Thanks to a substantial accumulation of research, we now know a good deal about earnings inequality in Canada in terms of its overall level, the sub-group patterns (e.g., by age, sex and level of education), and the shifts which have occurred over time. There is, however, one area in which our understanding is virtually nil: earnings inequality at the provincial level.

The contribution of this paper is to report the results of an empirical analysis of earnings inequality at the provincial level over the 1982-1994 period based on
the recently available Longitudinal Administrative Database. The paper addresses the following questions:

- Were there significant differences in earnings inequality by province over this period? If so, were there any clear tendencies along regional lines or any other provincial characteristics, such as industrial base or income levels (i.e., the richer versus poorer provinces)?
- Were the inequality patterns consistent across age-sex groups? For example, in provinces where there was greater inequality among men, were women's earnings also more unequally distributed? Related to this, were the provincial differences at the aggregate level due to common patterns across all age-sex groups or due to "composition effects" (i.e., different proportions of lower/higher inequality age-sex groups across the provinces)?
- Were there any significant shifts in earnings inequality at the national level or in the provincial patterns over the period covered by the analysis? In particular, was there "convergence" (with reductions in inequality in the high inequality provinces and increases in the low inequality provinces), increased divergence, or were the changes more idiosyncratic than to allow for such broad characterisations?
- Do the patterns change when inequality is measured using earnings averaged over several years at the individual level -- that is, taking earnings mobility into account?
- What are the patterns when other income measures are considered, such as when other sources of market income and transfers are included, or when taxes are subtracted out?

The results presented here thus provide an empirical view of labour market outcomes at the provincial level which should add to our general understanding of work and pay in Canada and also provide evidence on the effects of adding other income sources and taxes to the distribution of final incomes in each province. The paper thus furnishes new information on the regional nature of labour markets in Canada, a topic addressed at the international level in OECD (2000).

Furthermore, this comes in a context where it is not obvious what the expected patterns would be. One might, for example, hypothesize that the more resource-based provinces would be characterised by greater levels of inequality than others, but the wide variance in earnings across the burgeoning service sector which is more important in other regions, from the infamous "hamburger of work and pay in Canada and also provide evidence on the effects of adding other income sources and taxes to the distribution of final incomes in each prov­

inequality increase in Alberta in the early 1990s with the advent of a new fiscal regime? The results reported below provide answers to these and related questions.

While these findings are probably directly related to no single policy question, they should provide very useful background information for myriad issues relating to social programs, public finance, and other policy questions. In particular, and to quote from the introduction to a recent volume on polarisation, "The spectre of a society divided more sharply between "haves" and "have-nots" is one of the driving forces behind initiatives at both the federal and provincial levels to reconfigure the existing web of social and employment policies." (Banting et al 1995: 2). And as inequality is of vital importance at the national level, inter-provincial differences in inequality are surely also significant, with implications for policy initiatives at both levels of government. The information provided in this paper might be especially useful at a time when the proposed "social union" is in its nascent stage -- especially in a historical context where the prov­inces have often been the font of social policy experimentation.

The paper is laid out in a straightforward fashion: the next section discusses the LAD data, the selection of the samples employed in the analysis, and various methodological points; the presentation of the empirical findings then follows; and the paper concludes with a summary of the major findings, a discussion of their policy implications and suggestions for future work.

The Data and the Analytical Framework

General Characteristics of the LAD File

The recently available Longitudinal Administrative Database ("LAD") used in this analysis constitutes a ten-percent longitudinal sample of Canadian tax filers constructed from Revenue Canada tax files. Individuals are selected into the LAD according to a random number generator based on Social Insurance Numbers (SINs) and are then followed over time, with family level information added to individuals' records where appropriate based on various matching algorithms developed by Statistics Canada. Individuals drop out of the LAD if they become non-filers (due to death, leaving the country, or simply choosing to no longer file), while new filers (predominantly young people and immigrants) continually refresh the database in the one-in-ten ratio. The LAD thus comprises a dynamic representative sample of Canadian tax filers. For this work, the file ran from 1982 through 1994 (updates are made as new data become available).

