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The Effect of Workforce Aging on Labour Market Institutions and Workplace Human Resource Practices in Canada

Rafael Gomez (York University)
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Abstract

In this paper we examine how labour market institutions and human resource management (HRM) practices are likely to be affected by workforce age structure change. In more precise terms, the preferences of workers for various workplace practices and institutional arrangements across different age categories (and their relative shares in the working age population) will be used to anticipate where population-aging pressures will be greatest for firms and labour market institutions. The practices and institutional arrangements in question include such things as union membership, seniority rules, compensation mechanisms, early retirement plans, and supervisory practices among others. Specifically, the paper combines micro-level evidence on the incidence and preferences for certain workplace practices amongst workers with economy-wide demographic projections for Canada in order to answer the following questions:
What are the implications of age structure change and workforce aging on labour market institutions and the internal HRM practices of firms? What barriers (economic or institutional) are likely to impose significant constraints on the behaviour of employees and employers as the workforce ages and changes in composition? Given the constraints faced by employees and employers, how will labour market institutions and HRM practices likely adjust to population aging?

Résumé

Dans cette étude, nous examinons la façon dont les modifications à la structure par âge de la population active sont susceptibles d'influer sur les autorités responsables du marché du travail et les pratiques en gestion des ressources humaines. Plus précisément, les préférences des travailleurs en ce qui a trait aux diverses pratiques en milieu de travail et aux arrangements institutionnels selon les catégories d'âge (et leur proportion relative de la population en âge de travailler) seront utilisées pour prévoir où les pressions liées au vieillissement de la population seront les plus importantes pour les entreprises et les autorités responsables du marché du travail. Les pratiques et les arrangements institutionnels en question comprennent, entre autres, l'adhésion syndicale, les règles d'ancienneté, les mécanismes de rémunération, les régimes de retraite anticipée et les pratiques de surveillance. Plus précisément, nous avons jumelé des données micro-économiques sur l'incidence de certaines pratiques en milieu de travail et les préférences des travailleurs à l'égard de celles-ci à des projections démographiques pour l'ensemble de l'économie canadienne afin de répondre aux questions suivantes : Quelles sont les répercussions des modifications à la structure par âge et au vieillissement de la population active sur les autorités chargées du marché du travail et les pratiques en gestion des ressources humaines des entreprises? Quels obstacles (économiques ou institutionnels) sont susceptibles de restreindre de façon importante le comportement des employés et des employeurs à mesure que la population active vieillit et que sa composition change? Compte tenu des contraintes auxquelles sont confrontés les employés et les employeurs, de quelle façon les autorités chargées du marché du travail et les pratiques en gestion des ressources humaines sont susceptibles de s'adapter au vieillissement de la population?

1. Introduction

Demography is both a cause and consequence of changes in the economic environment. Research into the causal effects of demographic change has historically focused on the negative impact of high fertility and population growth on the level of output per worker. Indeed most economic growth models dating back to Barro (1995) and Mankiw et al (1992), among many others, cite the negative coefficient on the rate of population growth as one of the strongest observable correlations in cross-country data (Galor and Weil, 1996). Today, however, there is a growing recognition that birth rates and fertility are as much by-products, as sources, of economic and institutional change (Jones, 2003). [1]

However, if neither fertility nor population growth are the key demographic mechanisms driving economic and institutional change, where does the causal connection between demography and the economy come from? To answer that question we need to look at the demographic age structure of a country. Demographic age structure, which refers to the share of the population within different age groupings, is the result of past fertility and is therefore exogenous with respect to current economic conditions. It is this realization that allows researchers to study the (actual and potential) causal effects of workforce aging on labour productivity as well as on a whole set of labour market institutions and firm-level outcomes.

In this paper we will pay particular attention to how labour market institutions and human resource management (HRM) practices are likely to be affected by workforce age structure change. In more precise terms, the preferences of workers for various workplace practices and institutional arrangements across different age categories (and their relative shares in the working

[1] Family economics, for example, has traditionally focused on the strong links that both variables have with respect to changes in economic performance.

age population) will be used to anticipate where population-aging pressures will be greatest for firms and labour market institutions. The practices and institutional arrangements in question include such things as union membership, seniority rules, compensation mechanisms, early retirement plans, and supervisory practices among others. Specifically, the paper will combine micro-level evidence on the incidence and preferences for certain workplace practices amongst workers with economy-wide demographic projections for Canada in order to answer the following questions:

- What are the implications of age structure change and workforce aging on labour market institutions and the internal HRM practices of firms?
- What barriers (economic or institutional) are likely to impose significant constraints on the behaviour of employees and employers as the workforce ages and changes in composition?
- Given the constraints faced by employees and employers, how will labour market institutions and HRM practices likely adjust to population aging?

The remainder of the paper proceeds as follows. Section 2 examines the process of demographic maturity in Canada and its economic effects, with a focus on the labour market. Section 3 looks at the implications of workforce aging for HRM practices and internal labour market policies. Section 4 looks at the implications of workforce aging for labour market institutions (both internal and external to the firm). Section 5 examines the constraints that employers and employees face in attempting to adapt to workforce and population aging. Section 6 looks at the probable effects of aging on internal labour markets and the labour market and on the economy more generally. Section 7 summarizes the key findings and concludes with a policy discussion.

2. The Process of Workforce Maturation and Its Economic Implications

2.1 Potential Implications of Workforce Aging

Official demographic projections suggest that many high-income economies are rapidly aging and will start witnessing steady declines in population after the first decade of this century [Greenwood and Seshadri, 2002; Kosai et al., 1998]. Though largely a by-product of economic development [Galor and Weil, 1996; 2000], the effects of population aging on economic performance have been of interest to economic thinkers as far back as Keynes [1937], with most viewing the aging process as detrimental to an economy [Kosai et al., 1998]. Missing, however, from these typically gloomy demographic discussions is the effect of demographic maturation, which occurs prior to and in conjunction with the aging process, and which has the potential to improve, rather than dampen, economic performance.

Until recently, most approaches to estimating and testing the positive effect of demographic maturity on output have focused on a single causal mechanism: the so-called "demographic dividend". This is where a demographic transition (a sustained period of falling birth rates) causes the size of the potential workforce (i.e., the working age population 15 to 65 year olds) to increase faster than total population growth, producing a positive, though purely transitional effect on per capita output [Bloom and Williamson, 1998]. The demographic dividend described above is a direct effect akin to adding more labour to an aggregate production function. The demographic dividend can also affect output indirectly, through changes in labour force productivity. The direction of this latter channel, however, is more ambiguous given that productivity (embodied in either education or experience) varies systematically by age of worker.

These aforementioned lifecycle effects highlight a second but less often discussed link between demographic transitions and economic performance. Since falling birth rates affect not only the size [Alesina et al, 2003] but also the structure of the working age population, a country with a greater number of mature persons will differ substantially from one that is younger, even if both have workforces that are of the same relative size. In particular, if we consider that labour force participation and productivity peak sometime during the prime working ages of 35 and 54 -- when the balance between formal education and experiential human capital reaches its optimum– then the productive capacity of a society with a large fraction of prime age persons should be markedly different from one with many young labour force participants [Mincer 1974; Lemieux, 2003].

Finally, it is important to recognize that the positive effects of demographic transitions and associated age structure maturation (though felt for several periods beyond the end of the demographic transition process itself) will ultimately dissipate. As identified by Bloom and Williamson [1998], the positive effects of a demographic transition on workplaces and the economy are ultimately just that: transitional. Persistently low birth rates eventually produce a decline in the relative size of the working age population and an increase in old-age dependency ratios. It this long term process of population "aging" that has raised the greatest concerns in OECD economies including Canada.

2.2 The Process of Workforce Maturation in Canada: 1991-2050

The links described above between demographic maturity, labour supply and the economy can be seen more clearly if we explore in a mechanical way the effects of a constant or rising birth rate followed by a subsequent decline (i.e., the effect of a "baby boom" and "baby-bust" on the economy) on the size of the potential workforce and on the age structure of that workforce. As a

reference point we will use actual and projected data for Canada from 1991 to 2050, which because of the post-war baby boom and subsequent baby bust follows the pattern described in the demographic transition literature fairly closely (see Data Appendix for details).

In figure 1 we see that the baby boom, which ended in the mid 1960s, still has a positive impact over potential labour supply from 1991 to 2011, as an increasing share of working age persons over the total population increases potential labour supply. This is the positive direct (or first order) effect of a demographic transition noted by Bloom and Williamson [1998]. However, as noted earlier and as seen in Figure 2, a prolonged fall in birth rates eventually causes a decline in the relative size of the working age population as the number of old-age dependents (65+) swells within the total population. In Canada, old age dependents rise from 11.5 to 24.9 percent of the population between 1991 and 2050. This causes the relative size of the working age population to fall steadily from a high of 68.9 in 2011 to 59.8 in 2050 [Figure 1].

[Figures 1,2]

This is not the end of our story, however, as demographic transitions affect not only the size but also the structure of the working age population, thus playing a potentially important role in human capital accumulation. This is the indirect (or second order) effect of a demographic transition on the economy. To see this more clearly, examine Figure 3, which shows the percentage of prime age workers (35-54) in an economy along with the relative shares of younger (15-34) and older age workers (55-64). This is important, as we can imagine two countries (or a single country at different points in time) sharing working age populations of the same relative size; both may be equally mature in the sense that both share the same ratio of working age persons as a share of the total population; but one country by virtue of having had more recent falls in fertility has a greater share of young workers than the

other. Two workforces of the same relative size may therefore be composed of either a greater share of younger-age (15-34), prime-age (35-54) or older-age (55-64) workers. In Canada, for example, prime age workers peak at 46 percent of the total workforce in 2001 and then decline steadily before levelling off at 40 percent by 2050, implying that the share of the most productive part of the workforce will witness a 13 percent decline over the next 50 years.

[Figure 3]

The bottom line for Canada in terms of workforce age structure change between 2001 and 2050 can be summarized as follows (see Table 1 for overview):

[Table 1]

- After a long period of growth in the relative size of the potential working age population (15-64), Canada will witness a 10 percentage point decline in the size of its potential labour force from 2011 to 2050.
- The drop in the potentially active working age population is entirely the result of an increase in the percentage of old age dependents (65+); as the percentage of young age dependents (0-14) drops throughout the period.
- In terms of workforce age structure (15-64 year olds), Canada will witness a fairly steady but gentle drop in the percentage of prime age workers (35-54) from 2001 to 2050. These falls are greater than those in emerging economies (India and China), but about average for the OECD.
- Once again, declining shares of prime age workers are the result of population aging in the form of rising shares of older age workers (55-64), who nearly double in relative size, from 11.3 percent of the working age population in 1991 to 21.2 percent in 2050.

At the same time, the relative share of younger age workers (15-34) will have fallen from a high of 48.0 percent in 1991 to 37.8 in 2050.

3. Implications of Workforce Aging For HRM Practices and Internal Labour Market Policies

This section will describe the important implications for workplace and human resource practices of population aging within the internal labour markets of firms by exploring age-based differences in the incidence of, perceptions of, and preferences for, certain workplace policies and practices. For example, workers may differ in their preference for performance-based systems of promotion and pay on the basis of age (e.g., other things equal, younger workers may favour strong incentive systems while older workers favour seniority or standardized pay and promotional rules). Age dispersion within an organisation can therefore not only bifurcate earnings (as is commonly assumed) but it can also have negative consequences for co-operation (e.g., when the passing on of valuable information to younger colleagues is seen as a threat to an older worker's status and promotional probabilities within the firm). Productivity issues related not only to the performance of older workers but also to the variance in performance may be affected as a result of workforce aging.

An aging workforce will also affect the prevalence of fringe benefits, including pensions and health and disability policies, as these will obviously be affected by a workforce changing in age structure composition. In particular, just as there is a hump-shaped profile in age and earnings, there is likely to be a similar profile related to the non-pecuniary components of the job and characteristics of the workplace. This theoretical insight is commonly assumed in the economics of personnel literature [Lazear, 1999] and relates to a worker's outside opportunities

(or the ability for certain workers to find alternative employment at a wage that is near or higher than the internal wage paid by the firm). To the extent that these outside opportunities peak in the early to middle-ages of a career, employers will tend to offer the most suitable employment packages to these workers, leaving workers on either side of the prime age peak (<25-44>) with relatively fewer of these benefits and perks (other things equal).

3.1 The Incidence of Workplace Polices and Practices: Who Gets What?

We will begin our analysis by focusing on the incidence of firm level policies and workplace practices by age of worker using the 1994 General Social Survey (GSS) on Education, Work and Retirement, Cycle 9. All the age-related demographic results discussed within the text are based on an econometric specification that includes standard controls for tenure, gender, marital status, presence of children, education, work status, occupation, firm size, income, and province in which the respondent is a resident. In our appendix we provide the complete specification for each regression. In Tables 2 through 5, we report only the age regression coefficients[2] where the youngest age group (15-24) will function as our excluded reference category. We simplify the presentation of results within the text in this way as there are over 33 separate regressions (33 rows in our tables 2 to 5) which would otherwise be difficult to compare across age categories.

Table 2 shows the probability of receiving (i.e., incidence of) various workplace benefits and work time arrangements, and how that incidence varies by age of worker. In terms of workplace benefits, the findings present a consistent picture – as compared to the youngest

[2] Since the dependent variables are dichotomous or binary-coded (i.e., coded one if in that category, zero otherwise) these OLS regression estimates are termed *linear probability estimates*. The probit estimate is often used on binary coded dependent variables, but the probit coefficients themselves do not provide the information of interest – the effect of a unit change of each explanatory variable on the probability of being in a particular type of non-standard employment. Such changes in probabilities or marginal effects are calculated based on the mean values of the explanatory variables (they differ depending upon the probability levels themselves). The calculated marginal effects provided a similar picture as those based on the ordinary-least-squares estimates; hence, we report the simpler and more common OLS estimates – also termed *linear probability coefficients*.

worker category (15-24 year olds) mature workers (except workers who are past the normal retirement age of 65) get more benefits from their employers (i.e., retirement plans, medical benefits, counselling services, drug plans, and maternity leave). And consistent with the theory emanating from the economics of personnel, the prevalence of most benefits seem to be highest for workers in age categories where presumably outside opportunities are highest (i.e., 25-44 year olds). Everything from maternity leave (perhaps to be expected) to counselling services (not so intuitive) seems to peak for younger-prime age workers. And because we have controlled for tenure, marital status and the presence of children -- factors related to the provision of benefits and strongly correlated with age -- these results can be considered the direct effects (correlates) of age of worker on benefits.

