This finding, too, is consistent with results observed by previous researchers (e.g., Bolino & Feldman, 2000).

One of the objectives of Study One was to examine the unique variance in perceived underemployment accounted for by the predictor variables. When regressed simultaneously on all of its significant predictors, results demonstrated that wages and

skill level change (whether participants' current job requires a lower skill level than their preferred job) each predicted unique variance in perceived underemployment.

There are two notable limitations of the current study. First, because the sample in this study was comprised mainly of individuals who immigrated in the Skilled Worker category, we cannot be certain that results would generalize to immigrants more broadly (e.g., those who immigrated in the Family Class or as Refugees). Although there is no theoretical reason to believe that the nature of the relations observed in the current study would differ depending on the category in which individuals immigrated to Canada, the issue of generalizability is ultimately an empirical question. In order to increase claims about generalizability, in Studies Two and Three I took steps to ensure that participants came from a range of immigration categories. Second, the nature of the current study and analyses do not allow us to make inferences about causality. In Studies Two and Three, although the data were cross-sectional in nature, mediation analyses were used to test whether perceived underemployment is a mechanism that underlies the relation between its predictors and consequences.

Despite these limitations, results from this preliminary investigation allow us to draw some tentative conclusions about the experience of perceived underemployment among immigrants. The results demonstrate that the nature of the relations between perceived underemployment and the outcomes with which it has been associated in previous research are consistent among immigrants. In addition, results support my proposition that perceived underemployment is associated with variables that are uniquely relevant to this particular sample (e.g., satisfaction with immigration decision).

Overall, these findings suggest that developing a model of perceived underemployment among immigrants is a fruitful avenue for research.

CHAPTER 3: STUDY TWO

Introduction

Overview

In Study Two, I analysed data from the Region of Peel's Immigration Labour Market Survey (Region of Peel, 2009). This comprehensive survey includes data on a variety of variables examined in a sample of 199 employed immigrants. There were four primary objectives of Study Two. First, I examined whether the findings from Study One would replicate. Second, I examined the relation between perceived underemployment and some additional predictor and outcome variables. Third, I examined the unique variance in perceived underemployment accounted for by the predictor variables. Fourth, I tested a mediational model in which perceived underemployment mediates the relation between its predictors and outcomes. Note that all hypotheses are limited to variables measured in the pre-existing data set.

Hypotheses

Predictors of underemployment.

Unemployment history. Evidence suggests that the length of time an individual has been unemployed is positively correlated with underemployment (Tan et al., 1994). In part, this relation is driven by individuals' increased likelihood of accepting lower quality jobs (e.g., temporary jobs, jobs paying low wages) in order to make ends meet (Feather & O'Brien, 1986). In addition, periods of unemployment may send a signal to potential employers that an individual is either less desirable or more willing to work in a lower-skilled job and/or for lower wages (Feldman, 1996).

Hypothesis 1: The length of time that individuals have spent unemployed over the past ten years will be positively correlated with perceived underemployment.

Characteristics of current job. In Study One, I found support for my hypothesis that the characteristics of individuals' current job (e.g., wages, and whether individuals are currently working in a different industry than they were pre-migration) would predict perceived underemployment. Consistent with the results from Study One, I predicted the following:

Hypothesis 2: Wages will be negatively correlated with perceived underemployment.

Hypothesis 3: Individuals whose current job is in a different industry than their pre-migration job will be higher on perceived underemployed than individuals whose current job is in the same industry as their pre-migration job.

Demographic characteristics. In Study One, contrary to my hypotheses, demographic characteristics did not predict perceived underemployment. Because demographic data are available in Study Two, I re-examined these relations but, with the exception of immigration category, I did not make any formal hypotheses about their nature.

Immigration category. Although there is some evidence to suggest that individuals who immigrate in the Skilled Worker category obtain better objective employment outcomes than individuals who enter under other immigration categories (Li, 2003; Shields et al., 2010), these individuals have lower subjective assessments of their life in Canada and are less likely to report that life in Canada exceeds their expectations (Houle & Schellenberg, 2010). Because Skilled Worker applicants are

selected for immigration based on their labour market qualifications, it is likely that these individuals have higher expectations about their labour market outcomes in Canada.

Thus, compared to individuals who immigrated in other categories, their experiences may be more likely to not meet their expectations, leading to higher perceived underemployment.

Hypothesis 4: Individuals who immigrated to Canada in the Skilled Worker category will be higher on perceived underemployment than individuals who immigrated in other categories.

Credential recognition. Evidence suggests that immigrants' skills and credentials are devalued or discounted in the Canadian labour market (Reitz, 2005). Because employers use credentials as a proxy for knowledge, skills, and abilities, when individuals' credentials are not recognized in the hiring process, it increases the likelihood that these individuals will end up in a position for which they are overqualified.

Hypothesis 5: The extent to which participants' employers fully accepted their foreign credentials will be negatively correlated with perceived underemployment such that greater credential recognition is associated with lower perceived underemployment.

Outcomes of underemployment. Evidence suggests that underemployment in general is associated with a host of negative consequences to the organization, including: job dissatisfaction (e.g., Bolino & Feldman, 2000), turnover intentions (e.g., Maynard et al., 2006), job search behaviour (e.g., Tan et al., 1994), and lower affective commitment (Maynard et al.). Researchers have also hypothesized that underemployment is related to organizational citizenship behaviour (Feldman, 1996; Feldman et al., 2002). Thus, I

predicted that perceived underemployment would be related to organizational outcomes as follows:

Hypothesis 6: Perceived underemployment will be positively correlated with a) perceived employment-related discrimination, and b) turnover intentions.

Hypothesis 7: Perceived underemployment will be negatively correlated with a) career satisfaction, b) perceived person-organization fit, c) organizational citizenship behaviour, and d) organizational loyalty.

Mediating role of underemployment. One of the primary objectives of this second study was to test a mediational model in which perceived underemployment mediates the relation between its predictors and outcomes. Thus, the final hypothesis was as follows:

Hypothesis 8: Perceived underemployment will mediate the relation between its predictors and outcomes.

Method

Background Information

In 2009, the Region of Peel conducted a project designed to explore the labour market experiences of immigrants living in Peel (Region of Peel, 2009). Specifically, the purpose of the project was to provide information to government, local employers and community organizations about the labour market experiences of individuals in Peel, in order to determine which policies and programs can best help those looking for employment in this region (Region of Peel, p. 8).

Participants

Participants were recruited via: mainstream and ethnic newspaper/television advertisements; flyers distributed to homes; letters, telephone and door-to-door cold calls to local businesses; presentations to settlement service providers, employment service providers, and the broader Peel community; emails sent out to multiple distribution lists; and live television interviews (Region of Peel, 2009). In addition, respondents were recruited through the help of 14 private businesses and 36 local service providers in Peel (Region of Peel).

Participants were 199 immigrants to Canada (93 men, 106 women) who were currently living in Peel.¹⁴ All participants were employed and were recent immigrants (i.e., they had lived in Canada for less than 10 years). Participants had lived in Canada for an average of four years ($M = 4.13$ years, $SD = 3.11$ years). Participants ranged in age from 18 to 64 years ($M = 38.55$, $SD = 8.87$). One hundred and twenty-seven (64%) of the participants immigrated to Canada in the Skilled Worker Class, 50 (25%) immigrated in the Family Class, 6 (3%) immigrated as Refugees, and 16 individuals (8%) either immigrated in other categories or did not provide this information. In the analyses that follow, individuals who immigrated in the Skilled Worker Class were compared to those who immigrated in the Family Class. Because very few participants immigrated as Refugees, comparisons with this group were not made.

The majority of participants in the current study were highly educated: 83.3% had a minimum of a bachelor's degree from outside of Canada (38.4% bachelor's, 9.6% certificate or diploma above bachelor's degree, 31.3% master's, 4.0% doctorate).

¹⁴ The entire sample in the Peel Labour Market Survey consisted of 1,425 Peel residents (854 immigrants and 571 non-immigrants). Only immigrants who were currently employed and had been living in Canada for less than 10 years were included in the current analyses.

Participants came from diverse regions of the world (see Table 13). Notably, 17.1% were from Eastern Asia and 44.7% were from Southern Asia.

Procedure

Participants completed either a paper or an online version of the survey, which took between 25 and 60 minutes to complete (Region of Peel, 2009). After completing the survey, participants were asked to enter their email address if they wanted to be entered into a draw to win a \$250 gift certificate. Participants who completed the paper version of the survey also received a \$2 Tim Horton's gift certificate. The survey was designed by a research team at Ryerson University's Diversity Institute in Management and Technology. Due to a legal agreement between The University of Western Ontario and the Region of Peel, only select survey items appear below.

Perceived underemployment. Perceived underemployment was measured using two items: "I feel that my work uses my full abilities" and "My job gives me a chance to do the things I feel I do best." Participants responded on 5-point Likert-type scales (1 = *strongly disagree* to 5 = *strongly agree*). Responses were reverse-coded such that higher numbers reflected greater perceived underemployment. The two items correlated at .77 ($p < .001$) and thus an aggregate was formed.

Predictors.

Unemployment history. Participants were asked the number of times they had been unemployed in the last ten years and the average duration of their unemployment periods. To create an index of the duration of time participants had been unemployed, I multiplied the number of times participants indicated they had been unemployed by the average duration of their unemployment periods. For example, if a participant indicated

Table 13

Study Two Participants: Region of Origin

Region of Origin	Frequency	Percent
Southern Asia (e.g., India)	89	44.7
Eastern Asia (e.g., China)	34	17.1
West Central Asia and the Middle East (e.g., Kuwait)	12	6.0
Southeast Asia (e.g., the Philippines)	11	5.5
Eastern Africa (e.g., Kenya)	9	4.5
Caribbean and Bermuda (e.g., Jamaica)	8	4.0
Eastern Europe (e.g., Romania)	8	4.0
Western Africa (e.g., Nigeria)	8	4.0
South America (e.g., Colombia)	7	3.5
Northern Europe (e.g., UK)	5	2.5
Southern Europe (e.g., Serbia)	2	1.0
North America (e.g., USA)	1	0.5
Northern Africa (e.g., Egypt)	1	0.5
Missing Data	4	2
Total	199	

that she had been unemployed twice and that the average duration of her unemployment periods was 4 months, her total duration of unemployment was coded as 8 months.

Characteristics of current job. Participants were asked basic questions about their current job, such as their income, the length of time they had been employed in their current position, whether their current position was full- or part-time, permanent or temporary, and whether they worked in the private or public sector. For both their pre-migration occupation and current occupation, participants indicated the industry in which they were employed. If a participant's current job was in the same industry as his/her pre-migration job, this item was coded as 0, and if a participant's current job was in a different industry than his/her pre-migration job, it was coded as 1.

Demographic characteristics. Participants responded to questions assessing the following information: gender, age, immigration class in which they entered Canada, whether they had obtained Canadian citizenship, length of residency in Canada, educational attainment, English language proficiency, and accent. To assess ethnicity, participants responded to the following question: "Please indicate which of the following you most identify with: White, Chinese, South Asian, Black, Filipino, Latin American, Southeast Asian, Arab, West Asian, Japanese, Korean, Other (please specify)."ö

Credential recognition. Respondents indicated the extent to which their educational credentials were accepted by their Canadian employer (1 = *fully accepted* to 4 = *not accepted*). Responses were reverse-coded such that higher numbers reflected greater credential recognition.

Outcomes.

Responses to all of the measures below were completed on 5-point Likert-type scales (1 = *strongly disagree* to 5 = *strongly agree*).

Perceived employment-related discrimination. Perceived employment-related discrimination in Canada was measured using four items that assessed discrimination based on various characteristics associated with immigrant status (e.g., "In Canada, people face discrimination because of their immigrant status when they seek employment"). Cronbach's alpha for the scale was .79.

Career satisfaction. Career satisfaction was measured using four items (e.g., "I am satisfied with the progress I have made toward meeting my overall career goals"). Cronbach's alpha for the scale was .91.

Perceived person-organization (P-O) fit. Perceived person-organization (P-O) fit was measured using the following item: "My values and my employer's values are very similar."

Organizational citizenship behaviour. Organizational citizenship behaviour was measured using two items (i.e., "I am willing to put in a lot of effort beyond that normally expected in order to help my employer be successful" and "I tell my friends that my employer is great to work for"). The two items correlated at .50 ($p < .001$) and thus an aggregate was formed.

Organizational loyalty. Organizational loyalty was measured using three items (e.g., "I really care about the success of my employer"). Cronbach's alpha for the scale was .63.¹⁵

¹⁵ In Study Two, perceived person-organization fit, organizational citizenship behaviour, and organizational loyalty were quite highly intercorrelated (r s ranged from .50 to .64). This is likely reflective of the fact that

Turnover intentions. Turnover intentions were measured using the following item: "Are you currently searching for other job or career opportunities?" Responses were coded as follows: no = 0, yes = 1.

Results

Perceived Underemployment

Recall that in the current study perceived underemployment was measured using a 5-point Likert-type scale and that higher numbers reflected greater perceived underemployment. The mean value of perceived underemployment was 2.67 ($SD = 1.31$), which was slightly below the mid-point of the scale (3.00). There was an adequate range of perceived underemployment scores (1.00 to 5.00). An examination of the distribution of perceived underemployment scores demonstrated that this variable was fairly normally distributed, with a slight negative skew. There were no outliers.

Predictors of Underemployment

First, in order to make comparisons between the results from Studies One and Two, the relations between the predictor variables and perceived underemployment were examined individually. Refer to Table 14 for correlations between continuous predictor variables and perceived underemployment (plus means and standard deviations) and to Tables 15 and 16 for intercorrelations among predictor variables.

Unemployment history. A Pearson's correlation analysis demonstrated that the length of time that individuals had spent unemployed over the past ten years was positively correlated with perceived underemployment, $r(180) = .14, p = .05$. Thus, Hypothesis 1 was supported.

these variables were not measured using established scales. In addition, these measures appeared together in the survey. To address these issues, in Study Three I used established measures and did not place the measures together in the survey.

Table 14

Study Two: Correlations Between Continuous Predictor Variables and Perceived Underemployment (plus Descriptive Statistics)

	Correlation with perceived underemployment	<i>M</i>	<i>SD</i>
<i>Total duration of unemployment</i> (months)	.14*	5.39	7.50
<i>Characteristics of current job</i>			
Wages (annual income in \$)	-.24**	31,507.54	22,934.66
<i>Demographic characteristics</i>			
Age (years)	.00	38.55	8.87
Length of residency in Canada (years)	-.26*	4.13	3.11
English language skills (possible range: 1 ó 5)	-.13	4.22	0.84
Accent (possible range: 1 ó 5)	-.12	3.44	1.34
<i>Credential recognition</i> (possible range: 1 ó 4)	-.15*	2.68	1.14

* $p < .05$, ** $p < .01$.

Table 15

Study Two: Intercorrelations Among Predictors: Continuous Variables

	1.	2.	3.	4.	5.	6.
1. Total duration of unemployment						
2. Wages	-.03					
3. Age	.06	.12				
4. Length of residency in Canada	.16	.54**	.07			
5. English language skills	-.06	.17*	-.02	.00		
6. Accent	.14	-.28**	.07	-.27*	-.22**	
7. Credential recognition	-.03	.08	.03	-.11	.08	.01

* $p < .05$, ** $p < .01$.

Table 16

Study Two: Intercorrelations Among Predictors: Continuous x Dichotomous Variables

	Total duration of unemployment	Wages	Age	Length of residency in Canada	English language skills	Accent	Credential recognition
Industry match (0=same, 1=different)	-.05	-.15	.02	-.04	-.10	-.04	-.19*
Full- vs. part-time (0 = full-time, 1 = part-time)	-.10	-.32**	-.12	-.13	-.11	.06	-.04
Temp. vs. perm. (0 = permanent, 1 = temporary)	.08	-.34**	-.01	-.38**	-.12	-.10	-.05
Sector (0 = public, 1 = private)	-.06	-.24**	.02	-.16	-.22**	-.06	-.15
Gender (0=male, 1=female)	.16*	-.14	-.05	-.08	.10	-.10	.06
Immigration category (0=family, 1=skilled)	-.10	.14	.36**	-.06	.07	.09	.07
Canadian citizen (0=yes, 1=no)	-.07	-.25**	-.03	-.65**	.00	.00	.06

* $p < .05$, ** $p < .01$.

Characteristics of current job. Independent samples t-tests revealed that there was no difference in perceived underemployment between individuals who worked full-time and those who worked part-time, $t(191) = 0.82, p = .41$. Consistent with Study One, there was no difference in perceived underemployment between individuals who worked in a temporary position and those who worked in a permanent position, $t(193) = -1.65, p = .10$.

An independent samples t-test revealed that individuals who worked in the private sector ($M = 2.95, SD = 1.40$) were significantly higher on perceived underemployment than those who worked in the public sector ($M = 2.36, SD = 1.13$), $t(188) = -3.15, p < .01$.

Consistent with Study One, a Pearson's correlation analysis demonstrated that wages were negatively correlated with perceived underemployment, $r(197) = -.24, p = .001$. Thus, Hypothesis 2 was supported.

Consistent with Study One, an independent samples t-test revealed that individuals who currently work in a different industry than they did pre-migration ($M = 3.06, SD = 1.41$) were significantly higher on perceived underemployment than those who currently work in the same industry as they did pre-migration ($M = 2.29, SD = 1.20$), $t(163) = 3.74, p < .001$. Thus, Hypothesis 3 was supported.

Demographic characteristics. Consistent with Study One, an independent samples t-test revealed that there was no difference in perceived underemployment between men and women, $t(197) = 0.12, p = .90$.

An independent samples t-test revealed that there was no difference in perceived underemployment between individuals who immigrated as Skilled Workers and those

who immigrated in the Family Class, $t(175) = 0.01, p = .99$. Thus, Hypothesis 4 was not supported.

An independent samples t-test revealed that individuals who are not Canadian citizens ($M = 2.86, SD = 1.35$) were significantly higher on perceived underemployment than those who are Canadian citizens ($M = 2.36, SD = 1.17$), $t(196) = -2.67, p < .01$.

One-way ANOVAs were conducted to determine if perceptions of underemployment varied as a function of participants' ethnicity or the highest level of education participants obtained outside of Canada. Consistent with Study One, neither effect was significant: $F(9, 188) = 1.76, p = .08$ for ethnicity, and $F(6, 191) = 0.96, p = .45$ for education level.

Consistent with Study One, Pearson's correlation analyses demonstrated that age, English language proficiency, and accent were not correlated with perceived underemployment, all $r_s < .14, p_s > .06$. Length of residency in Canada was negatively correlated with perceived underemployment, $r(68) = -.26, p = .03$.

Credential recognition. The extent to which participants' employers accepted their credentials was negatively correlated with perceived underemployment such that greater credential recognition was associated with lower perceived underemployment, $r(162) = -.15, p = .05$. Thus, Hypothesis 5 was supported.

All predictors. Perceived underemployment was regressed simultaneously on all of its significant predictors (i.e., total duration of unemployment, sector, wages, industry match, whether or not participants were Canadian citizens, length of residency in Canada, and credential recognition). I examined the total amount of variance in perceived underemployment explained by the predictor variables, as well as the regression

coefficients for each predictor (holding the others constant). Results of the simultaneous regression analysis are presented in Table 17. The overall model was significant, $F(7, 191) = 6.29, p < .01$, and accounted for 18.70% of the variance in perceived underemployment. Total duration of unemployment, sector (private vs. public), and industry match (whether individuals currently work in a different industry than they did pre-migration) each predicted unique variance in perceived underemployment.¹⁶

Outcomes of Underemployment

Refer to Table 18 for correlations between perceived underemployment and outcome variables (plus means and standard deviations). Refer to Tables 19 and 20 for correlations between predictors and outcomes, and to Table 21 for intercorrelations among outcome variables.

Consistent with Study One, perceived underemployment was positively correlated with perceived employment-related discrimination ($r(193) = .33, p < .001$), and turnover intentions ($r(197) = .37, p < .001$). Perceived underemployment was negatively correlated with career satisfaction ($r(197) = -.73, p < .001$), perceived person-organization fit ($r(196) = -.35, p < .001$), organizational citizenship behaviour ($r(197) = -.38, p < .001$), and organizational loyalty ($r(197) = -.49, p < .001$). Thus, Hypotheses 6 and 7 were supported.

Mediating Role of Underemployment

Regression analyses were used to test whether perceived underemployment mediates the relation between its predictors and outcomes. As outlined by Baron and Kenny (1986), before testing for mediation, three pre-conditions must be established.

¹⁶ The importance of total duration of unemployment, sector, and industry match in predicting perceived underemployment was corroborated by results from a relative weights analysis.

Table 17

Study Two: Summary of Simultaneous Regression Analysis for Perceived Underemployment

Variable	<i>B</i>	<i>SE B</i>
Total duration unemployment	0.03*	0.01
Sector	0.41*	0.18
Wages	0.00	0.00
Industry match	0.67**	0.19
Canadian citizen	0.34	0.19
Length of residency in Canada	-0.06	0.05
Credential recognition	-0.10	0.09

* $p < .05$, ** $p < .01$.

Table 18

*Study Two: Correlations Between Perceived Underemployment and Outcome Variables
(plus Descriptive Statistics)*

	Correlation with perceived underemployment	<i>M</i>	<i>SD</i>
Perceived employment-related discrimination (possible range: 1 ó 5)	.33**	2.55	0.92
Career satisfaction (possible range: 1 ó 5)	-.73**	2.22	1.21
Perceived person-organization fit (possible range: 1 ó 5)	-.35**	2.87	1.09
Organizational citizenship behaviour (possible range: 1 ó 5)	-.38**	3.35	0.77
Organizational loyalty (possible range: 1 ó 5)	-.49**	4.03	0.83
Turnover intentions (0 = not searching for another job, 1 = searching for another job)	.37**	0.57	0.50

** $p < .01$.

Table 19

Study Two: Correlations Between Predictors and Outcomes: Continuous Predictor Variables

	Perceived discrim.	Career satisfaction	Perceived P-O fit ¹	OCB ²	Org. loyalty	Turnover intentions
Total duration of unemployment	.16*	-.11	-.05	-.05	-.12	.01
Wages	.04	.34**	.18*	.25**	.15*	-.18*
Age	-.12	-.06	.04	.11	.01	.01
Length of residency in Canada	-.05	.14	-.01	.08	.29*	-.15
English language skills	.03	.16*	.25**	.36**	.20**	.00
Accent	.08	.13	.05	.03	.06	-.09
Credential recognition	.01	.18*	.12	.13	.04	-.04

* $p < .05$, ** $p < .01$.

¹Perceived person-organization fit

²Organizational citizenship behaviour

Table 20

Study Two: Correlations Between Predictors and Outcomes: Dichotomous Predictor Variables

	Perceived discrimination	Career satisfaction	Perceived P-O fit ¹	OCB ²	Org. loyalty
Industry match (0=same, 1=different)	.03	-.26**	-.13	-.12	-.12
Full- vs. part-time (0 = full, 1 = part)	-.03	-.03	-.02	-.04	-.07
Temp. vs. permanent (0 = perm., 1 = temp.)	-.03	-.19**	.07	-.11	-.04
Sector (0 = public, 1 = private)	-.14	-.26**	-.27**	-.19**	-.19**
Gender (0=male, 1=female)	.10	.04	.01	.01	-.03
Immigration category (0=family, 1=skilled)	.04	-.06	.09	.11	.04
Canadian citizen (0=yes, 1=no)	.11	-.19**	-.05	-.06	-.13

** $p < .01$.¹Perceived person-organization fit²Organizational citizenship behaviour

Table 21

Study Two: Intercorrelations Among Outcomes

	1.	2.	3.	4.	5.
1. Perceived discrimination					
2. Career satisfaction	-.28**				
3. Perceived person-organization fit	-.09	.32**			
4. Organizational citizenship behaviour	-.08	.36**	.64**		
5. Organizational loyalty	-.14	.42**	.59**	.62**	
6. Turnover intentions (0 = not searching for another job, 1 = searching for another job)	.11	-.48**	-.12	-.17*	-.15*

* $p < .05$, ** $p < .01$.