The LAD's coverage of the adult population is very good since, unlike some other countries (such as the U.S.) the rate of tax filing is very high: higher

3. See Finnie (1997b) for further discussion of the material covered in this section.
4. Since the time this work was started, the file has been increased to a 20 percent sample.
income. Canadians are required to do so, while lower income individuals have strong incentives to file in order to recover income tax and other payroll tax deductions made throughout the year and to receive various tax credits. The full set of tax files from which the LAD is constructed are estimated to cover from 91 to 95% of the target adult population (official population estimates) over this period, thus comparing favorably with other survey-based databases, even rivalling (or even surpassing) the official population census in this regard.

The large number of observations in the LAD (roughly in the two million range on an annual basis) is critical to this analysis of earnings inequality at the provincial level, as they provide the sample sizes to carry out such an investigation which other standard Canadian databases (such as the earlier Survey of Consumer Finance and current SLID) lack, especially at the disaggregated level (by age and sex). The work reported below is primarily based on a more manageable, yet still generally sufficiently large, one-percent version of the file (i.e., one percent of the tax filer population), except for Prince Edward Island, for which calculations were carried out using the larger sample to ensure sufficient sample sizes, especially at the sub-group level.

The LAD includes information derived from individuals’ tax forms: basic demographic characteristics, income (sources, amounts), deductions, taxes. Most critical to this analysis is the excellent quality of the income information. The earnings variable (wage and salary income) focused on here is an appropriate measure which is provided in a consistent manner over the full period covered by the database. Total income, including all other private sources (e.g., net self-employment and professional income, investment income, and government transfers), is also considered, as is post-tax/post-transfer income (federal and provincial tax payable is read directly from individuals’ records), and the resulting patterns are different from the earnings-only findings in some interesting and important ways.

In order to avoid distortions caused by outlier observations, extreme earnings values were capped by calculating the mean earnings level of those in the top one-tenth of the highest earnings percentile in each year, determining the average of this value (in constant dollars) over the entire 1982-94 period, and then assigning individuals with earnings above this fixed cut-off the cap’s value ($246,600).  

The Selection of the Working Samples

The samples used in this analysis embody the following restrictions imposed on a year-by-year basis—that is, individuals were included in the calculations for the years they met the inclusion rules, excluded in other years. First, the person had to have at least $1,000 (in 1994 constant dollars) of wage and salary income, thus giving a broad representation to the study while deleting those with only very marginal attachment to the labour force, including those who filed only to collect tax credits. Second, individuals were excluded if they had more than $1,000 in (gross) self-employment income due to the ambiguous nature of this revenue source (which is partly a return to capital and entrepreneurship and partly a form of earnings) and problems relating to its gross versus net form in a context where there are incentives to declare deductions in order to reduce tax payable. Third, individuals under twenty years of age were deleted to exclude students and other younger workers who often have a generally looser attachment to the labour force, while those aged sixty-five and over were dropped to avoid issues relating to the move into retirement. Finally, full-time post-secondary students were deleted on the grounds that they have only a secondary attachment to the labour force and their earnings do not accurately reflect labour market opportunities.

For the results for all earners taken together and by sex which take up the greatest part of the discussion, the smallest number of observations on which the calculations are based is 710 (Newfoundland Women), which should be sufficient to generate statistically reliable estimates, especially since most of the analysis is based on averaging sets of three years’ worth of results together (see below). The more detailed age-sex results referred to are, of course, based on smaller samples, dipping as low as 40 in the case of older women in Newfoundland.  

5. Coverage is, not surprisingly, weakest for older married woman and others who tend to have no labour market earnings, who would not be included in this analysis in any event.

6. See Atkinson et al (1992) and OECD (1996) for discussions of the typical advantages of administrative data over survey data in terms of population coverage and the accuracy of income measures.

7. In previous related work by the author (Finnie 1997b), earnings were not capped, and despite the large sample sizes which characterise the LAD, it became clear that the inclusion of a few outlier observations was sufficient to significantly affect the Gini calculations of certain groups in certain years—older men in the very late 1980s and early 1990s in particular—with these effects to some extent spilling over to the more aggregated Gini calculations (all men, all earners) in those years.

8. The term “effective labour force participants” is found in Wolfson and Murphy (1997), where a $500 ($1,995) cut-off is used, as in other work by these authors. In general, different researchers use different lower cut-offs (Finnie 1997b).