[Table 2]

In terms of work hours and work arrangements, Table 2 rows 7-14, show that shift work (regular evening, night-time and rotating shift work) is highest in the youngest age category (15 – 24 year olds) and generally decreases as worker age rises. Apart from split-shifts and flexible work schedules, the prevalence of all other seemingly 'favourable' work and working time arrangements (including regular daytime shift and home work) increases as workers age. The magnitude of these differences across age groups, even after controlling for other correlates (see Appendix Table 2A) is fairly large – for example a prime age worker (44-54) is 17 percentage points more likely to have a regular daytime shift than is a younger age worker (15-24) -- indicating that age (and possibly other unobserved age related characteristics) plays an important role in the allocation of benefits and working time arrangements in the economy.

Our final result focuses on the presence of progressive HRM practices at the workplace, which include such things as quality circles, employee involvement schemes, and team-based

production. This question was not asked in the 1994 GSS but was asked of a representative sample of Canadian workers in 1996 by Ipsos-Reid for the Liset-Meltz survey. The lack of a large sample makes direct comparisons with the larger GSS sample more difficult– for instance we had to treat the entire younger age worker category (15-34) as the excluded reference category in our (regression) results and we had to include fewer right-hand-side control variables. However, we do get a picture that is more or less consistent with the one above, in that the incidence of progressive HRM practices seems to be highest for workers with (in theory at least) the steepest productivity profiles inside the firm and most valuable outside labour market prospects (i.e., workers aged 35-44).[3]

3.2 Workers' Perceptions of Their Jobs, Workplaces and Firm Policies

How will an aging workforce "fit" with the changing needs of firms, and how will the needs of an aging workforce give rise to changing demands for different workplace and human resource practices on the part of firms? For example, based on a standard life-cycle profile, workers with the highest opportunity cost of time (i.e., those juggling family commitments as well as career advancement) are more likely to be concerned with their work-life balance. An aging workforce will also place obvious pressure on promotional polices and succession planning. What kinds of promotional policies do workers prefer as they age - a meritocractic or seniority-based promotional system?

In order to answer these sorts of questions, we need to first look at more 'subjective' worker assessments of their job and workplace, as well as their preferences for certain workplace practices across different age groupings. These results are presented in Table 3. As before, we

[3] The full specifications for all regression results using the Lispet-Meltz dataset can be found in Appendix Table 6A.

begin with findings from the GSS cycle 9. The items in rows 1 and 2 include questions about the workplace and work environment.

As indicated in row 1, until the older age groups (55+), age *per* se (i.e., after controlling for marital status and number of children) has no significant effect on workers' perception that their work environment places too many demands on them and that they are working far too many hours. However, this objection to work demands is significantly lower amongst the 55-64 and 65+ age groups. Workers in their young to prime working years (age 25-34) report the most amount of problems with their workplace in terms of interpersonal relations, whereas older workers 55-64 report the least.

[Table 3]

In terms of aspects related to the job (as opposed to the workplace), rows 3 to 5 show that mature workers have a generally more positive view than the youngest and oldest workers about their current job. This holds for questions relating to whether the job requires a high level of skill and whether the job is related to a workers' level/type of education. It seems that mature workers have ultimately found a better match in the labour market. In keeping with these findings, workers aged 25-44 have the least likelihood of feeling that they are overqualified in their jobs. Alternatively stated, the likelihood of feeling overqualified is higher on either side of this 25-44 age grouping (other things equal).

Finally in terms of preferences for certain workplace promotion and pay policies, we again use the Lispet-Meltz survey and once again we are restricted in our comparability with the GSS results. Nevertheless, the findings seem to fall in line with earlier expectations. In row 6 we see that mature workers (35-44 and 45-54) are generally more interested in job security versus career advancement as compared to their younger age counterparts.

In row 7, we see that workers generally have a problem with merit-only (as opposed to seniority based) layoffs as they age. They are significantly less likely to approve of such an internal workplace practice if they are aged 35 and over up (but not including the age 65+ category). Although this latter difference is not significant at conventional levels, the older worker (65+) response may be a function of the 65+ age group nearing the end of their formal careers, and having already gone beyond the normal work lifetime they care less about layoff criteria.

Finally, in row 8 we see that preferences for merit-based pay (as opposed to paying according to the job or some other standardized basis) find less support amongst 35-54 year olds as compared to their younger worker counterparts.

4. Implications of Workforce Aging For Labour Market Institutions and Internal Labour Markets

An aging workforce can also affect labour market institutions, both external and internal to the firm, because of their changing relevance *to* an older workforce and because of the increased pressures placed on the institutions *by* an aging workforce. The changing age structure of the population also has implications for implicit contracting arrangements between workers and firms with respect to such factors as type and nature of job, the intensity of supervision, worker empowerment and supervisory practices. For example, it is often assumed that managerial skills increase with age and experience, implying that workers are more likely to be found in these jobs when they get older. Likewise, the demand for voice and empowerment is more likely when workers face fewest exit options, which again should generally increase as workers age. In an aging population one can therefore expect to find more pressure for empowerment and managerial forms of employment.

4.1 Job Type, Managerial Activities, Empowerment and Supervisory Burden

In this section we test for some of the age-based relations noted above. In particular we look at the GSS cycle 9 to see whether workers differ significantly in having a permanent job or whether they are likely to differ by age in their preference for a permanent job. This is extended to look at which workers are more likely to have supervisory duties on the job. We then look at managerial jobs only to see: i) who is more likely to be a manager, ii) the kinds of activities they perform and iii) how empowered they are *as* managers. This analysis will enable us to see how a changing workforce age structure may impact the nature of jobs and institutions both outside and inside the firm. Finally, we will examine age-based differences in job autonomy, or alternatively stated, how closely workers are supervised on the job based on their age

[Table 4]

Table 4 presents estimates for questions related to the nature of work inside the firm. In row 1, we see that most workers have a permanent job and that this does not vary significantly by age of worker (with the exception on 45-54 year olds who are 4.6 percentage points less likely to have a permanent job). However, amongst workers with non-permanent jobs, row 2, workers aged 25-54 are the most likely to state that they would prefer permanent work if it was available. Interestingly, the least likely to prefer a permanent job were the oldest workers, suggesting that there are greater opportunities to provide more flexible labour contracts to the growing cohort of workers aged 55-64 and 65+. This indicates that as the as the workforce ages and moves beyond its prime age years, there will be less pressure on the part of firms to provide permanent full time employment (other things equal) and increased opportunities for employers to offer more varied forms of employment contracts to older age workers.

Turning now to the nature of the job inside the firm, the GSS contains questions on supervisory activity: namely whether a worker undertakes supervisory duties in their current job. In Row 3 we see that supervisory activities significantly differ across age groups. Workers aged 45 plus are least likely to be responsible for direct supervision of employees. That task seems to fall on younger age workers.

Next we look at managerial work: namely who is more likely to be designated a part of management and how empowered are they in their managerial roles? Specifically, we look to see if managers undertake planning activities that can have an impact on the company and its operations. In row 4 we see that the probability of being a manager increases with age and in row 5, that empowerment is more likely the older one is, peaking for the 45-54 year old age group.

Finally, we look at the important question of autonomy, or alternatively stated, supervisory intensity. How closely supervised are workers and does this vary significantly by age of worker? In Row 6 we find that mature workers impose much lower supervisory burdens (i.e., are entrusted with much more autonomy) than younger counterparts (other things equal). In particular, supervisory intensity decreases monotonically with age. For example, compared to 15-24 year olds, a 25-34 year old worker is 6 percentage points less likely to be highly supervised and a 55-64 year old is 9.5 percentage points less likely to be highly supervised in their job.

4.2 Preferences for Collective Voice and Unionisation

Another important institutional feature is voice at work, and one form of voice in particular: namely union membership. There is a well-established gap in unionisation rates between young and older age workers in Canada, with younger workers being far less likely to be unionised than

older workers. Does this imply that in an aging population, unionisation will be an institutional feature likely to grow in importance amongst the workforce as a whole? Moreover, how do workers feel about unions? In other words, despite the large gap in unionisation rates, is there underlying demand for unionisation amongst young workers that is currently not being met because of obstacles in the labour market (temporary or part-time work) or managerial opposition?

[Table 5]

We begin in table 5 with a breakdown of union membership and collective bargaining coverage by age using the GSS cycle 9 so as to control for other factors such as tenure and firm size (which are strong correlates of unionisation). We see in Rows 1 and 2 the clear pattern observable in many other datasets whereby older workers (aged 45-54) are two to three times as likely to be a union member and/or covered by a collective agreement than the youngest workers. However, because of the nature of unionisation in Canada, whereby a worker has to be hired on to a union job or be part of a successful organizing drive, there may be substantial "latent" demand for unionisation. That is, if asked, workers may say that they would like to be unionised even if they are currently not part of a union or covered by a collective agreement. The reasons as to why workers are prevented from exercising their desire for unionisation are varied and are not discussed here. However, if we do find substantial latent demand for unionisation amongst groups that currently have low union density because they are in temporary jobs or have not gained sufficient labour market experience, one might paint a slightly less dour picture of the future of unions in Canada.

Questions regarding the desire for collective forms of voice and unionisation can be found in rows 3 and 4. We see in row 3 that mature workers (35-64) are more optimistic about

collective voice at work than younger age workers, but these differences were not significant at conventional levels. So although young workers are more likely to favour having a group of fellow employees help them deal with management than are older age workers, these results are likely to dissipate as workers age (e.g., once respondents are over 35, the coefficients with respect to the omitted reference category are roughly similar).

In terms of preferences for unionisation, row 4, workers aged 35-44 and 55-64 have the greatest desire for unionisation. However, those over 65+ have the least. Since the question was asked of both union and non-union members (for union members the question was worded slightly differently) the implication is clear: since these workers also have the highest unionisation rates, they must find it easier than younger workers to find unionised jobs or to work inside firms where union organizing is possible. However, this does imply that as a labour market institution in Canada, unions are not on their way out; there is still a fairly strong base of support for unions that may carry over as young workers move on through their life-course. Indeed, if actual and desired union preferences were matched, the potential unionisation rate in Canada would have been nearly 47 percent (row 4 column 1) in 1994, well above the observed 33 percent at the time.

5. Constraints Affecting Employers and Employees Adjustments to Population Aging

Based on the results above we can now begin to draw some implications for actual firms. However, before doing so, we should outline a few of the constraints facing employers and employees in adjusting to the changing age mixture of workers in Canada. For employers and employees the barriers affecting optimal adjustments to population aging are both economic and

institutional. We will begin with the economic barriers that employees and firms face in trying to adjust to changing shares of workers in different age groups.

5.1 Economic Constraints on Firms and Employees

In terms of economic constraints, one of the most important is the potential lack of substitutability between mature labour and young labour inputs. Theory suggest that firms benefit from having more experienced workers, but only up to a certain point, since a mix of young and old workers is likely to produce the most productive work environment. Evidence drawn from the field of personnel economics (Lazear and Freeman 1996) reinforces this view, in that mature workers are often easier to monitor, have greater firm specific human capital and more general skills learned on the job. In contrast, although young workers impose larger monitoring costs on the firm[4], they bring with them new ideas and general human capital embodied in formal education.

In order to explore the implications of this reasoning a bit further, consider a variant of a standard Cobb-Douglas production function with constant returns to scale for a given firm, eq. [1], where the firm produces output Y with physical K and human capital H and technology A. The only difference is that instead of utilising one type of labour input, the firm utilizes mature L^m and young L^y labour inputs separately,

$$[1] \quad Y = (K^{\beta} H^{\alpha}) A (L^m + \theta L^y)^{1-\alpha-\beta},$$

where θ is the marginal product of L^y relative to L^m. The justification for treating mature and young labour as separate inputs can emanate from a variety of sources. Workplace evidence demonstrates that the capacity to invest in new technology is significantly constrained by

[4] This emerges because true ability and effort is difficult to observe, and takes time to be realized by employers.

employee age. For example, technological adoption may actually be accelerated, rather than hindered, by the presence of mature workers (Weinberg 2002). In addition, it has been found that the development of cognitive and non-cognitive skills seem to display significant life-cycle variation (Carneiro and Heckman 2003).

If workers were perfect substitutes, then relative productivity would be $\theta = 1$, and there would be no single mix of both labour inputs that would maximise output. In equilibrium with perfect substitutability, firms would be indifferent to the proportional mix of young and mature labour employed. However, if mature labour is more productive $\theta < 1$, but both young and mature human capital are necessary in production, then firms maximise output using a production function similar to that found in Neumark (1988), where we hold *K* and *H* fixed and focus only on changes in labour supply:

$$[3] \quad Y = A(L^m + \theta L^y) - \delta\left(L^y / L^m\right),$$

and where δ is simply the inverse of the relative productivity ratio. This is akin to a "discrimination" coefficient capturing the desire of firms (other things equal) for mature workers. In this set up, however, employers care about the relative level of L^m rather than the absolute level since they recognize that some balance between youth and experience is required. Maximization of [3] implies

$$[4] \quad \theta = (\delta / L^m) / - \left[\delta \cdot L^y / (L^m)^2\right].$$

Here the (falling) marginal product from one additional unit of L^y is not fixed, but depends on the relative level of L^y. The effect of increases in the maturity of the workforce, on output change in this type of production structure, is akin to an inverted U pattern. Firms facing an optimal level of mature human capital L_o^m will grow faster than firms which have either too few

L_1^m or too many L_2^m mature workers. Note, as well, that persistent birth rate declines may eventually push working age populations past the optimal maturity ratio for long periods, and may ultimately dampen rather than promote output growth.