First, the predictor variables must predict the mediator (perceived underemployment). Second, the mediator (perceived underemployment) must predict the outcome. Third, the predictor variables must predict the outcome. Once these pre-conditions had been established, regression analyses were conducted to determine whether, with the inclusion of the mediator (perceived underemployment), the relation between the predictor and outcome was significantly reduced. Sobel tests were conducted to test the significance of the mediation effects.

Mediation analyses were conducted for the three variables that significantly predicted perceived underemployment when entered into a simultaneous regression analysis (thereby demonstrating that they predict unique variance in perceived underemployment): total duration of unemployment, sector (private vs. public), and industry match (whether individuals currently work in a different industry than they did pre-migration). Results of the mediation analyses are presented below by outcome. Note that mediation analyses were not conducted for turnover intentions because it is a dichotomous variable.

Perceived employment-related discrimination. Perceived underemployment predicts perceived employment-related discrimination ($B = 0.23$, $t = 4.76$, $p < .001$), thereby meeting the second pre-condition for mediation. Findings from regression analyses testing the third pre-condition for mediation ó whether the predictor variables significantly predict perceived employment-related discrimination ó were mixed. As shown in Table 22, the only variable that predicted perceived discrimination was total duration of unemployment. A regression analysis was conducted to determine whether

Table 22

Study Two: Summary of Mediation Analyses for Perceived Employment-related Discrimination

IV	Effect of IV on DV		Effect of IV on DV when Mediator included		Effect of Mediator on DV when IV included		Sobel Z
	B	t	B	t	B	t	
Total duration unemployment	0.02	2.16*	0.01	1.63	0.22	4.29**	1.78
Sector	-0.20	-1.46					
Industry match	0.07	0.45					

* $p < .05$, ** $p < .01$.

Note. Empty cells denote instances where preconditions for mediation were not met and therefore mediation analyses were not conducted.

perceived underemployment mediates the relation between total duration of unemployment and perceived discrimination. As shown in Table 22, the effect of total duration of unemployment on perceived discrimination was reduced to non-significance with the inclusion of the mediator. However, a Sobel test revealed that this mediation effect was not significant.

Career satisfaction. Perceived underemployment predicts career satisfaction ($B = -0.68, t = -15.18, p < .001$), thereby meeting the second pre-condition for mediation. Findings from regression analyses testing the third pre-condition for mediation ó whether the predictor variables significantly predict career satisfaction ó were mixed. As shown in Table 23, both sector and industry match predicted career satisfaction, whereas duration of unemployment did not. Thus, first, a regression analysis was conducted to determine whether perceived underemployment mediates the relation between sector and career satisfaction. As shown in Table 23, although still significant, the effect of sector on career satisfaction was reduced with the inclusion of the mediator. A Sobel test revealed that this mediation effect was significant. Second, a regression analysis was conducted to determine whether perceived underemployment mediates the relation between industry match and career satisfaction. As shown in Table 23, the effect of industry on career satisfaction was reduced to non-significance with the inclusion of the mediator. A Sobel test revealed that this mediation effect was significant.

Perceived person-organization (P-O) fit. Perceived underemployment predicts perceived person-organization fit ($B = -0.29, t = -5.25, p < .001$), thereby meeting the second pre-condition for mediation. Findings from regression analyses testing the third pre-condition for mediation ó whether the predictor variables significantly predict

Table 23

Study Two: Summary of Mediation Analyses for Career Satisfaction

IV	Effect of IV on DV		Effect of IV on DV when Mediator included		Effect of Mediator on DV when IV included		Sobel Z
	B	t	B	t	B	t	
Total duration unemployment	-0.02	-1.53					
Sector	-0.67	-3.97**	-0.29	-2.39*	-0.65	-14.10**	3.07**
Industry match	-0.62	-3.39**	-0.13	-0.96	-0.66	-12.97**	3.61**

* $p < .05$, ** $p < .01$.

Note. Empty cells denote instances where preconditions for mediation were not met and therefore mediation analyses were not conducted.

perceived person-organization fit δ were mixed. As shown in Table 24, both sector and industry match predicted perceived person-organization fit, whereas duration of unemployment did not. Thus, first, a regression analysis was conducted to determine whether perceived underemployment mediates the relation between sector and perceived person-organization fit. As shown in Table 24, although still significant, the effect of sector on perceived person-organization fit was reduced with the inclusion of the mediator. A Sobel test revealed that this mediation effect was significant. Second, a regression analysis was conducted to determine whether perceived underemployment mediates the relation between industry match and perceived person-organization fit. As shown in Table 24, the effect of industry match on perceived person-organization fit was reduced to non-significance with the inclusion of the mediator. A Sobel test revealed that this mediation effect was significant.

Organizational citizenship behaviour. Perceived underemployment predicts organizational citizenship behaviour ($B = -0.23, t = -5.80, p < .001$). Findings from regression analyses testing the third pre-condition for mediation δ whether the predictor variables significantly predict organizational citizenship behaviour δ were mixed. As shown in Table 25, the only variable that predicted organizational citizenship behaviour was sector. A regression analysis was conducted to determine whether perceived underemployment mediates the relation between sector and organizational citizenship behaviour. As shown in Table 25, the effect of sector on organizational citizenship behaviour was reduced to non-significance with the inclusion of the mediator. A Sobel test revealed that this mediation effect was significant.

Table 24

Study Two: Summary of Mediation Analyses for Perceived Person-Organization (P-O) Fit

IV	Effect of IV on DV		Effect of IV on DV when Mediator included		Effect of Mediator on DV when IV included		Sobel Z
	B	t	B	t	B	t	
Total duration unemployment	-0.01	-0.71					
Sector	-0.63	-4.14**	-0.48	-3.24**	-0.25	-4.41**	2.56*
Industry match	-0.36	-2.16*	-0.16	-0.96	-0.28	-4.31**	2.83**

* $p < .05$, ** $p < .01$.

Note. Empty cells denote instances where preconditions for mediation were not met and therefore mediation analyses were not conducted.

Table 25

Study Two: Summary of Mediation Analyses for Organizational Citizenship Behaviour

IV	Effect of IV on DV		Effect of IV on DV when Mediator included		Effect of Mediator on DV when IV included		Sobel Z
	B	t	B	t	B	t	
Total duration unemployment	-0.01	-0.60					
Sector	-0.32	-2.87**	-0.19	-1.83	-0.21	-5.15**	2.69**
Industry match	-0.19	-1.55					

** $p < .01$.

Note. Empty cells denote instances where preconditions for mediation were not met and therefore mediation analyses were not conducted.

Organizational loyalty. Perceived underemployment predicts organizational loyalty ($B = -0.31, t = -7.89, p < .001$). Findings from regression analyses testing the third pre-condition for mediation ó whether the predictor variables significantly predict organizational loyalty ó were mixed. As shown in Table 26, the only variable that predicted organizational loyalty was sector. A regression analysis was conducted to determine whether perceived underemployment mediates the relation between sector and organizational loyalty. As shown in Table 26, the effect of sector on organizational loyalty was reduced to non-significance with the inclusion of the mediator. A Sobel's test revealed that this mediation effect was significant.

In sum, in cases where the preconditions for mediation were established, in most instances perceived underemployment mediated the relation between its predictors and outcomes. Thus, Hypothesis 8 was partially supported.

Refer to Table 27 for a summary of the results from the novel predictions in Study Two and to Table 28 for a summary of results obtained across Studies One and Two.

Discussion

The first objective of Study Two was to examine whether the findings observed in Study One would replicate. Consistent with the results obtained in Study One, in the current study, some characteristics of individuals' current job predicted perceived underemployment. Specifically, wages were negatively correlated with perceived underemployment, and perceived underemployment was higher among individuals whose current job is in a different industry than their pre-migration job. As in Study One, individuals working in temporary positions were not higher on perceived underemployment than those working in permanent positions. Likewise, those working

Table 26

Study Two: Summary of Mediation Analyses for Organizational Loyalty

IV	Effect of IV on DV		Effect of IV on DV when Mediator included		Effect of Mediator on DV when IV included		Sobel Z
	<i>B</i>	<i>t</i>	<i>B</i>	<i>t</i>	<i>B</i>	<i>t</i>	
Total duration unemployment	-0.01	-1.61					
Sector	-0.33	-2.78**	-0.16	-1.44	-0.30	-7.21**	2.89**
Industry match	-0.19	-1.47					

** $p < .01$.

Note. Empty cells denote instances where preconditions for mediation were not met and therefore mediation analyses were not conducted.

Table 27

Study Two: Summary of Results

Hyp. #	Prediction	Supported
1.	The length of time that individuals have spent unemployed over the past ten years will be positively correlated with perceived underemployment.	Yes
2.	Wages will be negatively correlated with perceived underemployment.	Yes
3.	Individuals whose current job is in a different industry than their pre-migration job will be higher on perceived underemployed than individuals whose current job is in the same industry as their pre-migration job.	Yes
4.	Individuals who immigrated to Canada in the Skilled Worker category will be higher on perceived underemployment than individuals who immigrated in other categories.	No
5.	The extent to which participants' employers accepted their credentials will be negatively correlated with perceived underemployment such that greater credential recognition is associated with lower perceived underemployment.	Yes
6.	Perceived underemployment will be positively correlated with a) perceived employment-related discrimination, and b) turnover intentions.	Yes
7.	Perceived underemployment will be negatively correlated with a) career satisfaction, b) perceived person-organization fit, c) organizational citizenship behaviour, and d) organizational loyalty.	Yes
8.	Perceived underemployment will mediate the relation between its predictors and outcomes.	Partially

Table 28

Summary of Results Across Studies One and Two: Predictors and Outcomes of Perceived Underemployment

Variable	Significant in Study 1	Significant in Study 2
Predictors		
<i>Job characteristics</i>		
• Permanent/temp or contract	No	No
• Full-time/involuntary part-time	Yes	N/A
• Public/private sector	N/A	Yes
• Wages	Yes	Yes
• Industry match	Yes	Yes
• Skill level change	Yes	N/A
<i>Demographic Characteristics</i>		
• Gender	No	No
• Age	No	No
• Ethnicity	No	No
• Length of residency in Canada	No	Yes
• Canadian citizenship status	N/A	Yes
• Immigration class	N/A	No
• Educational attainment	No	No
• English language proficiency and accent	No	No
<i>Unemployment history</i>	N/A	Yes
<i>Credential recognition</i>	N/A	Yes

Variable	Significant in Study 1	Significant in Study 2
Outcomes		
<i>Individual-relevant outcomes</i>		
• Perceived employment-related discrimination	Yes	Yes
• Satisfaction with immigration decision	Yes	N/A
<i>Organization-relevant outcomes</i>		
• Career satisfaction	N/A	Yes
• Job satisfaction	Yes	N/A
• Perceived person-organization fit	N/A	Yes
• Organizational citizenship behaviour	N/A	Yes
• Organizational loyalty	N/A	Yes
• Turnover cognitions	Yes	N/A
• Turnover intentions	Yes	Yes

part-time were not higher on perceived underemployment than individuals working full-time. In Study One, I observed a relation between involuntary part-time status and underemployment but I was not able to examine this relation in Study Two because, based on the available data, I could not ascertain whether individuals were employed part-time voluntarily or involuntarily.

When examining the relation between demographic characteristics and perceived underemployment, results from Study Two were fairly consistent with those obtained in Study One. Paralleling results obtained in Study One, in the current study, age, gender, English language skills, accent, and educational attainment were not associated with perceived underemployment. In contrast to Study One, in the current study, length of residency in Canada was negatively correlated with perceived underemployment.

Finally, the relation between perceived underemployment and its outcomes was consistent across the two studies. Notably, perceived underemployment was positively correlated with perceived employment-related discrimination and turnover intentions, and negatively correlated with career satisfaction.

The second objective of Study Two was to examine the relation between perceived underemployment and some additional predictor and outcome variables. On the predictor side, I examined three additional variables: unemployment history, immigration category, and credential recognition. As expected, the length of time individuals spent unemployed was positively correlated with perceived underemployment. Although researchers typically posit that this relation exists because a longer unemployment history is associated with an increased likelihood of accepting a lower quality job (e.g., Feather & O'Brien, 1986), I did not find evidence to support this

rationale in the current study. Interestingly, I found that unemployment history was not correlated with other markers of employment quality such as wages, full- vs. part-time status, and whether or not individuals were currently working in the same industry as they were pre-migration (an objective indicator of underemployment). Unfortunately, because I do not have data on other objective indicators of underemployment (e.g., involuntary part-time status, whether individuals are currently employed in a lower-level job than they were pre-migration), it is difficult to determine precisely what underlies the observed relation between unemployment history and perceived underemployment.

Contrary to my hypothesis, results from Study Two demonstrated that individuals who immigrated to Canada in the Skilled Worker category were not higher on perceived underemployment than those who immigrated in the Family Class. Interestingly, these two groups did not differ on unemployment history, full- vs. part-time status, or wages. In order to explore the reason behind this null effect, I conducted a chi-square analysis to determine whether, compared to individuals who immigrated in the Skilled Worker category, those who immigrated in the Family Class were more likely to be currently working in a different industry than they were pre-migration. Results from the chi-square analysis ($\chi^2(1) = 0.01, p = 1.00$) indicated that individuals who immigrated in both immigration categories were equally likely to be working in a different industry. Considering all available indices of employment quality, in the current sample evidence suggests that individuals who immigrated in the Family Class and those who immigrated in the Skilled Worker category fared equally well in the Canadian labour market.

Consistent with my hypothesis, results demonstrated that the extent to which participants' employers were perceived to accept their credentials was negatively

correlated with perceived underemployment. Similarly, credential recognition was associated with whether individuals were currently employed in the same industry as they were pre-migration, such that higher credential recognition was associated with an increased likelihood of working in the same industry.

Two interesting findings emerged from Study Two on novel predictor variables for which I did not make formal predictions. First, results demonstrated that individuals working in the public sector were lower on perceived underemployment than those working in the private sector. Public sector employees were also making more money than private sector employees. Why might immigrants fare better in the public than the private sector? It is possible that employers in the public sector (e.g., municipal governments) provide more supports (e.g., mentors) for their employees than do employers in the private sector. Similarly, public sector employees may have better benefits and more job security than private sector employees. It may also be the case that public sector organizations support a more multicultural environment, which decreases discriminatory hiring practices and results in a lower likelihood of immigrants being hired below their abilities. The current data do not speak to these issues, but they may be worth exploring further in future studies. The second interesting finding from the current study is that, compared to individuals who are not Canadian citizens, those who have obtained citizenship were lower on perceived underemployment. It is likely that this effect is due largely to individuals' length of residency in Canada, which is highly correlated with whether or not they have obtained citizenship ($r = -.65, p < .01$).

One of the major objectives of Study Two was to examine the unique variance in perceived underemployment accounted for by predictor variables. When regressed

simultaneously on all of its significant predictors, results demonstrated that total duration of unemployment, sector (private vs. public) and industry match (whether individuals currently work in a different industry than they did pre-migration) significantly predicted perceived underemployment.

On the outcome side, I examined three novel variables in Study Two: perceived person-organization fit, organizational citizenship behaviour, and organizational loyalty. Consistent with my hypotheses, results demonstrated that perceived underemployment was negatively correlated with all three of these outcomes.

The fourth objective of Study Two was to examine a mediational model in which perceived underemployment mediates the relation between its predictors and outcomes. Mediation analyses were conducted for the three variables that significantly predicted perceived underemployment when entered into a simultaneous regression analysis of total duration of unemployment, sector (private vs. public) and industry match (whether individuals currently work in a different industry than they did pre-migration). Results demonstrated that the most consistent pattern of mediation was a model in which perceived underemployment partially mediates the relation between sector (private vs. public) and outcomes. This mediation pattern was significant for the following outcomes: career satisfaction, perceived person-organization fit, organizational citizenship behaviour, and organizational loyalty. Results also demonstrated that perceived underemployment partially mediates the relation between industry match (whether individuals currently work in a different industry than they did pre-migration) and both career satisfaction and perceived person-organization fit. Note that no significant mediations were found when examining total duration of unemployment as the predictor

variable, mainly because one of the pre-conditions for running mediation analyses was not met: duration of unemployment was not related to most of the outcomes. Although these mediation analyses were conducted using cross-sectional data, results provide support for my hypothesis that perceived underemployment is a mechanism that underlies the relation between its predictors and outcomes.

CHAPTER 4: STUDY THREE

Introduction

Overview

Study Three was the final and most comprehensive study in the dissertation. It served three primary objectives. First, I examined whether the findings from Studies One and Two would replicate. Second, I examined the relation between perceived underemployment and some additional outcome variables. [For a summary of the variables examined in each of the three studies see Appendix H]. Third, I examined a potential variable that might interact with perceived underemployment in predicting outcomes. Specifically, I examined whether the attributions that individuals make for their employment situation interact with perceived underemployment in predicting outcomes.

Hypotheses for Novel Variables

Individual-relevant outcomes.

Psychological well-being. Past research conducted with non-immigrant samples has consistently demonstrated that underemployment is associated with lower levels of general mental health and psychological well-being (e.g., Bolino & Feldman, 2000; Jones-Johnson & Johnson, 1992; Winefield et al., 1991).

Hypothesis 1: Perceived underemployment will be negatively correlated with psychological well-being such that higher perceived underemployment is associated with lower psychological well-being.

Perceptions of justice. Because education and previous work experience can make it easier for individuals to immigrate to Canada (particularly those who immigrate

under Economic categories), many immigrants come to Canada with the expectation that they will find employment commensurate with their skills and abilities. Indeed, research suggests that perceptions of employment opportunities are one of the main factors that influence immigrants' destination choices (Kukushkin, 2009). Hence, it is plausible that immigrants who feel overqualified for their current job, particularly when compared to their pre-migration job, experience feelings of injustice. To date, researchers have not examined the relation between perceived underemployment and perceptions of justice. When thinking about immigrant to Canada, there are different foci of justice that may be interesting to examine. For example, immigrants may vary on their levels of perceived justice in the immigration system and perceived justice in accessing social services. However, in line with the current focus on perceived underemployment, I chose to investigate perceptions of justice in how immigrants are treated in the Canadian labour market.

Hypothesis 2: Perceived underemployment will be negatively correlated with perceptions of justice such that higher perceived underemployment is associated with lower perceptions of justice regarding how immigrants are treated in the Canadian labour market.

Society-relevant outcomes.

Return migration intentions/intentions to leave Canada. Evidence suggests that individuals who immigrate to Canada as economic immigrants (i.e., as self-employed or entrepreneurs in the business class, or as Skilled Workers) stay in Canada for a shorter period of time and have a higher likelihood of leaving than individuals who immigrate in other categories (Aydemir & Robinson, 2006). Results from a longitudinal study of male

immigrants aged 25 to 30 at the time of immigration (between 1980 and 1996) demonstrated that approximately 40% of working-age men who immigrated in the business class or as Skilled Workers left Canada within 10 years after arriving. Among their counterparts who immigrated in the Family Class and as Refugees, the corresponding rates were 30% and 20%, respectively. In addition, evidence suggests that out-migration rates are higher during periods of economic recession (Aydemir & Robinson). It is hypothesized that this overall pattern of results occurs as a result of changes in the relative labour market conditions in various countries (Aydemir & Robinson).

After being selected for immigration to Canada based on their labour market qualifications, individuals who have immigrated to Canada in the economic category likely have high expectations about their ability to integrate into the Canadian labour market. Thus, when they experience underemployment, it is likely that this increases their return migration intentions and intentions to leave Canada. In addition, compared to individuals who immigrate to Canada in other categories (e.g., as Refugees), economic immigrants have more extensive educational credentials and employment experience. Hence, they likely have more employment options outside of Canada than do other immigrants.

Hypothesis 3: Perceived underemployment will be positively correlated with return migration intentions and intentions to leave Canada such that higher perceived underemployment is associated with higher return migration intentions and intentions to leave Canada, particularly among individuals who immigrated in the Skilled Worker category.

Organization-relevant outcomes.

Affective organizational commitment. Organizational commitment is defined as a psychological state that increases the likelihood that an employee will stay with an organization (Meyer, Allen, & Smith, 1993). It is widely considered to comprise three different components: 1) affective commitment: "an emotional attachment to, identification with, and involvement in the organization," 2) normative commitment: "a perceived obligation to remain in the organization," and 3) continuance commitment: "the perceived costs associated with leaving the organization" (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002, p. 21).

In studies conducted with non-immigrant samples, underemployment has been associated with lower affective commitment (Johnson, Morrow, & Johnson, 2002; Maynard et al., 2006). Researchers have not found a relation between underemployment and normative or continuance commitment (Johnson et al., 2002).

Hypothesis 4: Perceived underemployment will be negatively correlated with affective commitment such that higher perceived underemployment is associated with lower affective commitment.

Mediating Role of Underemployment

One of the objectives of Study Three was to examine whether the mediational model from Study Two would replicate. As such, I hypothesized the following:

Hypothesis 5: Perceived underemployment will mediate the relation between its predictors and outcomes.

Role of Attributions

One of the primary goals of this study was to examine whether attributions interact with perceived underemployment to predict outcomes (see Figure 3). The basic premise behind attribution theory is that people constantly strive to understand the world around them by making causal attributions about events and circumstances, including their successes and failures (Heider, 1944; Weiner, Frieze, Kukla, Reed, Rest et al., 1971). Decades of empirical evidence support the notion that the causes people use when making explanations can be classified according to three dimensions (see Weiner, 1985, 2010). The first dimension, locus, concerns whether the cause is due to factors within the person (internal) or to factors within the environment (external). The second dimension, stability, concerns whether the cause fluctuates (unstable) or remains constant (stable). The third dimension, controllability, concerns whether the cause is subject to volitional control (controllable) or whether it is fixed (uncontrollable). It is important to note that all causes are regarded as locatable within [this] three-dimensional taxonomic space (Weiner, 2010, p. 32), and that dimensional placement of a cause is phenomenological (Weiner, 2010). As Weiner (2010) explains, if an individual considers himself to be a "lucky person," then luck is regarded as internal and stable rather than external and unstable.

The causal attributions that people make are important because, in addition to helping them make sense of their reality, they influence emotions and behaviour. Indeed, extant research supports the association between causal attributions and emotions (see Weiner, 1985, 1986, 1995). Briefly, causal locus is linked with self-esteem and pride. For

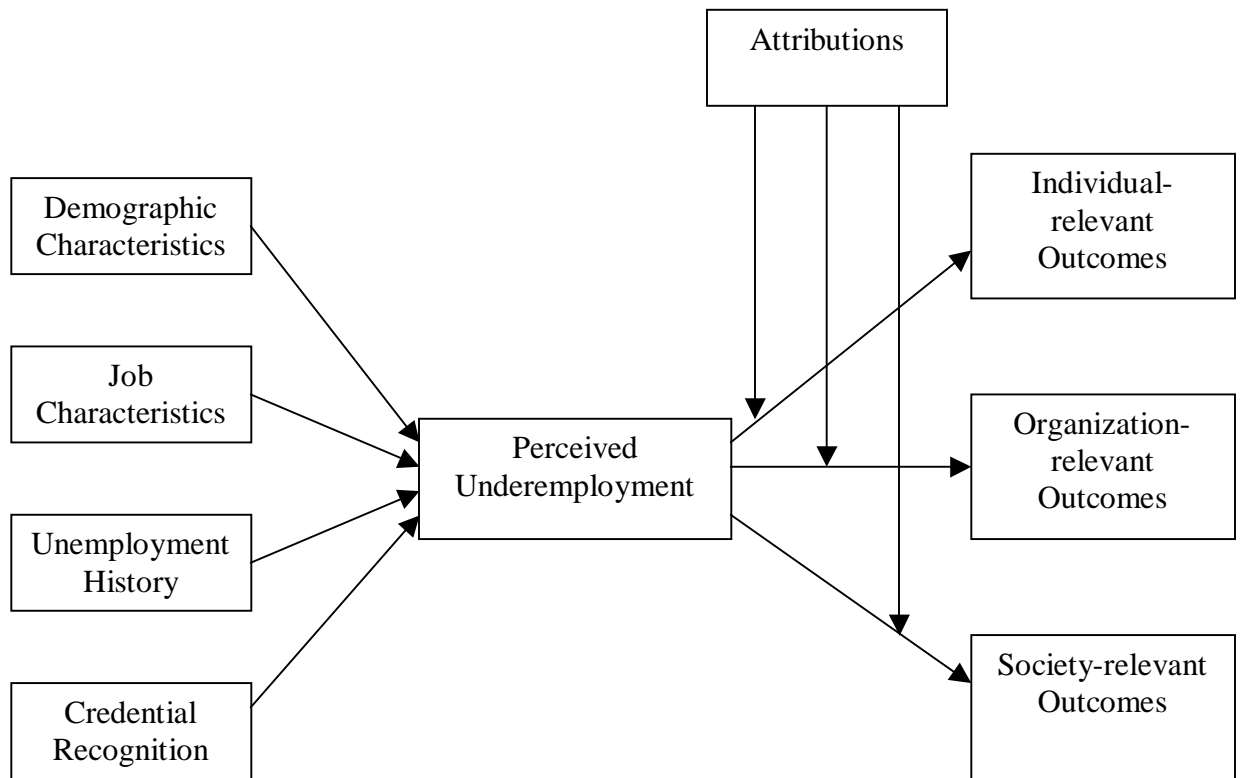


Figure 3. The role of attributions in the conceptual model of perceived underemployment.

instance, making internal attributions for success increases pride and self-esteem, while making internal attributions for failure has the opposite effect, decreasing pride and self-esteem. Causal control relates to shame, guilt, and regret. Making uncontrollable attributions increases shame, while making controllable attributions increases guilt and regret. Finally, causal stability relates to hope, hopelessness, helplessness, and expectancy shifts. Of interest to the current study, unstable causes of failure are associated with feelings of hope (e.g., Weiner, 1985) and a higher expectancy of future success (e.g., Meyer, 1980). Research also suggests that attributing failure to uncontrollable causes may be associated with dissatisfaction with performance. In a laboratory study in which participants were asked to imagine how a student would feel after failing an exam, attributing failure to uncontrollable causes was associated with greater perceived dissatisfaction with performance (Meyer, 1980).

