



DISABILITY ACCOMMODATION IN EMPLOYMENT: HOW DOES AN AGING POPULATION MATTER AND WHAT MIGHT IT MEAN FOR WORKPLACE LAW AND POLICY?

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The Canadian population is aging and staying at work longer. The percentage of Canadians over age 64, which stood at 13% in 2006, is expected to exceed 25% by 2036.¹ Meanwhile, labour force participation rates of Canadians over 55 have climbed steeply and steadily since 2000.² The key reasons for this are durable. They include the aging of the cohort of women who entered the labour force in large numbers in the 1970s and 1980s, a growing desire among older persons to remain active, and financial need due to inadequate retirement savings.³ Not surprisingly, however, the incidence of disability increases with age. The percentage of employed Canadians with a disability rises from just over 3 per cent among those between the ages of 20 and 24 to reach over 12% by the time Canadians reach the 60 to 64 age range.⁴ We can therefore predict with some confidence that a greater and growing share of Canadian workers will have disabilities, and will want or need to continue working notwithstanding the fact they have them. If they are to work productively and with equal opportunity, many will need employers to design, adapt and manage workplaces so as to enable them to overcome activity limitations. In short, they will need accommodation.

1 Statistics Canada, Some facts about the demographic and ethnocultural composition of the population, <http://www.statcan.gc.ca/pub/91-003-x/2007001/4129904-eng.htm>, visited October 20, 2012

2 See Michael Wolfson, Demo Doom or Apocalypse No? April 29, 2012, at page 8, available at <http://law.queensu.ca/lawResearch/clw/events/2012conferenceonaging/speakerpresentations/MichaelWolfson.pdf>.

3 On the effects of the aging of the female cohort, see Wolfson, *supra* note 2. On the role of the desire to remain active and of financial considerations, see Jungwee Park, Retirement, Health and Employment Among Those 55 Plus, in *Perspectives on Labour and Income*, Statistics Canada Catalogue no. 75-001-X, January 31, 2011, at page 10; on the inadequacy of retirement savings of Canadians, see Michael C. Wolfson, Projecting the Adequacy of Canadians' Retirement Incomes, Current Prospects and Possible Reform Options, Institute for Research in Public Policy Study No. 17, April 2011, available at www.irpp.org

4 See *infra*, Table 2..

Yet, as we will show, there are most likely already widespread accommodation shortfalls in Canadian workplaces, and an aging population is likely to aggravate this problem. Using data gathered in Statistics Canada's 2006 Participation and Activity Limitation Survey, we find that a sizeable fraction of persons with disabilities (PWD) say that they are not receiving accommodations that they need in order to work. We then demonstrate that widespread employee reports of accommodation shortfalls are consistent with previous research documenting the frequent negative influence of information gaps, stereotyping, economic incentives and workplace cultural resistance on the employment opportunities of PWD. That research also suggests that such influences are likely to interact with perceptions of aging in ways that deepen the disadvantage of older workers with disabilities. Specifically, it indicates that the perception that a worker is aging stands to aggravate both stereotyping of his or her anticipated work performance and economic disincentives to accommodate. Using regression analysis, our investigation the determinants of accommodation shortfalls in Canada yields results consistent with predictions: age interacted with disability severity has a negative influence on the likelihood of accommodation; and a series of factors associated with employer cost considerations and likely to interact negatively with perceptions of aging also have such negative impacts.

Accommodation shortfalls can contribute to significant social and economic problems, denying people opportunities to make for themselves lives that realize their potential, depriving the Canadian economy of productive workers, leaving people in poverty, and significantly increasing the cost of social programs. Moreover, as we will argue, our current legal and policy apparatus appears ill suited to address them. Canadian policy makers need to begin rethinking how to tackle the accommodation gap.

The plan of the paper is as follows. We begin in Part II by setting out the policy issues at stake. We canvass the labour market disadvantages experienced by persons with disabilities, public policy problems that result from those disadvantages, and the likely role of an accommodation gap in those problems. In Part III we present a statistical portrait of both the relationship between age and disability in the Canadian labour market, and of the incidence of accommodation shortfalls. In Part IV we analyse the likely causes of shortfalls, providing first a review of the relevant literature and then our econometric analysis. Part V canvasses, at a general level, the current Canadian legal and policy structures that address workplace accommodation, and argues that they are unlikely to adequately respond to the complex mix of factors that quite likely lie at the root of the accommodation gap. Part VI concludes.

We note that throughout this paper we use the term accommodation to refer specifically to adaptations in the work environment that workers need in order to perform their jobs productively and with equal opportunity for advancement. We do not imply that all such accommodations are legally required under human rights law's duty to accommodate. That is a duty to provide reasonable accommodations which, for good reasons, has inherent limits. Here we are concerned with a potentially broader set of accommodations that might be provided to Canadian workers. It is likely that many of the accommodations with which we are concerned are in fact legally required. But we have no way of empirically estimating what fraction of those accommodations are required by law.

II. Why Workplace Accommodation Should Matter to Canadian Policy Makers

Persons with disabilities (PWD) experience multiple disadvantages in the workplace. These present major economic and social policy problems. This Part outlines those problems and the role of workplace accommodation in addressing them.

A. Labour Market Disadvantages Faced by Persons with Disabilities

PWD face a host of disadvantages in the Canadian labour market. They are much less likely to obtain employment. This is reflected in both employment rates (the percentage of the overall population who are employed) and unemployment rates (the percentage of the overall population in the labour force but unable to find employment). In 2006, the employment rate for PWD in Canada stood at 51%, compared to 75% for persons without a disability.⁵ Similarly, the OECD reports that in the middle of this decade PWD in Canada were more than 1.5 times as likely to be unemployed than persons without, a figure that our calculations confirm.⁶ Among the unemployed, PWD are substantially over-represented in the chronically unemployed population and in the group that is always unemployed.⁷ Older workers with disabilities who become unemployed face additional challenges. The incidence of long term unemployment among workers over 45 in Canada has tended to be much higher than for younger workers. Reasons for this include lower labour market mobility, lower education levels, non-transferable skills, and age discrimination.⁸

5 See Statistics Canada Labour force status for adults 15 to 64, by age group, Canada, 2001 and 2006 <http://www.statcan.gc.ca/pub/89-628-x/2008008/t/5201163-eng.htm>. (author calculations based upon these data).

6 Organization for Economic Cooperation and Development, Sickness, Disability and Work: Breaking the Barriers-Synthesis. France: OECD Publishing, 2010, at 53

7 See Table 1, *infra*, estimating that while persons with disability constitute 7.13 per cent of the employed population, they constitute 11.23 per cent of the unemployed and 32 per cent of those not in the labour force or retired. These findings are similar to the earlier one of Bradley Brooks, *Chronic Unemployment: A Statistical Profile* (Ottawa: Statistics Canada, 2005) Brooks found that People with disabilities accounted for 7.4% of the labour force between 1993 and 2001. However they represented 8.9% of the population that was unemployed at some time, 16% of the chronically unemployed and 32% of the always unemployed.

8 Vincent Dube, *Sidelined in the Labour Market, Perspectives*, April 2004, Statistics Canada Catalogue No. 75-001-XIE, <http://www.statcan.gc.ca/pub/75-001-x/10404/6844-eng.pdf>, at pp. 7-8.

Second, PWD who are employed are more much more likely to receive lower earnings and to face limits on their career progression.⁹ Disabled workers are less mobile in the labour market, and those experiencing onset of a continuing disability fall behind their counterparts in earnings.¹⁰ These lower earnings occur the despite older average age of the disability group (age normalization widens the gap at trial end to about a third). The earnings effect is primarily a composite of lower wages and drop in the number of hours worked.¹¹

The lower earnings of PWD are attributable in part to the response of employers to the mere fact of having a disability, likely in the main through hiring decisions rather than because of overt pay discrimination. Gunderson finds that, after controlling for the effect of various wage determining characteristics including productivity, persons with a disability have annual earnings that are 25.6% lower than persons with no disability.¹² Some of this gap is probably due to the tendency of PWD to work fewer hours over the course of a year. However, a series of studies of *wage* levels in the United States found a disability pay gap of about 20 to 30 per cent, and most (but not all) find that most of the gap can be attributed to discrimination defined as disabled persons earning less pay than non-disabled persons even when they have the same endowments of wage determining characteristics.¹³ This implies

9 Spector finds in an analysis of Canadian longitudinal data over a series of five year periods that persons with disabilities were less likely to move into a management position (8% of those with disabilities became managers during the trial in contrast to 12% of the control group) and were more likely to have moved down the management hierarchy (12% versus 9%). Aron Spector, Examining the effects of onset of an on-going disability on labour market attachment, job retention and career progression, Policy Research Directorate, Human Resource and Skills Development Canada (2010), available at <http://carwh2010.iwh.on.ca/program/sat/1115/12/232>, last accessed June 6, 2012, at pp 27-8

10 Specifically, those experiencing disability onset earned beforehand an average \$5,070 less than those who did not experience a disability (a 12% difference which may reflect the fact that a high proportion of those experiencing a disability onset already had a disability), and that earnings then increased an average of 0.4% for the disability group and 3.7% for the control group, so that at the end of the trial period, those with disabilities earned an average of \$12,610 less (a 25% difference). Spector 2010 at 21.

11 Spector 2010, at pp 25-6

12 Morley Gunderson, Disability-based Pay Gap Analysis Based on the 2006 Participation and Activity Limitation Survey (2011) manuscript on file with authors, at 19.

13 Gunderson 2011 at page ii. It is difficult to determine exactly how much of the pay gap is due to discrimination and how much is due to unobserved productivity differences between PWD and workers without disabilities. Some studies attempt to separate the two by using control variables that measure functional limitations in normal daily activities (walking, climbing stairs, participating in conversation, but not necessarily work limitations), and attributing residual differences to discrimination. See for example Baldwin, Marjorie and William Johnson. "Labor Market Discrimination Against Men with Disabilities," *Journal of Human Resources*. 29 (1994) 1-19; Johnson, William and James Lambrinos. "Wage Discrimination Against Handicapped Men and Women," *Journal of Human Resources*. 20 (1985) 264-277. Critics have argued that these controls are not sufficient to capture productivity effects of disabilities, and instead use PWD who report no work limitations as controls, based on the assumption that people with nonwork-limiting disabilities

that in the United States lower earnings of PWD are not simply function of lower hours worked, and suggests that the same may be true in Canada.

These disadvantages, taken together, result in very high levels of poverty among persons with disabilities. Hatfield finds that 26.1% of PWD have persistent low income, compared to 3.4% of Canadians who do not fall into one of the 5 most vulnerable groups in Canadian society (the other 4 in addition to PWD being unattached individuals age 45-64, recent immigrants, lone parents, and aboriginals living off reserve).¹⁴ The OECD reports that Canada has one of the highest rates of poverty for PWD in the industrialized world, mainly as a result of lower employment rates and relatively ungenerous income support programs for unemployed persons and persons out of the workforce.¹⁵ Further, when PWD do fall below the low income threshold they are more likely to fall farther below it.¹⁶ The risk of poverty for PWD is also higher among those who are employed. Gunderson shows that the incidence of low income among employed PWD between the ages of 20-64 was more than 32% higher than for persons without disabilities.¹⁷

have the same work productivity as PWOD. These studies also assume that the level of discrimination against nonwork limited PWD is the same as the level of discrimination faced by work limited PWD. They tend to find a much smaller residual attributable to discrimination. DeLeire, Thomas. "Changes in Wage Discrimination Against People with Disabilities: 1984-1993," *Journal of Human Resources*. 36(2001)145-158; Jones, M. K. "Is there employment discrimination against the disabled?" *Economics Letters* (July 2006), 92 (1), pg. 32-37. This approach can in turn be criticized on the ground that it is unlikely that PWD without work limitations experience the same level of discrimination as those who have such limitations. See William M. Rodgers (ed.), *Handbook on the Economics of Discrimination*, (Northampton, Massachusetts: Edward Elgar Publishing, Ltd, 2006), p. 147). Studies that control for the extent of prejudice attached to specific disability types within the wider society have found that the pay gap widens significantly for persons with disabilities subject to greater social prejudice. Baldwin, Marjorie and William Johnson. "Labor Market Discrimination Against Men with Disabilities," *Journal of Human Resources*. 29 (1994) 1-19; Baldwin, Marjorie and William Johnson. "Labor Market Discrimination against Women with Disabilities," *Industrial Relations*. 34 (1995) 555-577; Baldwin, Marjorie and William Johnson. "Labor Market Discrimination Against Men with Disabilities in the Year of the A.D.A.," *Southern Economic Journal*. 66 (2000) 548-566. For a general discussion see Gunderson 2009, supra; and Melanie Jones, "Disability and the Labour Market: a Review of the Empirical Evidence," *Journal of Economic Studies* (January 2008), 35(5) pg. 405-424 .

14 Michael Hatfield "Vulnerability to Persistent Low Income," 7 *Horizons* 19-26 (2004)

15 OECD, *Sickness, Disability and Work: Breaking the Barriers-Canada: Opportunities for Collaboration*; Canada (Paris: OECD, 2010), at Table 1.7 (hereinafter "Breaking the Barriers – Canada")

16 Canadian Human Rights Commission, *Report on Equality Rights of People with Disabilities*, July 2012, at p.30. http://www.chrc-ccdp.ca/pdf/reports/rerpd_rdepad-eng.pdf

17 Gunderson 2011 at table 1.

B. Policy Implications

These labour market disadvantages raise important policy issues. Many would argue that high rates of poverty are themselves a serious injustice in an affluent society. Further, high rates of poverty for PWD pose problems for health policy. Poverty is one of the strongest correlates of poor health, and poverty reduction can improve health outcomes.¹⁸ Unemployment may similarly aggravate health conditions¹⁹ and therefore preventable unemployment is a health policy concern.

From an economic policy standpoint, there is a concern about losing potentially productive workers to the labour market, or employing them in jobs that do not make full use of their skills and experience at a time of slowing labour supply growth and projected labour shortages.²⁰ We should also be concerned about diminished employment opportunities for PWD in the interests of making better use of funds spent on our relatively large income support programs for disabled workers. In 2007 Canada's public expenditures on disability sickness programs were probably more than 1.5 times those on unemployment benefits, and total public and private expenditures on disability benefits were about \$25 billion, of which about 80% was public and 20% was private.²¹ Better opportunities for paid employment for PWD would allow some of these substantial expenditures to be redirected productively.

Perhaps most fundamentally, these labour market disadvantages, to the extent that they are preventable, represent a loss for PWD of what the Canadian Human Rights Act (CHRA) terms the "opportunity equal with other individuals to make for themselves in the lives that they are able".²² The "lives that [persons] are able" to make, referred to in section 2 of the CHRA, are ones which our human rights laws treat not as bounded by physical or medical condition but, rather, as enhanced by obligations on

18 Evelyn Forget, The Town with No Poverty: The Health Effects of a Canadian Guaranteed Annual Income Field Experiment, 37 Canadian Public Policy – Analyse de politiques (2011)

19 Canadian Public Health Association, *The Health Impact of Unemployment* (1996)

²⁰ See Human Resources Development Canada, *Knowledge Matters: Skills and Learning for Canadians* is a report prepared by HRDC (2002a), at section 1 (providing information on shortages of skilled workers in specific professions, such as nursing, engineering, plumbing and construction trades, and attributing emerging shortages to the aging of the workforce, a falling participation rate among older workers, and declining birth rates).

²¹ OECD, *Breaking the Barriers – Canada*, at Table 2.1

²² Canadian Human Rights Act, s.2

public and private institutions to reasonably accommodate PWD by removing unnecessary barriers to their social and economic inclusion.²³ Canada has endorsed this view by ratifying the United Convention on the Rights of Persons with Disabilities.²⁴ Providing access to such opportunities is the hallmark of a dynamic society built on individual freedom to develop and reach one's potential. Safeguarding such access is a fundamental goal of Canadian human rights law. Further, as the Supreme Court of Canada has recognized, work is “one of the most fundamental aspects in a person's life, providing the individual with a means of financial support and, as importantly, a contributory role in society”.²⁵ Equal opportunity at work, understood as removing unnecessary barriers to workforce participation and pursuit of a career, is central to bedrock policy objectives of the Canadian political order and value system. This is not to say that all such disadvantages constitute violations of human rights law. As we will clarify below, there are important limits to what human rights law can and should require of employers. But they do reflect a failure to reach the broader yet still fundamental goals that human rights legislation was enacted to serve.