This model does not preclude heterogeneity as δ may vary across firms or sectors of the economy; i.e., firms or sectors with a higher δ will employ more L^m at the expense of L^y.

Why would firms differ in their need for mature labour? Two reasons seem plausible. First, the more idiosyncratic are firm experiences, the higher will be δ since mature workers are likely to have better knowledge of these idiosyncratic details (i.e., institutional knowledge). Second, to the extent that on-the-job skills are relatively more important than skills learned in formal education, mature workers will again be more desired since there will be a greater need for "mentors", and senior workers (see Table 4 row 5) fill that role better than younger ones.

Changes in the structure of the working age population, rather than in the size, can therefore affect output in this model by increasing the relative supply of L^m in relation to L^y. Consider the case of an increase in young workers entering the labour market (as occurred in the late 1970s in Canada as the peak of the baby boom generation entered the labour market). Because of imperfect substitutability between young and mature labour inputs, firms faced with some constant retirement rate of mature labour, will work to keep the optimal ratio of young and mature labour intact. Firms may therefore divert resources away from production to monitoring in order to diminish the bias for mature labour. The logic here is that an older worker may be able to supervise two junior workers properly but the ability to supervise effectively diminishes as the number of junior workers increases. Now consider the opposite case of a fall in the relative supply of youth labour (as occurred in the early 1990s in Canada as the baby bust generation began entering the labour market). Here again firms suffer since too few junior employees

relative to mature workers impedes the upward flow of new knowledge and new ideas. Firms that are faced with less young hires may therefore be forced to downsize (layoff mature labour) in an effort to preserve the optimal youth-adult labour mix. In both cases, if we assume that a firm works to keep its labour mix at an optimum, output may fall as a result of a change in the relative supply of mature and/or youth labour.

At an industry or countrywide level, this reasoning implies that greater shares of prime-age workers may not always be associated with improved economic performance. Specifically, a greater cohort of mature workers unambiguously benefits the output of an economy only if: firms are already below the optimum prime age threshold[5]; firm experiences are highly idiosyncratic; or on-the-job skills are relatively more important than general skills. Otherwise, most firms (and hence economies) would prefer a balance of young and mature human capital.

How the effects described above may play out over the next several decades can be gleaned from figure 4, which shows the ratio of prime age workers to both younger and older age workers. That is, for any decade we can determine how many younger (15-34) and older workers (55-64) there will be for a given number of prime age workers (35-54). It turns out that the prime-age youth ratio, after rising for a period in the late 1990s, remains relatively stable, i.e., there will be approximately 2.3 prime age workers for every young worker between 2001 and 2050. However, the big change will be in the ratio of prime age to older age workers, as that ratio falls from 3.5 prime age workers for every older age worker down to 1.9 in 2050. This fall is even more dramatic if one considers that the older age group (55-64) includes a 10 year age grouping whereas the prime age (35-54) includes a 20 year age grouping.

[5] Conversely, if firms are already past the optimum, they benefit from a falling rather than a rising ratio of mature age workers.

[Figure 4]

5.2 Institutional Constraints on Firms and Employees

Institutional barriers can be both internal and external to the firm. External barriers can include the strength of collective bargaining agreements, employment laws, and public policies related to retirement and pensions. Internal barriers refer to HRM policies and personnel systems, which if costly to change, may prevent firms from abandoning or altering them to accommodate shifts in the age of the workforce. Sometimes these two sets of barriers interact. For example, in labour markets with little or no union coverage and low firing costs, internal labour markets may in fact be quite malleable and may adapt more quickly to changing labour market demographics. Hence the impact of workforce aging would fall on HRM practices and the adjustment caused by an aging workforce would occur internally through changes to wage and incentive systems as opposed to quantity adjustments (i.e., more layoffs or fewer hires). In industries where collective agreements are more common and work rules stronger, one could imagine a situation where the adjustments to workforce aging fall less on the practices of firms and instead result in capital replacement and/or plant closures.

There are also a number of constraints that can affect the decision making of employees, and that have important implications for the internal labour market adjustments of firms as the workforce ages. Often, the constraints are the consequence of laws, policies and practices that were put in place in earlier periods when a younger workforce was the norm. This of course complicates the issue – i.e., one cannot simply remove these barriers by a simple change in law – since the constraints are not simply exogenously given, but often arise as an endogenous response to other needs on the part of employers and employees. Identifying these constraints and their (often) unintended impact is an important first step in "efficient" barrier removal. As

such, understanding the rationale for these constraints is also important for predicting the probable impact of altering the constraints as a result of workforce aging.

For example, based on our regression results in Table 3, we have seen that mature age workers (55-64) are less likely to support merit-only based layoff decisions and that they along with their senior colleagues (65+) are also the least likely to feel that the demands of their job are too high. There are fairly immutable reasons for each of these findings, i.e., older workers naturally want seniority to count in any layoff decision and the older age worker without a young family any more to support, is the least time constrained and hence will always feel that their work-life balance is less skewed than younger age counterparts. Firms can mitigate the problem by offering more flexibility at work to the workers more affected by these concerns, but the pressures will always remain.

6. Probable Effects of Workforce Aging on Workplace Human Resource Practices and Labour Market Institutions

If we look at Table 1 once again, we can deduce three important facts about the labour market in Canada between 2001 and 2050:

1. After 2011, there will be successive declines in the potential working age population as a share of the total population. The largest declines will be felt between 2001-2031 when the share of 15-64 year olds in the population will fall by a combined 6.8 percentage points (or approximately 2 million working age persons).
2. Shares of young (15-34) and prime-age workers (35-54) in the working age population will fall between 2001 to 2021, while the share of older age workers (55-64) will rise quite dramatically.

3. After 2031, age structure change in the labour market will be much less severe as the baby boom would have worked its way out of the labour market.

Pressures associated with age structure change will therefore be most acute between 2011 and 2031 when falls in the share of potential workers and the share of the most productive workers within that population (35-54) will simultaneously witness declines. This will be a fairly negative event for the Canadian economy. The negative link between the kind of aging which will occur in Canada and productivity and human capital accumulation centres on the fact that labour force participation, education and learning-by-doing are important factors in increasing individual productivity and firm level output. Labour force participation as well as the stock of individual human capital peaks when the balance between formal education and experience reaches its optimum.[6] As discussed earlier, this tends to happen sometime during the prime working ages of 35 and 54, after which diminishing returns begin to set in.[7] An economy which is losing a large number of working age persons as well as a large cohort of prime age workers within that population, should (all things equal) be less productive than an economy populated by growing numbers of working age persons and prime-age workers. This type of 'reverse demographic dividend' implies that a turning point should be observed with respect to output per person, whereby too many workers at the mature end of their working lives should be associated with slower output growth.

[6] Fougère and Mérette (1999) also suggest that under a situation of scarce employment, incentives to human capital investment increase.

[7] More precise estimates can be found if we consider the typical Mincer (1974) wage regression, where experience is entered along with its square to reflect the rising but diminishing returns of experience with respect to productivity. Empirical evidence suggests that wages peak for US workers with 33 years of experience (Kruger and Pischke, 1992) or at around age 50 (after adding schooling and pre-school years). If workers earn their marginal product, then earnings equations imply a 50 percent higher productivity of a 50 year old worker as compared to that of a 20 year old with the same formal level of schooling.

However, getting older may positively affect such outcomes as agency costs, workplace productivity and the adoption of technology by firms, among others. Beginning with agency costs, we know that they impair economic performance. There is evidence that low wages and higher monitoring costs are systematically related (Gordon, 1996). The micro-foundation for this relationship rests with the observation that when principals (employers) pay a low wage, they decrease the cost of shirking to the agent (a worker in this case) causing the agent to be monitored more closely, thereby increasing agency costs. The agency cost link with workforce aging rests with evidence that monitoring costs are higher for younger workers (see row 6 Table 4). This is related to the opportunity costs of shirking which are lower for young workers, both because they earn a lower wage (other things constant) and because they possess less firm specific capital. Evidence in the U.S. also shows that larger cohorts of younger workers put downward pressure on wage levels, compounding the agency cost problem (Macunovich, 1998). These observations produce an age-based channel for agency costs, which would be expected to diminish as a result of workforce aging.

One obvious argument (others exist) surrounding productivity and labour market performance as a result of age structure change is the following: in a workforce with plenty of young workers relative to older ones, unskilled and semiskilled labour is in abundant supply. Firms faced with such a relaxed labour constraint have a lower incentive to substitute youth labour (which is cheap) with new technology (which is expensive). Such a production technology lowers labour productivity, widens wage dispersion and increases agency costs, as cheap labour has to be monitored more closely. Demographic maturation, as is occurring in Canada, and will continue over the next two and half decades, can therefore work in favour of reversing this trend.

6.1 The Near-to-Long Term Implications of Age Structure Change

More concrete implications of workforce demographic change can be seen if we go back to the results of our regression estimations and combine that information with what we know of workforce compositional change over the *near term* (2001-2011), *medium term* (2011-21) and *long term* (2021-2031).

If we examine the *near term* (2001-2011) implications of changing workforce demographics, we know from Table 1 that the share of younger age and prime age workers will diminish in this period, while the share of older workers will rise. Based on these forecasts and the results of Tables 2 through 5 we can conclude that:

- Pressures on firms to provide increased benefits (of any kind) will fall in relative terms. This will be especially true of maternity and paternity benefits as the bust generation enters the early to middle stages of their careers just as the boomer cohort exits.
- On the other hand, with the relative scarcity of younger age workers, it will be harder for firms to find workers to do shift work (i.e., rotating or night shifts).
- Working at home will be expected to boom as the likelihood of home work increases monotonically as we age. Moreover, we now have the information technology available to facilitate this transition.
- Pressures associated with work life balance will dissipate in the near term as they fall for older working age cohorts and it is these age cohorts who will witness the largest growth over the next six years.

- Satisfaction with work may increase on the whole, as older workers tend to find better matches in the labour market. This bodes well for firms and employees in the near term.
- However, firms will have to be careful with regards to introducing pure merit based criteria in terms of pay, promotion and layoffs, as these are less favoured amongst older age workers.
- The desire for more flexible work arrangements will be expected to grow in the near term as the 55-64 and 65+ age groups are the least likely to have, or prefer to have, a permanent job.
- Managerial designations inside firms will be expected to grow, as these are highly positively correlated with age of worker. Firms will have to think creatively of how to place the growing 55-64 workers in positions where they are happy and yet cognizant that they will have to let someone share many of the same duties and responsibilities.
- Firms will face the greatest benefit from workforce ageing in terms of supervisory burdens and costs. Workers are generally more autonomous and supervised much less as they age. This will be a benefit to firms since the 55-64 and 65+ are the most autonomous workers and these two age groups will constitute the largest growth in terms of workforce composition over the next decade.
- Finally there will still be a need for collective representation based on demographic trends in the near term. Firms wishing to move to a non-union system of working, will not find much consolation in the ageing workforce, as both the incidence and desire for unionisation grow as we age.

The wild card in all the above discussions are the 65+ year olds, who currently have very low labour participation rates relative to their younger age counterparts. If there is a change and this cohort begins to work longer, firms (on the basis of this evidence) will find a very flexible group of workers who are less likely to demand unionisation, prefer to work in non-standard contractual arrangements and be more likely to enjoy the job they are in and the work environment they currently have.

The *medium term* (2011-21) will be the toughest period for firms as the relative share of working age persons in Canada begins to fall for the first time in 80 years (the last time being during the middle to late years of the Great Depression). This will make labour inputs relatively scarce, although the full entry of the echo generation into the labour force will slow the relative decline in younger age workers (15-34). The prime age workforce will continue to decline, while the 55-64 age group will continue to grow.

Firms will therefore face pressures on either end of the working age spectrum. They will, among other things, have:

- Younger age workers who will likely have to be catered to in terms of benefits, simply because their numbers will increase relative to the same age cohort in the preceding period.
- The scarce prime age worker will be favoured by firms because of their accumulated skill and lower supervisory burdens. This will raise their value to the firm but also bid up their wages (all things constant).
- The need for firms to respond to the still increasing cohort of 55+ aged workers, by making the workplace more progressive and flexible in terms of working home arrangements, will not dissipate.

- Firms will have to tailor their workplace practices to differing working age segments as there will be differing preferences and also shifting relative shares of these cohorts in the working age population.

After two decades of rising shares of 55-64 year old workers and declines in the younger and prime age workforce, the *long term* (2021-31) period is marked by relative stability. Firms will not witness much external labour market change in this period and consequently will have time to solidify any reforms undertaken in the preceding years in order to accommodate the growth of older age workers. And although the relative share of the working age population will continue to decline, the actual composition of the working age population (15-65 year olds) will in fact grow younger as the share of the 55-64 population gets smaller relative to 35-54 year olds. This is the period when the tail end of the baby boom (the largest cohort) finally enters full retirement.

7. Concluding Observations and Policy Implications

Canada's labour market will witness a fairly dramatic shift in the coming decades based solely on demographic changes brought about by the baby boom (the period of historically higher than average birth rates from 1945 to 1964) and subsequent baby bust (1965-1985). Until recently, Canada's pronounced boom-bust demographic cycle has caused relative labour market growth amongst both the working age population (aged 15-64) and the prime age workers (aged 35-54) to rise faster than the growth in the share of dependents (0-14 and 65) or younger workers (15-34). This process of demographic transition has in turn changed the nature of our corporate structures as the traditional corporate pyramid has had to adapt to a non pyramidal labour force, with relatively fewer young and old workers at either end of the population pyramid. It has also

more recently placed pressure for legislation to ban mandatory retirement in a number of provinces.

From 2011 onwards, however, the baby boom generation will begin entering the ranks of older age workers (55-64 and 65+) and soon will be exiting the labour force altogether. This will produce a four-decade long period, 2011-2050, in which the share of potential working age persons (15 to 64 year olds) will shrink. At the same time the share of older age workers (55-64) and older age dependents will increase steadily. Will these changes necessarily spell doom for the Canadian economy and labour market fortunes of the rest of the workforce? The answer depends on the balance of economic forces pushing and pulling in either direction.