There is also some evidence to support the assertion that causal attributions alter behaviour. For the most part, this evidence comes from studies demonstrating that interventions designed to alter individuals' attributions result in behaviour change. For instance, research has shown that altering individuals' attributions for failure from stable to unstable (Perry, Hechter, Menec, & Weinberg, 1993; Sarkisian, Prohaska, Davis, & Weiner, 2007), and from uncontrollable to controllable (Sarkisian et al., 2007; Wilson, Damiani, & Shelton, 2002) results in positive behaviour change (e.g., increased studying among students, increased walking behaviour among the elderly).

In sum, past research has found that, when it comes to making attributions for situations or circumstances that can be perceived as failures (e.g., feeling underemployed), compared to stable attributions, unstable attributions are associated with

positive outcomes (e.g., feeling hopeful, having high expectations for the future, and positive behaviour change). Controllable (vs. uncontrollable) attributions are also associated with positive effects: controllable attributions for failure are associated with lower perceived dissatisfaction with failure and positive behaviour change. While the literature on causal locus has focused primarily on emotions (rather than behaviour), there is some evidence to suggest that attributing failure to external causes helps to buffer potential negative effects on self-esteem.

Although the effects of attributions have been well documented in many areas of psychology (e.g., the education literature, the prejudice literature), their role in underemployment has received little empirical attention. To my knowledge, the only study to consider the role of attributions in underemployment was an investigation of the relations among underemployment, attributions, and self-esteem among Black men (Johnson, 1990). In this study, underemployment was measured by creating an objective index that compared participants' occupational prestige to that which would be expected given their educational credentials. On the basis of this comparison, each participant was classified either as underemployed or not underemployed. To measure attributions, Johnson created two items designed to measure internal attributions (examining participants' perception of the role of lack of ability and lack of effort in preventing them from getting good jobs) and two items designed to measure external attributions (examining participants' perception of the role of family responsibilities and being Black in preventing them from getting good jobs). Johnson hypothesized that individuals who were classified as underemployed would have lower self-esteem than those who were not, and that this relation would be mitigated when individuals made external (rather than

internal) attributions for their employment situation. None of Johnson's hypotheses were supported by the data.

Johnson's approach to measuring attributions suffered from shortcomings that may have affected her results. First, when measuring internal and external attributions, she examined both stable causes (lack of ability, and being Black) and unstable causes (lack of effort, and the role of family responsibilities), yet she did not consider the stability dimension when running her analyses. Second, a more appropriate way to measure attributions is to ask respondents how they view their attributions in terms of the causal dimensions, rather than making the assumption that they perceive causes in the same way as the researcher (McAuley, Duncan, & Russell, 1992).

Given the methodological shortcomings reviewed above, as well as the fact that this was a single study that only examined one of the three dimensions of attributions, there was value in re-examining the role that attributions play in the relation between underemployment and its outcomes. In line with past research findings demonstrating the positive effects associated with making unstable attributions and controllable attributions, my hypotheses were as follows:

Hypothesis 6: Perceived underemployment and stability attributions will interact to predict outcomes. Specifically, among individuals low in perceived underemployment, there will be no effect of stability attributions on outcomes. In contrast, among individuals high in perceived underemployment, there will be an effect of stability attributions such that negative outcomes (e.g., low job satisfaction) are attenuated as the tendency to perceive attributions as unstable increases.

Figure 4 depicts the pattern of the hypothesized interaction between perceived underemployment and stability attributions.

There is some evidence to suggest that the controllability attribution dimension should be differentiated in terms of whether a cause is controllable by the target person or controllable by an external person (McAuley et al., 1992). This possibility was acknowledged by Weiner in 1986 and is consistent with Anderson and Arnoult's (1985) argument that personal control is the most important attribution dimension. To illustrate, consider two potential causes of underemployment: an employer's unwillingness to accept an immigrant's foreign credentials, and an individual's job search effort. While both of these causes are subject to volitional control, only the latter is controllable by the target person and thus might be more likely to result in positive behaviour change. A series of four studies conducted by McAuley and colleagues supports the separation of the control dimension into two dimensions representing personal and external control. Because personal control is arguably the most important of the two dimensions (Anderson & Arnoult, 1985; McAuley et al.), no formal hypotheses are made for external control.

Hypothesis 7: Perceived underemployment and personal control attributions will interact to predict outcomes. Specifically, among individuals low in perceived underemployment, there will be no effect of personal control attributions on outcomes. In contrast, among individuals high in perceived underemployment, there will be an effect of personal control attributions such that negative outcomes (e.g., low job satisfaction) are attenuated as the tendency to perceive attributions as personally controllable increases.

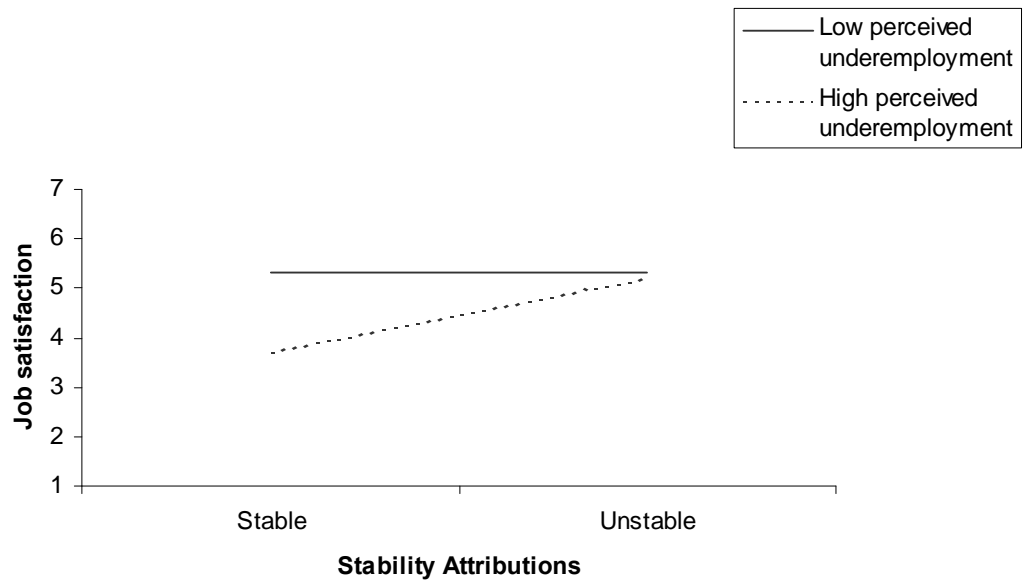


Figure 4. Pattern of hypothesized interaction between perceived underemployment and stability attributions.

Figure 5 depicts the pattern of the hypothesized interaction between perceived underemployment and personal control attributions.

Method

Participants

The final sample constituted 75 immigrants to Canada (34 men, 33 women, 8 undisclosed), based on the inclusion criteria of being employed, not missing an extensive amount of data, and responding correctly to a quality control question embedded in the questionnaire. All participants were employed, at least 18 years of age, and had been living in Canada for a maximum of 10 years. Participants ranged in age from 18 to 72 years ($M = 37.76$, $SD = 9.51$). Twenty-three (30.7%) of the participants immigrated to Canada in the Skilled Worker Class, fifteen (20.0%) immigrated in the Family Class, twenty (26.7%) immigrated as Refugees or Refugee Claimants, and seventeen (22.6%) either immigrated in other categories or did not provide this information.

Participants came from diverse regions of the world (see Table 29). Notably, 26.8% were from South America.

Procedure

Participants were recruited through advertisements posted in ethnic newspapers (e.g., Sing Tao Daily), at immigrant-serving agencies (e.g., London Cross Cultural Learner Centre), and on social media sites (e.g., Facebook groups) that catered to immigrants in Canada (see Appendix I for ethics approval form and Appendix J for the advertisement). As an incentive to participate, participants were told that, upon completing the questionnaire, they would have the opportunity to be entered into a lottery to win a \$50 online gift certificate to Chapters/Indigo.

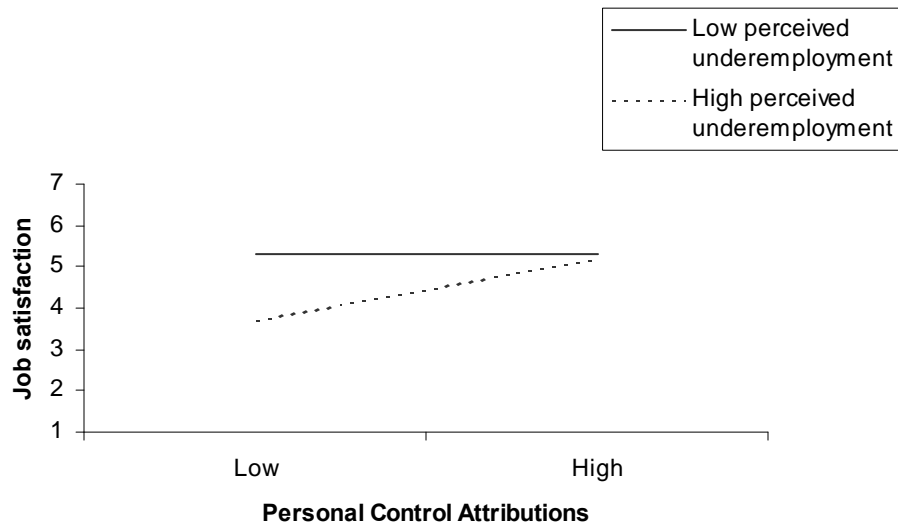


Figure 5. Pattern of hypothesized interaction between perceived underemployment and personal control attributions.

Table 29

Study Three Participants: Region of Origin

Region of Origin	Frequency	Percent
South America (e.g., Colombia)	20	26.8
Southeast Asia (e.g., the Philippines)	7	9.3
Eastern Asia (e.g., China)	6	8.0
Southern Asia (e.g., India)	6	8.0
Central America (e.g., El Salvador)	5	6.7
Northern Europe (e.g., UK)	4	5.3
Southern Europe (e.g., Serbia)	4	5.3
West Central Asia and the Middle East (e.g., Kuwait)	4	5.3
Eastern Europe (e.g., Romania)	3	4.0
North America (e.g., USA)	1	1.3
Western Europe (e.g., Germany)	1	1.3
Missing Data	14	18.7
Total	75	

Participants read a letter of information and consent form. Next, participants completed an online survey that included the following measures:

Perceived underemployment. Consistent with Study One, perceived underemployment was measured using 6 items from Bolino and Feldman's scale (2000; see Appendix B). Cronbach's alpha for the scale was .88.

Predictors.

Unemployment history. Participants were asked the number of times they had been unemployed in Canada and the average duration of their unemployment periods. To create an index of the duration of time participants had been unemployed, I multiplied the number of times participants indicated they had been unemployed by the average duration of their unemployment periods.

Characteristics of current job. Participants were asked basic questions about their current job such as: their job title, income/hourly wage, whether they work in the private or public sector, and whether their current position is full- or part-time (and if part-time, whether they wish they worked full-time). Participants were also asked questions about their pre-migration employment history and their preferred job (e.g., job title).

Participants' open-ended responses to questions regarding their current and preferred jobs were coded using the skill level categories identified in the National Occupational Classification (NOC). Additional information regarding this coding scheme is detailed in Study One. After the skill levels were coded for both current job and preferred job, they were examined to determine if differences existed. If a participant's current job required the same skill level as his/her preferred job, this item was coded as 0, and if a participant's current job required a lower skill level than his/her preferred job, it

was coded as 1. No participants were currently employed in a job that requires a higher skill level than their preferred job.

Participants selected the industry of their current and preferred jobs from drop-down menus that listed the industries in the North American Industry Classification System (NAICS; Statistics Canada, 2007b). The two industries were examined to determine differences. If a participant's current job was in the same industry as his/her preferred job, this item was coded as 0, and if a participant's current job was in a different industry than his/her preferred job, it was coded as 1.

Demographic characteristics. Participants were asked questions assessing the following information: gender, age, immigration class in which they entered Canada, length of time they had lived in Canada, whether they had obtained Canadian citizenship, and the highest level of education attained outside of Canada. To assess ethnicity, participants responded to the following question: "What is your ethnic background? White/European, Black North American/African, Hispanic, Asian, East Indian, Other (please specify)." Consistent with Study One, self-reported English language proficiency and accent were measured using items from Marian and colleagues' (2007) Language Experience and Proficiency Questionnaire (see Appendix E). Cronbach's alpha for the English language proficiency items was .93. The two items that measured self-reported accent correlated at .70 and thus were aggregated.

Credential recognition. Participants were asked to indicate the extent to which their current employer accepted their credentials using the following two items: "To what extent were your non-Canadian education credentials accepted by your current employer?" and "To what extent was your non-Canadian work experience accepted by

your current employer?ö (1 = *not at all accepted* to 7 = *completely accepted*). The two items were correlated at .84 and thus were aggregated.

Individual-relevant outcomes.

Perceived employment-related discrimination. Perceptions of employment-related discrimination in Canada were measured by adapting items used in both the Longitudinal Survey of Immigrants to Canada (Statistics Canada, 2007a) and the Ethnic Diversity Survey (Statistics Canada, 2002). Four items were used to measure perceptions of general discrimination: öI have experienced discrimination or unfair treatment when searching for a job in Canada,ö öI have experienced discrimination or unfair treatment while on-the-job in Canada,ö (1 = *strongly disagree* to 7 = *strongly agree*), öHow often have you experienced discrimination or unfair treatment when searching for a job in Canada?ö and öHow often have you experienced discrimination or unfair treatment while on-the-job in Canada?ö (1 = *never* to 7 = *all of the time*). The same four items were adapted to measure perceptions of discrimination based on immigrant status (see Appendix K). Cronbach's alpha was .85 for the measure of perceptions of general discrimination and .87 for the measure of perceptions of discrimination based on immigrant status.

Psychological well-being. To measure psychological well-being, I used the 8-item short-form version of the Oxford Happiness Questionnaire (Hills & Argyle, 2002; see Appendix L). A sample item is öI feel that life is very rewardingö (1 = *strongly disagree* to 7 = *strongly agree*). Three of the eight items were modified slightly in order to increase readability and eliminate reverse-scoring. Cronbach's alpha for the scale was .83.

Satisfaction with immigration decision. To measure satisfaction with immigration decision, I created a 6-item scale (see Appendix M). A sample item is "I am very happy with my decision to immigrate to Canada" (1 = *strongly disagree* to 7 = *strongly agree*). Cronbach's alpha for the scale was .96.

Perceptions of justice. To measure perceptions of justice regarding how immigrants are treated in the Canadian labour market, I created a 6-item scale (see Appendix N). A sample item is "Immigrants are given a fair chance in the Canadian labour market" (1 = *strongly disagree* to 7 = *strongly agree*). Cronbach's alpha for the scale was .90.

Society-relevant outcomes.

Return migration intentions and intentions to leave Canada. I created 3 items to measure return migration intentions, and 3 items to measure intentions to leave Canada (see Appendix O). A sample item that measures return migration intentions is "I frequently think of returning to my country of origin" and a sample item that measures intentions to leave Canada is: "I am actively looking into leaving Canada" (1 = *strongly disagree* to 7 = *strongly agree*). Cronbach's alpha was .84 for the measure of return migration intentions and .79 for the measure of intentions to leave Canada.

Organization-relevant outcomes.

Job satisfaction. Job satisfaction was measured using three items developed by Hackman and Oldham (1980). Cronbach's alpha for the scale was .68.

Turnover cognitions. Turnover cognitions were measured using one item from Hackman and Oldham's (1975) measure ("I frequently think of quitting") as well as three items used in previous research by Adams and Beehr (1998) and Maynard and colleagues

(2006): 'I am planning to leave my job for another in the near future' (Rosin & Korabik, 1991), 'I often think of quitting this job and finding another' (Rosin & Korabik, 1991), and 'I would like to quit this job and find another in the near future' (Michaels & Spector, 1982). Responses were made on 7-point Likert type scales (1 = *strongly disagree* to 7 = *strongly agree*). Cronbach's alpha for the scale was .94.

Job search behaviour. A slightly modified version of Blau's (1994) Job Search Behaviour Scale was used to measure job search behaviour (see Appendix P). Six items measured preparatory job search and six items measured active job search behaviours. For each item, participants indicated the frequency with which they performed various job search behaviours (e.g., sent out resumes to potential employers), using 5-point Likert type scales (1 = *never (0 times)* to 5 = *very frequently (at least 10 times)*). I modified the items slightly to reflect current forms of job search behaviour using the Internet. For instance, the item 'Telephoned a prospective employer' was changed to 'Emailed or telephoned a prospective employer.' In addition, the term 'job leads' was changed to 'job vacancies or opportunities.' The preparatory job search behaviour and active job search behaviour subscales correlated at .96. Thus, one job search behaviour aggregate was formed.

Organizational citizenship behaviour. Organizational citizenship behaviour (OCB) was measured using sixteen items selected by Lee and Allen (2002) from a pool of existing OCB scales: 8 that measure OCB directed to individuals (OCBI) and 8 that measure OCB directed to the organization (OCBO; see Appendix Q). Cronbach's alpha was .90 for the measure of OCB directed to individuals and .93 for the measure of OCB directed to the organization.

Perceived person-organization fit. Perceived person-organization fit was measured with three-items used in previous research conducted by Lauver and Kristof-Brown (2001; adapted from questions used by Cable & Judge, 1996): "My values match or fit the values of this organization," "I am able to maintain my values at this company," and "My values prevent me from fitting in at this company because they are different from the company's values" (reverse-scored). Responses were made on 7-point Likert type scales (1 = *strongly disagree* to 7 = *strongly agree*). Cronbach's alpha for the scale was .80.

Affective organizational commitment. Affective commitment was measured using Meyer and colleagues' (1993) 6-item measure (see Appendix R). Responses were made on 7-point Likert type scales (1 = *strongly disagree* to 7 = *strongly agree*). Cronbach's alpha for the scale was .82.

Attributions. A slightly modified version of McAuley, Duncan, and Russell's (1992) Revised Causal Dimension Scale (CDSII) was used to measure attributions (see Appendix S for the original scale and Appendix T for the modified version). First, participants were asked, "All things considered, are you overqualified for your current job?" (Yes, I am overqualified for my current job; No, I am not overqualified for my current job). Next participants were asked to make an open-ended causal attribution for their employment situation, by responding to the question: "What is the primary reason that you are (not) overqualified for your current job?" Subsequently, participants rated their causal attribution using a series of items corresponding to the attribution dimensions of stability, external control, and personal control.

Note that while McAuley and colleagues' measure contains 9 items assessed using semantic differential scales, I created an 18-item scale by taking each semantic differential scale and modifying it into two items. For example, on McAuley and colleagues' measure, participants rated the extent to which a cause was temporary versus permanent by responding to one item on a 9-point Likert type scale (1 = *temporary* to 9 = *permanent*). On the modified version used in the present study, participants responded to two items on a 7-point Likert type scale, rating the extent to which a cause was temporary (1 = *not at all* to 7 = *to a very large extent*) and the extent to which a cause was permanent (1 = *not at all* to 7 = *to a very large extent*). Cronbach's alpha was .65 for the stability dimension, .68 for the external control dimension, and .75 for the personal control dimension.

Additional information. Upon completion of the questionnaire, participants were asked to enter their email address if they would like to be entered into a draw to win a \$50 online gift certificate to Chapters/Indigo. A debriefing sheet was then displayed.

In order to identify careless, random, or malicious response patterns, a quality control question was embedded midway through the questionnaire (i.e., "For quality control purposes, please select 4").

Results

Perceived Underemployment

Recall that in the current study perceived underemployment was measured using a 7-point Likert-type scale and that higher numbers reflected greater perceived underemployment. The mean value of perceived underemployment was 3.91 ($SD = 1.65$), which was slightly below the mid-point of the scale (4.00). There was an adequate range

of perceived underemployment scores (1.00 to 7.00). An examination of the distribution of perceived underemployment scores demonstrated that this variable was fairly normally distributed. There were no outliers.

An independent t-test revealed that, when asked whether or not they were underemployed, individuals who responded "yes" were significantly higher on perceived underemployment ($M = 4.93$, $SD = 1.22$) than individuals who responded "no" ($M = 2.46$, $SD = 0.97$), $t(73) = -9.39$, $p < .001$.

Predictors of Underemployment

First, in order to make comparisons with the results from Studies One and Two, the relations between the predictor variables and perceived underemployment were examined individually. Refer to Table 30 for correlations between continuous predictor variables and perceived underemployment (plus means and standard deviations) and to Tables 31 and 32 for intercorrelations among predictor variables.

Table 30

Study Three: Correlations Between Continuous Predictor Variables and Perceived Underemployment (plus Descriptive Statistics)

	Correlation with perceived underemployment	<i>M</i>	<i>SD</i>
<i>Total duration of unemployment</i> (months)	.14	9.75	13.80
<i>Characteristics of current job</i>			
¹ Wages	-.25*	5.63	2.05
<i>Demographic characteristics</i>			
Age (years)	.17	37.76	9.51
Length of residency in Canada (months)	.16	66.47	38.81
English language skills (possible range: 0 ó 10)	-.05	8.65	1.31
Accent (possible range: 0 ó 10)	.17	7.31	3.00
<i>Credential recognition</i> (possible range: 1 ó 7)	-.17	4.37	2.14

* $p < .05$.