C. The Role of Employment Accommodations

The causes of workplace disadvantage of PWD are multiple. Many of them lie outside the workplace. As a group, PWD tend to have lower levels of education in Canada, in part because of previous and continuing barriers to access.²⁶ Income support systems and other social programs in Canada create disincentives to work by cutting off program entitlements above employment income thresholds that are quite low, rather than gradually phasing them out.²⁷ Lack of accessible transportation in many parts of the country limits the ability of PWD to travel to potential employers. Research in the United States finds that PWD often have less social capital in the form of networks that can help them find

23 The duty to accommodate in human rights law thus partially responds to the “social model” of disability. See generally Ravi Malhotra, *The implications of the social model of disablement for the legal regulation of the modern workplace in Canada and the United States*, 33 *Manitoba Law Journal* 1 (2009)

24 UN General Assembly, *Convention on the Rights of Persons with Disabilities : resolution / adopted by the General Assembly*, 24 January 2007, A/RES/61/106, available at: <http://www.unhcr.org/refworld/docid/45f973632.html> [accessed 23 October 2012], article 27

25 Reference re Public Service Employee Relations Act (Alta.), [1987] 1 S.C.R. 313, per Dickson, C.J.C., dissenting, at para 91, cited with approval by a majority of the Supreme Court of Canada in *Wallace v. United Grain Growers*, [1997] 3 S.C.R. 701, at para 93.

26 Gunderson, 2011, *supra* at 9

27 John Stapleton and Stephanie Procyk, *What Stops Us from Working?* (2011) http://www.camh.ca/en/hospital/about_camh/influencing_public_policy/Documents/ODSP%20Report%20final.pdf

employment, and the same is likely to be true here.²⁸ People who have been out of the workforce, among whom PWD are disproportionately represented, are more likely to lack “job readiness” skills - hard skills such as training in the most recent work methods or “soft skills” such the ability to give a good interview or preparing a polished resume.²⁹

Yet it is also clear that what goes on in the workplace plays an important role in creating or perpetuating labour market disadvantages. Discrimination in hiring and pay appears to be doing this in Canada, a matter to which we will return below. In addition, decisions by employers to grant or deny workplace accommodations such as modified work schedules, modified duties, or the provision of assistive or adaptive technology can often determine whether PWD are able obtain or remain in productive employment or advance in their careers. The vast majority of PWD report that they are able and willing to work full time with suitable accommodations.³⁰ Studies have revealed that providing accommodations directly improves job retention by PWD.³¹ Accommodations reduce the likelihood that workers with disabilities resulting from recurrent injuries will leave employment for health reasons.³² PWD who do not receive accommodations may have to take jobs that do not make full use of their skills and experience.³³ In 2006, 48% of working-age PWD in Canada required some form of accommodation to work. However, needing accommodation was associated with lack of employment: 59% percent of unemployed PWD required accommodations, while only 37% of employed PWD did.³⁴

28 L. Nishii, B. Rubineau, and S. Bruyère, Organizational practices to increase employment opportunities for people with disabilities: The Power of social networks . Presentation to AAFES, September 22, 2011

29 See for example M. Kulkarni, and M.L. Lengnick-Hall Socialization of people with disabilities in the workplace. 50 *Human Resource Management* , 521-540 (2011)

30 For four out of five respondents to a survey by the Canadian Abilities Foundation said that full-time work is possible with suitable workplace accommodations. Even for respondents with a severe disability, just 27% reported that their disability prevents them from working full-time when workplace accommodations are made. See Canadian Abilities Foundation, *Neglected or Hidden: Connecting Employers and People with Disabilities in Canada* (2004) <http://digitalcommons.ilr.cornell.edu/gladnetcollect/289>, at 3.

31 Janalee Morris-Wales, *Literature Review on Job Retention and Career Progression for Persons with Disabilities in Canada and Internationally* (2010), at page 19, and sources cited therein, available at <http://disabilitystudies.ca/wp-content/uploads/2010/08/Job-Retention-and-Career-Progression-Among-People-with-Disabilities-Final-Report.htm>

32 Michele Campolieti, *State Dependence, Accommodations, and the Postinjury Employment of Disabled Workers*, 46 *Industrial Relations* 636 (2007) (finding that employer accommodation can reduce the conditional probability of leaving employment for health reasons by 33 percent)

33 This is known as “skills mismatch” in the economic literature. While there are no published studies on skills mismatch for PWD in Canada, Jones and Sloane document such mismatch taking place in the United Kingdom. Melanie Jones and Peter Sloane, “Disability and Skill Mismatch” 86 *Economic Record*, 101 – 114 (2010)

34 Author calculations, based on data collected in Statistics Canada’s Participation and Activity Limitation Survey 2006.

As this study will make clear, a substantial percentage of employees who report that they need accommodations in order to work are not receiving either some or all of them. If accommodations that PWD require in order to work are not being provided, the same is likely to be true of accommodations required for career progression. Further, it is likely that, as Gunderson hypothesizes with respect to pay discrimination,³⁵ if PWD come to believe that their opportunities in the labour market will be diminished because of the unavailability of accommodation, then they will be less likely to invest in education and other steps that could help them succeed in the first place. The extent to which workers with disabilities receive from their employers accommodations that they need to work is therefore an important matter for public policy.

III. The Accommodation Shortfall in Canada

There is no published study estimating the extent of the difference between workplace accommodations needed and received by PWD in Canada. In this Part, we analyze data from Statistics Canada's 2006 *Participation and Activity Limitation Survey* (PALS) in order to profile the types of accommodations disabled workers require, receive and do not receive in the workplace. We also briefly describe the relationship of these variables to worker age and other major variables likely to influence workplace outcomes.³⁶

The PALS is a voluntary survey of persons living in Canada who live in households that reported, in the Canada Census, that there is at least one activity limitation in the household.³⁷ It asks workers about a detailed list of types of limitations, types of accommodations required, and whether they are provided.³⁸ Our analysis employs the public use version of this data set (the "PUMF"). All analysis using the PUMF file is conducted at the national level.³⁹ The analysis is focused on those individuals over the age of 15 who are employed; the employed sample size (n) is 36,565. The PWD (employed) sub-sample has 5,531 observations.⁴⁰ Statistics Canada provides weights to enable the estimation of total population sizes from sample sizes.

³⁵ Gunderson 2011, *supra* at i

³⁶ Further detailed results are available from the authors as an Appendix.

³⁷ See: PALS 2006 User Guide p. 2.

³⁸ Detailed definitions for the relevant variables identified in the PALS are available upon request from the authors as Appendix Tables 1 through 4 for: the types of limitations experienced (including hearing, seeing, communication, mobility, agility, pain, other, and mental or behavioral); severity of the limitation; accommodations required (including job redesign, modified hours or days, human support, technical aids, computer, communication aid, ergonomic station, special chair or back support, handrails or ramps, parking, accessible elevator, accessible washroom, accessible transportation, other equipment, help or work arrangements); and accommodations received.

³⁹ In the PUMF file provinces cannot be identified, in order to protect the confidentiality of individual survey respondents (see: PALS 2006 User Guide, p.7). Note that the PALS weight has been used for all calculations.

⁴⁰ In the PALS data set, there were 36,565 individuals aged 15 and older who were employed. Some of the key variables used in the analysis were, however, only available in the PALS for disabled, employed persons, thereby limiting the sample

In the PALS, disability (i.e., activity limitation), whether a worker requires an accommodation, and whether he or she is actually provided with an accommodation, are self-reported; incidences may therefore be subject to some reporting bias that may result in overstating the accommodation shortfall.⁴¹ While some caution is warranted with respect to the exact size of the accommodation gap that we find, we remain confident that the gap is in the size range that our findings suggest.⁴² A profile of the overall population according to disability status is provided in Table 1. A summary of labour force activity by disability status is provided in Panel A; and disability status by employment status is presented in Panel B.

A. The Incidence of Disability and Disability Severity by Age Group

The distribution of PWD in the overall population is heavily skewed towards the older age groups (see Figure 1 and Table 2). In the 15 to 34 year old group, the incidence of at least one identified disability in the population is quite low, roughly 3-4%. Thereafter, the incidence of disability increases in each age group, from about 5.5% among those aged 35-39 years to 12.5% among those aged 60-64 years and about 19% among those aged 70 years and older. The incidences of hearing, seeing, communication, mobility, agility, and pain limitations all increase by age over the 15-74 year age span. (Table 2)

size available for our analysis. We focused our study on those persons who were employed and disabled; this sample size was 5,531. The sample size was, in some cases, further reduced because of missing values for some variables used in the analysis.

⁴¹ This bias in reporting of a disability would be analogous to the reporting bias that has been documented in relation to medical conditions. See for example, Michael Baker, Mark Stabile, Catherine Deri. "What Do Self-Reported, Objective, Measures of Health Measure?" *Journal of Human Resources*, Vol. 39, No. 4, (Autumn, 2004), pp. 1067-1093; Currie, J., and B.C. Madrian. 1999. "Health, Health Insurance and the Labor Market." In *Handbook of Labor Economics*. Vol. 3C, ed. Orley Ashenfelter and David Card, 3309-3416. New York: Elsevier Science. Although we expect the accommodation shortfall to be overstated, the survey contains no employer-reported data, or other information, that would permit us to test for the presence of and/or potential extent of any reporting bias.

⁴² The sample selection bias discussed in note 44, *infra*, can be expected to result in understatement of any accommodation gap, a tendency running in the opposite direction to any tendency of employees to overstate it.

Within the population of disabled employees, the distribution is also skewed towards older age groups. Strikingly, approximately 27% of disabled employees are aged 15-39 years, while 60% are aged 40-59 years.⁴³

The incidence of “hearing” and “mobility” limitations, and “agility”, increases steadily with age. However, interestingly, the incidence of agility, pain and sight limitations falls after age 60. This may reflect selective attrition of disabled workers (by underlying limitation) from paid employment in the later years. Such selective attrition might in turn reflect voluntary retirement choices of employees, or growing unwillingness of employers to accommodate employees as they age or both, a matter to which we will return below. By contrast, the incidence of communications/speech disabilities among employed PWD generally declines with age among the employed population despite increasing in the general population, suggesting that selective attrition may be taking place at an earlier age.

B. The Incidence of Accommodations Required and Received

We analyze the incidence of accommodation for the segment of the labour force that is employed, measured as the incidence of employed workers receiving all, some or none of the accommodations that are reported as needed to work. We also examine various factors, such as labour market attributes and the extent of the limitation, that may be associated with that likelihood.⁴⁴

Approximately 40% of disabled employees reported *requiring* at least 1 type of accommodation, with about one-half of those requiring more than one accommodation. The most prevalent accommodations required were job re-design, modified working time (i.e., hours, days), ergonomics, and special chairs or back support.⁴⁵

About 83% of disabled workers who are identified as requiring an accommodation received at least one type (about 17% did not receive any).⁴⁶ However, only about 65% of disabled workers needing accommodation were provided with *all* of the accommodations that were required, meaning that 35% were not provided with one or more such accommodation.

The incidence of accommodation varies with a range of worker and employer variables that could reflect the cost of, employer willingness to pay for, or employer return on investment in accommodation, including (see Figures 2 and Tables 4 and 5):

⁴³ Detailed results for the profile of the incidence of disability by age are available from the authors.

⁴⁴ Since we are analyzing the sub-sample of “employed disabled” workers, workers who could not get hired and thus remain unemployed or have left the labour force because of their disability, are not included. This may result in some sample selection bias, since those who leave employment or remain unemployed because they do not receive accommodation are not included in the sample. We are in essence measuring the likelihood that a worker will receive needed accommodations, given that the worker has been hired.

⁴⁵ The incidence of specific types of accommodations that are *identified as required* by disabled employees is available from the authors upon request.

⁴⁶ The incidence of detailed types of accommodations provided by employers to disabled workers, given the worker requires an accommodation, is available from the authors upon request.

Educational attainment. The incidence of provision of all required accommodations increases with educational attainment.

Income level. The incidence of provision of all required accommodations is lower among low income earners.

Permanent employment. The incidence of all accommodations being provided and is considerably higher for those with a permanent job.

Unionization. The incidence of all accommodations being provided is slightly higher for unionized workers.

Severity of limitation. For workers with a severe limitation, the incidence of all accommodations being provided is roughly 52% compared to 74% for those with a mild/moderate limitation. The incidence of at least one accommodation not provided is higher among those with a severe limitation (at 48%) relative to those with a moderate limitation (at 26%).

Duration of Limitation As the duration of the limitation increases, the incidence of all accommodations being provided decreases, and the incidence of at least one accommodation *not* being provided increases.⁴⁷

In addition, the incidence of accommodation varies with *where the limitation onset occurred*. Roughly 76% of disabled workers received all accommodations required where the onset occurred at their present employer, compared to 52% of disabled workers where the onset occurred with a previous employer. At least one accommodation was *not* provided for 24% of disabled workers where the onset occurred at their present employer compared to 48% of disabled workers where the onset occurred with a previous employer.⁴⁸

By contrast, the relationship of likelihood of accommodation to age itself is more equivocal. The incidence of all accommodations being provided initially tends to decline with age up to about age 35-39 but, generally, increases thereafter. The incidence of at least one accommodation not being provided tends to increase up to the middle working years and then declines (Figure 3). Activity limitations that increase most with age (agility, mobility and pain) tend to have the highest incidence of receiving all accommodations that are required. This pattern may reflect the association of age with variables that may increase the likelihood of accommodation such as higher income, permanent employment status, unionization or long service associated in turn with onset of disability with the present rather than a previous employer. On the other hand, this pattern may also reflect in part selective attrition from the employed workforce over age 60 either due to retirement, or due employer decisions not to accommodate for reasons associated with age.

⁴⁷ These results are available from the authors.

⁴⁸ Detailed results are available from the authors.

Our descriptive analysis therefore suggests that, while age may play a role in the extent of provision of accommodations, any such role is likely to be the result of a complex set of interactions with other variables. In the next Part, we analyze the determinants of accommodation shortfalls and the likely interactions of age with those determinants.

IV. Why PWD do not Receive Accommodation, and What Age Has to Do with It

Here we first review the literature shedding light on the determinants of accommodation. We then provide an econometric analysis of the determinants of the accommodation shortfall in Canada.

A. Five Reasons Why Workers May Not Receive Disability Accommodations

Our analysis of the literature leads us to identify five distinct but often overlapping reasons why an employer might not provide an accommodation that a PWD needs to work. There is evidence suggesting that each plays a role in the shortfall between accommodations needed to work and those actually received by PWD in Canada, and that most interact with age in important ways.

1. No accommodation enabling sufficient productivity

In some instances there may be no accommodation that can prevent a significant gap in productivity (understood as the capacity of the employee to do the job in accordance with quality and quantity over time standards required of all employees) between a PWD and other workers in any job that the employer could offer. In such instances an employer would have little economic incentive to provide the accommodation, because it would have little incentive to hire or retain the employee in the absence of subsidies lowering that employee's unit labour costs. There are no studies that would allow us to determine how often this happens.

2. Lack of information

An employer may be unaware that the employee has a disability, or not know what the employee needs, or how an employee's needs can be met. An employee may be unwilling to disclose his or her disability for fear of being stigmatized or discriminated against by co-workers, managers or people within his or her community. Alternatively, an employee may not perceive his or her activity limitation to be a disability. Even where an employee discloses, the appropriate set of responses may be far from obvious. Accommodation can involve obtaining and interpreting medical assessments of activity limitation, and exploring a range of technical or administrative solutions to enable the worker to be productive. Smaller employers in particular, especially those lacking human resource staff, may have difficulty getting and interpreting information how to accommodate PWD and may therefore misperceive the costs and benefits of doing so, the true extent of an employee's disability, or the alternatives available.

Trust issues may also interfere with an employer's efforts to ascertain the extent of a disability and its associated activity limitations.⁴⁹ Case studies and small scale surveys done in Canada, and more extensive quantitative data from the United States, point to the importance of a culture of acceptance and employee involvement in accommodation decision making in facilitating open communication that enables accommodation.⁵⁰ Smaller workplaces and workplaces with a strong spirit of collaboration may be more likely to foster the trust required for open communication about accommodation.⁵¹ Conversely, substantial union-management animosity can hamper return to work efforts for PWD.⁵²

We do not have systematic data on how often Canadian employers lack the information that they need to accommodate their employees. There is some small scale survey evidence that suggests that among small and medium sized employers there is a perceived need for technical assistance to employers.⁵³ The fact that the United States Department of Labor has for more than 25 years maintained the Job Accommodation Network, a free advisory service available to employers of all sizes providing access

49 Williams & Whitt, K., & Taras, D. (2010). Disability and the performance Paradox: Can social capital bridge the divide? *British Journal of Industrial Relations*, 48, 534-559.