9. See Finnie (1997b) for the effects of these exclusions on sample sizes.

10. One can attempt to estimate standard errors of Gini coefficients, but this is rarely done due to the complex and still uncertain nature of the exercise. However, see Wolfson (1997), and Zvyablov (1996), who follow the work of Kovacevic and Binder (1995) and Binder and Kovacevic (1995), for examples where such calculations are in fact carried out. The task would be especially challenging in the present case due to the large number of Gini coefficients which comprise the analysis, as well as the use of the three year averages. The validity of the exercise would, furthermore, be limited in a context where the discussion focuses on the strongest and most enduring patterns—as opposed to specific findings or narrow hypothesis tests. Hence, standard errors are not included in the work reported here.
The inequality measure employed in this analysis is the Gini coefficient, an intuitively appealing and widely used scalar measure which indicates the degree to which the distribution of earnings departs from perfect equality, with a higher coefficient indicating greater inequality. Gini coefficients are based on Lorenz curves, which plot the cumulative percentage of a population along the horizontal axis from lowest to highest income levels and the cumulative percentage of income going to the population at each of these points along the vertical axis, each scale running from zero to 100. Perfect equality is, therefore, represented by a straight line running diagonally from the lower left corner to the upper right corner of the Lorenz box, the bottom x percent of the population having a commensurate x percent of total income, and so on. The Gini coefficient is then calculated as the area between the perfect equality diagonal and the Lorenz curve relative to the Lorenz area (the entire area under the diagonal). A higher coefficient indicates a more "bowed out" Lorenz curve -- greater earnings inequality.

The Empirical Findings

Earnings Inequality by Province -- All Earners

Table 1 shows the annual Ginis for all earners taken together at the national level and for each province on an annual basis over the full 1982-94 period, while Table 2 and Figure 1a show the selected three-year averages described above.

The smoothed Ginis relative to the national levels represent each province's three year means and Figure 1b these "smoothed" provincial Ginis relative to the national level.
Focusing first on the national results in order to establish some basic benchmarks, the data point to a secular rise in earnings inequality over this period. Interestingly, most of the increases occurred during the recession and following lukewarm recovery which characterised the period from the late 1980s into the early/mid-90s; the years before this showed effectively no change except for
some relatively widespread increases over the initial 1982-1983 recession.\footnote{12. Trends at the national level, including breakdowns by age and sex, are analysed in detail in Finnie (1997b).}

Turning to the specific focus of this paper, the cross-province patterns (probably best seen in Figure 1b) show that Newfoundland clearly had the greatest degree of overall earnings inequality, with its Gini lying 15 to 20 \% above the national level over the three selected intervals. Next come Prince Edward Island and New Brunswick, followed relatively closely by Nova Scotia, with the Gini coefficients of the former lying 7 to 10 \% above the national level, and the latter 4 to 5 \% above those norms over the various comparison periods. Atlantic Canada was, therefore, clearly set apart from the rest of the nation in terms of its overall level of earnings inequality.

At the other end of the inequality spectrum, Manitoba was consistently the province with the lowest level of earnings inequality, with its three year average Gini ranging from 3 to 5 \% below the national level. Quebec, Ontario, and Saskatchewan come next, with rates just under the Canada wide norms (to which the first two provinces contribute heavily due to their large populations). Finally, Alberta and British Columbia generally had Ginis near the national levels, with earnings inequality in Alberta rising in relative terms over time, and British Columbia first rising, then falling.

In terms of categorising these patterns with respect to provinces’ basic attributes, certain characterisations can be made, but others need to be resisted. In particular, the generally high levels of earnings inequality in the Atlantic provinces clearly set that region apart from the rest of the country (with the sort of potential policy ramifications mentioned earlier and discussed further below). On the other hand, it is not simply a story of being “resource-based”, as Saskatchewan has below average inequality, the two most western provinces are in the middle rank, and Manitoba (albeit possessing more of a mixed industrial base) has the lowest inequality of all. Regarding general income levels, there is no obvious general ordering here either: although the high inequality Atlantic provinces are, of course, among the poorer jurisdictions, below average income Manitoba is again noted as having the lowest inequality of all, and Quebec and Saskatchewan have less inequality than generally higher income Alberta and British Columbia. In short, any full characterisation of the observed patterns should probably await further analysis focused on precisely this objective, as discussed in the concluding section of the paper.