¹ Wages were coded as follows: 1 = < \$7.00/hour, 2 = \$7.00 to \$8.74/hour, 3 = \$8.75 to \$9.99/hour, 4 = \$10.00 to \$14.99/hour, 5 = \$15.00 to \$19.99/hour, 6 = \$20.00 to \$24.99/hour, 7 = \$25.00 to \$29.99/hour, 8 = \$30.00 to \$34.99/hour, 9 = \$35.00 to \$39.99/hour, 10 = \$40.00 to \$44.99/hour, 11 = \$45.00 to \$50.00/hour, 12 = > \$50.00/hour

Table 31

Study Three: Intercorrelations Among Predictors: Continuous Variables

	1.	2.	3.	4.	5.	6.
1. Total duration of unemployment						
2. Wages	-.19					
3. Age	.20	-.09				
4. Length of residency in Canada	.23	.39**	.24			
5. English language skills	.04	.07	-.12	.16		
6. Accent	.19	-.05	.13	-.08	-.42	
7. Credential recognition	-.22	-.18	-.32**	-.42**	.03	-.14

** $p < .01$.

Table 32

Study Three: Intercorrelations Among Predictors: Continuous x Dichotomous Variables

	Total duration of unemployment	Wages	Age	Length of residency in Canada	English language skills	Accent	Credential recognition
Skill level change (0 = same, 1 = lower)	.19	-.43**	.10	.20	-.07	-.00	-.26*
Industry match (0=same, 1=different)	.09	-.09	-.04	.01	.00	.01	-.01
Full- vs. involuntary part-time (0 = full-time or voluntary part-time, 1 = involuntary part-time)	.19	-.31**	-.04	-.10	-.01	.16	.14
Temp. vs. perm. (0 = permanent, 1 = temporary)	-.05	-.20	-.04	-.18	-.03	-.01	.16
Sector (0 = public, 1 = private)	.01	.11	.14	-.19	-.18	.20	.08
Gender (0=male, 1=female)	-.02	-.16	-.23	.18	.22	-.11	.08
Canadian citizen (0=yes, 1=no)	-.21	-.37**	-.15	-.69**	-.04	-.06	.42**

* $p < .05$, ** $p < .01$.

Unemployment history. In contrast to Study Two, a Pearson's correlation analysis demonstrated that the length of time that individuals had spent unemployed in Canada was not correlated with perceived underemployment, $r(63) = .14, p = .28$.

Characteristics of current job. In contrast to Study One, an independent samples t-test revealed that there was no difference in perceived underemployment between individuals who were involuntarily employed part-time and those who were either employed full-time or voluntarily employed part-time, $t(73) = 0.06, p = .95$.¹⁷ Consistent with Studies One and Two, there was no difference in perceived underemployment between individuals working in temporary/contract positions and those working in permanent positions, $t(73) = 0.46, p = .65$.

In contrast to Study Two, an independent samples t-test revealed that there was no difference in perceived underemployment between individuals who worked in the private sector and those who worked in the public sector, $t(73) = -1.20, p = .23$.¹⁸

Consistent with Studies One and Two, a Pearson's correlation analysis demonstrated that wages were negatively correlated with perceived underemployment, $r(73) = -.25, p = .03$.

Consistent with Study One, an independent samples t-test revealed that individuals whose current job requires a lower skill level than their preferred job ($M = 5.09, SD = 1.34$) were significantly higher on perceived underemployment than individuals whose current job requires the same skill level as their preferred job ($M = 3.27, SD = 1.48$), $t(56) = -4.74, p < .001$.

¹⁷ In the current study only 11 participants were involuntarily employed part-time.

¹⁸ Consistent with results obtained in Study Two, a comparison of means suggested that there was a trend in which individuals working in the private sector ($M = 4.06, SD = 1.65$) tended to be higher on perceived underemployment than those working in the public sector ($M = 3.57, SD = 1.66$).

Consistent with Studies One and Two, an independent samples t-test revealed that individuals whose current job is in a different industry than their preferred job ($M = 4.77$, $SD = 1.50$) were significantly higher on perceived underemployment than individuals whose current job is in the same industry as their preferred job ($M = 3.27$, $SD = 1.48$), $t(73) = -4.32$, $p < .001$.

Demographic characteristics. Consistent with Studies One and Two, an independent samples t-test revealed that there was no difference in perceived underemployment between men and women, $t(65) = 1.22$, $p = .23$. In contrast to Study Two, there was no difference in perceived underemployment between Canadian citizens and individuals who were not Canadian citizens, $t(65) = -0.02$, $p = .98$.

One-way ANOVAs were conducted to determine if perceptions of underemployment varied as a function of participants' ethnicity, the highest level of education they obtained outside of Canada, or the immigration class in which they entered Canada. Consistent with Studies One and Two, no effects were significant: all F s < 1.39 , $ps > .25$.

Consistent with Studies One and Two, Pearson's correlation analyses demonstrated that age, English language proficiency, and accent were not correlated with perceived underemployment: all r s $< .18$, $ps > .17$. In contrast to Study Two, results demonstrated that length of residency in Canada was not correlated with perceived underemployment, $r(59) = .16$, $p = .24$.

Credential recognition. In contrast to Study Two, the extent to which participants' employers accepted their credentials was not correlated with perceived underemployment, $r(73) = -.17$, $p = .14$.

All predictors. Perceived underemployment was regressed simultaneously on its three significant predictors (i.e., wages, skill level change, industry match). I examined the total amount of variance in perceived underemployment explained by the predictor variables, as well as the regression coefficients for each predictor. Results of the simultaneous regression analysis are presented in Table 33. The overall model was significant, $F(3, 71) = 14.26, p < .01$, and accounted for 37.60% of the variance in perceived underemployment. Skill level change and industry match each predicted unique variance in perceived underemployment.¹⁹

Outcomes of Underemployment

Refer to Table 34 for correlations between perceived underemployment and individual- and society-relevant outcome variables (plus means and standard deviations) and to Table 35 for correlations between perceived underemployment and organization-relevant outcome variables (plus means and standard deviations). Refer to Tables 36, 37, 38, and 39 for correlations between predictors and outcomes, and to Tables 40 and 41 for intercorrelations among outcome variables.

Individual-relevant outcomes. Consistent with Studies One and Two, perceived underemployment was positively correlated with perceptions of general discrimination, $r(71) = .24, p = .04$. Perceived underemployment was not correlated with perceptions of discrimination based on immigrant status, $r(71) = .22, p = .07$. Consistent with Study One, perceived underemployment was negatively correlated with satisfaction with immigration decision, $r(73) = -.26, p = .03$.

¹⁹ The importance of skill level change and industry match in predicting perceived underemployment was corroborated by results from a relative weights analysis.

Table 33

Study Three: Summary of Simultaneous Regression Analysis for Perceived Underemployment

Variable	<i>B</i>	<i>SE B</i>
Wages	-0.06	0.08
Skill level change	1.49**	0.39
Industry match	1.28**	0.32

** $p < .01$.

Table 34

Study Three: Correlations Between Perceived Underemployment and Individual and Societal Outcomes (plus Descriptive Statistics)

	Correlation with perceived underemployment	<i>M</i>	<i>SD</i>
<i>Individual-relevant outcomes</i>			
Perceived discrimination ó general (possible range: 1 ó 7)	.24*	3.34	1.64
Perceived discrimination ó immigrant status (possible range: 1 ó 7)	.22	3.08	1.64
Psychological well-being (possible range: 1 ó 7)	-.11	5.61	1.01
Satisfaction with immigration decision (possible range: 1 ó 7)	-.26*	5.56	1.64
Perceptions of justice (possible range: 1 ó 7)	-.08	2.86	1.65
<i>Society-relevant outcomes</i>			
Return migration intentions (possible range: 1 ó 7)	.11	2.63	1.75
Intentions to leave Canada (possible range: 1 ó 7)	.11	2.44	1.68

* $p < .05$.

Table 35

Study Three: Correlations Between Perceived Underemployment and Organizational Outcomes (plus Descriptive Statistics)

	Correlation with perceived underemployment	<i>M</i>	<i>SD</i>
Job satisfaction (possible range: 1-7)	-.50**	4.86	1.37
Turnover cognitions (possible range: 1-7)	.58**	3.71	2.09
Job search behaviours (possible range: 1-5)	.43**	1.37	1.74
Organizational citizenship behaviour ó directed at individuals (possible range: 1-7)	.10	5.61	1.07
Organizational citizenship behaviour ó directed at the organization (possible range: 1-7)	.03	5.70	1.23
Perceived person-organization fit (possible range: 1-7)	-.25*	5.39	1.48
Affective commitment (possible range: 1-7)	-.46**	4.49	1.48

* $p < .05$, ** $p < .01$.

Table 36

Study Three: Correlations Between Continuous Predictor Variables and Individual and Societal Outcome Variables

	Perceived discrimination ó general	Perceived discrimination ó immigrant status	Psychological well-being	Satisfaction with immigration decision	Perceptions of justice	Return migration intentions	Intentions to leave Canada
Total duration of unemployment	-.05	.12	-.32*	-.05	-.06	-.02	-.11
Wages	-.10	-.09	.16	-.01	-.10	-.13	-.01
Age	.19	.23	.13	-.11	-.20	.06	.06
Length of residency in Canada	.08	.06	-.06	-.18	-.12	.10	.25
English language skills	.07	-.01	.15	.03	.04	-.00	.02
Accent	.07	.12	-.09	.07	-.13	-.12	-.18
Credential recognition	-.34**	-.30*	-.05	.19	.29*	-.05	-.11

* $p < .05$, ** $p < .01$.

Table 37

Study Three: Correlations Between Continuous Predictor Variables and Organizational Outcome Variables

	Job satisfaction	Turnover cognitions	Job search behaviour	OCB-I ¹	OCB-O ²	P-O fit ³	Affective commitment
Total duration of unemployment	-.02	.08	.24	-.12	.07	-.06	-.01
Wages	.21	-.22	-.17	-.14	-.07	-.02	.08
Age	-.03	.22	.27*	.23	.25*	-.10	.13
Length of residency in Canada	.06	.08	.13	-.09	-.06	.07	.09
English language skills	.19	-.13	.01	.15	.07	.12	.13
Accent	-.19	.06	-.10	.19	-.01	-.08	-.23*
Credential recognition	.23*	-.11	-.18	.04	.02	.33**	.08

* $p < .05$, ** $p < .01$.

¹Organizational citizenship behaviours ó directed at individuals

²Organizational citizenship behaviours ó directed at the organization

³Perceived person-organization fit

Table 38

Study Three: Correlations Between Dichotomous Predictor Variables and Individual and Societal Outcome Variables

	Perceived discrimination ó general	Perceived discrimination ó immigrant status	Psychological well-being	Satisfaction with immigration decision	Perceptions of justice	Return migration intentions	Intentions to leave Canada
Skill level change (0 = same, 1 = lower)	.25	.13	-.08	-.23	-.14	.28*	.32*
Industry match (0=same, 1=different)	.05	.10	-.26*	-.14	-.16	.02	-.04
Full-time or voluntary part-time vs. involuntary part-time (0 = full, 1 = part)	-.06	.05	-.18	.03	.10	.10	.14
Temp. vs. permanent (0 = permanent, 1 = temporary)	-.02	-.04	-.18	-.05	.02	-.14	-.06
Sector (0 = public, 1 = private)	-.09	.01	.10	.22	.19	-.20	-.25*
Gender (0=male, 1=female)	-.09	-.21	.00	-.03	-.08	.10	.15
Canadian citizen (0=yes, 1=no)	-.20	-.05	-.01	.07	.32**	-.07	-.09

* $p < .05$, ** $p < .01$.

Table 39

Study Three: Correlations Between Dichotomous Predictor Variables and Organizational Outcome Variables

	Job satisfaction	Turnover cognitions	Job search behaviour	OCB-I ¹	OCB-O ²	P-O fit ³	Affective commitment
Skill level change (0 = same, 1 = lower)	-.37**	.34**	.36**	-.00	.25	-.01	-.12
Industry match (0=same, 1=different)	-.37**	.52**	.36**	.05	-.11	-.18	-.44**
Full-time or voluntary part-time vs. involuntary part-time (0 = full, 1 = part)	-.03	.03	.05	.10	.01	.10	.04
Temp. vs. permanent (0 = permanent, 1 = temporary)	.00	-.10	.15	.11	.06	.09	.08
Sector (0 = public, 1 = private)	-.11	.06	-.04	.12	.22	-.09	-.09
Gender (0=male, 1=female)	.21	-.13	-.21	.04	-.14	.22	.18
Canadian citizen (0=yes, 1=no)	.03	.00	-.05	.24	.07	.09	-.08

** $p < .01$.

¹Organizational citizenship behaviours ó directed at individuals

²Organizational citizenship behaviours ó directed at the organization

³Perceived person-organization fit

Table 40

Study Three: Intercorrelations Among Individual and Societal Outcomes

	1.	2.	3.	4.	5.	6.
1. Perceived discrimination ó general						
2. Perceived discrimination ó immigrant status	.81**					
3. Psychological well-being	-.22	-.32**				
4. Satisfaction with immigration decision	-.26*	-.33**	.47**			
5. Perceptions of justice	-.40**	-.37**	.28*	.38**		
6. Return migration intentions	.27*	.22	-.35**	-.57**	-.17	
7. Intentions to leave Canada	.19	.15	-.21	-.65**	-.28*	.74**

* $p < .05$, ** $p < .01$.

Table 41

Study Three: Intercorrelations Among Organizational Outcomes

	1.	2.	3.	4.	5.	6.
1. Job satisfaction						
2. Turnover cognitions	-.57**					
3. Job search behaviours	-.48**	.63**				
4. Organizational citizenship behaviour ó directed at individuals	.11	-.03	-.04			
5. Organizational citizenship behaviour ó directed at the organization	.29*	-.14	.02	.34**		
6. Perceived person-organization fit	.37**	-.28*	-.28*	.02	.31*	
7. Affective commitment	.61**	-.56**	-.31*	.13	.38**	.27**

* $p < .05$, ** $p < .01$.

Perceived underemployment was not correlated with psychological well-being, or with perceptions of justice, all $r_s < .12$, $p_s > .35$.²⁰ Thus, Hypotheses 1 and 2 were not supported.

Society-relevant outcomes. Perceived underemployment was not correlated with return migration intentions or with intentions to leave Canada, all $r_s < .12$, $p_s > .35$. The correlations between perceived underemployment and return migration intentions and intentions to leave Canada did not differ depending on the immigration class in which individuals entered Canada. In addition, a one-way ANOVA demonstrated that return migration intentions and intentions to leave Canada did not vary as a function of the immigration class in which individuals entered Canada: all $F_s < 2.36$, $p_s > .11$.

Thus, Hypothesis 3 was not supported.

Organization-relevant outcomes. Consistent with Study One, perceived underemployment was negatively correlated with job satisfaction, $r(73) = -.50$, $p < .001$, and positively correlated with turnover cognitions, $r(73) = .58$, $p < .001$. Consistent with Study Two, perceived underemployment was negatively correlated with perceived person-organization fit, $r(73) = -.25$, $p = .30$. Consistent with Studies One and Two, perceived underemployment was positively correlated with job search behaviours, $r(68) = .43$, $p < .001$.

Consistent with Hypothesis 4, perceived underemployment was negatively correlated with affective commitment, $r(73) = -.46$, $p < .001$.

²⁰ An exploratory analysis was conducted in which the measure of perceptions of justice was divided into two sub-scales, one comprising the first three items, and one comprising the second three items. When the sub-scales were examined separately, neither was correlated with perceived underemployment, both $r_s < .10$, $p_s > .39$.

In contrast to Study Two, perceived underemployment was not correlated with organizational citizenship behaviour directed to individuals or organizational citizenship behaviour directed to the organization, all $r_s < .11$, $p_s > .40$.

Mediating Role of Underemployment

Regression analyses were used to test whether perceived underemployment mediates the relation between its predictors and outcomes. As outlined by Baron and Kenny (1986), before testing for mediation, three pre-conditions must be established. First, the predictor variable must predict the mediator (perceived underemployment). Second, the mediator (perceived underemployment) must predict the outcome. Third, the predictor variable must predict the outcome. Once these pre-conditions had been established, regression analyses were conducted to determine whether, with the inclusion of the mediator (perceived underemployment), the relation between the predictor and outcome was significantly reduced. Sobel tests were conducted to test the significance of the mediation effects.

Mediation analyses were conducted for the two variables that significantly predicted perceived underemployment when entered into a simultaneous regression analysis (thereby demonstrating that they each predict unique variance in perceived underemployment): skill level change (whether participants' current job requires a lower skill level than their preferred job), and industry match (whether individuals' current job is in a different industry than their preferred job). Mediation analyses were only conducted on outcomes that were predicted by perceived underemployment (thereby meeting the second pre-condition for mediation analysis). Results of the mediation analyses are presented below by outcome.

Perceived employment-related discrimination. Neither of the predictor variables predicted perceived employment-related discrimination, all $t_s < 1.85$, $p_s > .07$. Thus, mediation analyses were not conducted.

Satisfaction with immigration decision. Neither of the predictor variables predicted satisfaction with immigration decision, all $t_s < -1.74$, $p_s > .09$. Thus, mediation analyses were not conducted.

Job satisfaction. Perceived underemployment predicts job satisfaction ($B = -0.42$, $t = -4.98$, $p < .001$), thereby meeting the second pre-condition for mediation. As shown in Table 42, both skill level change and industry match predicted job satisfaction. Thus, first, a regression analysis was conducted to determine whether perceived underemployment mediates the relation between skill level change and job satisfaction. As shown in Table 42, the effect of skill level change on job satisfaction was reduced to non-significance with the inclusion of the mediator. However, the Sobel test was not significant. Second, a regression analysis was conducted to determine whether perceived underemployment mediates the relation between industry match and job satisfaction. As shown in Table 42, the effect of industry match on job satisfaction was reduced to non-significance with the inclusion of the mediator. A Sobel test revealed that this mediation effect was significant.

Perceived person-organization fit. Neither of the predictor variables predicted perceived person-organization fit, all $t_s < -1.60$, $p_s > .11$. Thus, mediation analyses were not conducted.

Table 42

Study Three: Summary of Mediation Analyses for Job Satisfaction

IV	Effect of IV on DV		Effect of IV on DV when Mediator included		Effect of Mediator on DV when IV included		Sobel Z
	B	t	B	t	B	t	
Skill level change	-0.97	-2.96**	-0.59	-1.55	-0.21	-1.89	1.76
Industry match	-1.01	-3.40**	-0.49	-1.59	-0.34	-3.77**	2.84**

** $p < .01$.

Affective commitment. Perceived underemployment predicts affective commitment ($B = -0.41, t = -4.47, p < .001$), thereby meeting the second pre-condition for mediation. As shown in Table 43, industry match predicted affective commitment, whereas skill level change did not. Thus, a regression analysis was conducted to determine whether perceived underemployment mediates the relation between industry match and affective commitment. As shown in Table 43, although still significant, the effect of industry match on affective commitment was reduced with the inclusion of the mediator. A Sobel test revealed that this mediation effect was significant.

Turnover cognitions. Perceived underemployment predicts turnover cognitions ($B = 0.73, t = 6.10, p < .001$), thereby meeting the second pre-condition for mediation. As shown in Table 44, both skill level change and industry match predicted turnover cognitions. Thus, first, a regression analysis was conducted to determine whether perceived underemployment mediates the relation between skill level change and turnover cognitions. As shown in Table 44, the effect of skill level change on turnover cognitions was reduced to non-significance with the inclusion of the mediator. A Sobel test revealed that this mediation effect was significant. Second, a regression analysis was conducted to determine whether perceived underemployment mediates the relation between industry match and turnover cognitions. As shown in Table 44, although still significant, the effect of industry on turnover cognitions was reduced with the inclusion of the mediator. A Sobel test revealed that this mediation effect was significant.

Table 43

Study Three: Summary of Mediation Analyses for Affective Commitment

IV	Effect of IV on DV		Effect of IV on DV when Mediator included		Effect of Mediator on DV when IV included		Sobel Z
	B	t	B	t	B	t	
Skill level change	-0.33	-0.88					
Industry match	-1.29	-4.13**	-0.84	-2.53*	-0.30	-2.99**	2.46*

* $p < .05$, ** $p < .01$.

Note. Empty cells denote instances where preconditions for mediation were not met and therefore mediation analyses were not conducted.

Table 44

Study Three: Summary of Mediation Analyses for Turnover Cognitions

IV	Effect of IV on DV		Effect of IV on DV when Mediator included		Effect of Mediator on DV when IV included		Sobel Z
	B	t	B	t	B	t	
Skill level change	1.45	2.78**	0.44	0.78	0.55	3.31**	2.71**
Industry match	2.19	5.25**	1.38	3.27**	0.55	4.31**	3.05**

** $p < .01$.

Job search behaviours. Perceived underemployment predicts job search behaviours ($B = 0.46, t = 3.92, p < .001$), thereby meeting the second pre-condition for mediation. As shown in Table 45, both skill level change and industry match predicted job search behaviours. Thus, first, a regression analysis was conducted to determine whether perceived underemployment mediates the relation between skill level change and job search behaviours. As shown in Table 45, the effect of skill level change on job search behaviours was reduced to non-significance with the inclusion of the mediator. However, the Sobel's test was not significant. Second, a regression analysis was conducted to determine whether perceived underemployment mediates the relation between industry match and job search behaviours. As shown in Table 45, the effect of industry match on job search behaviours was reduced to non-significance with the inclusion of the mediator. A Sobel's test revealed that this mediation effect was significant.

In sum, in cases where the preconditions for mediation were established, perceived underemployment sometimes mediated the relation between its predictors and outcomes. Thus, Hypothesis 5 was partially supported.

Role of Attributions

To conduct the interaction analyses, each criterion variable was regressed on perceived underemployment, one of the attribution dimensions (e.g., stability), and the interaction between perceived underemployment and the attribution dimension. As recommended by Aiken and West (1991), to reduce multicollinearity between main effect predictors and interaction terms, the predictors were centred and then multiplied to create

Table 45

Study Three: Summary of Mediation Analyses for Job Search Behaviours

IV	Effect of IV on DV		Effect of IV on DV when Mediator included		Effect of Mediator on DV when IV included		Sobel Z
	B	t	B	t	B	t	
Skill level change	1.30	2.77**	0.75	1.38	0.31	1.92	1.78
Industry match	1.26	3.15**	0.74	1.76	0.37	2.82**	2.36*

* $p < .05$, ** $p < .01$.

the interaction terms. Because power to detect interactions is often low (Aguinis & Gottredson, 2010), interactions were probed in cases where $p < .10$. To illustrate all significant interaction terms, simple slopes were plotted at one standard deviation above and below the means of each predictor (Cohen & Cohen, 1983). Simple effects tests were conducted using regression analyses (Aiken & West, 1991).

Stability. Results demonstrated that the stability attribution dimension did not interact with perceived underemployment to predict any of the outcome variables. Thus, Hypothesis 6 was not supported.

External control. Results demonstrated that the external control attribution dimension did not interact with perceived underemployment to predict any of the outcome variables.

Personal control. The personal control attribution dimension interacted with perceived underemployment to predict four outcome variables: satisfaction with immigration decision, perceptions of justice, return migration intentions, and intentions to leave Canada. These results are presented in turn.

Satisfaction with immigration decision. The overall model was significant, $F(3, 63) = 5.18, p < .01$, and accounted for 19.8% of the variance in satisfaction with immigration decision. There was no significant main effect of perceived underemployment on satisfaction with immigration decision, $B = -0.13, p = .30$. There was a significant main effect of personal control attributions on satisfaction with immigration decision such that individuals with lower ratings of personal control attributions tended to be less satisfied with their immigration decision, $B = 0.36, p = .03$. This effect was qualified by the presence of a marginally significant interaction between

perceived underemployment and personal control attributions, $B = 0.16, p = .08$. As shown in Figure 6, among those low in perceived underemployment, there was no simple effect of personal control attributions ($B = 0.12, p = .63$). In contrast, among those high in perceived underemployment, there was a simple effect of personal control attributions ($B = 0.61, p < .01$) such that higher personal control attributions were associated with greater satisfaction with immigration decision.

Justice. The overall model was not significant, $F(3, 63) = 2.00, p = .12$, and accounted for 8.7% of the variance in perceptions of justice.²¹ There was no significant main effect of perceived underemployment ($B = 0.00, p = .99$) or personal control attributions ($B = 0.21, p = .24$) on perceptions of justice. There was a marginally significant interaction between perceived underemployment and personal control attributions, $B = 0.16, p = .09$. As shown in Figure 7, among those low in perceived underemployment, there was no simple effect of personal control attributions ($B = -0.04, p = .88$). In contrast, among those high in perceived underemployment, there was a simple effect of personal control attributions ($B = 0.47, p = .03$) such that higher personal control attributions were associated with higher perceptions of justice.