50 Kelly Williams-Witt, *Impediments to Disability Accommodation* 62 *Relations Industrielles/Industrial Relations* 405 (2007); Deborah M. Balsler, *Predictors of Workplace Accommodations for Employees With Mobility-Related Disabilities*, 39 *Administration & Society* 656-683 (2007); Gewurtz, R., & Kirsh, B. (2009). *Disruption, disbelief and resistance: A Meta-synthesis of Disability in the Workplace*. 34 *Work* 33 (2009)

51 R. Lysaght, T. Krupa & A. Gregory *Accommodations in the Workplace for Employees with Disabilities* (March 20, 2012) (unpublished report on file with authors), at 32.

52 Williams-Witt, *supra* at 421.

53 R. Lysaght, T. Krupa & A. Gregory, *Accommodations in the Workplace for Employees with Disabilities* (2012), at page 20 (unpublished report on file with author, finding that 55% of employers identified technical assistance to employers as an idea with merit.)

to expert consultants on workplace accommodation, also suggests an ongoing need for such information and advice.⁵⁴

We do know however that some of these information problems are more pronounced within the population of older workers. Workers who perceive that their activity limitations as a result of aging are less likely to report that they need workplace accommodations.⁵⁵ McMullin and Shuey suggest that this may be because they do not equate aging with disability but see it instead as a different process - “getting old” rather than acquiring a disability, or because they are more likely to fear the losing their jobs or work responsibilities if their activity limitations become known, or both.⁵⁶

3. *Prejudice and stereotypes*

The limited evidence available on attitudes of Canadians towards PWD suggests that many Canadians occasionally feel awkward around PWD and that some disabilities, particularly mental illness, make many quite uncomfortable.⁵⁷ There is no reason to think that employers and managers are systematically immune to this. Further, customer prejudices may create incentives for employers to remove PWD from interaction with customers. Employee prejudices can also create aversions to hiring or working alongside PWD.

Economic theory suggests that much of this discrimination should not survive in a competitive market. This is because non-prejudiced employers will be willing to hire lower cost but equally productive workers who face prejudice elsewhere, thereby gaining an advantage over their competitors.⁵⁸ There is

54 See <http://askjan.org/pubsandres/list.htm>

55 McMullin, Julie Ann and Shuey, Kim M. *Ageing, Disability and Workplace Accommodations* 26 *Ageing and Society* 831 (2006) at p. 841-4.

56 *Ibid.*

57 Michael J. Prince, *Pride and Prejudice: The Ambivalence of Canadian Attitudes toward Disability and Inclusion* (Toronto: Institute for Research on Inclusion and Society, York University, 2009)

58 Becker, Gary. *The Economics of Discrimination*. Chicago: University of Chicago Press, 1957; Heckman, James. “Detecting Discrimination,” *Journal of Economic Perspectives*. 12 (1998) 101-116. As Gunderson notes, evidence that competitive market forces can dissipate discrimination is given in several papers. See Morley Morley Gunderson, *Disability-Based Pay Gap Analysis Based on the 2006 Participation and Activity Limitation Survey (Literature Review)* (2009) Unpublished paper on file with authors) at 11.

evidence that such market forces do operate in practice.⁵⁹ There is also evidence that for many employers there is a good business case for accommodating many PWD. In two surveys of employers large majorities of those deciding to accommodate employees have reported direct and indirect benefits of doing so, including retaining a valued employee, increasing the employee's productivity, eliminating the costs associated with training a new employee, improving colleague interaction, increasing overall company morale and increasing overall company productivity.⁶⁰

Nonetheless there may also be economically rational reasons for employers to act on prejudices against PWD.⁶¹ First, discrimination can be profit maximizing if it occurs due to customer rather than employer prejudice. Second, employers may discriminate if they do not have sufficiently accurate information on employee qualifications, such information is too costly to obtain, and the employer

59 Gundersen 2009 at 4, citing Ashenfelter, Orley and Timothy Hannan. "Sex Discrimination and Product Market Competition: the Case of the Banking Industry," *Quarterly Journal of Economics*. 101 (1986) 149-173; Black, Sandra, and Elizabeth Brainerd. "Importing Equality? The Impact of Globalization on Gender Discrimination," *Industrial and Labor Relations Review*. 57 (2004) 540-559; Black, Sandra and Philip Strahan. "The Division of Spoils: Rent-Sharing and Discrimination in a Regulated Industry," *American Economic Review*. 91(2001) 814-831; Hellerstein, Judith, David Neumark and Kenneth Troske. "Market Forces and Sex Discrimination," *Journal of Human Resources*. 37 (2002) 353-380; Meng, Xin. "Gender Earnings Gap: The Role of Firm Specific Effects," *Labour Economics*. 11 (2004) 555-573

60 See [Schartz, Helen A](#); [Hendricks, D J](#); [Blanck, Peter](#), "[Workplace accommodations: evidence based outcomes](#)," *Work* (Reading, Mass.), (2006), 27 (4) , p. 345; and Job Accommodation Network "Workplace Accommodations: Low Cost, High Impact." Job Accommodation Network, Office of Disability and Employment Policy (US). 2011. Even at the level of direct benefits and costs the balance is positive for many employers. In one study 61% of responding employers estimated the direct benefits of having provided accommodation at more than \$1000. The mean benefit of providing accommodation being \$11,335 and the median was \$1000, indicating that a minority of accommodations had very large direct payoffs while the majority had relatively small ones. [Solovieva, Tatiana I](#); [Dowler, Denetta L](#); [Walls, Richard T](#), "[Employer benefits from making workplace accommodations](#)" *Disability and Health Journal*, (January 2011), 4(1), pp. 39 – 45. These studies of course only capture the experience of employers deciding to make accommodations and cannot be generalized to the entire employer population, many members of which may face very different cost-benefit structures.

61 See generally, Arrow, Kenneth J., "Models of Job Discrimination." In A.H. Pascal, (ed.) [Racial Discrimination in Economic Life](#). Lexington, Mass.: D.C. Heath, 1972a, 83-102; Arrow, Kenneth J., "Some Mathematical Models of Race Discrimination in the Labor Market." In A.H. Pascal, (ed.) [Racial Discrimination in Economic Life](#). Lexington, Mass.: D.C. Heath, 1972b, 187-204; Arrow, Kenneth J., "The Theory of Discrimination." In Orley Ashenfelter and Albert Rees, (eds.) [Discrimination in Labor Markets](#). Princeton, N.J.: Princeton University Press, 1973. 3-33; Arrow, Kenneth J., "What has economics to say about discrimination?" *Journal of Economic Perspectives*, Volume 12, Number 2, (Spring 1998). p. 91-100; Baldwin, Marjorie L. and William G. Johnson, "A critical review of studies of discrimination against workers with disabilities" in William M Rodgers III (ed.) [Handbook on the Economics of Discrimination](#). (Cheltenham, UK; Northampton, MA: Edward Elgar Publishing, 2006).

concludes that a group characteristic is sufficiently probative to provide a useful proxy for it.⁶² This is more likely to be cost-effective when employee turnover is high. Third, employers may have a degree of monopsony power over PWD with restricted mobility and high job search costs, and thus be able to pay them less without suffering competitive disadvantage in the labour market.⁶³ Most PWD are older adults, and consequently are often more limited in their ability to change jobs and acquire new job skills.⁶⁴ Fourth, it may require a costly investment of management effort to counter stereotyped views of PWD in the workplace, change hiring and other practices that reflect such views, and convince colleagues and managers that accommodation is simply non-discrimination rather than “special treatment”. Finally, for some employers the marginal gains in efficiency from eliminating discrimination may not be sufficient to make them a priority in the face of other imperatives competing for scarce management times and resources.

Therefore the economic forces that tend to erode discrimination may often operate only in the long run, if at all. They are less likely to operate where the employer's business model is not based on human capital (skills and abilities often acquired on the job) but rather on low labour costs, so that attracting and retaining the most talented workforce is not a prime motivation.

There are relatively few empirical studies addressing prejudice and stereotyping in employer accommodation decisions. The evidence that is available in U.S.-based studies indicates that prejudicial stereotypes play a role in the aggregate. One study found that employees who had a health condition that is typically more subject to discrimination are less likely to be accommodated.⁶⁵ Another found that managers are less willing to accommodate employees perceived to be ‘at fault’ by causing their disability.⁶⁶

62 Phelps, Edmund S., “The Statistical Theory of Racism and Sexism,” *The American Economic Review*, Vol. 62, No. 4 (Sept. 1972) pp. 659-661. This tendency may be accentuated by the fact that many employers have little experience in assessing the productivity of PWD because they are a relatively small portion of the labour force. Moreover, because PWD are a heterogeneous group even employers with experience may have difficulty in assessing the productivity of people with different limitations and how these would apply in different jobs. See Baldwin, Marjorie L. and William G. Johnson, “A critical review of studies of discrimination against workers with disabilities” in William M Rodgers III (ed.) *Handbook on the Economics of Discrimination*. (Cheltenham, UK; Northampton, MA: Edward Elgar Publishing, 2006), at p. 125

63 Gunderson, 2009 *supra* note at 3; Baldwin and Johnson 2006, *supra*, at 125

64 Baldwin and Johnson 2006, *supra*, at 125

65 Chirikos, Thomas N. “Will the costs of accommodating workers with disabilities remain low?” *Behavioral Sciences & the Law* (January 1999), 17 (1), pg. 93-106, at 104

66 Florey, Anna T and Harrison David “Responses to Informal Accommodation Requests from Employees with Disabilities: Multistudy Evidence on Willingness to Comply” *The Academy of Management Journal* (2000), 43(2), pp 224-233, at 230

The indications of these studies are supported by the considerable evidence that many employers have acted on stereotyped views of PWD in aspects of the employment relationship other than accommodation. Most of this evidence takes one of two forms. First, as noted above, researchers have documented a significant disability pay gap that cannot be attributed to productivity or other wage-determining characteristics. Studies have also found that the extent of the wage gap increases markedly with the visibility of the disability, with the extent of customer interaction required in the job, and with disabilities such as mental illness or disfigurement that score high on “social distance” scales, that is, that are subject with widespread stigmatization within society.⁶⁷

Second, studies of how employers evaluate the employability of PWD reveal that prejudices and stereotypes may be quite widespread. One set of studies infers the presence of discrimination in hiring decisions from differences in positive evaluation rates that cannot be accounted for by qualifications or experience. These studies examine how employers rate the employability or respond to unsolicited job applications of PWD and people without disabilities in reviews of actual or hypothetical resumes. They control for job qualifications and experience, and apply standard and objective qualification rating techniques. They have found that evaluations of PWD tend to be lower, even once such controls are taken into account.⁶⁸

67 Gunderson 2011, supra at 25; Baldwin, Marjorie and William Johnson. “Labor Market Discrimination Against Men with Disabilities in the Year of the A.D.A.,” *Southern Economic Journal*. 66 (2000) 548-566; Johnson, William and James Lambrinos. “The Effect of Prejudice on the Wages of PWDs,” *Policy Studies Journal*. 15 (1987) 571-590; Salkever, David and Marisa Domino. “Within Group ‘Structural’ Tests of Labor Market Discrimination: A Study of Persons with Disabilities,” National Bureau of Economic Research Working Paper 5931, 1997

68 See J. Bricourt & K. Bently, “Disability status and perceptions of employability by employers” (2000) 24:2 *Social Work Research* 87, (finding that when employers rated the employability of disabled and nondisabled job candidates who are equally qualified on a standard employability rating nondisabled job applicants were rated as more employable than job applicants with a severe disability); James Bordieri & David Drehmer, “Hiring Decisions for PWDs: Looking at the Cause” (1986) 16:3 *Journal of Applied Social Psychology* 197 (finding that when potential employers evaluated hypothetical resumes of candidates with a physical disability and an invisible disability, both the type of disability and cause of disability were determining factors in employers’ hiring decisions about disabled applicants, and that applicants with a physical disability that they did not cause were more likely to be perceived as employable); and Jean-Francois Ravaud, Beatrice Madiot & Isabelle Ville, “Discrimination towards people with disabilities seeking employment” (1992) 35:8 *Social Science & Medicine* 951 (in which unsolicited job applications from four groups - high and low qualified with a physical disability, and two control groups of high and low qualified people without disabilities – were mailed to employers. Ravaud found that highly qualified applicants without a disability were 1.78 times more likely than their disabled counterparts to get a positive response, while low qualified applicants were 3.2 times more likely to get a positive response. The level of discrimination increased as the size of the company increased); and James Bordieri, David Drehmer & Darrell Tayler “Work life for employees with disabilities: Recommendations for promotion” (1997) 40:3 *Rehabilitation Counselling Bulletin* 181 (finding that in promotion recommendations made by managers for disabled employees of a hypothetical company candidates with either depression or obesity are evaluated more negatively than their equally qualified nondisabled peers).

Another set of studies directly observes employer attitudes towards hiring PWD through surveys of and interviews with employer representatives. These studies find that stated concerns of employers about hiring PWD include that (1) they may lack knowledge, skills and abilities; (2) that they may not be able to perform physically demanding tasks; (3) that they will require costly accommodations; (4) that they may create safety problems; (5) that they may sue for discrimination; (6) they may hurt co-worker morale; and (7) they may affect consumers negatively.⁶⁹ Studies in this group have found that the type and severity of the disability of an employee or job applicant affects how employers perceive their employability, and in particular that employers have greater concerns about hiring people with intellectual or psychiatric disabilities compared to people with physical disabilities.⁷⁰ Qualitative

69 One small Canadian survey of employers found that “most employers interviewed had little experience with workplace accommodation (including job modification techniques), perceived it as a costly measure, and acknowledged it to occasionally influence hiring decisions.” See Canadian Abilities Foundation (2004, May). *Neglected or Hidden: Connecting Employers and People with Disabilities in Canada*. at page 3. Retrieved July 6, 2012, from GLADNET collection:
<http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1273&context=gladnetcollect&seiredir=1&referer=http%3A%2F%2Fwww.google.ca%2Furl%3Fsa%3Dt%26rct%3Dj%26q%3Dconnecting%2520employers%2520and%2520people%2520with%2520disabilities%2520in%2520ca>. Similarly, a focus group study of Canadian employers in the construction sector found that employers who do not hire persons with disabilities tend to cite safety risks, costs and productivity as their main concerns. Canadian Apprenticeship Forum, *Workplace accommodations for persons with disabilities in the skilled trades: A preliminary investigation*. Ottawa, Ontario: Canadian Apprenticeship Forum, 2009). See also Kaye, H. S., Jans, L. H., & Jones, E. C. (2011). *Why don't employers hire and retain workers with disabilities?* *Journal of Occupational Rehabilitation*, 21, 526-536; See Mark Lengnick-Hall et al. “Overlooked and underutilized, People With Disabilities are Untapped Resource” (2006) 47:2 *Human Resources Management* 255 (finding in interviews of 38 executives that concerns were that PWD “may lack necessary knowledge, skills, and abilities; may not be able to perform physically demanding tasks; may increase health care costs; will require costly accommodations; may create safety problems; may sue for discrimination; may hurt co-worker morale; and may affect customers negatively.” (Lengnick-Hall, 2006); Stephen et al. “Why don't employers hire and retain workers with disabilities?” (2011) 21:4 *Journal of Occupational Rehabilitation* 17 (concerns regarding cost as well as fears of legal liability as primary causes of employers' reluctance to hire PWD); Sonja Burnham & Warren Housely, “Pride in work: perceptions of employers, service providers and students who are mentally retarded and learning disabled” (1992) 15:1 *Career Development for Exceptional Individuals* 101 (finding that productivity and possible costs of supporting PWD were identified as factors that made employers hesitate to hire PWD); J. Kregel & D. Unger, “Employer perceptions of the work potential of individuals with disabilities: an illustration from supported employment” (1993) 3 *Journal of Vocational Rehabilitation* 17 (same); V.A. Johnson, R. Greenwood & K.F. Schriener “Work performance and work personality: employer concerns about workers with disabilities” (1988) 32 *Rehabilitation counselling Bulletin* 50 (finding significant employer concerns regarding the job performance of PWD); and D.R. Fuqua, M. Rathburn & E.M Gade “A comparison of employer attitudes toward the worker problems of eight types of disabilities” (1984) 15:1 *Vocational Evaluation and Work Adjustment Bulletin* 40 (same). There have also been a number of studies reporting that employers do not have negative conceptions or attitudes toward hiring PWD. Hernandez (2000) undertook a literature review to examine this contradiction. She found that the difference can be attributed to how attitudes are defined. Studies were more likely to have positive findings if they measured general attitudes towards PWD while studies that resulted in more negative results framed attitudes based on specific issues regarding employing PWD.