As for the trends in Gini levels over time, overall earnings inequality rose in every single province over this period (see Figure 1a) -- not only from the beginning to the end of the 1982-1994 period, but in most cases in a steady manner first from 1982-84 through 1987-1989, and then out to 1992-1994, with only Quebec, Ontario, and Manitoba having initial dips in their levels of inequality followed by more than offsetting increases over the later interval. The trends at the national level discussed above have, therefore, been reasonable indicators of what was occurring at the provincial level over time -- a result with potentially important implications regarding our general understanding of inequality trends which should perhaps be taken into account when looking at national level trends (which are available from other databases) in the future.

The specific nature of the provincial trends over time also defy any simple categorisation -- particularly with respect to the “convergence” hypothesis. Two of the provinces with above average inequality in 1982-1984 saw their levels of inequality rise further relative to the national levels by 1992-1994 (Newfoundland and, more marginally, Nova Scotia), while the other two showed declines (New Brunswick and Prince Edward Island). As for the lower than average inequality provinces, two had further declines (Ontario and Manitoba), two had rises (Alberta and British Columbia), and two had no identifiable net change (Quebec and Saskatchewan). There was, therefore, no single trend of either convergence or further divergence.

Provincial Earnings Inequality by Sex

This section parallels the previous one by discussing men’s and women’s earnings inequality, as shown in Figures 2a and 2b (as well as Tables 1 and 2 once again). Much of the preceding discussion for the combined distributions applies equally here, but there are some significant differences as well.

Again beginning with a brief summary of the situation at the national level, earnings inequality among men rose substantially over this period, rising 12 percent from 1982 to 1994 (from .340 to .380), while inequality among women increased more moderately, by just 5 \% (.374 to .392). Earnings inequality was, however, generally greater among women than men, primarily reflecting the greater variation in labour force attachment (hours and weeks of work) among females. Interestingly, both men’s and women’s earnings are more equally distributed than when both sexes are considered together, as the between-group effects (male-female differences in mean earnings levels) are added to the within-group effects (inequality among men, among women) in the joint distribution.

The general rankings of earnings inequality by province are quite similar to what was seen above for all earners taken together, with some relatively minor exceptions. Thus, Newfoundland is again characterised by greater earnings inequality than any other province and the rest of Atlantic Canada then follows suit, except for men in Nova Scotia, for whom inequality is only slightly above the national level.

At the opposite end of the inequality scale, Manitoba has among the lowest Gini coefficients for both men and women, but is no longer the clear leader it was with the combined distributions. Ontario and Saskatchewan are again generally lower-than-average inequality provinces (except for Saskatchewan women in the first interval), joined anew by British Columbia men and, in the earlier
intervals, women from Alberta.

Finally, Quebec is now seen to be characterised by inequality of a middle (rather than low) rank, along with men from Alberta, women from British Columbia, and women from Alberta in the more recent years, all of whom repeat from the joint male-female findings. The Quebec finding is particularly interesting, reflecting as it does the smaller gender earnings gap in that province which has been identified in other research. The trends over time (best seen in Figure 2a) indicate increased earnings inequality among both male and female groups from 1982-1984 to 1992-1994 in all cases except for a very slight decline for Saskatchewan women. On the other

13. The fact that inequality among both male and female groups of workers is in the middle rank while inequality when all workers are considered together is relatively low indicates that the latter outcome is driven by below average between group inequality – the gender earnings gap.
hand, the increases were generally considerably greater for men than women, as well as having been more of a steady march over time, with the male rises being monotone in every province except for a very slight decline over the first interval for Quebec and the women's distributions characterised by a certain number of ups and downs on the way to the higher final levels.

Regarding the convergence hypothesis, the men's distributions now generally tend to support this notion: every province having above average earnings inequality in the 1982-1984 period shows a lower relative level in 1992-94, and vice versa, except for Manitoba, which had a steady decline in its relative level of inequality from the already low level at which it started (Figure 2b). For women, however, the results show no such convergence.

Provincial Inequality by Age-Sex Groups

Out of regards for space, the Gini coefficients by age-sex group are not shown here, but are reported in Finnie (1997a) and can be directly provided by the author to interested readers on request. Only the highlights of these findings will, therefore, be discussed.