²¹ In this analysis, the test of R^2 was not significant; thus the regression of perceptions of justice on the predictor variables taken together was not statistically significant (Pedhazur, 1997). However, the regression coefficient associated with a given predictor variable indicates whether the effect of that particular variable is significantly different from zero (Pedhazur, 1997). In addition to examining the R^2 value, the current analyses were conducted in order to examine the significance values associated with independent regression coefficients. Thus, this regression analysis is presented in full.

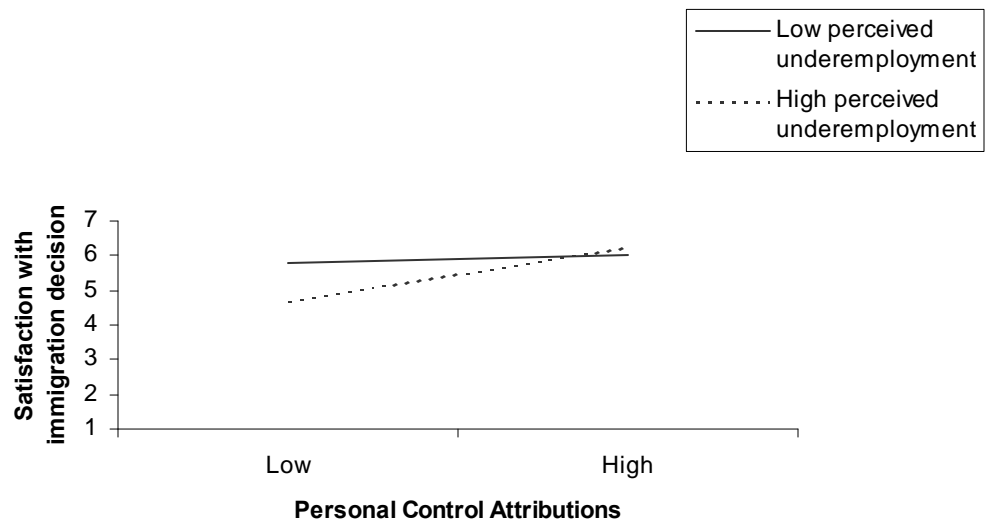


Figure 6. Personal control attributions and perceived underemployment interact to predict satisfaction with immigration decision.

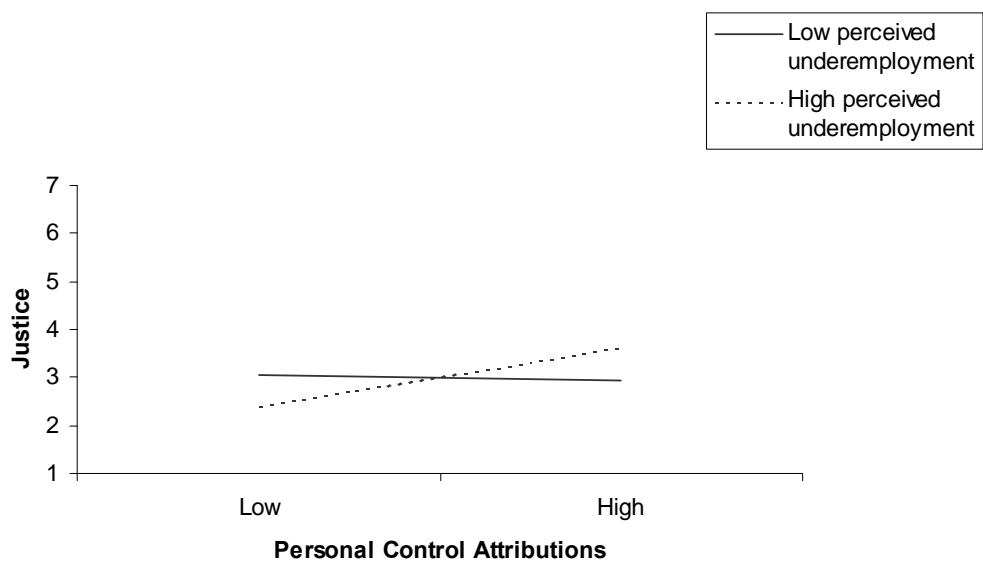


Figure 7. Personal control attributions and perceived underemployment interact to predict perceptions of justice.

Return migration. The overall model was significant, $F(3, 63) = 3.79, p = .02$, and accounted for 15.3% of the variance in return migration intentions. There was no significant main effect of perceived underemployment on return migration intentions, $B = -0.33, p = .99$. There was a marginally significant main effect of personal control attributions on return migration intentions such that individuals with lower ratings of personal control attributions tended to have higher return migration intentions, $B = -0.33, p = .07$. This effect was qualified by the presence of a significant interaction between perceived underemployment and personal control attributions, $B = -0.21, p = .03$. As shown in Figure 8, among those low in perceived underemployment, there was no simple effect of personal control attributions ($B = -0.01, p = .99$). In contrast, among those high in perceived underemployment, there was a simple effect of personal control attributions ($B = -0.67, p < .01$) such that higher personal control attributions were associated with lower return migration intentions.

Intentions to leave Canada. The overall model was significant, $F(3, 63) = 3.12, p = .03$, and accounted for 12.9% of the variance in intentions to leave Canada. There was no significant main effect of perceived underemployment ($B = 0.02, p = .88$) or personal control attributions ($B = -0.25, p = .16$) on intentions to leave Canada. There was a significant interaction between perceived underemployment and personal control attributions, $B = -0.20, p = .03$. As shown in Figure 9, among those low in perceived underemployment, there was no simple effect of personal control attributions ($B = 0.07, p = .80$). In contrast, among those high in perceived underemployment, there was a simple effect of personal control attributions ($B = -0.57, p < .01$) such that higher personal control attributions were associated with lower intentions to leave Canada.

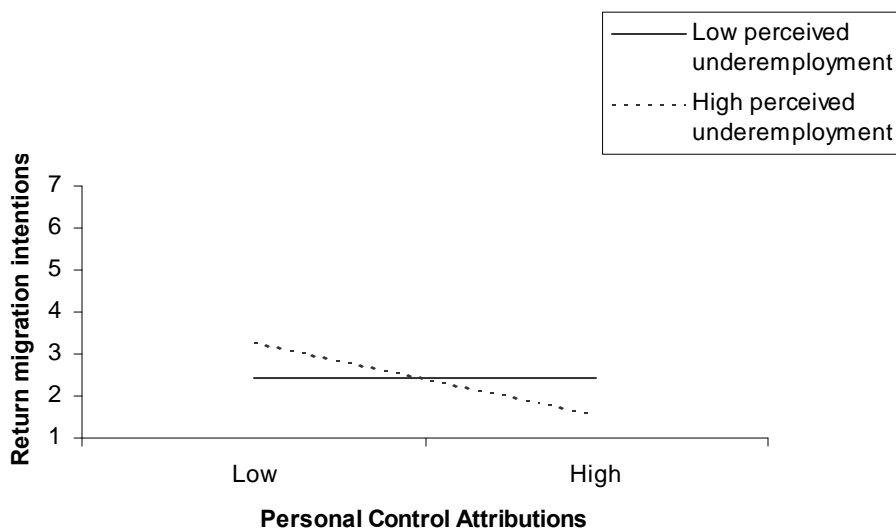


Figure 8. Personal control attributions and perceived underemployment interact to predict return migration intentions.

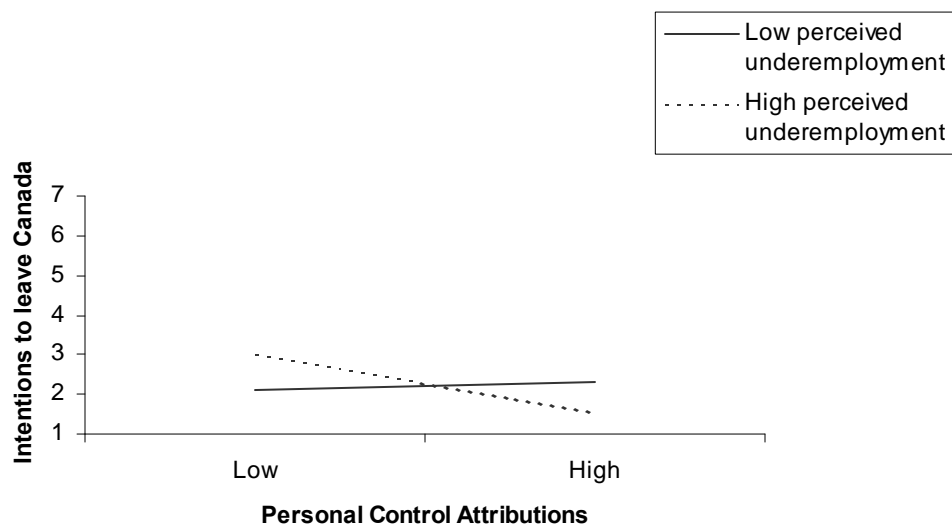


Figure 9. Personal control attributions and perceived underemployment interact to predict intentions to leave Canada.

In sum, personal control attributions and perceived underemployment interacted to predict several individual-relevant and society-relevant outcomes. Specifically, among individuals low in perceived underemployment, there was no effect of personal control attributions on outcomes. In contrast, among individuals high in perceived underemployment, there was an effect of personal control attributions such that negative outcomes were attenuated as the tendency to perceive attributions as personally controllable increased.

Personal control attributions did not interact with perceived underemployment to predict organization-relevant outcomes. Thus, Hypothesis 7 was supported for some, but not all, of the outcome variables.

Refer to Table 46 for a summary of the results from the novel predictions in Study Three.

Discussion

The first objective of Study Three was to examine whether the findings obtained in Studies One and Two would replicate (see Table 47 for a summary of results obtained across the three studies). I will begin by discussing the effects of the predictor variables (when examined individually) on perceived underemployment. In Study Three, the relations between job characteristics and perceived underemployment were generally consistent with those obtained in Studies One and Two. Of note, consistent with Studies One and Two, individuals working in temporary positions were not higher on perceived underemployment than those working in permanent positions. In all three studies, wages were negatively correlated with perceived underemployment, and perceived underemployment was higher among individuals whose current job is in a different

Table 46

Study Three: Summary of Results - Novel Predictions

Hyp. #	Prediction	Supported
1.	Perceived underemployment will be negatively correlated with psychological well-being.	No
2.	Perceived underemployment will be negatively correlated with perceptions of justice	No
3.	Perceived underemployment will be positively correlated with return migration intentions and intentions to leave Canada, particularly among individuals who immigrated in the Skilled Worker category.	No
4.	Perceived underemployment will be negatively correlated with affective commitment.	Yes
5.	Perceived underemployment will mediate the relation between its predictors and outcomes.	Partially
6.	Perceived underemployment and stability attributions will interact to predict outcomes. Specifically, among individuals low in perceived underemployment, there will be no effect of stability attributions on outcomes. In contrast, among individuals high in perceived underemployment, there will be an effect of stability attributions such that negative outcomes (e.g., low job satisfaction) are attenuated as the tendency to perceive attributions as unstable increases.	No
7.	Perceived underemployment and personal control attributions will interact to predict outcomes. Specifically, among individuals low in perceived underemployment, there will be no effect of personal control attributions on outcomes. In contrast, among individuals high in perceived underemployment, there will be an effect of personal control attributions such that negative outcomes (e.g., low job satisfaction) are attenuated as the tendency to perceive attributions as personally controllable increases.	Partially

Table 47

Summary of Results Across Three Studies: Predictors and Outcomes of Perceived Underemployment

Variable	Significant in Study 1	Significant in Study 2	Significant in Study 3
Predictors			
<i>Job characteristics</i>			
• Permanent/temp or contract	No	No	No
• Full-time/involuntary part-time	Yes	N/A	No
• Public/private sector	N/A	Yes	No
• Wages	Yes	Yes	Yes
• Industry match	Yes	Yes	Yes
• Skill level change	Yes	N/A	Yes
<i>Demographic Characteristics</i>			
• Gender	No	No	No
• Age	No	No	No
• Ethnicity	No	No	No
• Length of residency in Canada	No	Yes	No
• Canadian citizenship status	N/A	Yes	No
• Immigration class	N/A	No	No
• Educational attainment	No	No	No
• English language proficiency and accent	No	No	No
<i>Unemployment history</i>	N/A	Yes	No
<i>Credential recognition</i>	N/A	Yes	No

Variable	Significant in Study 1	Significant in Study 2	Significant in Study 3
Outcomes			
<i>Individual-relevant outcomes</i>			
• Perceived employment-related discrimination	Yes	Yes	Yes
• Psychological well-being	N/A	N/A	No
• Satisfaction with immigration decision	Yes	N/A	Yes, Also predicted by interaction between perceived underemployment and attributions
• Perceptions of justice	N/A	N/A	Interaction between perceived underemployment and attributions
<i>Society-relevant outcomes</i>			
• Return migration intentions	N/A	N/A	Interaction between perceived underemployment and attributions
• Intentions to leave Canada	N/A	N/A	Interaction between perceived underemployment and attributions

Variable	Significant in Study 1	Significant in Study 2	Significant in Study 3
<i>Organization-relevant outcomes</i>			
• Career satisfaction	N/A	Yes	N/A
• Job satisfaction	Yes	N/A	Yes
• Perceived person-organization fit	N/A	Yes	Yes
• Affective organizational commitment	N/A	N/A	Yes
• Organizational citizenship behaviour	N/A	Yes	No
• Organizational loyalty	N/A	Yes	N/A
• Turnover cognitions	Yes	N/A	Yes
• Turnover intentions	Yes	Yes	N/A
• Job search behaviour	N/A	N/A	Yes

industry than their preferred job. Likewise, in Study Three, perceived underemployment was higher among individuals who are working in a lower-skill job than their preferred job, a result also observed in Study One. In sum, as expected, evidence suggests that objective indicators of underemployment are associated with perceived underemployment.

There were several instances where the results observed in Study Three departed from those observed in Study One and/or Two. First, in Study One, individuals who worked part-time involuntarily were higher on perceived underemployment than those who worked full-time or part-time voluntarily. In Study Three, this relation was not observed. It is worth noting that only 11 participants in Study Three were employed part-time involuntarily. Thus, the null relation observed in Study Three should be interpreted with caution. Second, in Study Two, individuals working in the public sector were lower on perceived underemployment than those working in the private sector. This finding was not replicated in Study Three. However, a comparison of means suggests that the mean level of perceived underemployment among individuals working in the public sector ($M = 3.57$) appears to be lower than the mean level among those working in the private sector ($M = 4.06$). The fact that this difference was not statistically significant could have reflected, in part, the relatively small sample size in Study Three.

For the most part, the relations observed between demographic characteristics and perceived underemployment were parallel across the three studies. Notably, consistent with Studies One and Two, in Study Three there was no relation between perceived underemployment and gender, age, ethnicity, immigration class, educational attainment, English language proficiency, or accent. There were two instances in which the results

observed in Study Three did not replicate those in Study Two. Whereas length of residency in Canada and Canadian citizenship status predicted perceived underemployment in Study Two, these relations were not observed in Study Three.

There were two additional instances in which results obtained in Study Two were not replicated in Study Three. The significant relation between unemployment history and perceived underemployment observed in Study Two was not replicated in Study Three. Although the direction and size of the correlation coefficients was identical (.14 in both studies), the relation was not significant in Study Three. Similarly, the significant relation observed between credential recognition and perceived underemployment observed in Study Two was not replicated in Study Three. That being said, the direction and size of the correlation coefficients was similar across the two studies (-.15 in Study Two and -.17 in Study Three).

I turn now to the outcomes of perceived underemployment. Largely speaking, the results observed in Study Three were consistent with those observed in Studies One and Two. First, consistent with Studies One and Two, perceived underemployment predicted perceived employment-related discrimination. Extending the findings on turnover intentions observed in Studies One and Two, in Study Three I measured job search behaviours. Consequently, across the three studies, evidence suggests that perceived underemployment predicts not only whether individuals are intending to search for another job, but the extent to which they perform specific job search behaviours (e.g., contacting potential employers). Second, consistent with Study One, perceived underemployment predicted job satisfaction and satisfaction with immigration decision; consistent with Study Two, perceived underemployment predicted perceived person-

organization fit. There was only one instance in which the results observed in Study Three did not replicate those observed previously. In contrast to Study Two, perceived underemployment did not predict organizational citizenship behaviour in Study Three. In sum, across the three studies, I found relatively consistent support for the relation between perceived underemployment and individual-relevant outcomes (e.g., satisfaction with immigration decision) and organization-relevant outcomes (e.g., job satisfaction).

In addition to examining whether the results observed for the predictors and outcomes of perceived underemployment would replicate, I also examined a mediational model in which perceived underemployment mediates the relation between its predictors and outcomes. Paralleling results observed in Study Two, one of the most consistent patterns of mediation observed in Study Three was a model in which perceived underemployment partially mediates the relation between industry match (whether individuals' current job is in a different industry than their preferred job) and job attitudes. In Study Three, results also demonstrated that perceived underemployment partially mediates the relation between skill level change (whether participants' current job requires a lower skill level than their preferred job) and turnover cognitions. Considering the mediation results across Studies Two and Three, it appears that the relation between objective indicators of underemployment (industry match and skill level change) and organization-relevant outcomes is partially mediated by perceived underemployment. This finding will be discussed further in the general discussion.

The second objective of Study Three was to examine the relation between perceived underemployment and several additional outcome variables. Consistent with the results obtained for a variety of job attitudes, perceived underemployment was

negatively correlated with affective organizational commitment. However, contrary to my predictions, perceived underemployment did not predict psychological well-being, perceptions of justice regarding how immigrants are treated in the Canadian labour market, or return migration intentions and intentions to leave Canada. Although these findings did not support my hypotheses, results observed in the interaction analyses demonstrated that these outcomes (with the exception of psychological well-being) are indeed important when considering the effects of perceived underemployment.

The third objective of Study Three was to examine whether the attributions that individuals make for their employment situation interact with perceived underemployment in predicting negative outcomes. While the stability and external control attribution dimensions did not interact with perceived underemployment to predict the outcome variables, interesting findings emerged with the personal control attribution dimension. Personal control attributions interacted with perceived underemployment to predict four outcome variables: satisfaction with immigration decision, return migration intentions, intentions to leave Canada, and perceptions of justice regarding how immigrants are treated in the Canadian labour market (although the R^2 of the model was not significant). The general pattern of the interaction was consistent across the four outcome variables. Among individuals low in perceived underemployment, there was no effect of personal control attributions on outcomes. In contrast, among individuals high in perceived underemployment, there was an effect of personal control attributions such that negative outcomes were attenuated as the tendency to perceive attributions as personally controllable increased. Thus, when people believe that their underemployment situation is subject to their personal volitional control, this

tends to buffer them from experiencing negative individual- and society-relevant outcomes pertaining to their situation as an immigrant in Canada. This finding is consistent with results demonstrating that shifting individuals' attributions for failure from uncontrollable to controllable leads to positive effects (Sarkisian et al., 2007; Wilson et al., 2002). Altogether, these results support previous assertions that personal control may be the most important attribution dimension (Anderson & Arnoult, 1985; McAuley et al., 1992).

CHAPTER 5: GENERAL DISCUSSION

My goal of developing a model of perceived underemployment among immigrants in Canada stems from a pressing issue facing Canada's immigration program and policies: the underutilization of immigrants' skills and qualifications (Reitz, 2005). In light of the importance of immigrants to the Canadian labour market – they comprise nearly 100% of our net labour force growth (Zietsma, 2007) – it is important to gain a better understanding of the experience of underemployment among immigrants.

This discussion is organized as follows. I begin by reviewing the major findings observed in the current research. I examine the predictors and outcomes of perceived underemployment, the role of perceived underemployment as a mediator between these predictors and outcomes, and whether attributions interact with perceived underemployment to predict outcomes. Following this review, I describe the practical implications that can be drawn from the findings observed in the current studies. Next, I discuss some of the limitations of the current research. I conclude by suggesting some directions for future research.

Contributions of the Current Research

One of the major contributions of the current research is its focus on perceived underemployment, rather than objective indicators of the construct. Although large-scale labour market surveys have consistently documented the fact that immigrants do not fare as well as non-immigrants in the Canadian labour market (Gilmore, 2009; Li et al., 2006), these studies focus exclusively on discrepancies that exist between immigrants and non-immigrants on objective indicators of underemployment (e.g., documenting the percentage of individuals working in a job for which they are overeducated).

Consequently, we know little about immigrants' experiences with underemployment. This is a critical gap in the literature, particularly in light of preliminary evidence suggesting that perceptions of underemployment are what drive important outcomes (e.g., Khan & Morrow, 1991).

In addition to contributing to the study of underemployment among immigrants, the current studies also add to the broader underemployment literature. For instance, in the fifteen years that have passed since Feldman published his review of the underemployment literature (Feldman, 1996), there has been relatively little research on the predictors of underemployment. As a result, in a recent focal article on perceived underemployment published in *Industrial and Organizational Psychology: Perspectives on Science and Practice*, Erdogan and colleagues echoed Feldman's call for more research on the predictors of underemployment, stating that "one of the issues that remains unclear is what factors affect a person's perceptions of overqualification" (Erdogan, Bauer, Peiro, & Truxillo, 2011, p. 226). Thus, findings from the current studies contribute to the little we know about what predicts feelings of underemployment. The current studies also speak to Erdogan and colleagues' recommendations to examine the experience of underemployment among different employee groups (including immigrants), and additional outcomes of underemployment.

Predictors of Perceived Underemployment

Job characteristics. In all three of the studies conducted, consistent findings emerged regarding the relation between job characteristics and perceived underemployment. Paralleling results obtained in studies conducted with non-immigrant samples (e.g., Maynard et al., 2006), objective indicators of underemployment (e.g.,

working in a different industry or lower skill job than desired) predicted perceived underemployment.

In addition to indicators of objective underemployment, I also examined whether perceived underemployment differs among individuals working in the private versus public sector. Results demonstrated that perceived underemployment tends to be higher among individuals working in the private sector. There are several possible explanations for this finding. It may be that immigrants working in the public sector feel that they have more job security and better benefits, and that these factors affect perceptions of underemployment. Alternatively, it is possible that, in comparison to private sector employers, public sector employers support a more multicultural environment. If immigrants feel more accepted in their workplace, this may influence the extent to which they feel that their skills are utilized on the job.

The lower levels of perceived underemployment among immigrants working in the public sector may, in part, be a result of these individuals faring better on objective indicators of underemployment. According to a recent report by The Diversity Institute in Management and Technology (2010), the private sector lags behind the public sector on hiring visible minorities, particularly in leadership roles. Similarly, an analysis of the 2006 census data illustrated that visible minorities and non-visible minorities receive similar pay when performing similar jobs in the public sector, but a significant earnings gap exists in the private sector. Visible minorities working in the private sector earn significantly less than non-visible minorities, even when performing similar jobs (Coulombe, 2010). One would expect these findings to extend to immigrants, given that the majority of immigrants to Canada are visible minorities. Indeed, in the current

research, results from Study Two demonstrated that immigrants working in the public sector had higher earnings than those working in the private sector.

Demographic characteristics. Generally speaking, demographic characteristics did not predict perceived underemployment in any of the three studies. This is consistent with recent results obtained by Watt and Hargis (2010) who found that skills underutilization was not predicted by ethnicity, gender, age, or education.

I found some support for my prediction that length of residency in Canada and Canadian citizenship status (two variables that are highly correlated) would predict perceived underemployment. This is consistent with results from labour market surveys suggesting that the quality of immigrants' employment situation in Canada improves over time (Gilmore, 2009).