70 For example, Fuqua et al. conducted a survey of employers and found that 90% of employers would hire PW physical disabilities, 39% would hire someone with severe physical disabilities, and 20% would hire people with severe mental disabilities: Fuqua, Rathburn & Gade, 1988. See also: Johnson et al, 1988; T.L. Scheid, “Employment of individuals

studies of the employment experiences of PWD have tended to corroborate the inference of frequent labour market discrimination.⁷¹

A number of these generalizations are likely to be inaccurate and therefore to constitute prejudicial stereotyping. There appears to be no evidence that employing PWD generally creates safety problems.⁷² The studies discussed immediately above suggest that employers often evaluate the qualifications of PWD at a discount. Other studies have shown that there are few substantive differences in performance or productivity between non-disabled and disabled workers who are capable or completing assigned tasks.⁷³ (Of course the ability to complete assigned tasks may depend upon accommodation.) Studies of accommodation costs suggest that the direct costs of accommodation are usually very low.⁷⁴ The concerns of customers or the morale problems of other employees, if not

with mental disabilities: business response to the ADA's challenge" (1999) 17 Behavioural Sciences and the Law 73; B.J. Jones et al., "A survey of Fortune 500 corporate policies concerning the psychiatrically handicapped" (1991) 57 Journal of Rehabilitation 31; D.B. McFarlin, J. Song & M. Sonntag, "Integrating the disabled into the workforce: a survey of Fortune 500 company attitudes and practices" (1991) 4:2 Employee Responsibilities and Rights Journal 107. Edward Diksa & E. Sally Rogers, "Employer concerns about hiring persons with psychiatric disability: results of the employer attitude questionnaire" (1996) 40:1 Rehabilitation Counselling Bulletin 31 found that employers faced with a job applicant with psychiatric disabilities may be particularly concerned about the behavioural manifestations of a psychiatric disability or the effects of medication, and concerned that a new applicant with psychiatric disability would disrupt the ongoing functioning of the workplace.

71 For a literature review and study done in Canada, see Shier, M., Graham, J., Jones, M. (2009) "Barriers to employment as experienced by PWD: a qualitative analysis in Calgary and Regina, Canada" in *Disability and Society*, Jan2009, Vol. 24 Issue 1, p63-75

72 In fact one U.S.-based study found that employing PWD did not significantly affect workers' compensation claims, and did not pose a safety risk in the workplace. P.D. Blanck, *The Americans with Disability Act and the emerging workforce: employment of people with mental retardation*. (Washington D.C.: American Association of Mental Retardation, 1998).

73 See Williams-Witt and Taras, *supra*, at 536-7, and sources discussed therein; Brigida Hernandez and Katherine MacDonald, *Exploring the Costs and Benefits of Workers with Disabilities*, 76 Journal of Rehabilitation 15 (2010).

74 There is relatively little evidence available on the cost of accommodation in Canada. One survey of PWDs found that estimated annual workplace accommodation costs are under \$1,500 for almost all workers who have a disability, with 52% estimating that the cost of the needed accommodations would be less than \$500 per year. See Canadian Abilities Foundation, *supra*, at page 3. These findings are broadly consistent with a number of U.S. studies. Employers interviewed as part of a Job Accommodation Network (JAN) survey reported that almost half (46%) of their accommodations had no direct cost, while 45% paid a one-time cost for accommodation. The median for one-time expenditures was 500\$ (JAN, 2009). Three-quarters of surveyed employers indicated that the accommodations they implemented were either "very effective" or "extremely effective." Comparisons of the cost-benefit ratio of workplace accommodations show that the benefits generally outweigh the cost. (JAN, 2011) Henricks et al found that more than half (50.5%) of employers reported that accommodations were made at no cost, while 42.5% had a one-time accommodation expenditure, with a median cost of 600\$. See Henricks, G.J., Linda C. Batiste, Anne Hirsh. "Cost and Effectiveness of Accommodations in the Workplace: Preliminary Results of a Nationwide Study." 25 Disability Studies Quarterly, (2005). Solovieva et al. also surveyed employers and reported that 24% of accommodations made had no one-time or annual costs, while 55% reported a one-time cost for accommodation (mean of 2698\$, median of 500\$). See [Solovieva, Tatiana I; Dowler, Denetta L; Walls, Richard T](#), "Employer benefits from making workplace accommodations" *Disability and Health Journal*, (January 2011), 4(1), pp. 39 – 45. These figures may underestimate the cost of accommodation for PWD who are not yet employed, as workers requiring

based in actual or likely performance problems, must similarly be based on prejudicial stereotyping. It is interesting to note that employers with previous experience employing PWD have tended to have more positive attitudes toward hiring them and fewer concerns regarding their performance than employers with limited or no experience with this, which suggests that hiring PWD may lead to dispelling concerns or misconceptions.⁷⁵

In this context it is possible to make sense of findings that aging, but not age, reduces the likelihood of accommodation. An earlier Canadian study found that age alone was not a statistically significant determinant of receiving accommodation,⁷⁶ and that once older workers had identified a need for accommodation they were less likely to report an unmet need for accommodation, possibly because of greater length of service associated with skills and experience.⁷⁷ On the other hand the same study found that older workers requiring accommodation were twice as likely to receive a needed accommodation if they attributed their disability to a cause other than ageing.⁷⁸ This suggests that age affects the likelihood of accommodation through its association the aging process. The perception that an employee is aging may aggravate the potential for stereotyping of PWD as having declining abilities or posing increased risks of accommodation costs, safety problems or negative customer response. It may also affect employer perceptions of the likelihood of return on investment in accommodation, discussed immediately below.

4. Cost of accommodation

accommodation that have little or no cost are more likely to be accommodated in the first place. In addition, these figures represent the direct costs of accommodation but may not account for indirect costs such as managerial time: Chirikos, Thomas N. "Will the costs of accommodating workers with disabilities remain low?" *Behavioral Sciences & the Law* (January 1999), 17 (1), pg. 93-106.

75 Diksa, Edward & E. Sally Rogers. "Employer concerns about hiring persons with psychiatric disability: results of the employer attitude questionnaire." *Rehabilitation Counselling Bulletin*, Volume 40, Issue 1, 1996. p. 31; Levy, J.M., Jessop, D.J., Rimmerman, A., Francis, F., & Levy, P.H.. "Determinants of attitudes of New York state employers towards the employment of persons with severe handicaps." *Journal of Rehabilitation*, Volume 59, 1993. 49-55; Levy, J.M., Jessop, D.J., Rimmerman, A., & Levy, P.H. "Attitudes of Fortune 500 corporate executives toward the employability of persons with severe disabilities: A national study." *Mental Retardation*, Volume 30, 1992. 67-75; McFarlin, DB, J Song, & M Sonntag. "Integrating the disabled into the workforce: a survey of Fortune 500 company attitudes and practices." *Employee responsibilities and rights Journal* Volume 4, Issue 2, 1991, p. 107-123. See also Kaye, Stephen; Lita H Jans; Erica C Jones. "Why don't employers hire and retain workers with disabilities?" *Journal of Occupational Rehabilitation*, Volume 21, Issue 4, 2011, pp. 526 – 536 (finding that that lack of awareness of disability and accommodation issues contributed to employers' negative perceptions of PWD).

76 Campolieti, 2004, p. 563

77 McMullin and Shuey, at 844.

78 McMullin & Shuey, 2006, p. 841

All other things being equal, labour cost minimization improves profitability. As noted above, the actual cost of most accommodations is often very small. However, it is likely that in a non-negligible minority of cases this will not be the case.⁷⁹ Some accommodations will impose significant marginal costs on employers, especially where they are specific to a particular employee. Direct costs may include the costs of evaluating the employee's needs and the costs of purchasing assistive technology. Indirect costs may include the management effort required to change workplace attitudes and practices. Where the costs of those accommodations exceed the costs associated with replacing an employee who needs them to work productively, an employer will have incentives not to provide them. These incentives will be stronger with respect to employees who have less job-specific skills and human capital. Conversely they should be weaker where a one-time investment in accommodation is likely to be amortized over a long job tenure. They may also be weaker as employee pay increases and the cost of accommodation approaches a threshold of negligibility in relation to total compensation.

Uncertainty about potential additional future costs may also contribute to employer reluctance to accommodate, particularly at the point of hire, where the employee's skills, abilities and work ethic are relatively unknown to the employer. By hiring or retaining a disabled employee an employer may see itself as assuming a risk of large direct or indirect costs of future accommodation, and of a failed employment relationship which could entail lost productivity, termination costs, new recruitment costs, and indirect costs associated with harm to morale among other employees. If an employer considers these costs to be high enough even a small but non-negligible risk that it will end up paying them may matter enough at the margin, especially in hiring decisions in competitive labour markets.

There is considerable evidence that cost factors do affect willingness to accommodate. U.S.-based statistical studies have found that accommodation varies negatively with the probable cost of the accommodation requested.⁸⁰ Very severe disability, which is likely to be positively associated with

79 In the one available recent study on accommodation costs in Canada 16% of PWDs surveyed said that they anticipated annual costs of accommodation in excess of \$1500. For a smaller minority of accommodations it is likely that the costs will be much higher. In a U.S. study Solovieva et al. found in a small survey of employers that for the 18% of employers who indicated a non-zero annual cost of accommodation the mean annual cost was \$14,628, and the median \$2000. The large difference between the mean and the median implies that in a small minority of cases annual costs they will quite high. Solovieva et al, *supra*, at 43

80 Florey & Harrison, 2000, *supra* at p. 225 (finding that accommodation requests that were more costly or required larger outlays of resources received more negative responses than requests that were less costly, and that relatively costly accommodations such as special transportation or special equipment are least common, all other things equal.) See also Chirikos, Thomas N. "Will the costs of accommodating workers with disabilities remain low?" Behavioral Sciences & the Law (January 1999), 17 (1), pg. 93-106, at 96; Chirikos, Thomas N. "Employer accommodation of older workers with disabilities" in P. D. Blanck (Ed.), *Employment, disability, and the Americans with Disabilities Act* (Evanston: Northwestern University Press, 2000) at p. 242-243); and Richard v. Burkhauser, Maximilian D. Schmeiser and Robert R. Weathers II, *The Importance of Anti-Discrimination and Workers' Compensation laws on the Provision of Workplace Accommodations Following the Onset of Disability*, 65 Industrial and Labor Relations Review 101 (2012)

cost, has been shown to decrease the likelihood of accommodation in US and Canadian studies.⁸¹ Similarly, in U.S. and Canadian studies factors indicating that an employer is more likely to get a return on investment in accommodation increase the likelihood of accommodation, while factors indicating the opposite have the opposite effect. Specifically, studies done in the United States have found that full-time, permanent employees are significantly more likely to receive accommodation such as physical alterations of the work environment, building, or equipment,⁸² and that more productive employees are more likely to be accommodated than less productive ones, all other things being equal.⁸³ Canadian studies have found that workers with a university education⁸⁴ or who received vocational training prior to a disabling accident and returned to work with the same employer were more likely to receive accommodation.⁸⁵ Canadian employees with a higher socio-economic status were also more likely to receive accommodation, while low-income employees were more vulnerable to a lack of accommodation.⁸⁶ Canadian employees who experience disability onset resulting from a workplace accident are more likely to receive accommodation from the accident employer than from a subsequent employer, likely in part because they have firm-specific skills.⁸⁷ Employees with high social capital within a firm (good relationships with colleagues and supervisors) are more likely to receive accommodation.⁸⁸

Perceptions of aging may interact in important ways with cost considerations. An employer may consider that significant one time investments in accommodation are less likely to yield a positive return if the employee is likely to retire in the near term. If the employer perceives the aging process as

81 PWD who reported having a 'mild' condition were more likely to have their accommodation needs met compared to those with a 'very severe' condition: see McMullin, Julie Ann and Shuey, Kim M. *Ageing, Disability and Workplace Accommodations* 26 *Ageing and Society* 831 (2006) at p. 841. Campolieti found that employers are more likely to accommodate an employee who had not lost a significant amount of their physical ability to do their pre-injury jobs: Campolieti, Michele. *The Correlates of Accommodations for Permanently PWDs* 43 *Industrial Relations: A Journal of Economy and Society* 546 (2004) at p. 546.

82 Deborah Balser, *Predictors of Workplace Accommodation for Employees with Mobility-Related Disabilities*, 39 *Administration and Society* 656 (2007), at p. 671

83 Florey & Harrison, 2000, p. 230; Chirikos, 1999, p. 102

84 McMullin and Shuey, at 841-2. Note however that Campolieti does not find an effect for education level, including university education. Campolieti 2004, at 562-3.

85 Campolieti, 2004, p. 548.

86 McMullin & Shuey, 2006, p. 841

87 See Campolieti 2004 at 563-4 (finding that 49% of those who returned to work with their pre-injury employer received accommodation, compared to 41% of PWD who found a new employer).

88 Lysagt et al., supra, at 33; Williams-Whitt, K., & Taras, D. (2010). Disability and the performance Paradox: Can social capital bridge the divide? *British Journal of Industrial Relations*, 48, 534-559.

aggravating a disability and likely to lead to further declines in employee health, it may discount the future value of such investments to account for the risk that an employee will either require further accommodations or no longer be able to work. The risk of future expensive accommodations may also be added to the employer's assessment of the present costs of retaining or hiring the employee. These considerations may be particularly influential where an older worker with a disability is seeking new employment.

5. *Commitment to Rules, Standards, Practices or Norms with Adverse Impacts*

Most employers maintain policies and rules aiming at an efficient and consistently administered workplace. Notwithstanding the valid business purposes of those standards, they may adversely affect the ability of PWD to perform their duties and remain in their jobs. By definition, failing to adapt such standards to the conditions of PWD amounts to a lack of accommodation that impairs employment and career prospects.⁸⁹ Human rights commission records provide myriad examples, ranging from visual acuity standards that systematically deny employment opportunities, to drug testing policies under which employees who test positive are automatically suspended or terminated, to performance evaluation systems that take into account absences due to illness.⁹⁰

Less visible but equally problematic for PWD can be informal norms defining appropriate conduct and determining who is considered a full contributor in the workplace. For example, one study of difficult accommodation cases in Canada documented how managers and coworkers treated recurring absences as a sign of lack of commitment. Employees who were often absent as a result of a disability often became over time less trusted as team members, in some instances losing the "social capital" that they had previously accumulated through good performance.⁹¹ This eventually impaired career progression and could undermine the employment relationship. These kinds of informal norms may be particularly problematic for older workers with disabilities who may need flexible schedules in order to cope with fatigue.

Such formal and informal norms may be resistant to change because they embody bureaucratic judgments about work requirements or reflect workplace cultural norms. Nonetheless, as with stereotyping, a competitive labour market should over time provide incentives to alter such rules and practices, and to accommodate PWD in order to attract and retain the best available workforce. Again

⁸⁹ Note that this lack of accommodation is not necessarily unlawful. See *infra* notes... an accompanying text.

⁹⁰ Annette Nierobisz and Charles Theroux *Disability Complaints Submitted to the Canadian Human Rights Commission: An Analysis of Systemic Barriers Reported by Complainants*. (2009) (on file with author)

⁹¹ Williams-Witt and Taras, *supra*, at 551.

however, there may be countervailing incentives. The costs of changing rules and practices may be significant. Further, employers may have monopsony power with respect to PWD which enables them to retain highly qualified PWD notwithstanding a lack of career advancement prospects.⁹² Finally, the gains in profitability or efficiency or other organizational goals resulting from accommodation may be small relative to those offered by other initiatives competing for scarce management attention. While there is no survey evidence that allows us to estimate the prevalence of such rules and practices, it is noteworthy that their adverse impacts have been grounded many employment-based complaints filed with Canadian Human Rights Commission obtaining a remedy by way of Commission-approved settlement.⁹³

Thus the literature suggests that while in some cases it may be impossible to productively accommodate PWD, it is likely that lack of information, stereotyped views of PWD, economic incentive structures, and workplace cultural and institutional norms play a role in the accommodation gap. This confluence of factors appears to be further complicated by perceptions of the aging process which make older workers less likely to disclose their disabilities, and employers less likely to accommodate disabilities if they are attributable to aging.