On the bright side, this kind of labour market maturation may actually bring with it more (and not less) labour market flexibility and productivity as older age workers are less desirous of a permanent job if not possessing one and have a lower probability of being mismatched in terms of skill and ability in their jobs. Maturation also appears to lower agency costs for firms as older workers generally are given more autonomy and therefore need much less direct supervision in their jobs.

However, on the negative side, such large reductions in the relative size of the potential labour force and amongst prime age workers in particular, will have a negative impact on economic growth and productivity. Moreover, there is also some evidence that firms try to maintain an optimal youth/mature worker balance at work and when faced with such dramatic declines in the share of younger workers, they may try to rebalance by either shedding existing mature labour or slowing down the hiring of young labour market entrants. This result, however, is sensitive to the degree of substitutability between mature and young human capital. Changes in the nature of work and technology may mitigate this potential problem.

Finally, in terms of labour market institutions, both internal and external to the firm, it seems likely that as the workforce ages it may result in more empowerment as this rises fairly steadily with age. Conversely, fewer benefits and progressive workplace practices across firms are also likely, as these tend to peak amongst the prime age workforce and decline on either side of the prime age years. Unionisation appears to be neither harmed nor hindered by workforce aging, as workers (of any age) generally display a latent desire for unionisation that is larger than the observed rate of unionisation. Workers are more likely to satiate their latent demand for unionisation as they age, but since the incoming cohort is smaller, it may mean fewer workers will actually become union members in Canada in the future.

In terms of firm policies and practices, traditional promotional based systems of seniority work well when the working age population is expansive (fewer older workers relative to the prime age and young). But when many workers move into the older working age groups at the same time, seniority based systems of pay and promotion begin to break down. This may explain why merit and performance based systems or reward began to make their appearance in the 1990s as the last wave of the baby boom entered the middle stage of their careers and were followed into the entry-level labour market by the much smaller baby bust generation. Having said that, workers themselves do not prefer performance-only based systems of pay and promotion as they age. Employers will have to be sensitive to these preferences given the growth in 55+ age workers over the next 30 years.

While our analysis has implications mainly for firm-level policy responses, it also has implications for public policy responses. The greater number of older workers will mean continued pressure for legislation to protect against age discrimination as well as to ban mandatory retirement. This implies, for example, that those jurisdictions that still have an age

cap of 65 in their Human Rights Codes will be under pressure to remove that age limit so that the conventional protection against age discrimination will apply to those beyond age 65. Since that age cap generally existed to allow mandatory retirement, elimination of the age cap would effectively ban mandatory retirement unless governments allowed mandatory retirement if it was part of a *bone fide* retirement pension plan or collective agreement. This would effectively allow mandatory retirement in most circumstances (since it invariably is part of a pension plan and/or collective agreement) but only if it is accompanied by such protections. It would also mean that persons beyond the age of 65 have the normal protection of the Human Rights Code.

To the extent that non-standard employment will increase (both to facilitate the transition of older workers to retirement and because they are less desirous of a permanent job) there may be additional pressure on governments to ensure that non-standard workers are protected by normal labour laws. Such protection, however, is generally targeted towards more vulnerable disadvantaged workers who are involuntarily engaged in non-standard employment. To the extent that it is a preferred option for older workers who voluntarily accept non-standard work, there may be less pressure for such legal protection.

Pressure will also exist for life-long learning if older workers continue in employment, especially if technological change and job restructuring make skills rapidly obsolete. The methods and content of retraining for older workers may be different from that for younger workers, raising an additional challenge.

Governments will also be under pressure to reduce the barriers that may (perhaps unintentionally) inhibit the continued employment of older workers. Such barriers, for example, exist in the public pension system. Old Age Security has a clawback that reduces payments somewhat for those who continue working past age 65, and Guaranteed Income Supplements

have larger 'clawbacks'. CPP/QPP has a requirement to "substantially cease working" to receive early benefits between ages 60-65 and there is a penalty of no actuarial adjustment after age 70 for those who may postpone receipt.

Increased pressure will also exist on public disability programs given the greater likelihood of disability for older persons and the pressure on private employer disability systems if older workers continue in employment. The same applies to the interpretation of reasonable accommodation requirements with respect to disabilities.

In some areas, the continued employment of older workers may reduce pressure on government policy initiatives. This could be the case with pay-as-you go systems such as CPP/QPP if the continued employment of older workers meant they were paying into the fund and drawing less. For them to draw less, however, the government would have to raise the age of entitlement or reduce benefits.

Clearly, there will be pressure to redesign numerous public policy initiatives if older workers continue in employment, and especially if they continue in non-standard ways. Nevertheless, this is part-and-parcel of the broader pressure associated with a more diverse workforce with diverse needs over the different phases of their lifecycle. What is certain is that there will be changing pressures on policy makers just as there is changing pressures on employers and employees.

ANNEX: DATA DESCRIPTION

The empirical analysis of our report has been based on three data sources. The first dataset relies on Cycle 9 of the Canadian General Social Survey (GSS) of 1994. That data is ideally suited for analyzing the relationship between productivity, workplace practices and age structure since Cycle 9 provides information on age and workplace practices. The GSS also contains information on a wide range of institutional and working time characteristics (including union status and attitudes towards work and the job) as well as a wide array of socio-demographic and family characteristics that can affect behaviour. Finally, the GSS has a wide range of personal characteristics that can be important control variables, and that yield interesting information in their own right.

The second source used to capture preferences for workplace practices and institutional arrangements such as unionisation, is the Lipset and Meltz (1997) Ipsos-Reid administered Canada-U.S. Labour Attitudes Survey. The survey utilized quota sampling to generate a representative sample of workers by determining how many responses were needed to obtain a representative sample over observable characteristics based on Census data (e.g., region, gender, age and employment status) and then contacting households until those sample targets are met. The characteristics (based on Census data in this case), not surprisingly match very closely the population characteristics as given by Census figures in both respective countries. The purpose of the survey was to determine attitudes toward unions, work, institutions and social policy.

The final dataset, used primarily for figures 1 to 4 and in table 1, is data derived from the United Nations Population Division, which is made available on the following website from the US Census Bureau, International Population Division http://www.census.gov/ipc/www/idbsum.html. The US Census Bureau/United Nations World Population Prospects, provides corresponding demographic data for 160 countries including

Canada from 1950 to 2000, with age structure and population projections running until 2050. The projections used were medium level projections, which also include factors such as immigration and increasing longevity. Statistics Canada also published demographic projections for the Canadian economy but these are limited to 2036.

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FIGURE 1: Persons of Working Age (15-64) as a Percentage of Total Population in Canada, 1991-2050.

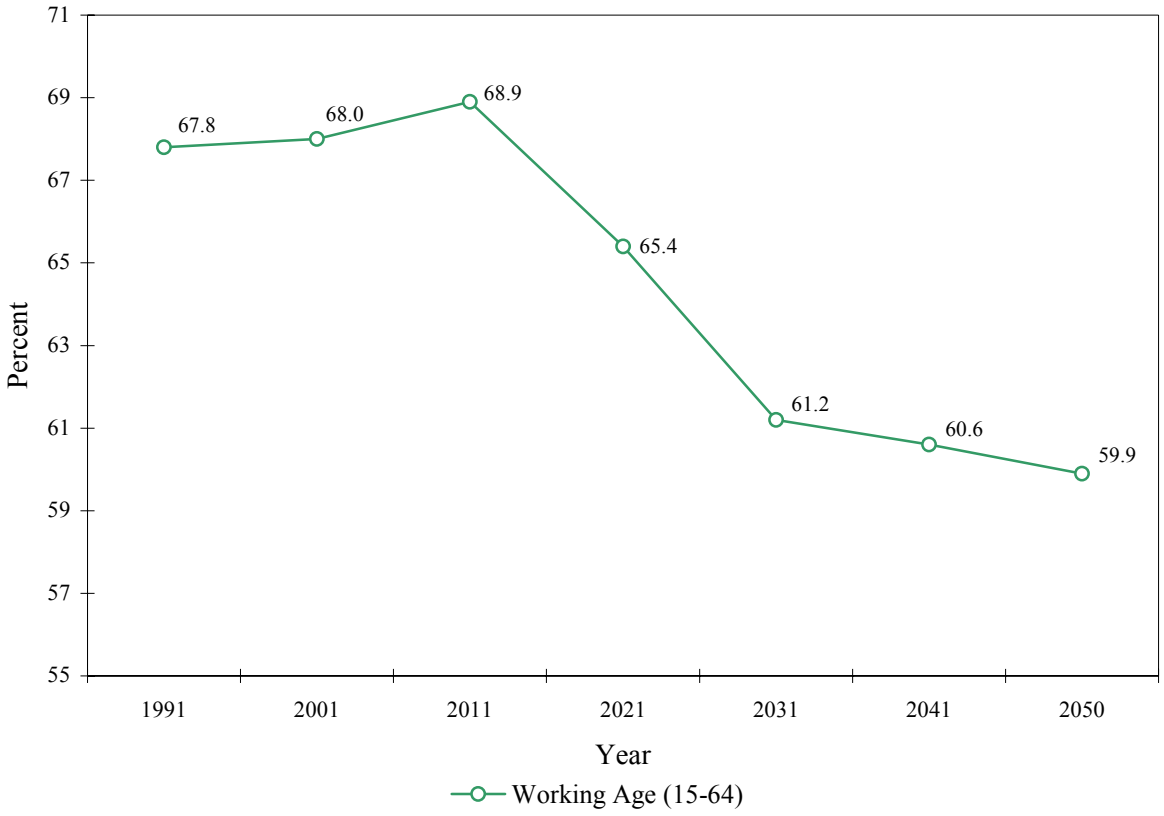

FIGURE 2: Youth (0-14) and Old Age (65+) Dependants as a Percentage of Total Population in Canada, 1991-2050.