One of the most surprising findings observed in the current studies was that perceived underemployment was not predicted by the immigration class in which individuals entered Canada. In Study Two I examined whether perceived underemployment levels differed between individuals who immigrated in the Skilled Worker category and those who immigrated in the Family Class. In addition to these groups, in Study Three I was also able to examine individuals who immigrated as Refugees. In both studies, effects of immigration class on perceived underemployment were not observed. In order to more fully understand these findings, I examined whether these groups differed on objective indicators of underemployment. Results from Study Two demonstrated that, in the current sample, there were no differences on objective indicators of underemployment between individuals who immigrated in different immigration categories. This finding suggests that immigration category does not affect

perceptions of underemployment in cases where objective indicators of underemployment do not differ by immigration category. Results from Study Three demonstrated that individuals who immigrated in the Family Class, Skilled Worker category, and as Refugees did not differ on unemployment history, likelihood of working in a different industry or lower-skill job, or part-time status. The only difference observed was that individuals who immigrated as Skilled Workers made higher wages than did those who immigrated in the other categories. This finding is consistent with results from large-scale labour market surveys demonstrating that individuals who immigrate in the Skilled Worker category obtain better objective labour market outcomes (e.g., wages) than those who immigrate in other categories (Li, 2003; Shields et al., 2010). Given that wages were negatively correlated with perceived underemployment in all three of the current studies, it is worth noting that, in Study Three, the higher wages obtained by individuals who immigrated as Skilled Workers did not correspond to lower levels of perceived underemployment within this group. Recall, however, that when entered into a simultaneous regression analysis with skill level change and industry match, wages failed to predict perceived underemployment in Study Three. Hence, skill level change and industry match appear to be the most important predictors of perceived underemployment. It is likely that immigration category did not affect perceptions of underemployment because individuals from the three immigration categories did not differ on the likelihood of working in a different industry or lower-skill job.

Unemployment history. I found some support for the hypothesis that unemployment history is associated with perceived underemployment. Specifically, in Study Two, I found a significant, positive, relation between unemployment history and

perceived underemployment. In Study Three, although the size and direction of the correlation coefficients were similar, the relation was not significant. In previous research conducted with non-immigrant samples, the length of time individuals have spent unemployed is linked to an increased likelihood of working in a lower level, lower paying job (e.g., Hijzen, Upward, & Wright, 2010; Leana & Feldman, 1995). This is driven by two factors: individuals' increasing need to accept a lower quality job in order to make ends meet as the period of unemployment increases (Feather & O'Brien, 1986), and the negative signal about an individual's market value that is sent to potential employers following lengthy periods of unemployment (Feldman, 1996).

Credential recognition. One of the novel predictor variables examined in the current research was credential recognition. Given the extant evidence documenting the extent to which immigrants' skills, credentials, and foreign work experience are devalued in the Canadian labour market (e.g., Reitz, 2005), credential recognition is a variable that is particularly relevant when examining underemployment among immigrants. In the current studies, I found some support for my prediction that credential recognition predicts perceived underemployment. It is worth noting, however, that in the current research I examined individuals' perceptions regarding the extent to which their credentials were recognized by their employers. Equally important in the study of predictors of perceived underemployment is an examination of the effects of objective indicators of credential recognition. Hence, in future research, it would be advantageous to obtain employers' ratings of the extent to which they accepted individuals' foreign credentials.

Outcomes of Perceived Underemployment

Individual-relevant outcomes. One of the major contributions of the current research is the finding that perceived underemployment is associated with perceived employment-related discrimination and satisfaction with immigration decision, two outcome variables heretofore unexamined in the context of underemployment.

Across three studies, I found evidence for a link between perceived underemployment and perceived employment-related discrimination. This suggests that, as a result of feeling underemployed, individuals may view themselves as targets of discrimination. This may have negative implications for immigrants' life satisfaction and well-being, two known outcomes of perceived discrimination (Jasinskaja-Lahti et al., 2006a, 2006b; Vedder et al., 2006). Future researchers may consider examining whether perceived underemployment is associated with perceived discrimination among other groups, such as individuals with physical disabilities.

The finding that perceived underemployment predicts satisfaction with immigration decision contributes to our understanding of outcomes of perceived underemployment that are uniquely relevant to immigrants, as well as to the very limited body of knowledge on factors that predict immigrants' evaluation of their decision to immigrate to Canada. The current findings extend research by Houle and Schellenberg (2010) demonstrating that, compared to immigrants reporting that their material well-being is better in Canada than it was in their region of origin, those reporting that their material well-being is worse in Canada are less likely to say that they would make the same immigration decision again. Because a sizeable proportion of the immigrants in the current studies (particularly Study One) were selected for immigration based in part on

their labour market qualifications, it is not surprising that these individuals become dissatisfied with their immigration decision after experiencing underemployment. This finding has important implications both for immigrants and for Canadian society more broadly because it is possible that this dissatisfaction leads to return and onward migration. Indeed, in the current research, I found that satisfaction with immigration decision was fairly highly correlated with return migration intentions and intentions to leave Canada.

Society-relevant outcomes. My model of perceived underemployment extends previous models (e.g., Feldman, 1996) by including society-relevant outcomes (i.e., return migration intentions and intentions to leave Canada) in addition to outcomes relevant to individuals and organizations. Although I did not observe a direct relation between perceived underemployment and return migration intentions/intentions to leave Canada, I did observe an interactive effect between perceived underemployment and personal control attributions on return migration intentions/intentions to leave Canada. In short, results demonstrated that, among individuals low in perceived underemployment, there was no effect of personal control attributions on return migration intentions and intentions to leave Canada. In contrast, among individuals high in perceived underemployment, return migration intentions/intentions to leave Canada decreased as the tendency to perceive attributions as personally controllable increased. Because there are fairly high rates of return and onward migration among immigrants to Canada (Aydemir & Robinson, 2006), increasing our understanding of factors that decrease intentions to leave Canada has valuable implications for Canada's desire to optimize the contributions of immigrants to the Canadian labour market. In sum, results from the

current research suggest that society-relevant outcomes are important in the study of perceived underemployment.

Organization-relevant outcomes. Results from the current research demonstrated that perceived underemployment predicts job attitudes (e.g., job satisfaction, perceived person-organization fit) and withdrawal behaviours (e.g., job search behaviour). Specifically, I found that perceived underemployment was negatively associated with job satisfaction, career satisfaction, perceived person-organization fit, affective organizational commitment, and organizational loyalty. This is consistent with previous research documenting the inverse relation between perceived underemployment and job attitudes such as job satisfaction (e.g., Bolino & Feldman, 2000; Feldman & Turnley, 1995; Feldman et al., 2002) and affective organizational commitment (Johnson et al., 2002; Maynard et al., 2006; McKee-Ryan et al., 2009). Consistent with previous research (e.g., Maynard et al., 2006; McKee-Ryan et al., 2009), results from the current studies also demonstrated that perceived underemployment was positively associated with turnover cognitions and intentions, and job search behaviour. While research conducted with non-immigrant samples has consistently revealed fairly robust relations between underemployment and a variety of job attitudes and withdrawal behaviours, the current studies were the first to examine these relations among immigrants.

It is worth noting that, for the most part, the outcome variables examined in the current studies were more strongly predicted by perceived underemployment than by the objective indicators of underemployment. For instance, in both Studies One and Three, job satisfaction was moderately correlated with perceived underemployment ($r = -.60$ and

-.50, respectively) but only weakly correlated with objective indicators of underemployment (for skill level change, $r = -.27$ and $-.37$, respectively). Additionally, certain outcome variables were predicted solely by perceived underemployment. For example, across all three studies, perceived underemployment predicted perceived employment-related discrimination, while objective indicators of underemployment did not. Likewise, in Studies Two and Three, perceived underemployment predicted perceived person-organization fit, while objective indicators of underemployment did not. Although researchers often limit their investigations to either perceived underemployment or objective indicators, the current findings are consistent with those who have examined both and have found that perceived underemployment is a better predictor of outcomes such as job satisfaction (Feldman et al., 2002; Khan & Morrow, 1991).

Mediating Role of Perceived Underemployment

Although some researchers have suggested that perceived underemployment should mediate the relation between objective indicators of underemployment and outcomes (Feldman et al., 2002; Maynard et al., 2006), this proposition has been rarely examined empirically.

In the two cases in which researchers have examined elements of this proposition, neither has been a thorough test of the role of perceived underemployment as a mediator between objective underemployment and outcomes. First, while Bolino and Feldman (2000) demonstrated that perceived underemployment fully mediates the relation between job characteristics and job attitudes (e.g., job satisfaction), the job characteristics examined (tenure and hierarchical job level) were not objective indicators of

underemployment per se, but rather objective characteristics of the job. Second, using longitudinal data from laid-off workers, McKee-Ryan and colleagues (2009) found that perceived underemployment fully mediated the relation between objective indicators of underemployment (differences between current and previous job on pay, hierarchical level, and skill level/usage) and both affective organizational commitment and turnover intentions. However, in their study, the objective indicators were self-reported (e.g., participants rated the extent to which the hierarchical level of their current job compares to that of their previous job). Hence, classifying them as objective may not be entirely accurate.

In light of these previous limitations, the current studies are among the first to demonstrate that perceived underemployment partially mediates the relation between objective indicators of underemployment ó in this case, industry match (whether individualsøcurrent job is in a different industry than their preferred job) and skill level change (whether participantsøcurrent job requires a lower skill level than their preferred job) ó and job attitudes. Hence, as argued previously by McKee-Ryan and colleagues (2009), although both objective and perceived underemployment are important, it appears that perceived underemployment is the more proximal predictor of job attitudinal outcomes, while objective indicators of underemployment are more distal predictors.

Results from these mediation analyses suggest that there may be deficiencies in the way underemployment among immigrants is currently examined via labour market surveys and census data that exclusively focus on objective indicators of underemployment. Indeed, important outcomes may be affected less by whether

individuals are underemployed according to objective indicators and more by whether they feel underemployed.

Consistent with other variables of interest to psychologists (e.g., prejudice and discrimination), when it comes to underemployment, people's reactions appear to be driven by their perceptions of the situation, regardless of whether those perceptions are accurate (Zalesny & Ford, 1990). Thus, examining the perspective of the targets of underemployment is crucial for understanding the implications of underemployment.

Role of Attributions

One of the largest theoretical contributions of the current research is the examination of whether attributions interact with perceived underemployment to predict important outcomes. Briefly, results demonstrated that, among individuals low in perceived underemployment, there was no effect of personal control attributions on outcomes. In contrast, among individuals high in perceived underemployment, there was an effect of personal control attributions such that negative individual-relevant (e.g., dissatisfaction with immigration decision) and society-relevant (e.g., return migration intentions) outcomes were attenuated as the tendency to perceive attributions as personally controllable increased. Although these findings are consistent with previous research demonstrating the positive effects resulting from shifting individuals' attributions for failure from uncontrollable to controllable (Sarkisian et al., 2007; Wilson et al., 2002), this is the first time these effects have been observed in the context of underemployment.

The results suggest that, on the one hand, when individuals feel overqualified for their job, attributing their situation to uncontrollable factors such as luck or aptitude is

accompanied by feeling dissatisfied with the decision to come to Canada, and with thinking about leaving Canada. On the other hand, when individuals feel overqualified for their job and attribute their situation to controllable factors such as their own job search effort, this does not translate into these negative thoughts and feelings. Indeed, when individuals believe that the cause of their underemployment situation is personally controllable, this is motivationally adaptive because it is possible to alter these causes (Weiner, 1985). Recall that controllability concerns perceptions of personal responsibility and whether one has volitional influence over a cause. Effort is controllable because individuals are presumed to have personal responsibility for how hard they try. In contrast, luck is a factor that is beyond personal control (Graham, 1991; Weiner, 1985).

According to Weiner's (1985, 1986) propositions, individuals who attribute their less-than-optimal employment situation to uncontrollable factors are unlikely to engage in behaviours that will help them improve their situation (e.g., spending time improving their resume and applying for new jobs). In contrast, individuals who attribute their less-than-optimal employment situation to controllable factors like effort are likely to employ strategies that help them cope with, and ultimately, improve their employment situation.

Hence, attributing one's underemployment situation to uncontrollable factors may ultimately prevent individuals from finding a job commensurate with their skills and abilities. Future research could collect longitudinal data to investigate Weiner's propositions, investigating whether individuals who attribute their underemployment situation to controllable factors ultimately improve their situation after engaging in adaptive behaviours such as seeking out interview training or conducting an effective job search.

Interestingly, in the current study, attributions did not interact with perceived underemployment to predict organization-relevant outcomes (e.g., job attitudes). Why is this the case? Consistent with previous research conducted with non-immigrant samples (e.g., Bolino & Feldman, 2000; Feldman & Turnley, 1995; Feldman et al., 2002; Johnson et al., 2002; Maynard et al., 2006; McKee-Ryan et al., 2009), in the current studies, the relations between perceived underemployment and job attitudes and withdrawal behaviours were relatively strong. Thus, personal control attributions regarding one's underemployment situation may be of little relevance to individuals' job attitudes and withdrawal behaviours. To illustrate, if an individual feels underemployed in his current job, he will likely feel dissatisfied with his job regardless of whether he attributes his current situation to a factor that is personally controllable (e.g., his job search effort) or to a factor that is not personally controllable (e.g., the failure of his employer to recognize his foreign credentials). While it is plausible that attributing an underemployment situation to personally controllable factors (e.g., job search effort) may increase the expectancy of future success (e.g., finding a job that utilizes one's qualifications; Weiner, 2010), the current findings suggest it does not affect attitudes toward the current job. Because the role of attributions in the relation between perceived underemployment and job attitudes and withdrawal behaviours has not received much research attention, ultimately, the reasons underlying the current findings should be explored further in future research.

In sum, results from the current research support previous findings that attributing failure to causes that are personally controllable is adaptive and results in positive effects (e.g., Sarkisian et al., 2007; Wilson et al., 2002). Of importance, this applies to the

underemployment of immigrants because it suggests that not all immigrants who feel underemployed will experience the negative individual- and society-relevant outcomes associated with perceived underemployment. Ultimately, attribution theory may be a promising framework through which we can more fully understand and perhaps ameliorate the effects of perceived underemployment among immigrants.

Taken together, results from the current studies provide support for the following conceptual model of perceived underemployment among immigrants in Canada (see Figure 10).

Practical Implications

Attributional Retraining

Given that some of the negative effects of perceived underemployment tend to be mitigated when individuals believe that their underemployment situation is personally controllable, pre-migration training programs and post-migration immigrant employment programs may consider ways to foster such attributions among their immigrant clients. Based on Weiner's (1986) attribution theory, attributional retraining is a motivational procedure that seeks to change maladaptive attributions to more adaptive attributions that result in more positive attitudes and behaviours (Perry, Hechter, Menec, & Weinberg, 1993). Research suggests that attributional retraining may be particularly helpful when employed in the context of career-counselling. Indeed, research has demonstrated that there are career decision-making benefits associated with the belief that career decisions are controllable (Blustein, 1987; Gable, Thompson, & Glanstein, 1976). Individuals who believe that career decisions are personally controllable may take an active role in the

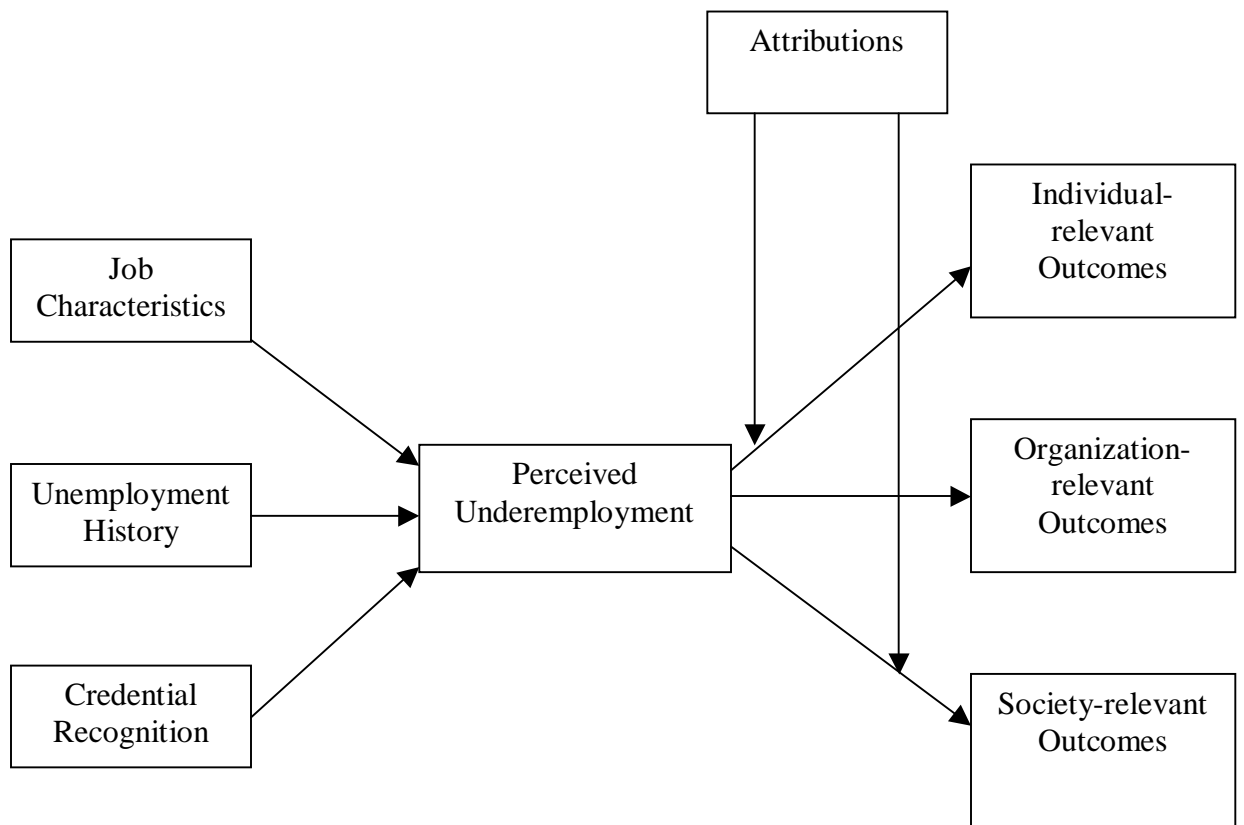


Figure 10. Model of perceived underemployment supported by results obtained in the current studies.

direction of their educational/vocational futures and personal responsibility for decision making (Taylor, 1982, p. 319).

Luzzo and colleagues (1996) investigated the efficacy of attributional retraining for improving career beliefs and career exploration behaviours among college students. To do so, they presented participants with one of two 8-minute videotapes: a videotape designed to create internal, controllable, and unstable attributions regarding career decision making, or a similar videotape that did not reference career-related attributions. Results demonstrated that attributional retraining caused an increase in students' beliefs that they could control their career decisions, and increased the likelihood of engaging in career exploration activities. Similarly, in a recent study, Jackson and colleagues (2009) examined the effects of attributional retraining in an employment interview setting designed to foster adaptive attributions by helping participants claim more control over their performance in employment interviews. As expected, Jackson and colleagues found that individuals who received attributional retraining made more adaptive attributions regarding past unsuccessful interviews, were more motivated to obtain information regarding how to increase performance in a job interview, and were more interested in taking an interview skills workshop. Together then, results from these two studies suggest that attributional retraining helps to foster the belief that individuals have personal control over their career outcomes, ultimately leading to positive behaviours. The current results suggest that this may also be the case for improving the underemployment situation of immigrants.

There is one caveat that must be kept in mind when engaging in attributional retraining. That is, not all underemployment situations can in fact be substantially

changed. Consequently, individuals working with immigrants should help them distinguish between factors that can be altered via personal control and responsibility and those that cannot. For example, in certain professions, foreign credentials might never be recognized in Canada. However, these individuals can still be taught to take control over their job search and ultimately find a job that uses their skills and for which they do not feel overqualified.

The Measurement of Underemployment

Results from the current study support Erdogan and colleagues' assertion that objective measures of underemployment ignore the complexity of overqualification as experienced by the person (Erdogan et al., 2011, p. 218). Evidence from the current research suggests that more attention should be paid to individuals' perceptions of underemployment, rather than solely examining objective indicators of the construct. Consider how underemployment is measured in Statistics Canada's Labour Force Survey, a monthly survey conducted with roughly 54,000 households (corresponding to over 100,000 individuals; Statistics Canada, 2011). The Labour Force Survey uses a rotating panel sample design so that selected households remain in the sample for six consecutive months, allowing for the collection of longitudinal data (Bowlby, 2005). The Labour Force Survey is used to provide monthly estimates of unemployment and employment, and is considered an important measure of the Canadian economy's performance. Of interest to the study of underemployment, the Labour Force Survey collects a variety of estimates of employment quality, including: union membership, hours worked (including involuntary part-time status), job permanence, wages, public vs. private sector, industry, and occupation (Statistics Canada, n.d.). These data serve a variety of purposes, one of

which is to document and understand the quality of employment among immigrants to Canada, and how this compares to that of non-immigrants. Indeed, many of the estimates regarding the disparate underemployment rates among immigrants and non-immigrants stem from these data (e.g., Gilmore, 2009).

Given the importance that perceived underemployment plays in understanding the phenomenon of underemployment, designers of large national surveys such as the Labour Force Survey would be wise to consider including items that measure perceptions of underemployment. As the current research has shown, these perceptions drive individuals' reactions and outcomes, and measuring them would help to paint a richer picture of the quality of employment among individuals in Canada. Moreover, given its use of longitudinal data, including a measure of perceived underemployment in this survey would greatly inform our understanding of factors that cause perceived underemployment.

Programs Designed to Assist Immigrants with Labour Market Integration

The current research provides evidence that being objectively underemployed (e.g., working in a lower-skill level job than preferred) is associated with perceived underemployment. Given that perceived underemployment of immigrants is associated with a variety of negative outcomes, as demonstrated here, this finding suggests that it is important for the Canadian government to continue funding programs that work toward the full integration of immigrants in the Canadian labour market, including those that work directly with immigrants and those that work with employers to promote the recognition of immigrants' skills and credentials. Typically, programs that work directly with immigrants (e.g., COSTI immigrant services in Toronto, <http://www.costi.org/>) are

non-profit organizations that provide specialized employment services for immigrants, including but not limited to: career counselling, planning, and assessment services; job placement programs; and seminars on effective job search strategies. There also exist important organizations that work to integrate immigrants into the Canadian labour market but do not work directly with immigrants. For instance, in order to optimize the integration of immigrants into the Greater Toronto Area's labour market, the Toronto Region Immigrant Employment Council (TRIEC, <http://www.triec.ca/>) works with key stakeholders ó primarily employers ó to foster their awareness and capacity to integrate immigrants into their organizations. TRIEC also works with all levels of government in order to increase coordination and inform the development of policies and programs for immigrant labour market integration. The ultimate goal of these organizations is to facilitate the transition of immigrants into the Canadian labour market, ideally in jobs that are commensurate with their skills. Results from the current research suggest that it is crucial that the government continue to provide funding for programs and training that help immigrant job seekers obtain employment that is in their preferred industry and at a skill level that is commensurate with their educational credentials and previous work experience in order to avoid the negative outcomes associated with perceptions of underemployment.

Relatedly, the current research found some evidence to suggest that credential recognition may predict perceived underemployment. Pre-migration orientation programs, as well as programs that promote immigrant employment, can help immigrants get their foreign credentials (and work experience) recognized in Canada. Recently, the federal government has taken steps to improve the credential recognition process in

Canada. The Government of Canada's \$68 million Foreign Credential Recognition Program is dedicated to improving the process of recognizing international qualifications (Human Resources and Skills Development Canada, 2009b). Specifically, the Program works in collaboration with partners across Canada to ensure that foreign credential recognition processes are fair, accessible, coherent, transparent, and rigorous.

Beyond the difficulties encountered with foreign credential recognition, immigrants also face challenges in the form of non-recognition of foreign work experience. Although this issue is only beginning to receive attention, there exist a few programs devoted to valorizing foreign work experience. As explained in a recent report published by the Canadian Council on Learning, these programs typically fall into one of two categories (Larose & Tillman, 2009). The first focuses on teaching immigrants to adequately explain how their foreign work experience would benefit them in the Canadian labour market, a skill designed to assist them during the employment interview process. The second involves bridging programs that assess the knowledge, skills, and competencies immigrants acquired during their foreign work experiences, and then apply this knowledge to customize internships and work placements. Together, credential recognition programs and programs that valorize foreign work experience have the potential to greatly assist immigrants in their efforts to obtain employment commensurate with their skills and abilities.