B. Econometric Analysis of Determinants of the Accommodation Gap

Our analysis complements the earlier of Canadian study of McMullin and Shuey, which used 2001 PALS data to empirically study the determinants of unmet accommodation needs in Canada. Using 2006 PALS data, we provide a more detailed focus on the potential determinants of accommodation shortfall, using regression analysis to estimate the relative importance of various potential determinants of accommodation shortfalls⁹⁴ Standard errors were calculated for the population, which permits

92 See sources cited in note , supra.

93 See Nierobisz and Theroux, supra, at 11 (documenting 133 such complaints between 1997 and 2006).

⁹⁴ All computations were performed using STATA/MP 11. As a check against programming errors, the “unweighted” frequencies of all variables created were compared to the corresponding “unweighted” frequencies for each variable reported in the PALS User Guide. These comparisons were done using PWD sample (without any further restrictions). Our analysis focuses on the sub-sample of “employed disabled” workers. However, unemployed persons may experience more “discrimination” than do persons in the employed sample – that is, the unemployed may be more likely to need an accommodation, and discrimination based upon the fact they need more accommodation may contribute to why they are (more likely to be) unemployed.

If, as we might expect, the unemployed have greater unmet needs, then the measured shortfall in the analysis may understate the actual extent of the shortfall amongst all those PWD in the labour force because unemployed PWD are more likely to need an accommodation; the analysis is therefore subject to selection effects. We expect, however, that our empirical estimates, based on the employed sample, represent a lower bound for the results that would be obtained for a broader sample of the employed and unemployed.

inferences to be based upon the entire population (not just the sample). The dependent variable is accommodation shortfall, which is constructed on the basis of counts of the number of required accommodations that are *not* provided to each person.⁹⁵ We then estimate a count regression equation that explains variation in the “number” or “count” of the number of accommodations that are not provided, across disabled workers.⁹⁶

Based upon the profile of incidence of limitations and shortfall in provision of required accommodations, and the empirical research literature (reviewed above), we formulated a number of hypotheses regarding the determinants of shortfalls.

First, previous studies lead us to expect that stereotyping of disability and aging may play a role in the observed aggregate accommodation shortfall. Based on the work of McMullin and Shuey, we expect where disabilities are attributed to “getting old” – and therefore becoming less vigorous and productive – employees will be less likely to receive accommodation. We explore this hypothesis by interacting age with disability severity.

⁹⁵ Specifically, for each person, the number of required accommodations and the number of accommodation provided was calculated. Then, using this information, for each person, the shortfall measure was calculated as the difference between the number of required accommodations and the number of provided accommodations (given the accommodation was required).

As noted above (refer to section III), the analysis is based upon self-reported employee perceptions of whether or not a specific accommodation is required, or is provided with an (appropriate) accommodation in the workplace. Consequently, there is some probability that the employee’s perception of being disabled, or of being accommodated (given they are actually disabled), is incorrect; that is, the reported incidence of limitation/accommodation may be subject to reporting bias. Since we lack information regarding the probability that an employee’s “perception” of being disabled (or requiring an accommodation) is (in)correct, and the probability that an employee who is not disabled (or does not require an accommodation) is misclassified as being disabled (or requiring an accommodation), we cannot identify the “true” disability rate in the sample. We therefore expect there to be some measurement error, but we expect our estimates to represent a lower bound.

⁹⁶ We estimate a Poisson regression. The data include 14 required accommodations and 13 provided accommodations. For each person a dummy variable was defined that takes a value of 1 if an accommodation is required and another dummy variable that takes a value of 1 if the accommodation is provided, *given* that it is required. It is important to note that provided accommodations are a sub-sample of required accommodations, in that the provided accommodation is only defined for an individual if the individual reports that the accommodation is required (i.e. the required accommodation for a given accommodation dummy variable takes a value of 1). Since there are 14 required accommodations and only 13 provided accommodations, accommodation provision is only defined over 13 required accommodations. Note as well that required accommodations, provided accommodations, and the shortfall for each person are based solely upon the subset of accommodations that individual workers believe they require.

Second, we expect that the cost of an accommodation will be negatively associated with the likelihood of an accommodation being provided. The literature suggests that cost considerations are likely to affect the likelihood of accommodation of older workers through employee return on investment considerations. Although the PALS does not provide direct measures of the costs of an accommodation, it does have information on proxies for costs which we expect, when taken together, to provide useful insights. We examine the effects of disability severity on the likelihood of receiving accommodation.⁹⁷ Disability severity is, however, probably only a very crude proxy for costs.⁹⁸ Other proxies may be more suitable. We therefore examine the effects of individualized accommodations which are likely to be associated with higher direct costs of accommodation relative to accommodations for which the costs can be spread over many workers requiring the same or similar accommodation (e.g., ergonomic work station versus accessible washrooms). We also consider the effects of a series of variables that are expected to increase the likelihood that an employer will receive a positive return on its accommodation investment, and which previous studies have found to influence the likelihood of receiving an accommodation, including: permanent employment status;⁹⁹ full time employment status; university education; income level; and disability onset occurring at the current employer.

Third, we expect that institutional rules and workplace cultural norms may influence the likelihood of receiving accommodation. The PALS provides relatively little information on these types of potential factors. However, as noted above, Williams-Witt and Taras propose that, in many workplace cultures, regularity of work attendance is perceived as a measure of commitment to both colleagues and the employer; and that the degree of commitment can affect the willingness to accommodate in the first instance, as well as the permanence of accommodations over time. Accordingly, we expect that workers' needs for flexible (modified) scheduling would be less likely to be accommodated. This may be particularly important to older workers, for whom we expect scheduling flexibility to be a frequently required accommodation.

⁹⁷ Note that disability severity is likely an imperfect proxy for costs; and it may also be associated with increased stigmatization and stereotyping on the one hand, and with objective inability to meet productivity requirements (even with accommodation), on the other. Further caution is applied in relation to psychological or psychiatric disorders because the accommodation of such disabilities may not cost that much more as severity increases, whereas the stigma and likelihood of discrimination probably does.

⁹⁸ On the one hand, severity may be associated with increased stigmatization and stereotyping. This would tend to overstate its effects as a proxy for costs. On the other hand employers may be less likely to question the bona fides of more severe disabilities or of the needs for accommodation associated with them. In that case severity would understate the effects of cost considerations.

⁹⁹ The permanent worker variable may also capture differences in how the labour market (or employers) may treat workers (e.g., in internal job opportunities or responsibilities).

Fourth, since unions typically have a significant positive impact on a range of non-pay workplace outcomes¹⁰⁰ we expect a positive union effect on the likelihood of accommodation. Older workers are more likely to be unionized.¹⁰¹ However, while the power of unions to enforce legal duties to accommodate should increase the likelihood of accommodation, unions may also be associated with employers having commitments to bureaucratic rules, and with seniority systems that can conflict with potential accommodations. Further, as noted above, the literature suggests that, where there is a history of conflictual labour relations, this may decrease the likelihood of accommodation. Therefore, while we expect, based on the broader literature on unions, that being covered by a union may, on net, result in a higher chance of accommodation, there is no strong expectation regarding the magnitude of the union effect.

Finally, we hypothesize that if the limitation onset occurred while employer with the present employer (especially if the limitation is due to a work related accident) the worker is more likely to be accommodated. This is for two reasons. First, employers may be more likely to be sympathetic in such cases. Conversely they may be less sympathetic to accommodating limitations where the onset occurred at a previous employer or occurred during non-work time, situations in which the current employer had no responsibility to ensure worker safety. Second, employers may perceive such accommodations to have a more certain return on investment. Having seen the employee's performance prior to the onset of disability they may believe that they are in a better position to judge the employee's productive potential. On the other hand, the law should limit employer tendencies to act on such considerations. Employers have a legal obligation under workers' compensation legislation to return employees who are injured on the job to employment, regardless of whether original disability onset was with another employer. Workers' compensation boards often use case management systems in place to ensure that such obligations are complied with. Further, a refusal to accommodate a disability will often be unlawful and is more detectable and more easily challenged under human rights law than a refusal to hire. As discussed above, return on investment considerations are likely to accentuate the effects of onset with a previous employer in the situation of older workers.

We therefore expect that variation in the extent of the shortfall in accommodation may depend upon a range of explanatory variables, including personal socio-demographic characteristics of disabled workers, their occupation, the nature of the severity of the limitation, the type of accommodation required, and the characteristics of the employer and industry. A list of variables used in the base specification of the regression is presented in Appendix Chart A.¹⁰²

¹⁰⁰ Gunderson, M. and D. Hyatt. 2009. "Union Impact on Compensation, Productivity, and Management of the Organization." In M. Gunderson and D. Taras, eds., *Canadian Labour and Employment Relations*. Toronto: Pearson. pp. 383-402.

¹⁰¹ Human Resources and Skills Development Canada, Unionization Rates, http://www4.hrsdc.gc.ca/.3ndic.1t.4r@-eng.jsp?iid=17#M_3 visited January 9, 2013.

¹⁰² The variable "paid worker" was excluded from all equations because it is perfectly collinear with other variables.

Age is included in level form and in squared form to allow for nonlinearities in the effect, since the older a person becomes, the more likely they are to develop new limitations or additional severity in pre-existing limitations.¹⁰³ Since (at least some) limitations are progressive, the longer the person has had a limitation, the greater the severity of the limitation. Consequently, the limitation duration variable is included in level form and in squared form to allow for nonlinearities of this effect. Since many of these variables are positively associated with age, we expect that simply examining age per se would over-estimate the effects of age on accommodation. We account for this by controlling for age effects independent of other relevant variables. This also permits us to consider distinct age-related disabilities which may be a function of the ageing process. Finally, we found that limitation type and accommodation requirements were highly collinear and could not therefore both be included in the estimation. We opted to focus on accommodation requirements as these are directly probative with respect to employer cost considerations.

The results for the base specification of the shortfall count regression are presented in Table 6. The partial effect of a specific variable on the shortfall depends upon the particular value of the explanatory variable used to estimate the effect, so the partial response varies across individuals. Therefore we calculate the “average marginal effect”, which is computed by taking an average of the “marginal effect” calculations across observations; for continuous variables (e.g., employment hours) it is calculated as the derivative and for binary categorical (dummy) variables it is calculated as the difference in the probability of the variable assuming category 1 versus the probability of assuming category 0 (e.g., the first difference between the probability of being male versus the probability of being female, for a dummy variable that takes on a value of 0 if the individual is male and 1 if female).

Neither age nor age-squared were statistically significant on their own. Interestingly, severity was significant and negative, indicating that higher severity of limitation is associated with a smaller shortfall, and thus with a greater willingness to accommodate of the part of employers. In our descriptive statistics increased severity was associated with increased accommodation shortfall. The regression results suggest that it is not severity per se that produces this association, but rather something else that is associated with severity. It is possible that higher levels of severity may reduce the likelihood that an employer will question the bona fides of an accommodation request. This may account in part for the negative relationship between severity itself and accommodation shortfall.

¹⁰³ This effect may not be strong in this analysis because we are already using the sub-sample of disabled workers.

On the other hand, age interacted with severity is significant and positive. This suggests that the older the worker, and the more severe the limitation, the greater the accommodation shortfall. In order to further assess the relationship between age and the severity of limitations, we calculated the shortfall (i.e., average effects) by both the severity of disability and age. These results are presented in the first two rows of Table 7, for less severe limitations, and more severe limitations, respectively. In addition, the marginal effect of increased severity (i.e., the difference between the average effects of less severe versus more severe) is calculated at each age (row 3) along with the level of significance of the marginal effect (in row 4).

The results from Table 7, which are depicted in Figure 4, show that for less severe limitations, the shortfall in provision of accommodations decreases with age; and for limitations that are more severe, the shortfall increases with age. The marginal effect of increased severity (i.e., the difference in the average effects between less severe and more severe) increases dramatically with age for disabled workers aged 40 years and older; and the marginal effect is statistically significant. These results, taken together, suggest that age and severity in combination have a sizable and increasing effect on the shortfall, with age. This is consistent with the theory that employers will consider the potential return on investment in accommodating severe disabilities, and may perceive that such returns will tend to decline with the age of the employee. This may in turn reflect perceptions that age increases the risk that disabilities will deteriorate, perhaps reflecting the idea that the worker is just “getting old”. This would lower expectations of worker productivity and increase the perceived risk that the employee will withdraw from the workforce.

Consistent with the theory that costs matter, we also found that a number of accommodations that are individually provided (and thus may be more costly to employers relative to accommodations that could be provided to the benefit of a large number of disabled workers, such as ramps) have a (statistically significant) positive effect on the size of the shortfall. These include: job redesign (modified or different duties); modified hours or days, or reduced work hours; human support; and special chair or back support.¹⁰⁴

Similarly, consistent with the theory that return on investment matters, holding a permanent job is associated with a smaller shortfall. However, higher weekly hours of work are associated with a larger shortfall, a finding that invites further inquiry. Despite the fact that a university education was

¹⁰⁴ Required accommodations that had a negative (but not statistically significant) effect on the shortfall included: handrails or ramps; and accessible washrooms. These types of accommodations are provided to groups and are useful to both employees & “customers”.

Required accommodations that had a positive (but not statistically significant) effect on the shortfall included: technical aids; computer (with Braille, large print, voice recognition, or a scanner), communication aid; ergonomic work station; appropriate parking; accessible elevator; and accessible transportation.

associated with increased likelihood of accommodation and low income with decreased likelihood in our descriptive statistics, neither is statistically significant in the regression analysis. This may, however, be due to income and education variables being collinear.

Being covered by a union is, as expected, associated with a smaller shortfall and is statistically significant. Having French as one's native language is significant and associated with a larger shortfall, a finding that calls for further study.¹⁰⁵ Finally, we found significant industry effects which also call for additional study.

We varied the base model to estimate alternative specifications. One excluded industry. Another excluded industry and occupation. These specifications did yield some differences in results, but the differences were not consequential. A third alternative specification included onset with previous (versus current) employer.¹⁰⁶ In this specification the coefficient of the "onset at current employer" variable had, as expected, a negative effect on the magnitude of the shortfall – consistent with the hypothesis that employers provide accommodation differentially depending upon when/where the onset occurred.¹⁰⁷ While other coefficient estimates, as well as the significance of some of the other variables, were affected by including this variable in the specification, this was likely due to the sample being greatly reduced relative to the base specification, rather than the effect of onset capturing variation in other explanatory variables.

Our findings are consistent with the hypotheses developed based on our literature review. They suggest that cost considerations are likely an important determinant of the accommodation shortfall, and that views of ageing interact with these considerations in significant ways. Whether or not disability onset occurred with the current employer also appears to matter, and this effect is also likely to interact with perceptions of aging for reasons discussed above. We also find industry effects that may be consistent with this analysis: it is possible that the different role of labour costs in overall cost structures, and the absence of profit motive in the public sector, may account for these effects.

¹⁰⁵ One possible contributing factor to this result is linguistic constructions of activity limitation. The term disability has no precise analog in French. The most widely used similar concept in French is handicap, which tends to connote a more severe condition. This linguistic usage in the survey may in turn affect perceptions of activity limitations by both workers and employers in ways that influence the accommodation outcomes reported in the survey.

¹⁰⁶ The variable concerning "Where Employed When First Experienced Limitation" derives from where the onset of the limitation occurred – the present employer, a previous employer or not at work.

¹⁰⁷ Interpreting the coefficient on this variable must be done with caution, because a worker may change their job to improve the extent of accommodation that they receive. For example, if an employee experiences the onset of a limitation at employer A, but employer A does not accommodate (or weakly accommodates), then the worker may change employers to obtain one that (more) fully accommodates the limitation.

V. Reasons for Rethinking the Canadian Policy Approach

Our analysis indicates that many PWD in Canada do not receive needed accommodations, that an aging population stands to increase this trend, and that the causes of this are often preventable. Lack of information can be cured; stereotyping can be discouraged; rules and norms that unnecessarily disadvantage PWD can be modified; the allocation of accommodation costs to private employers could be altered by public program, if policy makers value the public benefits sufficiently.

Canadian governments employ a range of policy tools to foster workplace accommodation. Human rights statutes in all Canadian jurisdictions impose duties to accommodate disabled workers on employers. Workers' compensation laws impose duties to return workers with an injury or illness arising out of or in the course of employment to work, and many workers' compensation agencies provide case management services that monitor and support employers in carry out the duty.¹⁰⁸ This benefits workers with disabilities resulting from such illnesses or injuries. In addition, a range of federal and provincial programs fund employment support services for PWD.¹⁰⁹ The services are generally provided by non-governmental not-for-profit social service agencies. Some agencies work with employers to ensure accommodations. However, funding constraints often limit the ability of employment service agencies to deal with accommodation issues.¹¹⁰ Finally, Quebec has implemented a temporary wage subsidy program with the aim of helping the long term unemployed

108 Manitoba: s.49.3 of the *Worker's Compensation Act*; New Brunswick: s.42.1 of the *Workers' Compensation Act*; Newfoundland and Labrador: s.89-89.4 of the *Workplace Health, Safety and Compensation Act*; Nova Scotia: s.89-101 of the *Workers' Compensation Act*; Ontario: s.41 of the *Workplace Safety and Insurance Act*; Prince Edward Island: s.86.1-86.12 of the *Workers' Compensation Act*; Quebec: ss.32, 234, 251 of *Act Respecting Industrial Accidents and Occupational Disease*; Yukon: s.41 of the *Workers' Compensation Act*. See also s. 34 of the *Canada Labour Standards Regulations* and s.239.1 of the *Canada Labour Code*.