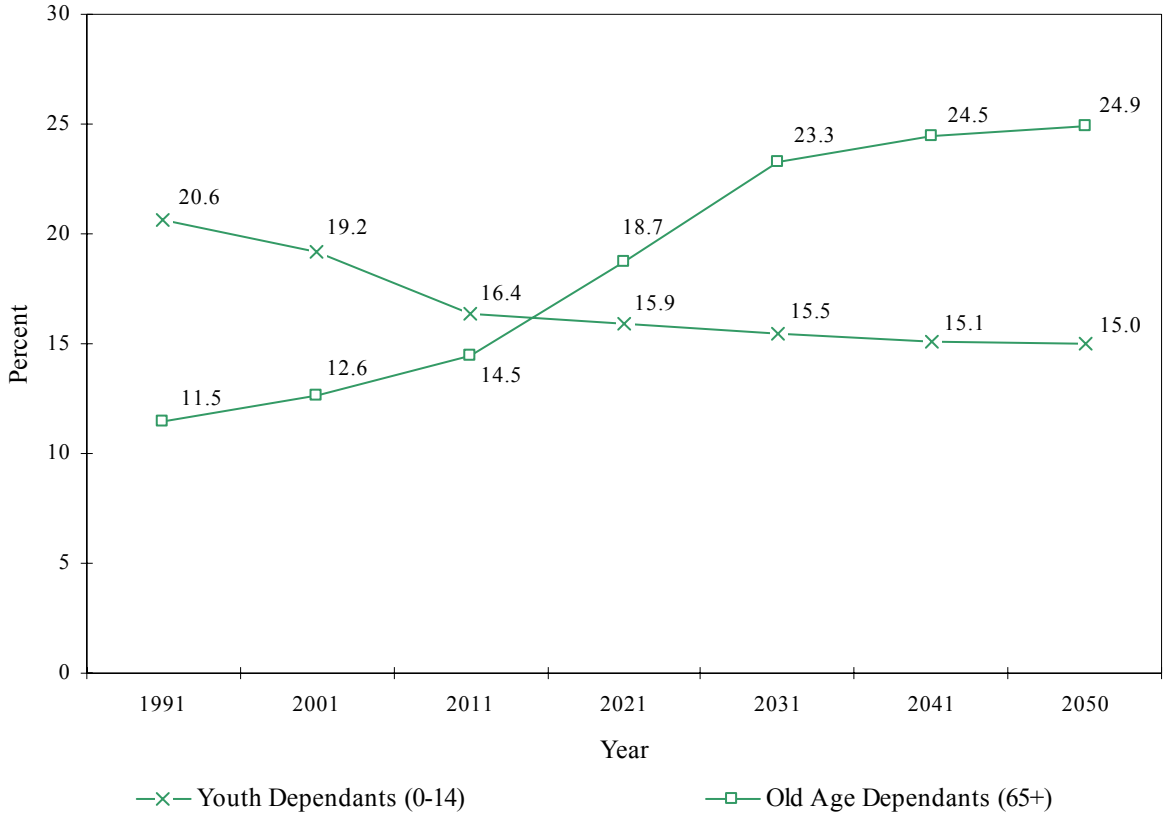

FIGURE 3: The Distribution of Canada's Working Age Population, 1991-2050

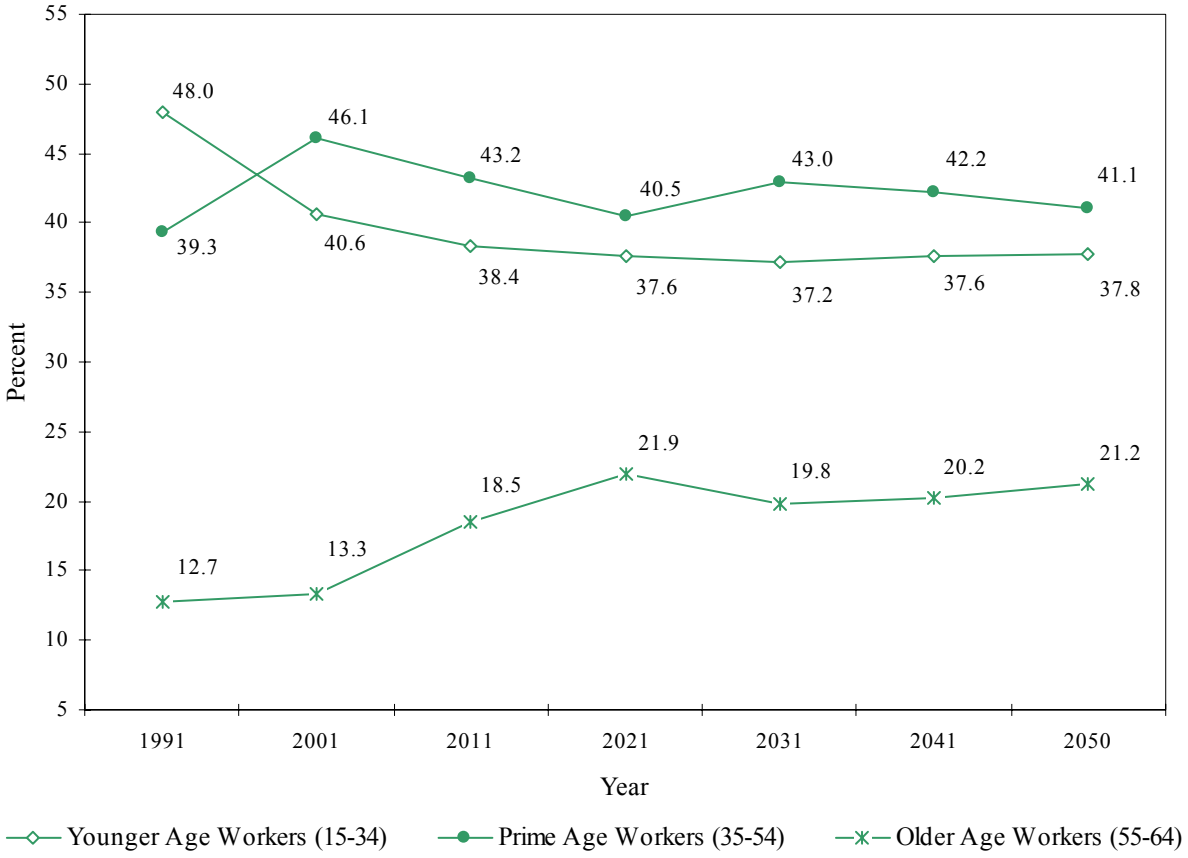

FIGURE 4: The Ratio of Prime Age to Youth and Older Age Workers in Canada, 1991-2050

Table 1: Changes in Canada's Working Age Population and Workforce Age Structure, 1991-2050

Decade	Δ Woking Age Population	Δ Share of Younger Age Workers	Δ Share of Prime Age Workers	Δ Share of Older Age Workers
	15-64 / Total pop	15-34 / 15-64	35-54 / 15-64	55-64 / 15-64
1. 1991-2001	+0.2	-7.4	+6.8	0.6
2. 2001-2011	+0.9	-2.2	-2.9	5.2
3.2011-2021	-3.5	-0.8	-2.7	3.4
4. 2021-2031	-4.2	-0.4	+2.5	-2.1
5. 2031-2041	-0.6	+0.4	-0.8	0.4
6. 2041-2050	-0.7	+0.2	-1.1	1.0
7. Projected Change (2001-2050)	-8.1	-2.8	-5.0	7.9

Note: All cell numbers refer to percentage point changes. From 2001 onward these changes are based on projections.

Table 2: The Incidence of Firm Policies and Workplace Practices in Canada by Age of Worker

Adjusted Results (Probability Estimates)	**Overall Mean**	**Younger Age Workers**		**Prime Age Workers**		**Older Age Workers**	
		[15-24]	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Firms Benefits							
1. Retirement Plan	0.453	--	0.107**	0.117**	0.080**	0.048*	-0.019
2. Medical Plan	0.522	--	0.145**	0.116**	0.074**	0.051**	-0.047
3. Dental Plan	0.498	--	0.153**	0.118**	0.077**	0.053**	-0.024
4. Counseling Services	0.363	--	0.091**	0.105**	0.068**	0.040*	-0.015
5. Drug Plan	0.477	--	0.138**	0.113**	0.078**	0.063**	-0.033
6. Mat/Paternity Leave	0.316	--	0.057**	0.048**	0.040*	-0.010	-0.053*
Work Schedule							
7. Regular daytime shift	0.729	--	0.154**	0.167**	0.173**	0.175**	0.168**
8. Regular evening shift	0.059	--	-0.082**	-0.094**	-0.094**	-0.096**	-0.095**
9. Regular night shift	0.019	--	-0.014*	-0.016*	-0.014	-0.009	-0.002
10. Rotating shift	0.148	--	-0.041**	-0.035*	-0.044**	-0.068**	-0.038
11. Split-shift	0.018	--	-0.003	-0.003	-0.002	0.002	0.000
Working Arrangements							
12. Flexible work	0.339	--	-0.004	-0.001	-0.010	-0.002	0.084*
13. Work from home	0.190	--	0.025	0.055**	0.067**	0.077**	0.189**
14. Progressive HRM*	0.522	--	--	0.115**	0.109**	0.097	0.022

Source: GSS, cycle 9 (1994). *The progressive HRM results based on Lispet-Meltz Ipsos-Reid survey (1996).
Note: Numbers in cells refer to changes in probability based on results obtained from linear probability estimates, which include as controls tenure, gender, marital status, presence of children, education, work status, occupation, firm size, income, and province. Results available upon request. The [15-24] year olds function as our excluded reference category. Excluded reference category for row 14 is [15-34]. Significance is denoted ** at the < 0.05 level and * at the 0.05 - 0.10 level.

Table 3: Perceptions of Job, Firm Policies and Workplace Practices in Canada by Age of Worker

Adjusted Results (Probability Estimates)	**Overall Mean**	**Younger Age Workers**		**Prime Age Workers**		**Older Age Workers**	
		[15-24]	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Assessments of Workplace							
1. Too many hours/demands	0.341	--	0.030	0.003	-0.027	-0.082**	-0.203**
2. Bad interpersonal relations	0.177	--	0.033*	0.026	-0.006	-0.050**	-0.034
Assessments of Job							
3. Related to education	0.390	--	0.042**	0.017	0.027	0.027	-0.012
4. Overqualified for job	0.197	--	-0.037*	-0.050**	-0.008	-0.022	-0.028
5. Requires high skills	0.509	--	0.118**	0.175**	0.160**	0.165**	0.082*
Assessments of Workplace Practices + Polices							
6. Security more important than career advancement*	0.688	--	--	0.171**	0.145**	0.040	0.162
7. Merit-only layoff criteria*	0.553	--	--	-0.134**	-0.092**	-0.121*	0.153
8. Positive view of merit-based pay *	0.774	--	--	-0.080**	-0.079**	-0.043	0.003

Source: GSS, cycle 9 (1994). *The results based on Lispet-Meltz Ipsos-Reid survey (1996).
Note: Numbers in cells refer to changes in probability based on results obtained from linear probability estimates, which include as controls tenure, gender, marital status, presence of children, education, work status, occupation, firm size, income, and province. The [15-24] year olds function as our excluded reference category. Excluded reference category for rows 6, 7 and 8 is [15-34]. Significance is denoted ** at the < 0.05 level and * at the 0.05 - 0.10 level.

Table 4: Employment Contracts, Managerial Activities and Supervisory Burden in Canada by Age of Worker

Adjusted Results (Probability Estimates)	**Overall Mean**	**Younger Age Workers**		**Prime Age Workers**		**Older Age Workers**	
		[15-24]	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Permanent Contracts							
1. Permanent job	0.892	--	-0.003	-0.007	-0.046**	-0.026	-0.011
2. Preference for perm. job*	0.781	--	0.188**	0.220**	0.194**	-0.013	-0.545**
Supervisory/Managerial Job							
3. Supervisory Duties	0.307	--	0.003	-0.035	-0.066**	-0.068**	-0.130**
4. Managerial job	0.302	--	0.080**	0.081**	0.065**	0.060**	0.130**
5. Empowered manager	0.492	--	0.034	0.017	0.050*	0.040*	0.015
Supervisory Burden							
6. Highly supervised in job	0.227	--	-0.060**	-0.071**	-0.073**	-0.095**	-0.103**

Source: GSS, cycle 9 (1994). *Question asked only of the subset of those who answered job was not a permanent contract.
Note: Numbers in cells refer to changes in probability based on results obtained from linear probability estimates, which include as controls tenure, gender, marital status, presence of children, education, work status, occupation, firm size, income, and province. The [15-24] year olds function as our excluded reference category. Significance is denoted ** at the < 0.05 level and * at the 0.05 - 0.10 level.

Table 5: Incidence of Union Voice and Preferences for Collective Voice and Unionization in Canada by Age of Worker

Adjusted Results (Probability Estimates)	**Overall Mean**	**Younger Age Workers**		**Prime Age Workers**		**Older Age Workers**	
		[15-24]	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Union Voice							
1. Union member	0.285	--	0.042**	0.086**	0.089**	0.023	-0.015
2. Covered by coll. agreement	0.360	--	0.063**	0.080**	0.078**	0.001	-0.035
Preferences for:							
3. Collective solutions to workplace problems*	0.362	--	--	0.040	0.041	0.031	0.110
4. Union membership*	0.471	--	--	0.105**	0.088**	0.152**	-0.177**

Source: GSS, cycle 9 (1994). *The results based on Lispet-Meltz Ipsos-Reid survey (1996).
Note: Numbers in cells refer to changes in probability based on results obtained from linear probability estimates, which include as controls tenure, gender, marital status, presence of children, education, work status, occupation, firm size, income, and province. The [15-24] year olds function as our excluded reference category. Excluded reference category for rows 3 and 4 is [15-34]. Significance is denoted ** at the < 0.05 level and * at the 0.05 - 0.10 level.

APPENDIX

Table 2A: Estimates of Correlates of Firm Policies and Workplace Practices, GSS 1994 (Coefficients and P-values)

Variable	Retirement Plan [1]		Medical Plan [2]		Dental Plan [3]	
	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
Mean dependent variable	0.453	--	0.522	--	0.498	--
(Age 15-24)						
Age 25-34	0.107	0.000	0.145	0.000	0.153	0.000
Age 35-44	0.117	0.000	0.116	0.000	0.118	0.000
Age 45-54	0.080	0.001	0.074	0.002	0.077	0.002
Age 55-64	0.048	0.060	0.051	0.048	0.053	0.043
Age 65 and over	-0.019	0.619	-0.047	0.203	-0.024	0.527
Tenure (in years)	0.025	0.000	0.021	0.000	0.018	0.000
Tenure squared	0.000	0.000	0.000	0.000	0.000	0.000
(Female)						
Male	0.015	0.175	0.018	0.121	0.020	0.076
(Single, never married)						
Married or common law	0.013	0.368	0.011	0.472	-0.004	0.785
Widowed	0.002	0.960	0.007	0.840	-0.002	0.963
Separated or divorced	0.019	0.340	0.039	0.059	0.023	0.268
(No children in household)						
One child	-0.020	0.164	-0.036	0.015	-0.031	0.038
Two or more children	-0.019	0.161	-0.033	0.019	-0.014	0.315
(Less than high school grad)						
High school diploma	0.049	0.002	0.056	0.000	0.097	0.000
Some post-secondary	0.024	0.163	0.059	0.001	0.085	0.000
Comm. college/trade diploma	0.066	0.000	0.050	0.001	0.083	0.000
University graduate	0.096	0.000	0.092	0.000	0.114	0.000
(Part-Time)						
Full-Time	-0.016	0.140	0.077	0.000	0.072	0.000
(Paid worker)						
Self-employed	-0.224	0.000	-0.229	0.000	-0.226	0.000
(Clerical occupation)						
Managerial	0.043	0.019	0.049	0.007	0.029	0.114
Professional	0.091	0.000	0.032	0.087	0.024	0.207
Technical	0.090	0.005	0.027	0.413	-0.003	0.918
Sales and service	0.066	0.002	0.027	0.222	0.024	0.285
Trades/ operators	0.075	0.001	0.043	0.052	0.024	0.279
Primary occupations	0.027	0.323	-0.068	0.009	-0.081	0.001
Processing & mfg.	0.043	0.015	-0.013	0.474	-0.019	0.286
(Firm Size (<20 employees))						
Firm Size (20-99 employees)	0.188	0.000	0.288	0.000	0.277	0.000
Firm Size (100-249 employees)	0.352	0.000	0.389	0.000	0.387	0.000
Firm Size (250-499 employees)	0.448	0.000	0.470	0.000	0.483	0.000
Firm Size (500-999 employees)	0.484	0.000	0.487	0.000	0.482	0.000
Firm Size (1000+ employees)	0.515	0.000	0.475	0.000	0.498	0.000
(Household income less $10,000)						

$10,000-14,999	-0.035	0.468	-0.009	0.868	-0.019	0.712
$15,000-19,999	-0.010	0.831	0.011	0.817	-0.011	0.823
$20,000-29,000	0.087	0.032	0.117	0.007	0.098	0.027
$30,000-39,999	0.100	0.012	0.115	0.007	0.105	0.017
$40,000-49,999	0.144	0.000	0.181	0.000	0.164	0.000
$50,000-59,999	0.175	0.000	0.191	0.000	0.174	0.000
$60,000-79,999	0.178	0.000	0.224	0.000	0.217	0.000
$80,000-99,999	0.166	0.000	0.216	0.000	0.220	0.000
$100000+	0.107	0.013	0.181	0.000	0.177	0.000
(Ontario)						
Nfld	0.002	0.932	0.003	0.911	-0.080	0.003
PEI	0.005	0.875	-0.009	0.777	-0.040	0.167
NS	-0.015	0.459	-0.004	0.853	-0.060	0.006
NB	-0.039	0.075	-0.070	0.003	-0.054	0.022
Que	0.007	0.613	-0.047	0.002	-0.094	0.000
Man	0.052	0.010	-0.031	0.154	0.008	0.694
Sask	0.081	0.000	-0.076	0.002	0.048	0.026
Alb	-0.006	0.704	0.017	0.320	0.042	0.012
Bc	-0.026	0.119	0.019	0.243	0.045	0.006
N	6295	--	6295	--	6295	--
R-squared	0.448	--	0.419	--	0.417	--

Table 2A: Estimates of Correlates of Firm Policies and Workplace Practices, GSS 1994 (Coefficients and P-values) – Cont'd