The current research provided some evidence to suggest that perceived underemployment is inversely related to the length of time individuals spend in Canada. While it would be difficult to find a direct solution to this issue, it may be possible to help immigrants set realistic expectations about their employment opportunities in Canada,

explaining that it may take some time before they find employment in their preferred field of work. To some extent, these issues are addressed in pre-migration training programs and structures such as the Going to Canada Immigration Portal (www.goingtocanada.gc.ca) óa federally funded initiative designed to provide comprehensive information and services that help prospective immigrants make informed decisions about immigrating to Canada. One of the portal's three major areas of preparation is öincreasing awareness of the opportunities, challenges and barriers awaiting prospective immigrants, so that they may better prepare for the labour market before coming to Canadaö (Human Resources and Skills Development Canada, 2008, para. 1). The Working in Canada section of the Portal (www.workingincanada.gc.ca) is designed specifically to help immigrants prepare for the challenges inherent in finding a job in Canada. Among the extensive information it provides, it offers a tool designed to help prospective immigrants learn the job demands, opportunities, wages, and skill requirements of their occupational interest. It also recommends places to live in Canada based on job opportunities in particular sectors. This information may allow immigrants to set realistic expectations about their job prospects in Canada and reduce perceptions of underemployment.

Organizational Hiring Practices

Is it advisable for organizations to hire employees who are overqualified for their jobs? As Erdogan and colleagues (2011) explain, this is a particularly important question during the economic downturn, where unemployment rates are very high and many employers receive a large number of applications for their job openings. If overqualified employees have lower job satisfaction and higher turnover intentions, is hiring them bad

for the organization? And, if this is a common perspective among employers, should individuals simplify their resumes to avoid this stigma (Porter, 2009)?

Evidence suggests that recruiters tend to be unwilling to hire applicants they believe are overqualified, out of fear that they will be quick to turnover (Bewley, 1999). In a highly publicized court case in the mid-1990s, the New London, Connecticut police department was sued by a job candidate who was rejected because his score on a cognitive ability test was deemed too high (New York Times, 1999). The court ruled in favour of the police department, suggesting that employers are justified in rejecting applicants they believe are overqualified (Erdogan et al., 2011).

From the perspective of employers such as the New London, Connecticut police department, the question of whether or not to hire individuals who are overqualified is framed in terms of objective indicators of underemployment. Results from the present research, however, suggest that focusing solely on objective indicators of underemployment may not tell the whole story, because the relation between objective and perceived underemployment is generally relatively weak. This presents a conundrum when providing advice to employers who examine job applicants' credentials and likely assume that job applicants who are objectively overqualified for their job will feel that they are underemployed if hired. Perhaps organizations should be advised to focus less on whether individuals are objectively overqualified for their jobs and more on keeping perceptions of underemployment at bay. This assertion is supported by recent research by Erdogan and Bauer (2009). Although researchers have consistently found strong relations between perceived underemployment and withdrawal behaviours (e.g., Maynard et al., 2006; McKee-Ryan et al., 2009), Erdogan and Bauer's (2009) research suggests that

perceived underemployment is associated with turnover only among employees who do not feel empowered. Hence, organizations may be able to institute practices and design jobs in such a way as to reduce the likelihood that employees will feel underemployed.

It is also important to note that there may be benefits associated with hiring overqualified employees. They may be especially suited for promotion into higher-level positions (Dekker, de Grip, & Heijke, 2002) and they may learn faster when being trained. Importantly, there is some evidence to suggest that employees who feel underemployed receive higher performance ratings from their supervisors (Fine, 2007; Fine & Nevo, 2008).

Taken together, then, research suggests that hiring overqualified employees may not have uniformly negative results for organizations. In addition, results from the underemployment literature, including the current research, suggest that organizations should perhaps shift their focus from avoiding hiring individuals who are objectively overqualified to implementing practices designed to keep perceptions of underemployment to a minimum.

Limitations

Samples

The samples used in the current research had both positive and negative features. On the one hand, a strength of the current research was the use of fairly large samples of immigrants. Across the three studies, data were collected from a total of 464 employed immigrants. In addition, I was able to examine diverse individuals who immigrated to Canada in a variety of immigration classes. On the other hand, to some extent the samples could be considered opportunity samples, in the sense that recruitment was

conducted in organizations and social media groups (in the case of Study Three) that cater to immigrants.²² Because the samples are not representative of the entire population of immigrants in Canada, generalizations to this larger population should be made with caution. That said, because the current focus was on psychological processes, the representativeness of the sample is less important than it would be if the focus was on documenting absolute levels of perceived and objective indicators of underemployment.

Use of Cross-sectional Data

Perhaps the greatest limitation of the current research is its use of cross-sectional data. This limits the ability to make firm causal inferences about the effects of perceived underemployment, a limitation common to underemployment research in general (Feldman et al., 2002). For instance, whereas job dissatisfaction is typically assumed to be an outcome of perceived underemployment, it is plausible that feeling dissatisfied with one's job leads one to look for explanations for that dissatisfaction, which ultimately results in feeling overqualified for one's job. Similarly, feeling that one has experienced employment-related discrimination (perhaps as a result of an employer failing to fully recognize one's credentials) may precede perceptions of underemployment. Most likely the relations between perceived underemployment and variables such as job dissatisfaction and perceived employment-related discrimination are reciprocal. In addition, it is possible that a third variable (e.g., trait dissatisfaction) is responsible for the relation between perceived underemployment and its outcomes. Because the issue of

²² Although Studies One and Three required the use of the Internet to complete an online survey, research suggests that this should not have altered the representativeness of my sample. Research on Internet access and use suggests that immigrants to Canada have high levels of home computer use, and that recent immigrants are more likely than Canadian-born individuals and non-recent immigrants to use the Internet as a key form of communication (Veenhof, 2006b; as cited in Statistics Canada, 2008).

causality plagues underemployment research, there is an urgent need to conduct longitudinal research in this area to supplement the work conducted to date.

Measures

In Study One, several outcome variables (i.e., satisfaction with immigration decision, perceptions of general discrimination, and turnover cognitions) were measured using single items, which poses concerns about measurement reliability. That said, although it is difficult to estimate the reliability of single-item measures, there is some evidence to suggest that single-item measures have equally high predictive validity as multiple-item measures (Bergkvist & Rossiter, 2007).

There are also possible measurement concerns associated with the measures used in Study Two. For this study, I analyzed data from a survey conducted by the Region of Peel (2009). Because these data were collected independent of my research, I did not have input into the scales used to measure the constructs of interest. Constructs such as perceived underemployment and organizational citizenship behaviour were not measured with established scales.

Both of these issues were addressed in Study Three. In this study, all constructs were measured using multiple-item scales. Where available, established measures were used (e.g., Meyer et al.'s (1993) measure of affective commitment).

Common Method Bias

Common method bias is a frequently cited concern when using cross-sectional, self-report data. However, Spector (2006) reviewed empirical evidence that casts doubt on the notion that a method itself leads to systematic variance and inflates correlations among self-report measures. In the current studies, if the self-report survey was a method

that introduced common method variance, I should have observed a baseline level of correlations among all variables (Spector, 2006). This was not the case. In fact, I failed to observe correlations between perceived underemployment and some of the variables with which I hypothesized it to be correlated (e.g., psychological well-being). In addition, it is important to note that some of the key variables examined in the current research (e.g., whether individuals are currently working in a lower-level job or different industry than their preferred job) were based on objective coding, rather than participants' self-reports. Moreover, behavioural measures of outcomes (e.g., job search behaviours) were included in Study Three. Although common method bias was thus not a major concern in the current research, this issue could be addressed in future research by examining relations between individuals' perceived underemployment and data collected via other sources (e.g., spousal ratings of satisfaction with life in Canada, managers' performance ratings).

Directions for Future Research

Results from the current research have inspired a number of additional research questions that could be examined in the future. Here I discuss four ideas for future research.

First, since the outset of the current studies, some novel findings have emerged in the literature regarding additional variables that may predict underemployment. Recently, Watt and Hargis (2010) found that trait boredom (the tendency to feel bored) was associated with higher levels of perceived underemployment. Given these findings, in the future, it would be worth examining whether personality traits influence perceived underemployment among immigrants.

Second, in order to make definitive causal conclusions about the predictors and outcomes of perceived underemployment, it would be useful to collect longitudinal data from immigrants to Canada. It would be optimal to collect the first wave of data when individuals are employed in their pre-migration jobs, and then to track individuals' Canadian job search behaviours and post-migration jobs upon arrival in Canada.

Relatedly, as Aydemir and Robinson (2006) have illustrated, immigration to Canada is characterized by fairly high rates of return and onward migration. This trend has serious consequences for the contribution of immigrants to the Canadian labour market, which depends on several factors: the numbers and skill levels of immigrants to Canada, the extent to which immigrants work in jobs that are commensurate with their skills, the length of time immigrants stay in Canada, and who stays in Canada (Aydemir & Robinson, 2006). Thus, a longitudinal research design that examines return and onward migration behaviour – rather than just intentions as examined in the current research – could be crucial for informing immigration policy and for better understanding the costs and payoffs to settlement and integration services.

Third, in the current studies, much has been learned about perceived underemployment among immigrants. Yet, little is known about how the experience of perceived underemployment differs between immigrants and non-immigrants. Of particular interest is whether the predictors of perceived underemployment differ for non-immigrants. Although there is no theoretical reason to believe that the relations observed between objective indicators of underemployment and perceived underemployment would differ between these two groups, it is possible that factors such as unemployment history differentially predict perceived underemployment for immigrants and non-

immigrants. While there may be challenges associated with obtaining data from comparable groups of immigrants and non-immigrants, in the future, it would be worth exploring these issues.

Fourth, it is important to examine additional factors that might attenuate the relation between perceived underemployment and its outcomes. For instance, it is plausible that immigrants who came to Canada primarily to improve the quality of life for their children are buffered against experiencing dissatisfaction with their immigration decision when they experience underemployment.

When thinking about the boundary conditions of perceived underemployment, there is some evidence to suggest that it may be fruitful to examine moderator variables that are within the control of organizations. Notably, recent research by Erdogan and Bauer (2009) suggests that there may be moderators of the relation between perceived underemployment and turnover. In their study conducted in a retail organization in Turkey, perceived underemployment was associated with turnover only among employees who did not feel empowered. Among employees who felt high levels of psychological empowerment, there was no relation between perceived underemployment and turnover. Erdogan and Bauer suggest that "there may be conditions under which organizations can retain their overqualified employees by providing an environment where they will choose to stay" (2011, p. 222). As Erdogan and Bauer (2009) propose, the negative effects of perceived underemployment may be attenuated via workplace characteristics that provide autonomy or communicate to employees that they are valued by the organization. Given their promising findings regarding empowerment, it appears that exploring moderators that are within the control of organizations is warranted.

Additional research in this area could help organizations manage workers who feel overqualified for their jobs.

Conclusion

Despite immigration policies designed to foster the successful integration of immigrants into the labour market, evidence suggests that immigrants to Canada experience disproportionately high levels of underemployment (Galarneau & Morissette, 2004; Gilmore, 2009; Li et al., 2006). As the prevalence of underemployment among immigrants has reached unprecedented highs, it has been deemed a pressing issue confronting government agencies and policy makers (Reitz, 2005).

Because immigrants play an important role in the Canadian labour market, it is important to increase our knowledge about the experience of underemployment among immigrants. Thus, the overarching goal of this dissertation was to develop a conceptual model of perceived underemployment among immigrants. Of specific interest was an examination of the predictors and consequences of perceived underemployment, as well as the role of perceived underemployment as a mediator between these predictors and consequences. In addition, I predicted and found that the attributions individuals make for their underemployment situation interact with perceived underemployment to predict individual- and society-relevant outcomes. Overall, results from the three studies described here contribute significantly to our understanding of immigrants' experiences with underemployment. By contributing to the development of a conceptual model of perceived underemployment among immigrants, the current research provides important information that can inform the development and implementation of policies and

programs designed to facilitate the successful integration of immigrants into the Canadian labour market, a goal that is important for Canada's future.

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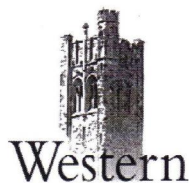
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Appendices

Appendix A: Ethics Approval Form (Study One)



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Use of Human Subjects - Ethics Approval Notice

Review Number	09 01 02	Approval Date	09 01 07
Principal Investigator	Vicki Esses/Joan Finegan/Leah Hamilton	End Date	09 05 09
Protocol Title	Immigrants' job expectations and experiences		
Sponsor	n/a		

This is to notify you that The University of Western Ontario Department of Psychology Research Ethics Board (PREB) has granted expedited ethics approval to the above named research study on the date noted above.

The PREB is a sub-REB of The University of Western Ontario's Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario. (See Office of Research Ethics web site: <http://www.uwo.ca/research/ethics/>)

This approval shall remain valid until end date noted above assuming timely and acceptable responses to the University's periodic requests for surveillance and monitoring information.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the PREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of research assistant, telephone number etc). Subjects must receive a copy of the information/consent documentation.

Investigators must promptly also report to the PREB:

- changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- all adverse and unexpected experiences or events that are both serious and unexpected;
- new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to the PREB for approval.

Members of the PREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the PREB.



Clive Seligman Ph.D.

Chair, Psychology Expedited Research Ethics Board (PREB)

The other members of the 2008-2009 PREB are: David Dozois, Bill Fisher, Riley Hinson and Steve Lupker

CC: UWO Office of Research Ethics

This is an official document. Please retain the original in your files

Appendix B: Perceived Underemployment (Studies One and Three)
(Bolino & Feldman, 2000)

This section is about attitudes you have toward your current job. Please follow the instructions carefully and provide the answer that most accurately describes your attitude.

Please answer the following questions considering your current job.

Indicate the extent to which you agree with the following statements on a scale from 1 (strongly disagree) to 7 (strongly agree).

Strongly disagree							Strongly agree
1	2	3	4	5	6	7	

I am overeducated for this job.	1	2	3	4	5	6	7
*This job lets me use my abilities.	1	2	3	4	5	6	7
I have more formal education than this job requires; that is, someone with less formal education could perform my job well.	1	2	3	4	5	6	7
I feel overqualified for my current job.	1	2	3	4	5	6	7
*This job lets me use skills from my previous experience and training.	1	2	3	4	5	6	7
I feel underemployed on this job.	1	2	3	4	5	6	7

* denotes reverse-coded items

Appendix C: Characteristics of Current Job (Study One)

This section is about your current job. Please follow the instructions carefully and provide the answer that most accurately describes your current job situation.

1. I am currently employed.

Yes _____

No _____

2. Given your qualifications (e.g., education, job experience), what is your preferred job?

Please be as specific as possible (e.g., mechanical engineer, server at a restaurant, etc).

3. What is your current job?

Please be as specific as possible. (e.g., mechanical engineer, server at a restaurant, etc).

** If you have more than one job, please select the job in which you work the most hours.

4. **Please respond to the rest of the questionnaire considering the job you listed in Question 3**

How many months have you had your current job?

_____ months

5. My job is:

Temporary/contract _____

Permanent _____

Other (please specify): _____

6. On average, I work:

More than 40 hours per week

Between 35 and 40 hours per week

Between 25 and 34 hours per week

Fewer than 24 hours per week

7. I wish I could work:

More hours

Fewer hours

The same number of hours

8. In this job, do other employees report to you?

No

Yes

If Yes, how many? _____

9. What is your wage (in Canadian dollars) *before taxes and deductions*?

*Note: \$/year assumes full-time work

< \$7.00/hour (< \$14, 500/year for full-time work) *
\$7.00 to \$8.74/hour (\$14, 500 to \$18, 000/year)
\$8.75 to \$9.99/hour (\$18,001 to \$21,000/year)
\$10.00 to \$14.99/hour (\$21,001 to \$31, 000/year)
\$15.00 to \$19.99/hour (\$31,001 to \$42,000/year)
\$20.00 to \$24.99/hour (\$42,001 to \$52,000/year)
\$25.00 to \$29.99/hour (\$52,001 to \$62,000/year)
\$30.00 to \$34.99/hour (\$62,001 to \$73,000/year)
\$35.00 to \$39.99/hour (\$73,001 to \$83,000/year)
\$40.00 to \$44.99/hour (\$83,001 to \$94,000/year)
\$45.00 to \$50.00/hour (\$94,001 to \$104,000/year)
>\$50.00/hour (> \$104,000/year)

Appendix D: Demographic Characteristics (Study One)

Please answer the following demographic questions.

1. In what country were you born? _____

2. Please indicate your approximate date of immigration to Canada:
Year ____ Month____ Day____

3. Please indicate the immigration class in which you entered Canada:
Skilled worker or Professional
Business class (investor, entrepreneur, self-employed)
Family class
Provincial nominee
Live-in caregiver
Refugee claimant
Refugee
Temporary worker
Temporary student
Other (please specify) _____

4. Your sex:
Male
Female

5. What is your ethnic background?
White
Black/African American
Hispanic
Asian
East Indian
Other (please specify) _____

6. Your age:
19 or under
20-24
25-29
30-34
35-39
40-44
45-49
50-54
55-59
60 and over

7. What is the highest level of formal education you obtained outside of Canada?

No formal education

Some elementary school or elementary school completed

Some high school

High school graduation

Some trade school or apprenticeship training

Trade certificate or apprenticeship completed

Some college

College diploma or certificate

Some university

Bachelor's degree

Master's degree

Degree in dentistry, medicine, veterinary medicine, optometry, law or theology

Doctorate

Other (please specify) _____

8. Including all courses or training you have taken, what is the highest level of formal education you obtained in Canada?

No formal education

Some elementary school or elementary school completed

Some high school

High school graduation

Some trade school or apprenticeship training

Trade certificate or apprenticeship completed

Some college

College diploma or certificate

Some university

Bachelor's degree

Master's degree

Degree in dentistry, medicine, veterinary medicine, optometry, law or theology

Doctorate

Other (please specify) _____

Appendix E: English Language Proficiency (Studies One and Three)
(Marian et al., 2007)

Please answer the following questions about your language skills.

1. On a scale from zero to ten, please select your level of ability in speaking, understanding, reading, and writing English.

	None										Perfect
Speaking	0	1	2	3	4	5	6	7	8	9	10
Understanding	0	1	2	3	4	5	6	7	8	9	10
Reading	0	1	2	3	4	5	6	7	8	9	10
Writing	0	1	2	3	4	5	6	7	8	9	10

2. Compared to English-speaking Canadians, my accent is:

Not at all different											Very different
0	1	2	3	4	5	6	7	8	9	10	

3. Please rate how frequently others identify you as a non-native speaker based on your accent when you speak English:

Never										Always
0	1	2	3	4	5	6	7	8	9	10

Appendix F: Perceived Employment-Related Discrimination (Study One)

We would like to ask you a few questions about experiences you may have had with discrimination (times when you have been treated unfairly).

1. In your search for a job and on the job in Canada, do you think you have experienced discrimination or been treated unfairly by others because of your ethnicity, culture, race or skin colour, language or accent, religion, or immigrant status?

Not at all							Definitely
1	2	3	4	5	6	7	

2. In your search for a job and on the job in Canada, which of the following factors do you think have led to you experiencing discrimination or being treated unfairly by others?

	Not at all						Definitely
Ethnicity	1	2	3	4	5	6	7
Culture	1	2	3	4	5	6	7
Race or skin colour	1	2	3	4	5	6	7
Language or accent	1	2	3	4	5	6	7
Immigrant status	1	2	3	4	5	6	7

3. Since your arrival in Canada how often have you experienced discrimination or unfair treatment in your search for a job and on the job because of the following factors?

	Never						All of the time
Ethnicity	1	2	3	4	5	6	7
Culture	1	2	3	4	5	6	7
Race or skin colour	1	2	3	4	5	6	7
Language or accent	1	2	3	4	5	6	7
Immigrant status	1	2	3	4	5	6	7

Appendix G: Job Satisfaction, Turnover Cognitions,
and Turnover Intentions (Study One)
(Hackman & Oldham, 1975)

Please answer the following questions considering your current job.

Indicate the extent to which you agree with the following statements on a scale from 1 (strongly disagree) to 7 (strongly agree).

Strongly disagree							Strongly agree
1	2	3	4	5	6	7	

1. Generally speaking, I am very satisfied with this job.	1	2	3	4	5	6	7
2. I am generally satisfied with the kind of work I do on this job.	1	2	3	4	5	6	7
3. Most people on this job are generally satisfied with the job.	1	2	3	4	5	6	7
4. I frequently think of quitting.	1	2	3	4	5	6	7

5. Are you currently looking for another job?

Yes

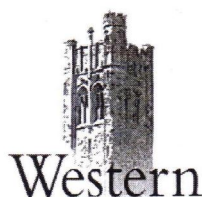
No

Appendix H: Summary of Variables Examined in Each Study

Variable	Study 1	Study 2	Study 3
Predictors			
<i>Job characteristics</i>			
• Permanent/temp or contract	Yes	Yes	Yes
• Full-time/involuntary part-time	Yes	No	Yes
• Public/private sector	No	Yes	Yes
• Wages	Yes	Yes	Yes
• Industry match	Yes	Yes	Yes
• Skill level change	Yes	No	Yes
<i>Demographic Characteristics</i>			
• Gender	Yes	Yes	Yes
• Age	Yes	Yes	Yes
• Ethnicity	Yes	Yes	Yes
• Length of residency in Canada	Yes	Yes	Yes
• Canadian citizenship status	No	Yes	Yes
• Immigration class	No	Yes	Yes
• Educational attainment	Yes	Yes	Yes
• English language proficiency and accent	Yes	Yes	Yes
<i>Unemployment history</i>	No	Yes	Yes
<i>Credential recognition</i>	No	Yes	Yes

Variable	Study 1	Study 2	Study 3
Outcomes			
<i>Individual-relevant outcomes</i>			
• Perceived employment-related discrimination	Yes	Yes	Yes
• Psychological well-being	No	No	Yes
• Satisfaction with immigration decision	Yes	No	Yes
• Perceptions of justice	No	No	Yes
<i>Society-relevant outcomes</i>			
• Return migration intentions	No	No	Yes
• Intentions to leave Canada	No	No	Yes
<i>Organization-relevant outcomes</i>			
• Career satisfaction	No	Yes	No
• Job satisfaction	Yes	No	Yes
• Perceived person-organization fit	No	Yes	Yes
• Affective organizational commitment	No	No	Yes
• Organizational citizenship behaviour	No	Yes	Yes
• Organizational loyalty	No	Yes	No
• Turnover cognitions	Yes	No	Yes
• Turnover intentions	Yes	Yes	No
• Job search behaviour	No	No	Yes

Appendix I: Ethics Approval (Study Three)



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Use of Human Subjects - Ethics Approval Notice

Review Number	10 11 14	Approval Date	10 11 02
Principal Investigator	Vicki Esses/Leah Hamilton	End Date	11 03 30
Protocol Title	Immigrants' job expectations and experiences		
Sponsor	n/a		

This is to notify you that The University of Western Ontario Department of Psychology Research Ethics Board (PREB) has granted expedited ethics approval to the above named research study on the date noted above.

The PREB is a sub-REB of The University of Western Ontario's Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario. (See Office of Research Ethics web site: <http://www.uwo.ca/research/ethics/>)

This approval shall remain valid until end date noted above assuming timely and acceptable responses to the University's periodic requests for surveillance and monitoring information.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the PREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of research assistant, telephone number etc). Subjects must receive a copy of the information/consent documentation.

Investigators must promptly also report to the PREB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to the PREB for approval.

Members of the PREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the PREB.


 Clive Seligman Ph.D.

Chair, Psychology Expedited Research Ethics Board (PREB)

The other members of the 2010-2011 PREB are: Mike Atkinson (Introductory Psychology Coordinator), David Dozois, Vicki Esses, Riley Hinson Albert Katz (Department Chair), and Tom O'Neill (Graduate Student Representative)

CC: UWO Office of Research Ethics

This is an official document. Please retain the original in your files

Appendix J: Advertisement (Study Three)

Participate in a Study about Immigrants' Job Experiences in Canada

Researchers at the University of Western Ontario are recruiting immigrants to complete an online survey. It will take approximately one hour to complete and you will have a 1 in 15 chance of winning a \$50 gift certificate to Chapters/Indigo.