109 See for example the Federal Opportunities Fund: [web address]; Multilateral Framework for Labour Market Agreements For Persons With Disabilities:
http://www.hrsdc.gc.ca/eng/disability_issues/labour_market_agreements/framework.shtml.

110 See, Ontario Disability Employment Network, Submission to the Social Assistance Review Commission (Revised – June 21, 2012) <http://www.odenetnetwork.com/category/government-issues> (noting that “Current funding models do not provide sufficient resources for effective marketing campaigns and often limit longer term coaching, trouble shooting and other interventions, customer service and quality assurance”)

regain a connection to the labour market.¹¹¹ Such programs may indirectly facilitate workplace accommodation by enabling some PWD to obtain employment that might otherwise lie out of their reach. However, the only measure universally available to employees is the duty to accommodate under human rights law. Accordingly, this Part will first identify gaps in the reach and coverage of application of the duty. Then it will point to policy and program approaches that that could be considered to address those gaps.

A. Gaps in the Operation of the Duty to Accommodate

Human rights codes across Canada prohibit disability discrimination in employment. The Ontario Human Rights Code, for example, provides every person with “a right to equal treatment with respect to employment without discrimination” on the basis of disability.¹¹² The concept of equal treatment without discrimination in employment includes not only freedom from direct or intentional discrimination but also freedom from adverse impacts on the basis of disability resulting from facially neutral practices, standards or rules, unless the same are bona fide occupational requirements.¹¹³ A bona fide occupational requirement is one that is adopted for a purpose rationally connected to the performance of the job, in an honest and good faith belief that it is necessary to that purpose, and is in fact reasonably necessary in that way.¹¹⁴ To show that a practice, standard or rule is reasonably necessary, it must be demonstrated that it is impossible to accommodate individual employees sharing the characteristics of the claimant without imposing undue hardship on the employer.¹¹⁵ The duty to accommodate thus flows directly from the right to equal treatment without discrimination, and ends at the imposition of undue hardship on an employer.

The first thing to note is that the duty simply sets a minimum standard. It does not generally require that an employer advance to the frontiers of inclusivity by adopting proactive programs to create an

111 For an evaluation of the impacts of Action emploi program, see Guy Lacroix, *Assessing the Impact of a Wage Subsidy for Single Parents on Social Assistance* (Montreal: Centre Interuniversitaire de recherche en analyse des organisations) (2010)

112 s.5

113 *Ontario (Human Rights Commission) v. Simpsons Sears Ltd.* [1985] 2 S.C.R. 536

114 *British Columbia (Public Service Employee Relations Commission) v. British Columbia Government Service Employees Union*, [1999] 3 S.C.R. 3 (“Meiorin”)

115 *Ibid.*, at para 54.

inclusive climate (such as performance measures for managers, systems to ensure that career advancement is based on merit, or formal mentorship programs). This is true even where such measures would not constitute an undue hardship, if such measures are not necessary to enabling a PWD to perform the job in a way that meets the employer's business purposes. This means that if there are opportunities to advance inclusiveness in the workplace by providing information on or a business case for such practices, focusing only on compliance with the duty to accommodation will, by design, not seize them.

Second, given the undue hardship threshold, the duty to accommodate does not require employers to implement all possible accommodations. The duty to accommodate does not, for example, require employers to retain an employee who cannot meet an employer's general productivity requirements in any position that an employer can offer him or her.¹¹⁶

Third, there are good reasons to think that there is significant non-compliance with the duty to accommodate and that more could be done to secure compliance.¹¹⁷ There are evident tensions between the widespread employer incentives and motivations discussed in Part IV and what the law requires. Of the five likely causes of failure to accommodate discussed in Part IV above, four, if acted upon, are likely to frequently result in non-compliance with the duty. Ignorance of the law and lack of information about possible accommodations are not generally defences to a claim that an employer has violated rights to equal treatment without discrimination. Once an employer is aware of an employee's disability, it has a positive duty to investigate alternative approaches, and to be “innovative yet practical” in seeking an accommodation.¹¹⁸ While an employee's failure to disclose will often provide a defense, employers have a duty to inquire into whether an employee has a disability requiring accommodation when there is reason to suspect that a disability may be the cause of an employee's performance issues.¹¹⁹ The fact that widely held perceptions about PWD will often constitute

116 *Hydro Quebec v. Syndicat des employées de techniques professionnelles et de bureau d'Hydro Quebec, Section locale 2000 (SCFP-FTQ)*. [2008] 2 S.C.R. 561

117 It is difficult to precisely gauge the extent of employer compliance with the duty to accommodate PWD in Canada. Without knowing where the undue hardship threshold lies in a particular case, one cannot say with legal certainty that denial of a particular accommodation runs afoul of the law. Further, without knowing where the undue hardship threshold is likely to lie given the characteristics of the employee, employer and particular accommodation needed for the employee to work, one cannot predict with accuracy whether a particular type of accommodation denial is likely to run afoul of the law. There are unfortunately no systematic empirical studies of such questions.

118 Meiorin, at para 64.

119 S. Michelle Blendell et al, “Advice to Unions and Employers Regarding the Accommodation of ‘Invisible’ Disabilities,” November 2007, p. 11; Kelly Williams-Whitt, “Impediments to Disability Accommodation,” *Industrial Relations*, (2007) Volume 62, Number 3, p. 417; *Canada Safeway v. United Food and Commercial Workers (UFCW), Local 401* (1992), 26 LAC (4th) 409, 83 WAC 306 (Alta CA) at 433-434

inaccurate stereotypes when applied to specific individuals means that acting on those perceptions is likely to constitute unlawful discrimination. Human rights law requires that employers undertake individualized assessment of skills and abilities rather than acting upon generalized notions about PWD.¹²⁰ Similarly, acting on concerns that hiring PWD may hurt co-worker morale or may affect consumers negatively, if not grounded in an assessment of the capabilities of the particular individual in question, constitutes unlawful discrimination because it gives effect to the prejudices of others.¹²¹ Acting on concerns that an employee may file a discrimination complaint violates human rights laws, as it effectively seeks to pre-empt the exercise of legal rights. Further, the law requires employers to absorb some significant costs of accommodation, notwithstanding economic incentives that will often operate to the contrary. As the Supreme Court of Canada puts it in the leading case “the use of the term “undue” infers that some hardship is acceptable”.¹²² Adjudicators and arbitrators have consistently held that employers must absorb non-trivial costs to accommodate employees.¹²³ Finally, rights to be free of discrimination apply to workplace rules, standards, practices and informal norms, and employers are responsible for ensuring that those yield to the duty to accommodate.

Further, securing compliance with the duty to accommodate PWD poses particular and acute challenges. These challenges set it apart from much of labour and employment law. They lie in the burdens imposed by human rights laws where stereotyping and prejudice remains widespread in the general population, in the particular cost structures of the duty to accommodate disabilities, in the difficulty of regulating hiring practices, and in the frequent difficulty or complexity of proving discrimination.

The duty to accommodate asks many employers to change workplace practices and/or to absorb direct and indirect costs that they would not otherwise. This, admittedly, is also true for labour and employment laws which enact other rules embodying social norms, such as respect for freedom of association, minimum wage or minimum vacation standards, or requirements that family responsibilities be accommodated by granting parental leave. Our legal system expects employers to

120 *Eaton v. Brant County Board of Education* [1997] 1 S.C.R. 241, at para 69. The Supreme Court of Canada recognized the need for individualized accommodation because the ground of disability “means vastly different things depending on the individual and the context.”; Ontario Human Rights Commission, “Principles of Accommodation.” Visited July 12, 201, <http://www.ohrc.on.ca/en/guidelines-accessible-education/principles-accommodation>

121 See for example *Shuswap Lake General Hospital v. British Columbia Nurses’ Union (“Lockie Greivance”)* [2002] B.C.C.A.A.A. No. 21, at para 115

122 *Central Okanagan School District No. 23 v. Renaud* [1992] S.C.J. No. 75; 2 S.C.R. 970 at para 19.

123 See generally Kevin D. MacNeill, *The Duty to Accommodate*, at pp 12-23 to 12-31.

play their part as corporate citizens by respecting those norms and by paying the costs associated with them. However, here the employer is often asked to counter the belief systems of many employees, managers and customers, or asked to alter cultural or formal norms that have long governed workplace practices. It may therefore face resistance on many fronts, resistance it is asked to counter for the benefit of a relatively small number of its employees, or a single individual. Further, as noted above, in a substantial minority of disability discrimination cases the direct costs of accommodation will be both significant and specific to the individual employee, a fact which separates those cases from many other aspects of human rights law,¹²⁴ and most of the rest of employment law as well.

The hiring and pay gap studies discussed above suggest that much of the disadvantaging of PWD in the labour market takes place at the point of hire. There are good reasons to think that hiring decisions may be both particularly prone to discrimination and particularly difficult to regulate. At this stage the employer has no investment in or personal relationship with the potential employee which might counter economic or other motivations to discriminate. The range of factors at play and the subjectivity of many hiring criteria make proving discrimination difficult. Further, because workers generally have little investment in the relationship with a potential employer they may be reluctant to devote personal resources (which may be very scarce if the worker is unemployed) to pursuing a formal legal complaint. For all these reasons one would expect that current or former employees would be much more likely to seek and obtain redress for discrimination than prospective ones, and therefore more likely to benefit from the influence of human rights law. There is indirect evidence in Canada that this is the case. One study showed that disabled workers who become unemployed faced greater difficulties in gaining new employment, and ended up accepting lower rates of pay than their experience and qualifications would ordinarily merit, and that they had previously enjoyed.¹²⁵ The authors conclude that PWD who remain with their employer after disability onset likely benefit from institutional pressures such as human rights law protections, and thus benefit from accommodations paid for by the employer, while those who must seek new employment end up effectively paying for the direct costs of their accommodations such as physical modifications of the workplace (though not for reduced physical demands) through reduced wages and benefits.

Finally, determining whether an employer has discriminated contrary to human rights law can be complex and therefore time-consuming and expensive.¹²⁶ This will further limit the reach and

124 Michael Lynk, *Disability and the Duty to Accommodate* [2001-2002] *Labour Arbitration Yearbook* 51

125 Morley Gunderson & Douglas Hyatt, "Do Injured Workers pay for reasonable accommodation?" *Industrial & Labour Relations Review*. Volume 50, Issue 1. (October 1996): 92

126 A range of factors must be considered in determining whether accommodation must be provided, including physical and mental abilities of the employee, potential effects on health and safety, "financial cost, disruption of a collective agreement, problems of morale of other employees, [and] interchangeability of work force and facilities . *Central Alberta Dairy Pool v. Alberta (Human Rights Commission)* SCC [1990], 72 S.L.R. (4th) 417 at p. 439. For a good discussion of the

influence of complaint-driven enforcement. Relatively few complainants are likely to have the financial and emotional resources to invest in a potentially lengthy and litigious process. Moreover, relatively few non-unionized employees will be willing to challenge their employer in this way during the life of the employment relationship.¹²⁷

For similar reasons, two prominent public reviews of human rights enforcement in Canada have concluded that a complaint-driven model is an outdated and ineffective means of addressing forms of discrimination that are systemic – that is, embedded in pervasive attitudes, workplace cultural norms, rules, practices or cost structures rather than being individual acts of prejudice.¹²⁸ This conclusion about the overall framework of human rights law is particularly apt in the case of disability accommodation at work. Each report went on to recommend other options (most of which were not implemented), as did the OECD in a recent report on Canada's approach to integrating PWD into the workforce.¹²⁹

To sum up, human rights law's duty to accommodate has an important role to play in ensuring that PWD receive accommodations that they need to work – a role that will become more important as Canada's population ages. It is confined to a limited role, however, in that it does not necessarily require or even speak to best practices, and therefore does not seize some opportunities to advance accommodation that are likely quite readily available. It also does not address accommodation beyond a threshold of employer undue hardship and may therefore do little for many of the most severely disabled workers. Finally, within the scope its mandate, the influence of duty to accommodate is often

difficulties posed by this type of complexity for adjudicating human rights claims see Jean R. Stemlight In Search of the Best Procedure for Enforcing Employment Discrimination Laws: □ A Comparative Analysis 78 Tulane L. Rev 1401 (2004)

127 See Federal Labour Standards Review Commission, *Fairness At Work: Labour Standards for the 21st Century* (Ottawa: HRSDC, 2006) at Chapter 9, section 2A, noting that “ that 92% of all complaints under Part III were filed by workers who were no longer employed in the same workplace. This striking statistic suggests that some workers are so concerned that they will be fired that they abandon their statutory rights.” Ian R. Mackenzie, “Legal Rights for Persons with Disabilities in Canada: Can the Impasse be Resolved?” (1997) 29 *Ottawa Law Review* 152-213, p. 177.; Catherine R. Albiston, “Mobilizing Employment Rights in the Workplace,” in Laura Beth Nielson, Robert L. Nelson (eds.) *Handbook of Employment Discrimination Research* New York; London: Springer, 2008, p. 304

128 Canadian Human Rights Act Review Panel, *The Report of the Canadian Human Rights Review Panel*, online: Canadian Human Rights Commission <<http://www.chrc-ccdp.ca/default-eng.aspx> ; Ontario Human Rights Code Review Task Force, *Achieving Equality*, (Toronto: Ontario Ministry of Citizenship, 1992).

129 See the recommendations contained in OECD *Breaking the Barriers – Synthesis Report*, supra.

hampered by having limited reach because of complaint-driven enforcement, in the face of widespread stigmatization and frequent contrary economic incentives.

B. The Need to Evaluate Other Policy Options

There are therefore many reasons to look beyond the current approach to fostering workplace accommodation of PWD. As noted above, Canadian public reviews have already offered detailed options for consideration. Moreover, these issues are not unique to Canada and policy makers in a number of industrialized countries have begun to experiment with alternative means of promoting workplace accommodation of disabilities.¹³⁰ We might learn from those experiences as well.

These analyses and experiences suggest three categories of options. We outline them here to illustrate the need for policy analysis and not to endorse any particular approach. The first comprises measures adding to the policy toolkit fostering compliance with the duty to accommodate itself. In general terms the possibilities for this last category include enhancing enforcement mechanisms or complementing them with supports to employers and employees. The second includes measures to support employers by disseminating information including practical advice and business case analysis or reducing the costs of employing disabled workers through carefully targeted wage or accommodation subsidies.¹³¹ A third approach would support employees outside of the human rights litigation process. We will briefly describe the possibilities within each approach.

To increase the influence of complaint-driven enforcement policy makers might consider enhancing deterrent and reputational sanction effects of remedies under human rights law and the capacity of employees to properly frame and pursue complaints. The latter objective could be served by providing free or low cost legal advice and representation to complainants.¹³² Deterrence might be strengthened by making use of exemplary damages in cases of deliberate non-compliance, by making greater use of regulatory fines, or by publishing lists of employers found not to be in compliance. In addition or in the alternative, Human Rights Commissions could be empowered to bring strategic litigation

130 OECD, *Breaking the Barriers – Synthesis*, supra, chapters 3, 5.

131 OECD *Breaking the Barriers - Synthesis*, at 134-8

132 For two examples of proposals, see Ontario Task Force on the Human Rights Code, supra, at 50-61; Canadian Human Rights Review Panel, supra, at 74-79.

addressing systemic problems within large employers or problematic industry sectors.¹³³ However, given the difficulties discussed above of regulating hiring decisions, there is a serious risk that strengthened enforcement might have adverse unintended consequences for PWD in the form of reduced employment opportunities. There is some evidence that this is already happening under current less aggressive enforcement strategies.¹³⁴ Alternatives to complaint-driven enforcement should also be considered.