Variable	Counseling Services [4]		Drug Plan [5]		Mat/Paternity Leave [6]	
	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
Mean dependent variable	0.363	--	0.477	--	0.316	--
(Age 15-24)						
Age 25-34	0.091	0.000	0.138	0.000	0.057	0.003
Age 35-44	0.105	0.000	0.113	0.000	0.048	0.024
Age 45-54	0.068	0.002	0.078	0.001	0.040	0.081
Age 55-64	0.040	0.100	0.063	0.014	-0.010	0.682
Age 65 and over	-0.015	0.649	-0.033	0.355	-0.053	0.091
Tenure (in years)	0.019	0.000	0.019	0.000	0.017	0.000
Tenure squared	0.000	0.000	0.000	0.000	0.000	0.000
(Female)						
Male	0.007	0.542	0.033	0.005	-0.008	0.504
(Single, never married)						
Married or common law	0.010	0.506	0.012	0.448	0.020	0.179
Widowed	0.000	0.994	0.019	0.547	0.014	0.660
Separated or divorced	0.039	0.054	0.043	0.041	0.026	0.214
(No children in household)						
One child	-0.032	0.028	-0.034	0.026	-0.013	0.402
Two or more children	-0.021	0.133	-0.013	0.371	-0.015	0.323
(Less than high school grad)						
High school diploma	0.054	0.000	0.064	0.000	0.056	0.000
Some post-secondary	0.058	0.001	0.041	0.024	0.040	0.022
Comm. college/trade diploma	0.062	0.000	0.057	0.000	0.054	0.000
University graduate	0.118	0.000	0.088	0.000	0.107	0.000
(Part-Time)						
Full-Time	-0.015	0.187	0.059	0.000	0.000	0.975
(Paid worker)						
Self-employed	-0.169	0.000	-0.204	0.000	-0.124	0.000
(Clerical occupation)						
Managerial	0.035	0.050	0.028	0.127	0.013	0.495
Professional	0.054	0.004	0.028	0.146	0.019	0.331
Technical	0.022	0.539	-0.015	0.691	0.076	0.059
Sales and service	0.030	0.183	0.037	0.102	0.012	0.596
Trades/ operators	0.051	0.021	0.049	0.032	0.016	0.495
Primary occupations	-0.010	0.641	-0.042	0.085	-0.011	0.617
Processing & mfg.	0.003	0.871	-0.006	0.751	-0.022	0.215
(Firm Size (<20 employees))						
Firm Size (20-99 employees)	0.135	0.000	0.262	0.000	0.136	0.000
Firm Size (100-249 employees)	0.246	0.000	0.394	0.000	0.253	0.000
Firm Size (250-499 employees)	0.385	0.000	0.471	0.000	0.322	0.000
Firm Size (500-999 employees)	0.464	0.000	0.487	0.000	0.373	0.000
Firm Size (1000+ employees)	0.516	0.000	0.478	0.000	0.408	0.000
(Household income less $10,000)						
$10,000-14,999	-0.060	0.165	0.002	0.964	-0.070	0.077
$15,000-19,999	-0.043	0.321	0.040	0.384	-0.043	0.273
$20,000-29,000	0.021	0.589	0.103	0.010	0.018	0.608

$30,000-39,999	0.029	0.439	0.117	0.003	0.029	0.410
$40,000-49,999	0.097	0.011	0.159	0.000	0.082	0.023
$50,000-59,999	0.127	0.001	0.187	0.000	0.135	0.000
$60,000-79,999	0.141	0.000	0.215	0.000	0.100	0.007
$80,000-99,999	0.134	0.001	0.185	0.000	0.093	0.023
$100000+	0.096	0.020	0.184	0.000	0.076	0.060
(Ontario)						
Nfld	0.006	0.803	-0.004	0.869	-0.070	0.009
PEI	-0.001	0.973	-0.021	0.483	-0.046	0.109
NS	0.035	0.097	0.014	0.485	-0.072	0.002
NB	0.034	0.139	-0.053	0.026	-0.104	0.000
Que	0.013	0.404	0.023	0.125	0.038	0.016
Man	0.049	0.018	-0.166	0.000	-0.014	0.523
Sask	0.051	0.017	-0.197	0.000	-0.065	0.005
Alb	0.045	0.006	-0.057	0.001	-0.035	0.045
Bc	0.023	0.157	-0.085	0.000	-0.178	0.000
N	6295	--	6295	--	6295	--
R-squared	0.406	--	0.413	--	0.310	--

Table 2A: Estimates of Correlates of Firm Policies and Workplace Practices, GSS 1994 (Coefficients and P-values)- Cont'd

Variable	Regular daytime shift [7]		Regular evening shift [8]		Regular night shift [9]	
	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
Mean dependent variable	0.729	--	0.059	--	0.019	--
(Age 15-24)						
Age 25-34	0.154	0.000	-0.082	0.000	-0.014	0.095
Age 35-44	0.167	0.000	-0.094	0.000	-0.016	0.084
Age 45-54	0.173	0.000	-0.094	0.000	-0.014	0.130
Age 55-64	0.175	0.000	-0.096	0.000	-0.009	0.353
Age 65 and over	0.168	0.000	-0.095	0.000	-0.002	0.905
Tenure (in years)	0.004	0.057	-0.001	0.257	-0.002	0.006
Tenure squared	0.000	0.919	0.000	0.884	0.000	0.137
(Female)						
Male	-0.010	0.441	0.016	0.024	0.003	0.375
(Single, never married)						
Married or common law	0.061	0.000	-0.026	0.003	0.000	0.923
Widowed	0.064	0.089	-0.017	0.392	0.011	0.428
Separated or divorced	0.036	0.115	-0.015	0.204	0.012	0.115
(No children in household)						
One child	0.003	0.836	0.003	0.678	0.000	0.924
Two or more children	-0.036	0.020	0.005	0.539	0.003	0.600
(Less than high school grad)						
High school diploma	0.023	0.218	-0.036	0.001	-0.016	0.014
Some post-secondary	0.037	0.077	-0.022	0.104	-0.016	0.038
Comm. college/trade diploma	0.025	0.150	-0.032	0.001	-0.018	0.005
University graduate	0.112	0.000	-0.048	0.000	-0.035	0.000
(Part-Time)						
Full-Time	0.055	0.000	-0.053	0.000	-0.006	0.128
(Paid worker)						
Self-employed	-0.105	0.000	0.020	0.030	-0.001	0.854
(Clerical occupation)						
Managerial	0.083	0.000	-0.021	0.037	0.003	0.619
Professional	-0.002	0.921	-0.012	0.241	0.018	0.021
Technical	0.015	0.705	-0.037	0.004	-0.012	0.023
Sales and service	0.069	0.003	-0.020	0.076	-0.006	0.287
Trades/ operators	0.004	0.888	-0.017	0.186	-0.004	0.621
Primary occupations	0.086	0.007	-0.050	0.000	0.002	0.797
Processing & mfg.	-0.048	0.019	-0.004	0.721	0.009	0.208
(Firm Size (<20 employees))						
Firm Size (20-99 employees)	-0.053	0.003	0.033	0.002	0.003	0.563
Firm Size (100-249 employees)	-0.068	0.003	0.031	0.019	0.006	0.320
Firm Size (250-499 employees)	-0.084	0.001	0.022	0.101	0.020	0.023
Firm Size (500-999 employees)	-0.130	0.000	0.036	0.015	0.033	0.002
Firm Size (1000+ employees)	-0.109	0.000	0.008	0.341	0.023	0.000
(Household income less $10,000)						
$10,000-14,999	-0.017	0.775	-0.013	0.757	-0.022	0.383
$15,000-19,999	-0.114	0.048	0.010	0.809	-0.002	0.940
$20,000-29,000	-0.062	0.214	0.005	0.881	-0.014	0.529

$30,000-39,999	-0.051	0.300	-0.012	0.720	-0.021	0.347
$40,000-49,999	-0.033	0.499	-0.003	0.935	-0.009	0.699
$50,000-59,999	-0.046	0.355	-0.019	0.581	-0.015	0.522
$60,000-79,999	-0.033	0.506	-0.013	0.702	-0.021	0.367
$80,000-99,999	-0.048	0.351	-0.005	0.890	-0.018	0.456
$100000+	-0.048	0.352	-0.006	0.855	-0.026	0.259
(Ontario)						
Nfld	-0.123	0.000	-0.033	0.012	0.003	0.796
PEI	-0.044	0.198	0.016	0.455	-0.012	0.169
NS	-0.077	0.002	-0.020	0.089	0.009	0.314
NB	-0.040	0.146	-0.038	0.002	-0.009	0.201
Que	0.018	0.266	0.002	0.797	0.006	0.323
Man	-0.013	0.556	0.002	0.898	-0.007	0.270
Sask	-0.021	0.370	-0.012	0.332	0.000	0.952
Alb	0.032	0.070	-0.013	0.207	0.000	0.955
Bc	-0.055	0.004	-0.011	0.259	-0.004	0.525
N	6295	--	6295	--	6295	--
R-squared	0.093	--	0.084	--	0.023	--

Table 2A: Estimates of Correlates of Firm Policies and Workplace Practices, GSS 1994 (Coefficients and P-values) – Cont'd

Variable	Rotating shift [10]		Split-shift [11]		Flexible work [12]	
	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
Mean dependent variable	0.148	--	0.018	--	0.339	--
(Age 15-24)						
Age 25-34	-0.041	0.036	-0.003	0.715	-0.004	0.870
Age 35-44	-0.035	0.089	-0.003	0.677	-0.001	0.974
Age 45-54	-0.044	0.046	-0.002	0.769	-0.010	0.715
Age 55-64	-0.068	0.003	0.002	0.793	-0.002	0.933
Age 65 and over	-0.038	0.240	0.000	0.998	0.084	0.064
Tenure (in years)	0.000	0.959	-0.001	0.211	-0.001	0.606
Tenure squared	0.000	0.529	0.000	0.968	0.000	0.689
(Female)						
Male	-0.016	0.127	0.001	0.746	0.059	0.000
(Single, never married)						
Married or common law	-0.020	0.151	-0.005	0.369	-0.022	0.179
Widowed	-0.046	0.091	-0.001	0.909	-0.005	0.894
Separated or divorced	-0.029	0.117	0.000	0.989	-0.022	0.336
(No children in household)						
One child	-0.009	0.494	0.002	0.624	-0.002	0.919
Two or more children	0.012	0.355	0.005	0.336	0.002	0.916
(Less than high school grad)						
High school diploma	0.027	0.085	0.006	0.262	0.019	0.283
Some post-secondary	-0.015	0.363	0.014	0.046	0.084	0.000
Comm. college/trade diploma	0.024	0.094	0.003	0.499	0.023	0.173
University graduate	-0.041	0.010	0.006	0.294	0.113	0.000
(Part-Time)						
Full-Time	0.012	0.233	-0.001	0.831	-0.038	0.003
(Paid worker)						
Self-employed	0.044	0.002	0.017	0.037	0.286	0.000
(Clerical occupation)						
Managerial	-0.069	0.000	0.004	0.540	0.091	0.000
Professional	-0.012	0.490	0.010	0.143	0.037	0.078
Technical	0.044	0.247	-0.005	0.585	0.032	0.453
Sales and service	-0.061	0.001	0.000	0.945	0.134	0.000
Trades/ operators	0.020	0.375	-0.005	0.416	-0.095	0.000
Primary occupations	-0.028	0.275	-0.002	0.848	0.109	0.001
Processing & mfg.	0.033	0.053	0.004	0.544	-0.060	0.002
(Firm Size (<20 employees))						
Firm Size (20-99 employees)	0.040	0.004	-0.011	0.045	-0.166	0.000
Firm Size (100-249 employees)	0.047	0.007	-0.006	0.413	-0.157	0.000
Firm Size (250-499 employees)	0.075	0.000	-0.019	0.001	-0.188	0.000
Firm Size (500-999 employees)	0.102	0.000	-0.018	0.007	-0.207	0.000
Firm Size (1000+ employees)	0.112	0.000	-0.010	0.054	-0.159	0.000
(Household income less $10,000)						
$10,000-14,999	0.010	0.817	0.041	0.015	-0.037	0.505
$15,000-19,999	0.081	0.064	0.038	0.006	-0.020	0.703
$20,000-29,000	0.026	0.472	0.038	0.000	-0.024	0.613

$30,000-39,999	0.067	0.065	0.016	0.005	0.032	0.498
$40,000-49,999	0.026	0.478	0.026	0.000	0.041	0.385
$50,000-59,999	0.038	0.309	0.029	0.000	0.052	0.288
$60,000-79,999	0.031	0.393	0.030	0.000	0.065	0.179
$80,000-99,999	0.033	0.399	0.029	0.003	0.105	0.044
$100000+	0.040	0.295	0.020	0.019	0.200	0.000
(Ontario)						
Nfld	0.126	0.000	0.008	0.332	-0.066	0.019
PEI	0.008	0.760	-0.002	0.802	0.000	0.995
NS	0.062	0.004	0.015	0.069	-0.017	0.481
NB	0.074	0.003	0.019	0.049	-0.099	0.000
Que	-0.042	0.001	0.030	0.000	-0.096	0.000
Man	0.015	0.418	0.003	0.651	-0.001	0.970
Sask	0.028	0.178	-0.006	0.192	0.012	0.653
Alb	-0.012	0.392	0.002	0.736	0.021	0.292
Bc	0.039	0.015	-0.004	0.392	-0.021	0.279
N	6295	--	6295	--	6295	--
R-squared	0.057	--	0.024	--	0.178	--

Table 2A: Estimates of Correlates of Firm Policies and Workplace Practices, GSS 1994 (Coefficients and P-values) – Cont'd.