To participate you must be: employed, at least 18 years old, and an immigrant who has been living in Canada for less than 10 years.

To sign up, please email:

Appendix K: Perceived Employment-Related Discrimination (Study Three)

We would like to ask you a few questions about experiences you may have had with discrimination (times when you were treated unfairly).

Please indicate the extent to which you agree with the following statements on a scale from 1 (strongly disagree) to 7 (strongly agree).

Strongly disagree							Strongly agree
1	2	3	4	5	6	7	

1. I have experienced discrimination or unfair treatment when searching for a job in Canada.	1	2	3	4	5	6	7
2. I have experienced discrimination or unfair treatment while on-the-job in Canada.	1	2	3	4	5	6	7
3. I have experienced discrimination or unfair treatment based on my immigrant status when searching for a job in Canada.	1	2	3	4	5	6	7
4. I have experienced discrimination or unfair treatment based on my immigrant status while on-the-job in Canada.	1	2	3	4	5	6	7

Please answer the following questions using the scale below.

Never							All of the time
1	2	3	4	5	6	7	

1. How often have you experienced discrimination or unfair treatment when searching for a job in Canada?	1	2	3	4	5	6	7
2. How often have you experienced discrimination or unfair treatment while on-the-job in Canada?	1	2	3	4	5	6	7
3. How often have you experienced discrimination or unfair treatment based on your immigrant status when searching for a job in Canada?	1	2	3	4	5	6	7
4. How often have you experienced discrimination or unfair treatment based on your immigrant status while on-the-job in Canada?	1	2	3	4	5	6	7

Appendix L: The Oxford Happiness Questionnaire (Study Three)
(adapted from Hills & Argyle, 2002)

Please indicate the extent to which you agree with the following statements on a scale from 1 (strongly disagree) to 7 (strongly agree).

Strongly disagree						Strongly agree
1	2	3	4	5	6	7

1. I feel pleased with the way I am.
2. I feel that life is very rewarding.
3. I am well satisfied about everything in my life.
4. I think I look attractive.
5. I find beauty in some things.
6. I have time for everything I want to do.
7. I feel fully mentally alert.
8. I have very happy memories of the past.

Appendix M: Satisfaction with Immigration Decision (Study Three)

Indicate the extent to which you agree with the following statements on a scale from 1 (strongly disagree) to 7 (strongly agree).

Strongly disagree						Strongly agree
1	2	3	4	5	6	7

1. I am very happy with my decision to immigrate to Canada.

*2. I regret my decision to immigrate to Canada.

3. I am very satisfied with my decision to immigrate to Canada.

*4. Immigrating to Canada was a mistake.

5. If I had to make the decision again, I would immigrate to Canada.

6. Immigrating to Canada was a great decision.

*Reverse-scored

Appendix N: Perceptions of Justice Regarding how Immigrants
are Treated in the Canadian Labour Market (Study Three)

Indicate the extent to which you agree with the following statements on a scale from 1 (strongly disagree) to 7 (strongly agree).

Strongly disagree						Strongly agree
1	2	3	4	5	6	7

1. Prior to my arrival in Canada, I was told the truth about the job opportunities in Canada.
2. The Canadian government is honest with immigrants about the job opportunities in Canada.
3. Prior to my arrival in Canada, I received accurate information about the job opportunities in Canada.
4. Immigrants are given a fair chance in the Canadian labour market.
5. The procedures that Canadian organizations use to evaluate immigrant job applicants are fair.
6. Canadian organizations give immigrants a fair chance.

Appendix O: Return Migration Intentions/Intentions to Leave Canada (Study Three)

Please indicate the extent to which you agree with the following statements on a scale from 1 (strongly disagree) to 7 (strongly agree).

Strongly disagree						Strongly agree
1	2	3	4	5	6	7

1. I intend to return to my country of origin.
2. I am actively looking into leaving Canada.
3. I frequently think of leaving Canada.
4. I frequently think of returning to my country of origin.
5. If I could, I would leave Canada tomorrow.
6. If I could, I would return to my country of origin tomorrow.

Note: Items 1, 4, and 6 measure return migration intentions and items 2, 3, and 5 measure intentions to leave Canada.

Appendix P: Job Search Behaviour (Study Three)
(adapted from Blau, 1994)

When looking for another job, how frequently have you done the following within the last 6 months?

1	2	3	4	5
Never (0 times)	Rarely (1 or 2 times)	Occasionally (3 to 5 times)	Frequently (6 to 9 times)	Very Frequently (at least 10 times)

1. Read the help wanted/classified ads on a website or in a newspaper, journal, or professional association.
2. Advertised yourself as a job applicant online or in a newspaper, journal or professional association.
3. Prepared/revised your resume.
4. Sent out resumes to potential employers.
5. Filled out a job application.
6. Read a website, book or article about getting a job or changing jobs.
7. Had a job interview with a prospective employer.
8. Talked with friends or relatives about possible job vacancies or opportunities.
9. Contacted an employment agency.
10. Spoke with previous employers or business acquaintances about their knowing of potential job vacancies or opportunities.
11. Emailed or telephoned a prospective employer.
12. Used current within company resources (e.g., colleagues) to generate potential job vacancies or opportunities.

Note: Items 1, 3, 6, 8, 10, and 12 measure preparatory job search while items 2, 4, 5, 7, 9, and 11 measure active job search behaviour.

Appendix Q: Organizational Citizenship Behaviour (Study Three)
(Lee & Allen, 2002)

Please indicate how often you engage in these behaviours at your current organization (workplace), using the scale below.

0	1	2	3	4	5	6	7
N/A	never						always

1. Help others who have been absent.
2. Willingly give your time to help others who have work-related problems.
3. Adjust your work schedule to accommodate other employees' requests for time off.
4. Go out of the way to make newer employees feel welcome in the work group.
5. Show genuine concern and courtesy toward coworkers, even under the most trying business or personal situations.
6. Give up time to help others who have work or nonwork problems.
7. Assist others with their duties.
8. Share personal property with others to help their work.
9. Attend functions that are not required but that help the organizational image.
10. Keep up with developments in the organization.
11. Defend the organization when other employees criticize it.
12. Show pride when representing the organization in public.
13. Offer ideas to improve the functioning of the organization.
14. Express loyalty toward the organization.
15. Take action to protect the organization from potential problems.
16. Demonstrate concern about the image of the organization.

Note: Items 1 through 8 measure OCBs directed to individuals and items 9 through 16 measure OCBs directed to the organization.

Appendix R: Affective Organizational Commitment (Study Three)
(Meyer et al., 1993)

Indicate the extent to which you agree with the following statements on a scale from 1 (strongly disagree) to 7 (strongly agree).

Strongly disagree						Strongly agree
1	2	3	4	5	6	7

1. I would be very happy to spend the rest of my career in my organization.

*2. I do not feel like "part of the family" at my organization.

3. I really feel as if my organization's problems are my own.

4. My organization has a great deal of personal meaning to me.

*5. I do not feel a strong sense of belonging to my organization.

*6. I do not feel "emotionally attached" to this organization.

* Reverse-scored.

Appendix S: Revised Causal Dimension Scale (Study Three)
(McAuley et al., 1992)

What is the primary cause of _____?

Instructions: Think about the reason or reasons you have written above. The items below concern your impressions or opinions of this cause or causes. Circle one number for each of the following questions.

Is the cause(s) something:											
1. Manageable by you	9	8	7	6	5	4	3	2	1	Not manageable by you	
2. Permanent	9	8	7	6	5	4	3	2	1	Temporary	
3. You can regulate	9	8	7	6	5	4	3	2	1	You cannot regulate	
4. Over which others have control	9	8	7	6	5	4	3	2	1	Over which others have no control	
5. Stable over time	9	8	7	6	5	4	3	2	1	Variable over time	
6. Under the power of other people	9	8	7	6	5	4	3	2	1	Not under the power of other people	
7. Over which you have power	9	8	7	6	5	4	3	2	1	Over which you have no power	
8. Unchangeable	9	8	7	6	5	4	3	2	1	Changeable	
9. Other people can regulate	9	8	7	6	5	4	3	2	1	Other people cannot regulate	

NOTE: The total scores for each dimension are obtained by summing the items as follows: 2, 5, 8 = stability; 4, 6, 9 = external control; 1, 3, 7 = personal control.

Appendix T: Revised Causal Dimension Scale ó Adapted for Current Study
(Study Three)
(McAuley et al., 1992)

All things considered, are you overqualified for your current job?

-Yes, I am overqualified for my current job.

-No, I am not overqualified for my current job.

If yes, what is the primary reason that you are overqualified for your current job?

If no, what is the primary reason that you are not overqualified for your current job?

Think about the primary reason why you are (not) overqualified for your current job. The items below concern your impressions or opinions of this cause. Circle one number for each of the following questions.

Is the reason why you are (not) overqualified something:	Not at all						To a very large extent
1. Manageable by you	1	2	3	4	5	6	7
2. Permanent	1	2	3	4	5	6	7
3. You can regulate	1	2	3	4	5	6	7
4. Over which others have control	1	2	3	4	5	6	7
5. Stable over time	1	2	3	4	5	6	7
6. Under the power of other people	1	2	3	4	5	6	7
7. Over which you have power	1	2	3	4	5	6	7
8. Unchangeable	1	2	3	4	5	6	7
9. Other people can regulate	1	2	3	4	5	6	7
10. Not manageable by you	1	2	3	4	5	6	7
11. Temporary	1	2	3	4	5	6	7
12. You cannot regulate	1	2	3	4	5	6	7
13. Over which others have no control	1	2	3	4	5	6	7
14. Variable over time	1	2	3	4	5	6	7
15. Not under the power of other people	1	2	3	4	5	6	7
16. Over which you have no power	1	2	3	4	5	6	7
17. Changeable	1	2	3	4	5	6	7
18. Other people cannot regulate	1	2	3	4	5	6	7

NOTE: The total scores for each dimension are obtained by summing the items as follows: 2, 5, 8, 11, 14, 17 = stability; 4, 6, 9, 13, 15, 18 = external control; 1, 3, 7, 10, 12, 16 = personal control. Items 10 through 19 are reverse-coded.

CURRICULUM VITAE

EDUCATION

Ph.D. Industrial/Organizational Psychology	2011
Department of Psychology University of Western Ontario, London, ON, Canada	
M.A. Industrial/Organizational Psychology	2006
Department of Psychology University of Guelph, Guelph, ON, Canada	
B.A. Psychology	2004
Department of Psychology University of Guelph, Guelph, ON, Canada	

AWARDS AND SCHOLARSHIPS

Graduate Thesis Research Award (\$650; University of Western Ontario)	2010-2011
SSHRC Doctoral Fellowship (\$20,000 per annum for four years)	2006-2010
Ontario Graduate Scholarship (\$15,000; declined due to funding limit)	2006-2007
SSHRC Canada Graduate Scholarship (\$17,500)	2004-2005
Ontario Graduate Scholarship (\$15,000; declined due to funding limit)	2004-2005
University of Guelph Graduate Scholarship (\$4000)	2004-2005
Canadian Psychological Association Certificate of Academic Excellence	2004
Undergraduate Honours Thesis Award, University of Guelph	2004

PUBLICATIONS AND CONFERENCE PRESENTATIONS

JOURNAL ARTICLES (REFEREED)

Son Hing, L. S., Chung-Yan, G. A., **Hamilton, L. K.**, & Zanna, M. P. (2008). A two-dimensional model that employs explicit and implicit attitudes to characterize prejudice. *Journal of Personality and Social Psychology*, 94(6), 971-987.

Cronshaw, S. F., **Hamilton, L. K.**, Onyura, B. R., & Winston, A. S. (2006). The case for non-biased intelligence testing against Black Africans has not been made: A comment on Rushton, Skuy, and Bons (2004). *International Journal of Selection and Assessment*, 14(3), 278-287.

BOOK CHAPTERS

Esses, V. M., **Hamilton, L. K.**, & Medianu, S. (in press). Right-wing authoritarianism and attitudes toward immigrants and immigration: Subgroups and multiple motives. For publication in F. Funke, T. Petzel, C. Cohrs, & J. Duckitt (Eds.), *Perspectives on Authoritarianism*. Verlag.

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Meyer, J. P., & **Hamilton, L. K.** (in press). Commitment to organizational change: Theory, research, principles and practice. For publication in R. T. By, S. Oreg, & A. Michel (Eds.), *The psychology of organizational change: Viewing change from the employee's perspective*. Cambridge University Press.

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Bennett-AbuAyyash, C., Esses, V. M., & **Hamilton, L. K.** (2010). *Religious prejudice, accreditation of foreign-acquired skills, and the evaluation of immigrants' hard and soft skills*. Research capsules: Select expert research on foreign credential recognition in Canada. Citizenship and Immigration Canada: Foreign Credentials Referral Office.

Esses, V. M., **Hamilton, L. K.**, Bennett-AbuAyyash, C., & Burstein, M. (2010). *Characteristics of a welcoming community*. Report written for Citizenship and Immigration Canada, Integration Branch.

Hamilton, L. K., & Esses, V. M. (2010). *Peel immigration labour market survey findings: Do labour market outcomes differ between men and women in Peel?* Report written for Region of Peel.

CASE STUDIES

Dietz, J., & **Hamilton, L. K.** (2008, February). Subtle biases and covert prejudice in the workplace. *Ivey Publishing 9B08C005*.

ADDITIONAL PUBLICATIONS (NON-REFEREED)

Hamilton, L. K., & Erdogan, S. (2009, Fall). Managing diversity in the workplace. *YourCity: London's Multi-Cultural Magazine*, 1(3), 12-13.

Houde, S., & **Hamilton, L. K.** (2005, October). Best practices for developing and implementing an effective leadership succession plan. *Human Resources Professionals Association of Ontario*.

BOOK CHAPTERS IN PREPARATION

Esses, V. M., Medianu, S., **Hamilton, L. K.**, & Lapshina, N. Psychological perspectives on immigration and acculturation. For publication in P. Shaver & M. Mikulincer (Eds.), *Handbook of Personality and Social Psychology* (Vol. 2). American Psychological Association.

SYMPOSIA (REFEREED)

Hamilton, L. K., & Esses, V. M. (2011, March). Objective and perceived underemployment: An examination of their consequences for individuals and organizations. In **L. K. Hamilton** (Chair), *Underemployment among immigrants in Canada: Causes, consequences, and solutions*. Symposium presented at the 13th National Metropolis Conference, Vancouver, BC.

Hamilton, L. K. (2007, June). *The issue of intelligence test bias in Industrial/Organizational psychology: Delineating controversies from historical, ideological, and empirical perspectives*. Symposium presented at the 68th annual meeting of the Canadian Psychological Association, Ottawa, ON.

Hamilton, L. K. (2006, June). *Prejudice and discrimination: Awareness of biases, justifications of behaviour, and strategies to reduce*. Symposium conducted at the 67th annual meeting of the Canadian Psychological Association, Calgary, AB.

CONFERENCE PRESENTATIONS (REFEREED)

Tarraf, R. C., Hastings, S., **Hamilton, L. K.**, Fife, J., & Finegan, J. E. (June, 2011). *The mediating effect of work-family conflict on the relation between emotional labour and job outcomes*. Poster to be presented at the 72nd annual meeting of the Canadian Psychological Association, Toronto, ON.

- Hamilton, L. K., & Esses, V. M.** (2011, April). *An examination of the consequences of underemployment among immigrants*. Paper presented at the 26th annual meeting of the Society for Industrial and Organizational Psychology, Chicago, IL.
- Dietz, J., Joshi, C., Esses, V., **Hamilton, L. K.**, & Gabarrot, F. (2010, August). *Le paradoxe des compétences: Quand on discrimine les immigrés lorsqu'ils sont qualifiés mais pas lorsqu'ils ne le sont pas*. Paper to be presented at the 8th Colloque International de Psychologie Sociale en Langue Française (ADRIPS), Nice, France. [Trans.: The skill paradox: Discrimination against qualified but not unqualified immigrants.]
- Hamilton, L. K., & Esses, V. M.** (2010, June). *The effects of underemployment on skilled immigrants' work attitudes*. Poster presented at the 71st annual meeting of the Canadian Psychological Association, Winnipeg, MB.
- Hastings, S., **Hamilton, L. K.**, Fife, J., & Finegan, J. (2010, June). *The role of personality in the performance of emotional labour*. Poster presented at the 71st annual meeting of the Canadian Psychological Association, Winnipeg, MB.
- Hastings, S., **Hamilton, L. K.**, Fife, J., & Finegan, J. (2010, April). *Are the negative effects of emotional labour exacerbated among Machiavellians?* Paper presented at the 25th annual meeting of the Society for Industrial and Organizational Psychology, Atlanta, GA.
- Bennett-AbuAyyash, C., & **Hamilton, L. K.** (2010, March). Characteristics and indicators of a welcoming community. In M. Henley & V. Esses (Chairs), *What is a welcoming community?* Roundtable presented at the 12th National Metropolis Conference, Montreal, QC.
- Hamilton, L. K., & Esses, V. M.** (2010, January). *The experience of perceived discrimination among skilled immigrants*. Poster presented at the 11th annual meeting of the Society for Personality and Social Psychology, Las Vegas, NV.
- Hastings, S., **Hamilton, L. K.**, Sheppard, L., Fife, J., & Finegan, J. (2009, June). *Emotional labour: Does deep-acting really matter?* Poster presented at the 70th annual meeting of the Canadian Psychological Association, Montreal, QC.
- Hamilton, L. K., Hastings, S., Sheppard, L., & Finegan, J.** (2009, April). *Emotional labour: Scale development and validation*. Paper presented at the 24th annual meeting of the Society for Industrial and Organizational Psychology, New Orleans, LA.
- Joshi, C., Dietz, J., Esses, V., & **Hamilton, L. K.** (2008, April). *The skill paradox: Bias against qualified but not unqualified immigrants*. Paper presented at the 23rd annual meeting of the Society for Industrial and Organizational Psychology, San Francisco, CA.

Hamilton, L. K., & Son Hing, L. S. (2008, February). *How do explicit prejudice, implicit prejudice, and gender interact to predict discriminatory behaviour against gay men?* Poster presented at the 9th annual meeting of the Society for Personality and Social Psychology, Albuquerque, NM.

Hamilton, L. K., Cronshaw, S. F., Onyura, B. R., & Winston, A. S. (2007, June). Has the case for non-biased intelligence testing been made? A critical look at Rushton, Skuy, and Bons (2004). In **L. K. Hamilton** (Chair), *The issue of intelligence test bias in Industrial/Organizational psychology: Delineating controversies from historical, ideological, and empirical perspectives*. Symposium conducted at the 68th annual meeting of the Canadian Psychological Association, Ottawa, ON.

Son Hing, L. S., & **Hamilton, L. K.** (2007, June). The negative effects of diversity initiatives for beneficiaries: for whom and when? In Sonia Kang (Chair), *Contemporary perspectives in social psychology*. Symposium conducted at the 68th annual meeting of the Canadian Psychological Association, Ottawa, ON.

Son Hing, L. S., **Hamilton, L. K.,** Chung-Yan, G. A., & Zanna, M. P. (2007, April). *Using explicit and implicit attitudes to characterize prejudice types*. Paper presented at the annual Psychology and Social Justice Conference, New York, NY.

Hamilton, L. K., & Son Hing, L. S. (2007, January). *Does awareness of implicit prejudice affect the relation between explicit and implicit prejudice?* Poster presented at the 8th annual meeting of the Society for Personality and Social Psychology, Memphis, TN.

Hamilton, L. K., & Son Hing, L. S. (2006, June). An investigation of the interactive effects of explicit and implicit prejudice on discrimination against gay men. In **L. K. Hamilton** (Chair), *Prejudice and discrimination: Awareness of biases, justifications of behaviour, and strategies to reduce*. Symposium conducted at the 67th annual meeting of the Canadian Psychological Association, Calgary, AB.

Hamilton, L. K., Son Hing, L. S., Ong, P. Y. (2006, June). *Preferential treatment and stereotype threat among women in leadership*. Poster presented at the 6th biennial meeting of the Society for the Psychological Study of Social Issues, Long Beach, CA.

Son Hing, L. S., Chung-Yan, G. A., **Hamilton, L. K., & Zanna, M. P.** (2006, June). Testing aversive and modern racism theories: The importance of employing implicit and explicit prejudice. In **L. K. Hamilton** (Chair), *Prejudice and discrimination: Awareness of biases, justifications of behaviour, and strategies to reduce*. Symposium conducted at the 67th annual meeting of the Canadian Psychological Association, Calgary, AB.

Hamilton, L. K., Son Hing, L. S., & Ong, P. Y. (2006, January). *The effects of preferential treatment and perceptions of discrimination on women's perceived competence and performance on a leadership task*. Poster presented at the 7th annual meeting of the Society for Personality and Social Psychology, Palm Springs, CA.

Son Hing, L. S., Chung-Yan, G. A., **Hamilton, L. K.,** & Zanna, M. P. (2006, January). *Employing implicit and explicit prejudice measures to test the aversive racism and the modern racism effects*. Poster presented at the 7th annual meeting of the Society for Personality and Social Psychology, Palm Springs, CA.

Hamilton, L. K., Son Hing, L. S., Zanna, M. P. (2005, June). *Implicit and explicit prejudice as predictors of hiring recommendations*. Poster presented at the 66th annual meeting of the Canadian Psychological Association, Montreal, QC.

INVITED PRESENTATIONS

Hamilton, L. K. (2010, July). *Perceived underemployment among immigrants in Canada*. Presented at the College of Business Administration, The University of Texas at El Paso, El Paso, TX.

Esses, V. M., **Hamilton, L. K.,** Bennett-AbuAyyash, C., & Burstein, M. (2010, June). *Characteristics of a welcoming community*. Presented at Welcoming Communities Awareness Building Workshop and Governing Council Meeting, Hamilton, ON.

Esses, V. M., **Hamilton, L. K.,** Bennett-AbuAyyash, C., & Burstein, M. (2010, June). *Characteristics of a welcoming community, outcome indicators and policy considerations*. Presented to Citizenship and Immigration Canada, Integration Branch, Ottawa, ON.

Hamilton, L. K., & Erdogan, S. (2009, June). *Diversity in the workplace*. Presented on behalf of onePM Associates, London, ON.

Hamilton, L. K., & Esses, V. M. (2009, June). *Job search behaviours and experiences of skilled immigrants in Canada*. Skills International, London, ON.

Hamilton, L. K. (2009, January). *TA evaluations: Getting, interpreting, and acting on formative feedback*. University of Western Ontario Winter Conference on Teaching, London, ON.

TEACHING AND MENTORING

UNDERGRADUATE TEACHING

I have taught undergraduate courses in the Department of Psychology and in the Aubrey Dan Program in Management and Organizational Studies at the University of Western Ontario.

Course Name	Level	# of Students	Session Date
The Psychology of People, Work, & Organizations	2 nd year	71 92	Fall 2010-Winter 2011 Summer 2008
Applications of Psychology (online)	2 nd year	44 100	Summer 2010 Fall 2009
Organizational Behaviour: Theoretical Foundations	3 rd year	60	Winter 2010
Human Sexuality (online)	2 nd year	113	Summer 2009
Organizational Behaviour	2 nd year	181	Fall 2008-Winter 2009
Social Psychology	2 nd year	195	Fall 2007

MENTORING EXPERIENCE

Honours Thesis Supervisor 2010-2011

Alexandra DeBora, University of Western Ontario
Title: The effect of underemployment on job attitudes

Honours Thesis Supervisor 2009-2010

Shelby Corriveau, University of Western Ontario
Title: The effect of perceived resource discrimination on hiring discrimination against immigrants

SERVICE

COMMITTEE POSITIONS

Canadian Society for Industrial & Organizational Psychology 2007-2010

Student Representative, Executive Committee

University of Western Ontario

Industrial/Organizational Psychology Brown Bag Committee 2006-2009

Workload and Resource Planning Committee (Department of Psychology) 2006-2007

University of Guelph

Psychology Graduate Studentsø Association 2005-2006

AD HOC REVIEWER

Analyses of Social Issues and Public Policy

Journal of Managerial Psychology

Personality and Individual Differences