One set of alternatives would require that employers positively take steps to reduce the risk that employees will be denied accommodation in violation of the duty. Such pro-active risk management systems have been required in legislation addressing bullying, harassment, and occupational safety and health in the workplace.¹³⁵ Another model is provided by the Integrated Accessibility Standards regulation made under the Accessibility for Ontarians with Disabilities Act 2005.¹³⁶ When it takes effect it will, among other things, require employers to develop policies for accommodating persons with disabilities, to inform their employees of those policies, notify applicants for jobs or promotions of those policies and that accommodations are available, and to develop procedures for creating individual accommodation plans with the involvement of the employee and his or her representative.

Going one step further still, legislators could mandate employment equity plans under which employers seek systematically to hire and retain a workforce that is representative of the labour force available to them. The federal jurisdiction has long experience with such legislation, and there is some evidence that employment equity can be effective in improving the opportunities of PWD.¹³⁷

133 See for example Ontario Task Force on the Human Rights Code, *supra*, at 73-74; Canadian Human Rights Review Panel, *supra*, at 63-66.

134 DeLeire, Thomas, "The unintended Consequences of the Americans with Disabilities Act." *Regulation*. (2000), 23 (1), pp. 21-24; Acemoglu, D., Angrist, J.D., "Consequence of employment protection? The case of the Americans with Disabilities Act.," *Journal of Political Economy*. (2001) 19, p. 915-950; Gunderson and Hyatt, *supra*.

135 See for example Occupational Health and Safety Amendment Act (Violence and Harassment in the Workplace) 2009 S.O. 2009 C.23

¹³⁶ See ONTARIO REGULATION 191/11, printed in *The Ontario Gazette*: June 18, 2011, sections 20-32 http://www.e-laws.gov.on.ca/html/source/regs/english/2011/elaws_src_regs_r11191_e.htm

137 **Employment Equity Act S.C. 1995, c. 44.** Corporations that have an explicit hiring policy regarding PWD are more likely to be willing to hire PWD, as 64% had hired a PWD compared to only 40% of companies without explicit hiring policies: Levy, Joel; Jessop, Dorothy; Rimmerman, Arie; Levy, Phillip, "Employment of People with Severe Disabilities in Large Businesses in the United States," *International journal of rehabilitation research*, (1991) Volume 14, Issue 4, p. 323-32. There is some evidence that employment equity plans will be more effective if they are used in

Adapting a proposal by the Canadian Human Rights Act Review Panel¹³⁸, such proactive approaches might be supported by internal responsibility systems in the form of joint employer-employee accommodation committees.

Another set of alternatives would focus on information, advice and financial supports to employers. As noted above, many Canadian employers appear to be interested in information programs. The disjuncture between the very often positive experience of employers who hire PWD, on the one hand, and the pervasiveness of misperceptions of accommodation costs and risks on the other, suggests the potential value of such programs. These could provide employers with information on accommodations costs, benefits and solutions, with access to disability management consultants, or with mentoring services.¹³⁹ Australia has recently followed the U.S. lead in implementing such a program.¹⁴⁰ Canadian governments might consider such a program, or increase support to employment services agencies while requiring that appropriate quality standards be met. These supports might conceivably be extended to include making case management services like those provided under workers' compensation systems available at the joint request of the employer and employee. Such approaches are unlikely to be effective however in cases where the costs or risks of accommodation are high enough to influence accommodation decisions. To deal with those situations, given the importance of the public goods at stake, policy makers might consider an accommodation subsidy program.¹⁴¹ Australia, for example, has recently implemented one from which Canada might learn.¹⁴²

Finally, active supports to employees outside of the complaint process might include information and awareness resources explaining the duty to accommodate and the concept of disability protected by

tandem with programs aimed at the supply side of the labour market, such as job-training and employment programs specifically targeted to assist PWD with finding and supporting them in jobs that suit their abilities: Bond, Gary R. "Supported Employment: Evidence for an evidence-based practice." *Psychiatric Rehabilitation Journal*, Vol 27, No. 4, Spring 2004.

138 Canadian Human Rights Review Panel, *supra*, at 27-34.

139 Bostrand, "Tilting at Windmills: Changing Attitudes Toward People with Disabilities," *Journal of Rehabilitation*, (2006) Volume 72, Issue 1, p. 4.; Prince, Michael. "Advancing the Participation of People with disabilities in the labour market: International Practices and Lessons," presentation to Human Resources and Skills Development Canada (HRSDC), January 2012.

140 See Job Access Australia's web page: <http://jobaccess.gov.au/Home/Home.aspx>

141 For examples see OECD, *Breaking the Barriers - Synthesis*, at 136-8

142 For an overview see http://jobaccess.gov.au/Employers/Financial_help_and_wages/Pages/home.aspx.

law, and assistance with resolving accommodation problems prior to litigation.¹⁴³ Assistance could also take the form of employment support services focused on the workplace accommodation process.

The details of each specific option would need to be defined and the costs and benefits of each carefully evaluated. But addressing them is a logical next step if Canadian policy makers are to reduce the workplace accommodation shortfall experienced by PWD.

VI. Conclusions

Our results indicate that there is a sizable difference across workplaces between the extent of the accommodations that Canadians report that they need to work and the accommodations that they actually receive. This shortfall appears to arise because of the confluence of information gaps, problematic stereotypes, and counter-productive economic incentives. These factors likely interact with the perceptions of the ageing process, by employers, co-workers, and the public, in ways that we expect would exacerbate the shortfall as the population ages.

These shortfalls suggest the presence of persistent market failures in relation to the optimal overall provision of workplace accommodations. This is potentially problematic in relation to the impact that persistent shortfalls may have on workplace level outcomes including productivity and equity. It is problematic as well because of the broader public good that the provision of workplace accommodations serves. The presence of negative effects on these outcomes are therefore quite concerning from the standpoints of efficient and equitable economic and social policy, as well as human rights policy.

The existence of shortfalls in accommodation is a complex problem that probably requires a multi-faceted policy approach. It is not likely to be solved under the current legal and policy structures, which are fragmented across jurisdictions and which may simply not address some of the underlying problems that systematically give rise to the shortfalls. The only “universal” measure within the current framework is human right law’s duty to accommodate. This requirement is, however, enforced through a reactive and complaint-driven legal regime that is unlikely to reach widely enough into workplace decision making to substantially close the accommodation gap. While a patchwork of other laws and programs support the goal of increased accommodation, they are far from universal, and their actual effectiveness remains largely unevaluated.

These considerations point to the need to consider a coordinated national strategy to address workplace accommodation gaps. This approach has the benefits of providing a degree of universal measures that enhances access to effective accommodation across all employees and workplaces, as a basic entitlement, while ensuring that there is minimal opportunity for economic incentives (especially cost

¹⁴³ New Zealand provides free access to mediation to resolve disputes arising out of the employment relationship. See Employment Relations Act 2000, Public Law No. 24, section 144.

considerations) to under-accommodate to be actualized. A federalist national approach would, however, run counter to the recent strategy of the federal government (and desire of the provinces) to devolve a broad range of labour market and workplace related programs, that have traditionally been offered nationally, to the provinces. Even so, a universal programme could take the form of highly coordinated provincial policies that, taken together, provide fairly complete coverage.

Population (and workforce) ageing has emerged as one of the most important and sustained policy challenges for governments as well as employers. We expect that the issue of affording PWD effective workplace accommodation will only increase in importance over time. Addressing the accommodation gap may require a better compliance strategy for human rights law, a new focus on providing better information about disabilities and accommodation, and possibly direct economic supports to employers and employees. Other countries, such as Australia and the United States, are experimenting with approaches that could inform Canadian policy. Canadian governments, employers and unions should support a comprehensive review and assessment of options to address the accommodation gap, and consider the desirability of a nationally coordinated policy effort to close it.

Table 1: Profile of the Population

Panel A: Disability Status by Labour Force Status									
Labour Force Activity	Not Disabled			Disabled			Total		
	Population Size	Percentage	Sample Size	Population Size	Percentage	Sample Size	Population Size	Percentage	Sample Size
Employed	14,456,831	68.81	31,034	1,109,583	28.61	5,531	15,566,414	62.55	36,565
Unemployed	919,346	4.38	2,421	116,260	3.00	719	1,035,606	4.16	3,140
Not in the Labour Force or Retired	5,633,787	26.81	21,289	2,652,367	68.39	10,346	8,286,154	33.29	31,635
Total	21,009,964	100.00	54,744	3,878,210	100.00	16,596	24,888,174	100.00	71,340
Panel B: Disability Status by Employment Status									
Disability	Employed			Unemployed			Not in the Labour Force or Retired		
	Population Size	Percentage	Sample Size	Population Size	Percentage	Sample Size	Population Size	Percentage	Sample Size
Not Disabled	14,456,831	92.87	31,034	919,346	88.77	2,421	5,633,787	67.99	21,289

Disabled	1,109,583	7.13	5,531	116,260	11.23	719	2,652,367	32.01	10,346
Total	15,566,414	100.00	36,565	1,035,606	100.00	3,140	8,286,154	Total	31,635

Note: In our sample we include all people 15 and older. This has the effect of lowering the employment rate figures that we report in relation to those reported by Statistics Canada, since Statistics Canada reports employment rate figures for the 15 to 64 year old age range.

Table 2: Incidence of Disability and Disability Type By Age in the Overall Population, 2006

Incidence of Disability															
Age	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
No	96.63	96.85	95.78	95.82	94.46	93.02	91.11	90.09	88.1	87.49	86.64	82.79	74.03	88.55	80.89
Yes	3.37	3.15	4.22	4.18	5.54	6.98	8.89	9.91	11.9	12.51	13.36	17.21	25.97	11.45	19.11
Incidence of Hearing Limitation															
No	99.73	99.61	99.39	99.4	99.15	98.66	97.94	97.24	96.78	95.57	95.24	88.91	86.53	95.91	90.44
Yes	0.27	0.39	0.61	0.6	0.85	1.34	2.06	2.76	3.22	4.43	4.76	11.09	13.47	4.09	9.56
Incidence of Seeing Limitation															
No	99.75	99.68	99.66	99.62	99.68	98.79	98.43	98.5	98	98.95	98.65	97.8	99.06	99.83	100
Yes	0.25	0.32	0.34	0.38	0.32	1.21	1.57	1.5	2	1.05	1.35	2.2	0.94	0.17	0
Incidence of Communication Limitation															
No	99.56	99.57	99.48	99.37	99.49	99.6	99.4	99.56	99.42	98.99	99.58	99.09	99.63	99.2	100
Yes	0.44	0.43	0.52	0.63	0.51	0.4	0.6	0.44	0.58	1.01	0.42	0.91	0.37	0.8	0
Incidence of Mobility Limitation															
No	98.97	98.97	97.97	98.31	97.31	96.56	95.19	94.48	92.6	92.15	93.74	90.77	81.61	95.53	95.75
Yes	1.03	1.03	2.03	1.69	2.69	3.44	4.81	5.52	7.4	7.85	6.26	9.23	18.39	4.47	4.25
Incidence of Agility Limitation															

No	99.35	99.03	98.23	98.13	97.47	96.2	94.81	94.71	92.53	93.77	92.76	91.93	86.55	97.27	90.86
Yes	0.65	0.97	1.77	1.87	2.53	3.8	5.19	5.29	7.47	6.23	7.24	8.07	13.45	2.73	9.14
Incidence of Pain Limitation															
No	98.48	98.26	97.4	96.95	95.76	94.67	93.12	92.47	91.31	91.73	91.27	90.85	90.04	97.28	97.91
Yes	1.52	1.74	2.6	3.05	4.24	5.33	6.88	7.53	8.69	8.27	8.73	9.15	9.96	2.72	2.09
Incidence of Other Limitation															
No	97.9	98.31	98.21	97.97	98.15	97.86	98.16	97.48	97.67	97.52	98.51	97.81	97.43	96.15	92.19
Yes	2.1	1.69	1.79	2.03	1.85	2.14	1.84	2.52	2.33	2.48	1.49	2.19	2.57	3.85	7.81
Incidence of Mental or Behavioural Disorder															
No	98.99	99.19	99.24	99.11	99.05	99.13	99.24	98.88	99.47	99.52	99.87	100	100	100	100
Yes	1.01	0.81	0.76	0.89	0.95	0.87	0.76	1.12	0.53	0.48	0.13	0	0	0	0

Note: N = .

Table 3: Incidence of Limitations by Type of Limitation and Age Among the Disabled, 2006

Limitation Related to:	Age												Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	
Hearing	8.15	12.23	14.41	14.27	15.25	19.12	23.19	27.82	27.01	35.42	35.67	57.78	23.38
Seeing	7.36	10.13	8.06	9.08	5.76	17.32	17.62	15.17	16.79	8.36	10.11	8.36	13.27
Communication	12.9	13.76	12.43	15	9.25	5.75	6.75	4.39	4.84	8.05	3.11	3.8	7.4
Mobility	30.68	32.81	48.1	40.52	48.45	49.31	54.05	55.72	62.13	62.7	46.88	57.23	52.16
Agility	19.34	30.72	41.95	44.74	45.65	54.41	58.4	53.38	62.71	49.74	54.2	47.35	51.53
Pain	45.17	55.1	61.69	72.9	76.49	76.37	77.36	75.96	72.97	66.06	65.32	44.36	71.37
Other	62.28	53.49	42.44	48.63	33.42	30.66	20.71	25.45	19.55	19.8	11.17	14.28	28.73
Mental or Behavioural	29.85	25.53	18.04	21.37	17.1	12.46	8.59	11.31	4.41	3.84	0.96	0	11.56
Sample Size = 5531													

Table 4: Incidence of the Provision of Accommodation, By Selected Characteristics, Among the Disabled, 2006

1. Sex	Male	Female	Total	
All Accommodations Provided	64.13	66.59	65.48	
At Least One Accommodation Not Provided	35.87	33.41	34.52	
2. Urban\Rural	Rural	Urban	Total	
All Accommodations Provided	57.39	67.32	65.48	
At Least One Accommodation Not Provided	42.61	32.68	34.52	
3. Mother Tongue English	No	Yes	Total	
All Accommodations Provided	59.66	67.97	65.48	
At Least One Accommodation Not Provided	40.34	32.03	34.52	
4. Mother Tongue French	No	Yes	Total	
All Accommodations Provided	67.08	56.93	65.48	
At Least One Accommodation Not Provided	32.92	43.07	34.52	
5. Mother Tongue Other	No	Yes	Total	
All Accommodations Provided	65.93	62.71	65.48	
At Least One Accommodation Not Provided	34.07	37.29	34.52	
6. Education	HS or Less	Trade or College	University	Total
All Accommodations Provided	65.94	66.80	70.11	65.48
At Least One Accommodation Not Provided	34.06	33.20	29.89	34.52
7. Marital Status	Not Married	Married	Total	
All Accommodations Provided	66.42	64.99	65.54	
At Least One Accommodation Not Provided	33.58	35.01	34.46	

8. Low Income After Tax	No	Yes	Total	
All Accommodations Provided	65.84	60.73	65.14	
At Least One Accommodation Not Provided	34.16	39.27	34.86	
9. Permanent Job	No	Yes	Total	
All Accommodations Provided	56.78	66.17	65.22	
At Least One Accommodation Not Provided	43.22	33.83	34.78	
10. Covered by a Union	No	Yes	Total	
All Accommodations Provided	62.60	68.28	65.01	
At Least One Accommodation Not Provided	37.4	31.72	34.99	

Table 5: Incidence of the Provision of Accommodation by Severity and Duration of Disability Among the Disabled, 2006

Panel A: Limitation Severity	Mild to Moderate		Severe to Very Severe				Total	
All Accommodations Provided	73.87		51.55				65.48	
At Least One Accommodation Not Provided	26.13		48.45				34.52	
Panel B: Limitation Duration	0	Less Than 1 Year	1 to 2 Years	2 to 4 Years	5 to 9 Years	10 to 19 Years	20+ Years	Total
All Accommodations Provided	74.74	72.92	62.86	69.93	71.92	69.15	55.70	65.48
At Least One Accommodation Not Provided	25.26	27.08	37.14	30.07	28.08	30.85	44.30	34.52

Table 6: Accommodation Shortfall Count Model, 2006

Explanatory Variable	Coefficient	Robust Std Error	T-statistic
Socio-Demographic:			
Age	.0214763	.0275421	0.78
Age ²	-.0003997	.0003309	-1.21
Female	.1340753	.1332817	1.01
Urban	-.1437515	.1408827	-1.02
French Lang.	.4755561	.1230248	3.87 *
High Sch. Or less	-.09949	.1900613	-0.52
College	-.0513459	.1764288	-0.29
Low Income	.1820994	.1618279	1.13
Employ. Income	.0009001	.0037917	0.24
Weeks of Work	-.0057154	.0036047	-1.59
Weekly Hrs.	.01254	.0055531	2.26 *
Unionized	-.3522681	.1432433	-2.46 *
Establishment Characteristics:			
Mult. Loc. Est.	.038134	.1246882	0.31
Est. Employ 20-99	.1598877	.1412719	1.13