Variable	Work from home [13]	
	Coefficient	P-Value
Mean dependent variable	0.190	--
(Age 15-24)		
Age 25-34	0.025	0.107
Age 35-44	0.055	0.002
Age 45-54	0.067	0.001
Age 55-64	0.077	0.001
Age 65 and over	0.189	0.000
Tenure (in years)	-0.001	0.461
Tenure squared	0.000	0.184
(Female)		
Male	-0.006	0.557
(Single, never married)		
Married or common law	0.005	0.724
Widowed	-0.052	0.072
Separated or divorced	-0.007	0.727
(No children in household)		
One child	0.003	0.828
Two or more children	0.026	0.054
(Less than high school grad)		
High school diploma	0.042	0.001
Some post-secondary	0.048	0.001
Comm. college/trade diploma	0.073	0.000
University graduate	0.183	0.000
(Part-Time)		
Full-Time	0.059	0.000
(Paid worker)		
Self-employed	0.230	0.000
(Clerical occupation)		
Managerial	0.073	0.000
Professional	0.091	0.000
Technical	-0.041	0.163
Sales and service	0.130	0.000
Trades/ operators	-0.079	0.000
Primary occupations	0.204	0.000
Processing & mfg.	-0.027	0.045
(Firm Size (<20 employees))		
Firm Size (20-99 employees)	-0.114	0.000
Firm Size (100-249 employees)	-0.100	0.000
Firm Size (250-499 employees)	-0.087	0.000
Firm Size (500-999 employees)	-0.105	0.000
Firm Size (1000+ employees)	-0.115	0.000
(Household income less $10,000)		
$10,000-14,999	0.037	0.399
$15,000-19,999	-0.023	0.570
$20,000-29,000	-0.028	0.442

$30,000-39,999	-0.018	0.621
$40,000-49,999	0.011	0.771
$50,000-59,999	0.004	0.916
$60,000-79,999	0.021	0.569
$80,000-99,999	0.023	0.587
$100000+	0.095	0.029
(Ontario)		
Nfld	0.009	0.675
PEI	-0.010	0.708
NS	0.049	0.015
NB	-0.044	0.024
Que	0.035	0.013
Man	0.021	0.249
Sask	0.022	0.296
Alb	0.018	0.268
Bc	-0.009	0.553
N	6295	--
R-squared	0.211	--

Table 3A: Estimates of Correlates of Perceptions of Job, Firm Practices and Workplace Practices, GSS 1994 (Coefficients and P-values)

Variable	Too many hours/demands [1]		Bad interpersonal relations [2]		Related to education [3]	
	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
Mean dependent variable	0.341	--	0.177	--	0.390	--
(Age 15-24)						
Age 25-34	0.030	0.176	0.033	0.088	0.042	0.045
Age 35-44	0.003	0.908	0.026	0.228	0.017	0.454
Age 45-54	-0.027	0.316	-0.006	0.798	0.027	0.272
Age 55-64	-0.082	0.004	-0.050	0.034	0.027	0.308
Age 65 and over	-0.203	0.000	-0.034	0.284	-0.012	0.774
Tenure (in years)	0.014	0.000	0.005	0.001	0.003	0.164
Tenure squared	0.000	0.000	0.000	0.004	0.000	0.872
(Female)						
Male	-0.051	0.000	-0.016	0.151	-0.004	0.752
(Single, never married)						
Married or common law	0.019	0.294	-0.005	0.744	0.007	0.689
Widowed	-0.005	0.906	-0.034	0.268	0.015	0.681
Separated or divorced	0.065	0.010	-0.003	0.879	0.005	0.841
(No children in household)						
One child	-0.021	0.241	-0.022	0.138	-0.001	0.936
Two or more children	-0.019	0.270	-0.045	0.002	0.019	0.208
(Less than high school grad)						
High school diploma	0.012	0.513	-0.010	0.515	0.048	0.001
Some post-secondary	0.050	0.020	0.007	0.700	0.188	0.000
Comm. college/trade diploma	0.062	0.001	0.036	0.015	0.438	0.000
University graduate	0.086	0.000	0.043	0.014	0.451	0.000
(Part-Time)						
Full-Time	0.126	0.000	0.017	0.116	-0.008	0.547
(Paid worker)						
Self-employed	0.077	0.000	-0.051	0.001	-0.020	0.305
(Clerical occupation)						
Managerial	0.034	0.139	0.007	0.709	-0.006	0.785
Professional	0.066	0.004	-0.012	0.534	0.251	0.000
Technical	-0.026	0.562	-0.026	0.503	0.146	0.001
Sales and service	-0.012	0.662	-0.011	0.611	0.055	0.037
Trades/ operators	-0.072	0.008	-0.024	0.294	0.077	0.002
Primary occupations	0.007	0.851	-0.059	0.008	-0.031	0.307
Processing & mfg.	-0.056	0.007	-0.023	0.183	-0.046	0.014
(Firm Size (<20 employees))						
Firm Size (20-99 employees)	0.030	0.110	0.050	0.001	-0.001	0.958
Firm Size (100-249 employees)	0.059	0.017	0.056	0.006	0.020	0.355
Firm Size (250-499 employees)	0.078	0.008	0.134	0.000	0.014	0.576
Firm Size (500-999 employees)	0.091	0.001	0.049	0.031	-0.014	0.549
Firm Size (1000+ employees)	0.067	0.000	0.104	0.000	0.013	0.394
(Household income less $10,000)						
$10,000-14,999	0.001	0.984	0.007	0.883	-0.007	0.903

$15,000-19,999	0.003	0.958	0.045	0.351	-0.076	0.150
$20,000-29,000	0.033	0.505	0.032	0.451	0.003	0.946
$30,000-39,999	0.018	0.721	0.002	0.961	0.016	0.735
$40,000-49,999	0.042	0.399	-0.003	0.946	0.038	0.419
$50,000-59,999	0.061	0.228	-0.039	0.349	0.067	0.163
$60,000-79,999	0.038	0.446	-0.001	0.981	0.048	0.316
$80,000-99,999	0.128	0.019	0.034	0.461	0.035	0.480
$100000+	0.029	0.592	-0.048	0.273	0.042	0.413
(Ontario)						
Nfld	-0.066	0.021	-0.064	0.004	-0.011	0.706
PEI	-0.085	0.015	-0.056	0.035	-0.004	0.902
NS	-0.053	0.035	0.016	0.470	0.003	0.901
NB	-0.077	0.004	-0.074	0.000	0.030	0.235
Que	-0.048	0.008	-0.012	0.411	0.004	0.800
Man	-0.011	0.668	0.013	0.526	-0.013	0.548
Sask	0.057	0.038	0.022	0.308	0.009	0.713
Alb	0.020	0.337	0.012	0.463	0.031	0.096
Bc	0.060	0.003	0.027	0.107	-0.002	0.914
N	6295	--	6295	--	6295	--
R-squared	0.085	--	0.052	--	0.294	--

Table 3A: Estimates of Correlates of Perceptions of Job, Firm Practices and Workplace Practices, GSS 1994 (Coefficients and P-values) – Cont'd

Variable	Overqualified for job [4]		Requires high skills [5]	
	Coefficient	P-Value	Coefficient	P-Value
Mean dependent variable	0.197	--	0.509	--
(Age 15-24)				
Age 25-34	-0.037	0.090	0.118	0.000
Age 35-44	-0.050	0.033	0.175	0.000
Age 45-54	-0.008	0.749	0.160	0.000
Age 55-64	-0.022	0.402	0.165	0.000
Age 65 and over	-0.028	0.454	0.082	0.079
Tenure (in years)	-0.013	0.000	0.000	0.954
Tenure squared	0.000	0.000	0.000	0.389
(Female)				
Male	0.012	0.291	0.045	0.001
(Single, never married)				
Married or common law	-0.035	0.022	0.002	0.920
Widowed	-0.084	0.005	0.001	0.986
Separated or divorced	0.013	0.537	0.082	0.001
(No children in household)				
One child	0.011	0.454	0.006	0.750
Two or more children	0.017	0.234	-0.019	0.248
(Less than high school grad)				
High school diploma	0.040	0.009	0.033	0.076
Some post-secondary	0.124	0.000	0.094	0.000
Comm. college/trade diploma	0.086	0.000	0.187	0.000
University graduate	0.163	0.000	0.255	0.000
(Part-Time)				
Full-Time	-0.035	0.003	0.040	0.003
(Paid worker)				
Self-employed	0.005	0.752	0.078	0.000
(Clerical occupation)				
Managerial	-0.058	0.002	0.109	0.000
Professional	-0.117	0.000	0.231	0.000
Technical	-0.170	0.000	0.197	0.000
Sales and service	-0.025	0.270	0.031	0.251
Trades/ operators	-0.069	0.002	0.160	0.000
Primary occupations	-0.094	0.000	-0.005	0.902
Processing & mfg.	0.002	0.897	-0.011	0.592
(Firm Size (<20 employees))				
Firm Size (20-99 employees)	0.041	0.014	-0.024	0.210
Firm Size (100-249 employees)	0.058	0.008	-0.021	0.371
Firm Size (250-499 employees)	0.045	0.066	0.002	0.933
Firm Size (500-999 employees)	0.035	0.136	0.055	0.034
Firm Size (1000+ employees)	0.040	0.006	0.005	0.755
(Household income less $10,000)				
$10,000-14,999	-0.006	0.920	0.045	0.447
$15,000-19,999	0.039	0.487	-0.026	0.656
$20,000-29,000	0.010	0.850	0.055	0.280

$30,000-39,999	-0.015	0.763	0.081	0.111
$40,000-49,999	-0.040	0.420	0.138	0.007
$50,000-59,999	-0.055	0.272	0.123	0.018
$60,000-79,999	-0.058	0.243	0.156	0.003
$80,000-99,999	-0.070	0.176	0.165	0.003
$100000+	-0.101	0.050	0.194	0.000
(Ontario)				
Nfld	-0.089	0.000	-0.005	0.859
PEI	-0.013	0.703	-0.047	0.203
NS	-0.067	0.002	0.016	0.503
NB	-0.131	0.000	-0.058	0.040
Que	-0.086	0.000	-0.223	0.000
Man	-0.074	0.000	-0.004	0.863
Sask	-0.068	0.002	0.054	0.038
Alb	-0.063	0.000	0.070	0.000
Bc	-0.053	0.003	0.026	0.170
N	6295	--	6295	--
R-squared	0.081	--	0.226	--

Table 4A: Estimates of Correlates of Employment Contracts, Managerial Activities and Supervisory Burden, GSS 1994 (Coefficients and P-values)

Variable	**Permanent Job [1]**		**Preference for permanent job [2]**		**Supervisory Duties [3]**	
	Coefficient	**P-Value**	**Coefficient**	**P-Value**	**Coefficient**	**P-Value**
Mean dependent variable	0.892	--	0.781	--	0.307	--
(Age 15-24)						
Age 25-34	-0.003	0.852	0.188	0.001	0.003	0.885
Age 35-44	-0.007	0.707	0.220	0.001	-0.035	0.130
Age 45-54	-0.046	0.036	0.194	0.010	-0.066	0.007
Age 55-64	-0.026	0.234	-0.013	0.906	-0.068	0.011
Age 65 and over	-0.011	0.779	-0.545	0.000	-0.130	0.001
Tenure (in years)	0.017	0.000	0.002	0.733	0.010	0.000
Tenure squared	0.000	0.000	0.000	0.197	0.000	0.005
(Female)						
Male	-0.018	0.072	0.046	0.280	0.071	0.000
(Single, never married)						
Married or common law	0.026	0.041	-0.021	0.680	0.006	0.702
Widowed	0.062	0.016	0.209	0.207	-0.031	0.369
Separated or divorced	0.032	0.064	0.050	0.436	0.012	0.613
(No children in household)						
One child	0.009	0.428	0.041	0.425	0.015	0.355
Two or more children	-0.008	0.470	0.045	0.397	-0.019	0.236
(Less than high school grad)						
High school diploma	0.009	0.498	-0.019	0.771	0.038	0.024
Some post-secondary	-0.027	0.100	-0.189	0.004	0.073	0.000
Comm. college/trade diploma	-0.020	0.126	0.004	0.946	0.088	0.000
University graduate	-0.027	0.077	-0.020	0.753	0.054	0.006
(Part-Time)						
Full-Time	0.029	0.002	0.071	0.082	0.109	0.000
(Paid worker)						
Self-employed	-0.069	0.044	0.123	0.063	-0.005	0.810
(Clerical occupation)						
Managerial	0.024	0.102	-0.043	0.616	0.301	0.000
Professional	-0.023	0.126	-0.048	0.483	0.068	0.001
Technical	0.028	0.187	0.145	0.065	0.058	0.201
Sales and service	0.037	0.011	0.074	0.414	-0.051	0.027
Trades/ operators	-0.024	0.211	-0.111	0.181	-0.077	0.002
Primary occupations	0.026	0.496	0.000	0.997	-0.133	0.000
Processing & mfg.	-0.007	0.635	0.046	0.446	-0.021	0.277
(Firm Size (<20 employees))						
Firm Size (20-99 employees)	0.042	0.002	-0.011	0.861	0.056	0.002
Firm Size (100-249 employees)	0.017	0.319	-0.089	0.280	-0.005	0.819
Firm Size (250-499 employees)	0.013	0.465	0.006	0.951	-0.013	0.623
Firm Size (500-999 employees)	0.018	0.316	0.184	0.010	-0.041	0.108
Firm Size (1000+ employees)	-0.001	0.933	0.078	0.123	0.001	0.968
(Household income less $10,000)						
$10,000-14,999	0.095	0.131	0.081	0.564	0.025	0.599

$15,000-19,999	0.112	0.059	0.102	0.424	0.042	0.353
$20,000-29,000	0.140	0.008	0.127	0.259	0.046	0.243
$30,000-39,999	0.159	0.003	0.098	0.395	0.068	0.081
$40,000-49,999	0.169	0.001	0.099	0.421	0.088	0.026
$50,000-59,999	0.173	0.001	0.110	0.394	0.127	0.002
$60,000-79,999	0.195	0.000	0.082	0.512	0.197	0.000
$80,000-99,999	0.188	0.000	-0.114	0.442	0.186	0.000
$100000+	0.175	0.001	0.185	0.179	0.266	0.000
(Ontario)						
Nfld	-0.130	0.000	0.249	0.000	0.008	0.794
PEI	-0.106	0.001	0.127	0.080	-0.001	0.972
NS	-0.084	0.000	0.095	0.208	0.034	0.152
NB	0.017	0.337	0.156	0.067	-0.035	0.174
Que	-0.024	0.052	0.037	0.552	-0.051	0.002
Man	0.003	0.855	0.173	0.013	0.003	0.891
Sask	0.016	0.343	0.099	0.312	0.022	0.382
Alb	0.003	0.812	0.119	0.112	0.040	0.040
Bc	0.034	0.008	0.065	0.399	0.033	0.077
N	5282	--	514	--	6295	--
R-squared	0.094	--	0.260	--	0.166	--