Est. Employ 100-500	.2021651	.1566428	1.29
Est. Employ. > 500	.1535466	.2203756	0.70
Perm. Job	-.4945425	.1245058	-3.97 *
Limitation Characteristics			
Severe Limitation	-1.398177	.4401152	-3.18 *
Severity x Age	.0382399	.0098622	3.88 *
Duration of Limitation	-.0352752	.0405882	-0.87
(Limitation Duration) ²	.0022526	.0019078	1.18
Required accommodation for:			
Job Redesign	.6815819	.1210568	5.63 *
Modified Hrs/Days	.2929345	.1293028	2.27 *
Human Support	.712689	.2297022	3.10 *
Tech'l Aids	.5249036	.3292562	1.59
Computer Rel'd	.2852184	.4062403	0.70
Communication Aid	.4199403	.4341765	0.97
Erg. Work Stn	.2645379	.1538458	1.72
Chair/Back Support	.8497635	.1280411	6.64 *
Rails/Ramps	-.0685896	.2317287	-0.30

Parking	.0987135	.2254575	0.44
Elevator	.2291976	.3003553	0.76
Access. Washroom	-.3784936	.3052991	-1.24
Access. Transp.	.2649653	.2447035	1.08
Other	-.1789952	.2045711	-0.87
Industries (relative to manufacturing):			
Public Admin	-.078444	.294375	-0.27
Education	.3423767	.3403352	1.01
Health	.1079979	.2890244	0.37
Primary	-.5299788	.6301795	-0.84
Construct	.0745128	.2971367	0.25
Trade	.0917851	.2707577	0.34
Transport	-.2269318	.3256468	-0.70
Services	.1671101	.2570806	0.65
Leisure	.1927776	.2742997	0.70
Occupations (relative to Management):			
Business, Fin, Admin.	.8583863	.4267402	2.01 *
Sciences	.9570989	.4833181	1.98 *

Health	.942703	.4883741	1.93
Educ. & Government	.8604595	.4407455	1.95
Culture	1.078649	.5824983	1.85
Sales & Serv.	.9502137	.4220042	2.25 *
Operators	1.279455	.4276349	2.99 *
Unique to Primary	.9241717	.8949513	1.03
Proc/Manuf/Utilities	1.344987	.4614294	2.91 *
CONSTANT	-2.865338	.7476675	-3.83

* = Statistically Significantly different from 0 at the 95% level ($t > 1.96$)

Dependent Variable = Shortfall (number of required accommodations that are not provided to each person).

Poisson regression where Number of observations = 1536

Wald chi2(53) = 730.53

Log pseudolikelihood = -743.59926

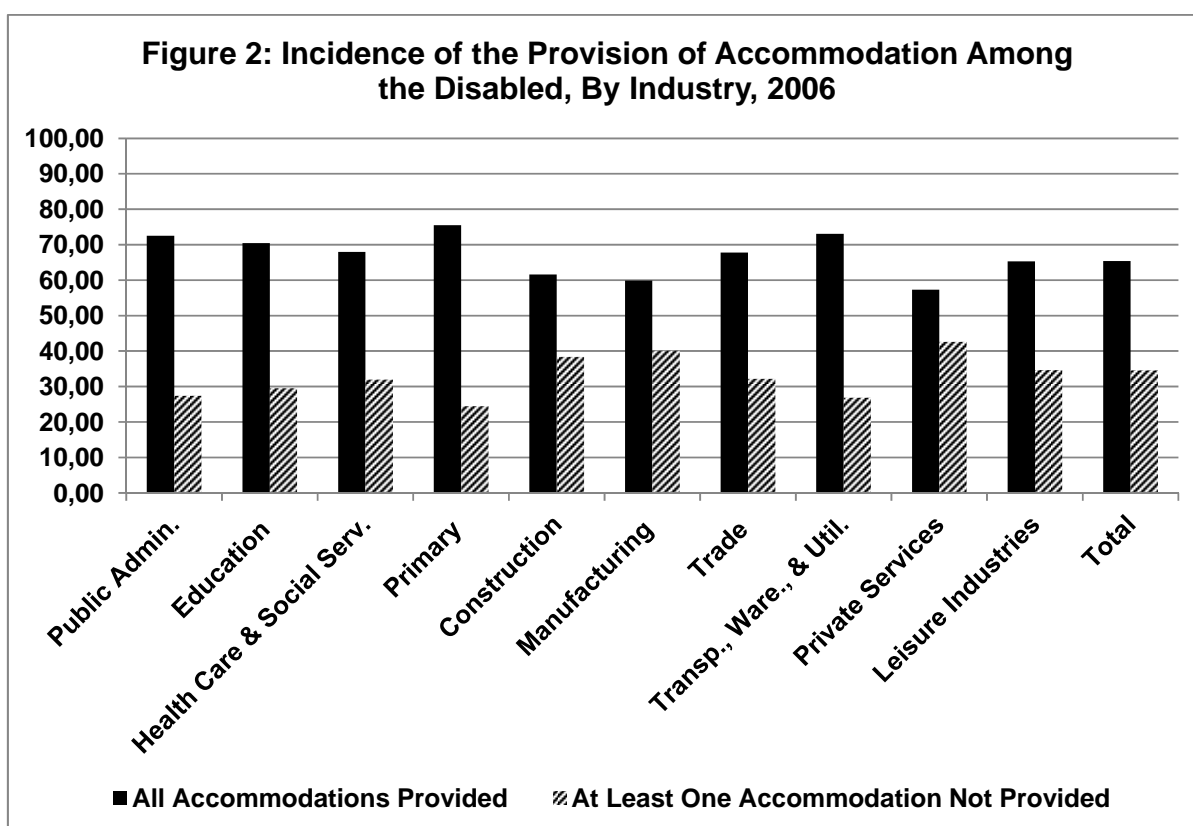
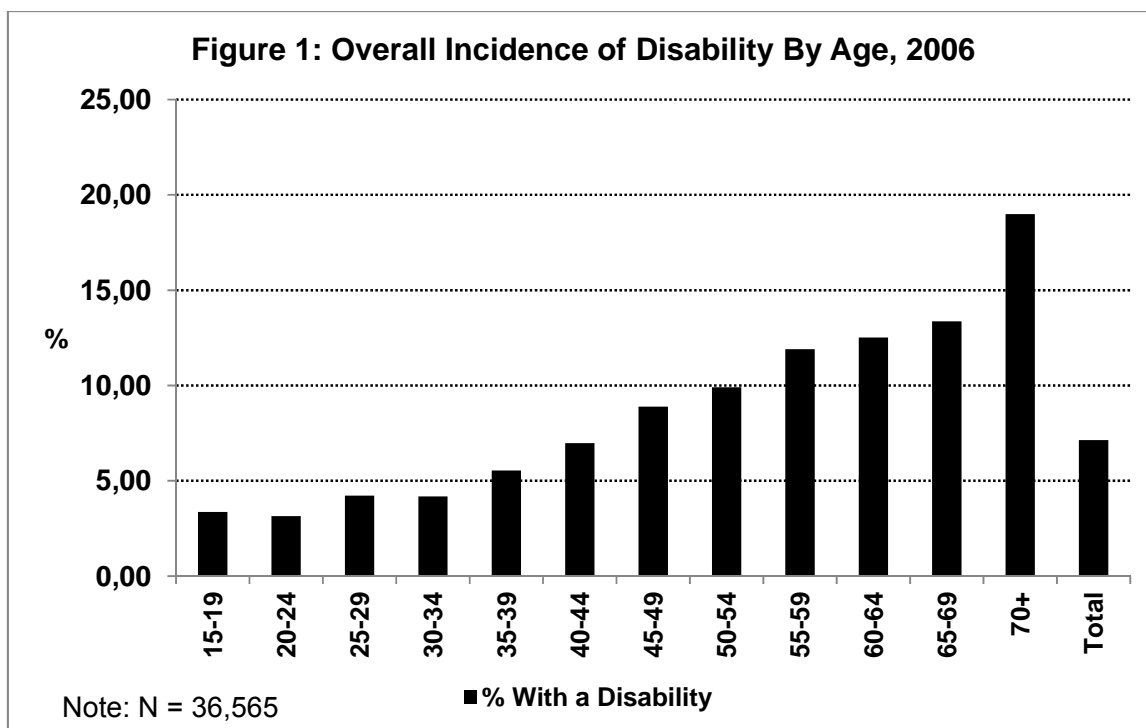
Prob > chi2 = 0.0000

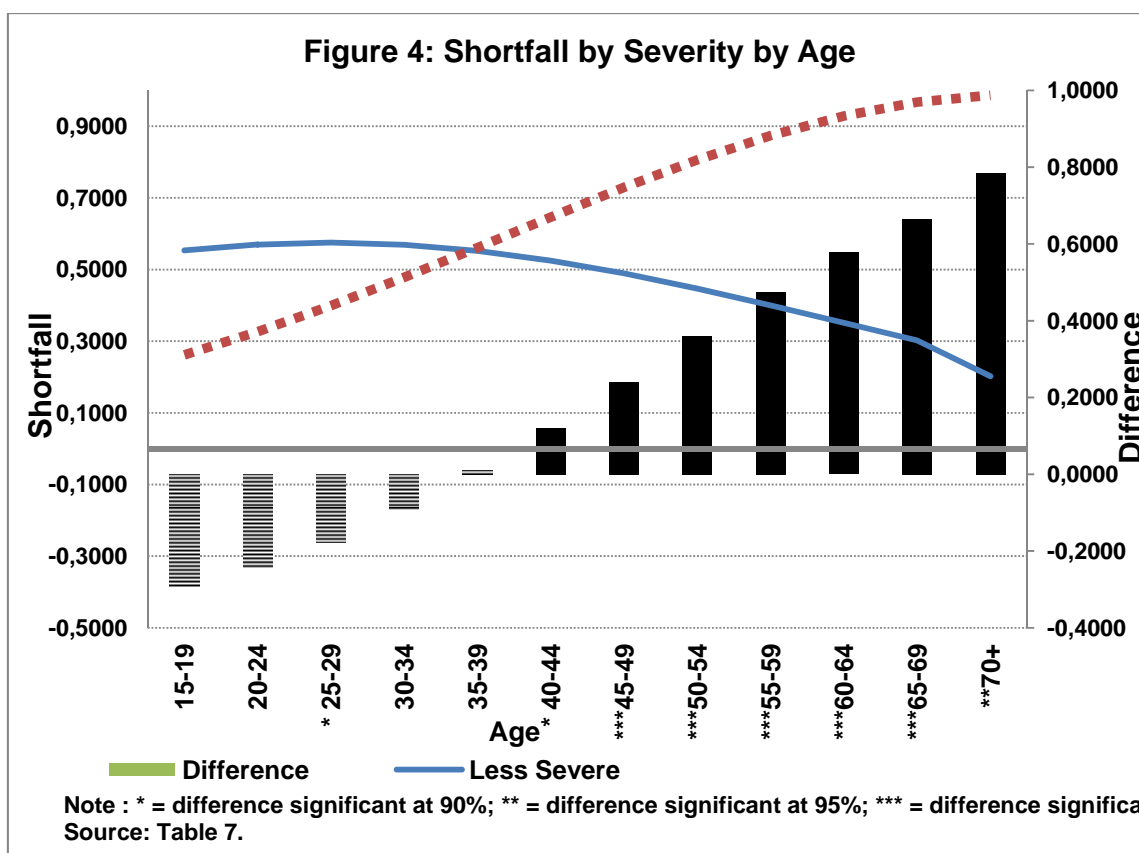
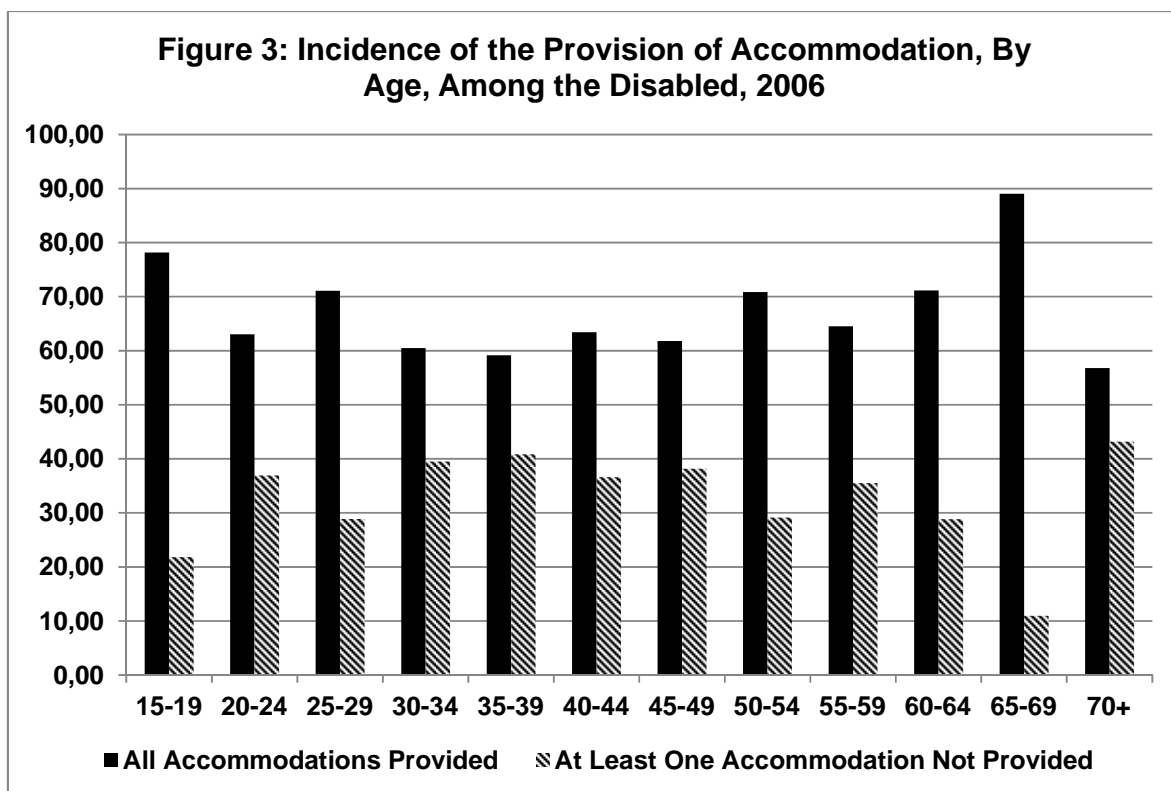
Table 7: Shortfall (Average Effects) By Severity of Disability and Age, 2006

Severity	Age											
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+
Less Severe	0.5533	0.5698	0.5752	0.5692	0.5521	0.5249	0.4892	0.4468	0.4001	0.3512	0.3021	0.2023
More Severe	0.2619	0.3265	0.3990	0.4781	0.5614	0.6462	0.7291	0.8063	0.8741	0.9289	0.9675	0.9864
Difference (Marginal Effect)	-0.2914	-0.2433	-0.1762	-0.0911	0.0093	0.1213	0.2399	0.3595	0.4740	0.5777	0.6654	0.7842
Significance	***	**	*			*	***	***	***	***	***	**

Notes: * Difference Significant at 90%; ** Difference Significant at 95%; *** Difference Significant at 90%

Difference is the marginal effect = More Severe - Less Severe.





Appendix Chart A:

Base Specification for the Count Regression

<p><i>Worker personal characteristics</i></p> <ul style="list-style-type: none"> ▪ Age ▪ Age-squared ▪ Sex ▪ Urban ▪ French mother tongue
<p><i>Worker labour market characteristics</i></p> <ul style="list-style-type: none"> ▪ Education ▪ Low income after tax ▪ Employment income ▪ Weeks worked (last year) ▪ Weekly hours ▪ Covered by a union
<p><i>Employer characteristics</i></p> <ul style="list-style-type: none"> ▪ Multiple location employer ▪ Establishment employment size ▪ Industry
<p><i>Job characteristics</i></p> <ul style="list-style-type: none"> ▪ Permanent job ▪ Occupation ▪ Usual hours per week
<p><i>Limitation/disability characteristics</i></p> <ul style="list-style-type: none"> ▪ Limitation duration ▪ Limitation duration squared ▪ Severity of the limitation ▪ Limitation severity interacted with age
<p><i>Accommodation Requirements</i></p> <p>(i) Each required accommodation (14 categories)</p>