Table 4A: Estimates of Correlates of Employment Contracts, Managerial Activities and Supervisory Burden, GSS 1994 (Coefficients and P-values) – Cont'd

Variable	Managerial job [4]		Empowered manager [5]		Highly supervised in job [6]	
	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
Mean dependent variable	0.302	--	0.492	--	0.227	--
(Age 15-24)						
Age 25-34	0.080	0.000	0.034	0.491	-0.060	0.007
Age 35-44	0.081	0.000	0.017	0.746	-0.071	0.003
Age 45-54	0.065	0.004	0.050	0.035	-0.073	0.005
Age 55-64	0.060	0.015	0.040	0.048	-0.095	0.000
Age 65 and over	0.130	0.001	0.015	0.815	-0.103	0.007
Tenure (in years)	0.005	0.013	-0.005	0.143	0.000	0.867
Tenure squared	0.000	0.906	0.000	0.047	0.000	0.946
(Female)						
Male	0.100	0.000	0.054	0.010	-0.045	0.000
(Single, never married)						
Married or common law	0.015	0.338	0.025	0.377	-0.032	0.046
Widowed	-0.019	0.565	-0.044	0.534	-0.050	0.162
Separated or divorced	0.004	0.845	0.025	0.482	-0.031	0.159
(No children in household)						
One child	0.019	0.240	0.006	0.806	-0.004	0.789
Two or more children	0.004	0.768	0.025	0.303	0.015	0.301
(Less than high school grad)						
High school diploma	0.056	0.000	0.022	0.479	0.000	0.994
Some post-secondary	0.091	0.000	0.070	0.044	0.013	0.526
Comm. college/trade diploma	0.098	0.000	0.010	0.718	-0.009	0.597
University graduate	0.139	0.000	0.148	0.000	-0.055	0.003
(Part-Time)						
Full-Time	0.129	0.000	0.078	0.001	-0.025	0.046
(Paid worker)						
Self-employed	0.271	0.000	0.308	0.000	-0.034	0.028
(Clerical occupation)						
Managerial	--	--	--	--	-0.067	0.000
Professional	-0.158	0.000	-0.053	0.041	-0.035	0.084
Technical	-0.217	0.000	-0.150	0.030	-0.003	0.936
Sales and service	-0.144	0.000	-0.113	0.004	-0.036	0.121
Trades/ operators	-0.301	0.000	-0.058	0.108	0.011	0.657
Primary occupations	-0.107	0.001	-0.033	0.348	-0.021	0.473
Processing & mfg.	-0.201	0.000	-0.066	0.014	0.041	0.040
(Firm Size (<20 employees))						
Firm Size (20-99 employees)	-0.102	0.000	-0.291	0.000	0.065	0.000
Firm Size (100-249 employees)	-0.159	0.000	-0.308	0.000	0.084	0.000
Firm Size (250-499 employees)	-0.130	0.000	-0.445	0.000	0.108	0.000
Firm Size (500-999 employees)	-0.168	0.000	-0.514	0.000	0.128	0.000
Firm Size (1000+ employees)	-0.170	0.000	-0.501	0.000	0.133	0.000
(Household income less $10,000)						
$10,000-14,999	0.051	0.267	-0.201	0.100	-0.077	0.176
$15,000-19,999	0.022	0.606	-0.019	0.857	0.087	0.128

$20,000-29,000	0.034	0.346	-0.131	0.181	0.032	0.519
$30,000-39,999	0.052	0.148	-0.097	0.313	-0.014	0.769
$40,000-49,999	0.079	0.031	-0.107	0.265	-0.035	0.468
$50,000-59,999	0.130	0.001	-0.122	0.212	-0.036	0.469
$60,000-79,999	0.155	0.000	-0.156	0.106	-0.051	0.296
$80,000-99,999	0.180	0.000	-0.073	0.468	-0.049	0.347
$100000+	0.237	0.000	0.018	0.856	-0.078	0.125
(Ontario)						
Nfld	0.000	0.986	-0.004	0.944	-0.044	0.105
PEI	-0.016	0.595	-0.037	0.461	0.003	0.932
NS	0.044	0.051	0.005	0.880	-0.010	0.670
NB	0.004	0.876	0.027	0.547	-0.067	0.007
Que	-0.085	0.000	0.079	0.010	-0.042	0.009
Man	-0.046	0.028	0.026	0.469	0.010	0.658
Sask	0.006	0.810	-0.023	0.546	-0.014	0.540
Alb	-0.006	0.725	0.002	0.939	-0.015	0.399
Bc	-0.014	0.440	0.036	0.194	0.035	0.058
N	6295	--	1933	--	6295	--
R-squared	0.254	--	0.454	--	0.064	--

Table 5A: Estimates of Correlates of Union Voice and Preferences for Collective Voice, GSS 1994 (Coefficients and P-values)

Variable	Union member [1]		Covered by coll. Agreement [2]	
	Coefficient	**P-Value**	**Coefficient**	**P-Value**
Mean dependent variable	0.285	--	0.360	--
(Age 15-24)				
Age 25-34	0.042	0.020	0.063	0.002
Age 35-44	0.086	0.000	0.080	0.000
Age 45-54	0.089	0.000	0.078	0.001
Age 55-64	0.023	0.324	0.001	0.974
Age 65 and over	-0.015	0.652	-0.035	0.322
Tenure (in years)	0.019	0.000	0.016	0.000
Tenure squared	0.000	0.000	0.000	0.000
(Female)				
Male	-0.013	0.258	0.001	0.952
(Single, never married)				
Married or common law	0.001	0.935	-0.010	0.512
Widowed	0.007	0.831	-0.010	0.756
Separated or divorced	0.055	0.008	0.039	0.079
(No children in household)				
One child	-0.010	0.505	-0.001	0.929
Two or more children	-0.006	0.695	0.002	0.917
(Less than high school grad)				
High school diploma	-0.011	0.462	-0.012	0.456
Some post-secondary	-0.015	0.381	-0.001	0.967
Comm. college/trade diploma	0.039	0.007	0.043	0.006
University graduate	0.051	0.003	0.087	0.000
(Part-Time)				
Full-Time	-0.077	0.000	-0.059	0.000
(Paid worker)				
Self-employed	-0.094	0.000	-0.111	0.000
(Clerical occupation)				
Managerial	-0.138	0.000	-0.091	0.000
Professional	0.096	0.000	0.140	0.000
Technical	0.010	0.802	0.124	0.002
Sales and service	-0.090	0.000	-0.067	0.003
Trades/ operators	0.168	0.000	0.190	0.000
Primary occupations	-0.009	0.709	-0.011	0.660
Processing & mfg.	0.077	0.000	0.094	0.000
(Firm Size (<20 employees))				
Firm Size (20-99 employees)	0.118	0.000	0.144	0.000
Firm Size (100-249 employees)	0.248	0.000	0.267	0.000
Firm Size (250-499 employees)	0.337	0.000	0.336	0.000
Firm Size (500-999 employees)	0.350	0.000	0.337	0.000
Firm Size (1000+ employees)	0.351	0.000	0.396	0.000

(Household income less $10,000)				
$10,000-14,999	-0.063	0.162	-0.088	0.110
$15,000-19,999	-0.041	0.323	-0.060	0.254
$20,000-29,000	0.031	0.415	-0.013	0.787
$30,000-39,999	0.075	0.046	0.041	0.375
$40,000-49,999	0.076	0.046	0.032	0.486
$50,000-59,999	0.081	0.038	0.031	0.514
$60,000-79,999	0.052	0.181	0.001	0.976
$80,000-99,999	0.038	0.357	-0.003	0.947
$100000+	-0.057	0.166	-0.110	0.028
(Ontario)				
Nfld	0.115	0.000	0.092	0.001
PEI	0.067	0.024	0.043	0.160
NS	-0.006	0.785	0.008	0.731
NB	0.014	0.550	0.005	0.831
Que	0.094	0.000	0.088	0.000
Man	0.071	0.001	0.072	0.001
Sask	0.069	0.002	0.072	0.002
Alb	0.000	0.994	0.042	0.025
Bc	0.040	0.014	-0.014	0.410
N	6295	--	6295	--
R-squared	0.299	--	0.289	--

Table 6A: Specifications of Regression Results Using Lipset-Meltz Data, 1996 (Coefficients and P-values)

Variable	Progressive HRM at Workplace [1]		Security More Important than Career Advancement [2]		Prefer Merit-Only Layoff Criteria [3]	
	Coef.	P-Value	Coef.	P-Value	Coef.	P-Value
Mean dependent variable	0.522	--	0.688	--	0.553	--
(Age 25-24)						
Age 35-44	0.115	0.005	0.171	0.000	-0.134	0.001
Age 45-54	0.109	0.020	0.145	0.000	-0.092	0.034
Age 55-64	0.097	0.166	0.040	0.537	-0.121	0.059
Age 65 and over	0.022	0.910	0.162	0.374	0.153	0.208
(Female)						
Male	0.001	0.976	-0.069	0.019	-0.018	0.567
(Single, never married)						
Married or common law	0.012	0.762	0.048	0.205	0.069	0.075
Widowed	0.022	0.894	0.217	0.072	0.041	0.797
Separated or divorced	-0.054	0.387	0.103	0.046	0.042	0.482
(Less than high school grad)						
High school diploma	0.139	0.018	0.030	0.541	0.111	0.043
Some post-secondary	0.088	0.180	-0.142	0.015	0.276	0.000
Comm. college/trade diploma	0.105	0.083	-0.028	0.596	0.183	0.001
University graduate	0.160	0.005	-0.193	0.000	0.296	0.000
(Part-Time)						
Full-Time	0.063	0.129	0.007	0.836	0.010	0.790
(Paid worker)						
Self-employed	0.009	0.900	-0.046	0.468	0.144	0.005
(Ontario)						
Nfld	-0.078	0.510	-0.255	0.031	0.087	0.406
PEI	-0.260	0.125	0.301	0.000	-0.305	0.073
NS	0.045	0.657	0.131	0.070	-0.063	0.505
NB	-0.183	0.057	-0.138	0.138	-0.001	0.993
Que	-0.022	0.596	0.050	0.162	-0.091	0.019
Man	-0.146	0.065	-0.072	0.318	-0.090	0.234
Sask	-0.365	0.000	0.095	0.218	0.004	0.958
Alb	0.065	0.290	-0.040	0.489	0.048	0.363
Bc	-0.063	0.227	-0.011	0.819	-0.073	0.137
N	971	--	992	--	1087	--
R-squared	0.057	--	0.111	--	0.076	--

Note: Column 1 displays specification for row 14 in Table 2, columns 2, 3 and 4 display specifications for rows 6, 7 and 8 in Table 3 and columns 5 and 6 display specifications for rows 3 and 4 in Table 5. Due to restrictions in data and smaller sample size, specifications using Lispet-Meltz data had to include fewer right-hand side variables.

Table 6A: Specifications of Regression Results Using Lipset-Meltz Data, 1996 (Coefficients and P-values reported) – Cont'd

Variable	Positive View of Merit-Based Pay [3]		Prefer Collective Solution to Workplace Problem [4]		Prefer Union Membership [5]	
	Coef.	P-Value	Coef.	P-Value	Coef.	P-Value
Mean dependent variable	0.774	--	0.362	--	0.471	--
(Age 25-24)						
Age 35-44	-0.080	0.011	0.040	0.394	0.105	0.006
Age 45-54	-0.079	0.025	0.041	0.456	0.088	0.038
Age 55-64	-0.043	0.389	0.031	0.706	0.152	0.014
Age 65 and over	0.003	0.975	0.110	0.772	-0.177	0.005
(Female)						
Male	0.064	0.011	0.027	0.490	-0.025	0.407
(Single, never married)						
Married or common law	0.017	0.596	-0.054	0.254	-0.137	0.000
Widowed	-0.035	0.788	0.079	0.642	0.196	0.000
Separated or divorced	0.043	0.395	-0.064	0.388	-0.159	0.009
(Less than high school grad)						
High school diploma	0.151	0.003	0.023	0.738	-0.049	0.355
Some post-secondary	0.151	0.006	-0.059	0.420	-0.079	0.189
Comm. college/trade diploma	0.178	0.000	-0.056	0.409	-0.132	0.018
University graduate	0.220	0.000	0.038	0.572	-0.107	0.036
(Part-Time)						
Full-Time	0.020	0.538	-0.018	0.693	-0.113	0.002
(Paid worker)						
Self-employed	0.096	0.004	0.032	0.739	-0.109	0.025
(Ontario)						
Nfld	-0.089	0.362	-0.220	0.099	-0.033	0.769
PEI	0.083	0.605	-0.135	0.539	0.222	0.087
NS	-0.121	0.155	-0.087	0.419	0.043	0.588
NB	0.152	0.000	-0.025	0.809	0.106	0.191
Que	-0.088	0.007	-0.162	0.000	0.020	0.606
Man	0.037	0.483	-0.023	0.789	0.072	0.313
Sask	0.064	0.249	0.061	0.577	0.074	0.320
Alb	0.027	0.499	0.001	0.986	0.077	0.152
Bc	-0.074	0.076	0.089	0.151	0.106	0.027
N	1100	--	692	--	963	--
R-squared	0.067	--	0.044	--	0.227	--

Note: Column 1 displays specification for row 14 in Table 2, columns 2, 3 and 4 display specifications for rows 6, 7 and 8 in Table 3 and columns 5 and 6 display specifications for rows 3 and 4 in Table 5. Due to smaller sample size, specifications using Lispet-Meltz data had to include fewer right-hand side variables.