Again starting at the national level (see also Finnie 1997b), the Gini coefficients increased for each male group, by 11, 15, 10, and 19% for the entry, younger, prime, and older groups respectively, while women's changes were more diverse, showing changes of 15, 4, minus 3, and 8% for the four groups. Earnings inequality was generally greater for the youngest and oldest groups of workers than for those in their middle years, especially for men - a well-known finding driven principally by the wider variation in hours and weeks worked at the entry and departure phases of the labour force participation life cycle. The general trends over time were again upward.

The most important finding here, however, is that the provincial patterns seen at the more aggregate levels largely hold for the specific age-sex groups. Thus Newfoundland was in every case the province with the greatest earnings inequality - for all age-sex groups at all points in time (except for prime men in the 1987-1989 period, in which case Prince Edward Island had a slightly higher Gini). The other Atlantic provinces generally had the next highest levels of inequality -- with some exceptions, mostly in the case of men in Nova Scotia (as was also the case for all men taken together). The generally low inequality provinces were Manitoba, Ontario (except for entry men in the latest period), and Saskatchewan in the case of men. Quebec also tended to have lower average inequality, but not so consistently as the others. Alberta and British Columbia had more mixed records, mostly in the low and medium range, but with higher than average inequality for certain groups in certain years.

As for the trends over time, not too much can be teased out of this large set of results, but a couple of important shifts are worth noting. Probably most dramatic is the rise in relative inequality observed for all age groups of men in Ontario from 1982-84 to 1992-94 -- strongly affirming what was seen at the aggregate level above. Women in Alberta also showed a general movement towards higher inequality over this period (already noted at the more aggregate level). Declines in inequality were registered for men in New Brunswick and most groups of female workers in Saskatchewan and Manitoba. Other than these, no general tendencies across all groups for given provinces are clearly identifiable.

A final point to make regarding the age-sex distributions is that there was less inter-provincial variation in earnings inequality for entry workers than for the other age groups, especially for men. The greater earnings inequality among entry workers relative to other age groups which is observed at the national level thus appears to be driven by "between" (province) differences rather "within" differences - an interesting finding with implications for labour mobility and related issues.15

Taking Account of Earnings Mobility: Using Individuals' Average Earnings

It is well known that inequality is typically reduced when it is measured using individuals' earnings averaged over a number of years rather than on an annual basis. The reason is that earnings mobility patterns include a general "regression to the mean" component, whereby workers with generally lower earnings levels in one year tend to have somewhat higher earnings in the next, and vice versa (OECD 1997). The general effects of averaging at the national level are addressed in detail in Finnie (1997c), while this section focuses on the effects at the provincial level, the hypothesis being that the effects of averaging might differ by province -- reflecting differences in the extent and nature of earnings mobility across jurisdictions -- and thereby affect the related inequality patterns.

Table 3 shows the Gini coefficients generated using individuals' earnings averaged over the various three-year intervals, while Figure 3a compares the Ginis thus obtained for the 1992-1994 period with the smoothed Ginis seen above for this same period -- thus directly comparing the Ginis based on annual data with those calculated using individuals' incomes averaged over the same interval (the earlier periods show similar patterns).

Using average incomes clearly reduces inequality, but the magnitudes of the effects are only moderate, are generally fairly bunched, and otherwise vary


15. This notion is reinforced by the finding that the provincial Ginis for entry workers are generally lower than the national ones for each three year period -- again, especially for men (results again available from the author). See Finnie (1998) for the effects of inter-provincial mobility on individuals' earnings and other work on such movements.
### TABLE 3 Ginis by Province Based on Three-Year Average Earnings

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<tr>
<td>All Earnings</td>
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<tr>
<td>Canada</td>
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<tr>
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<tr>
<td>PQ</td>
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<td>0.330</td>
<td>0.344</td>
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<tr>
<td>ON</td>
<td>0.331</td>
<td>0.329</td>
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<tr>
<td>MN</td>
<td>0.324</td>
<td>0.324</td>
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<tr>
<td>BC</td>
<td>0.317</td>
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<td>0.338</td>
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<tr>
<td>Men</td>
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<tr>
<td>Canada</td>
<td>0.293</td>
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<td>Women</td>
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<td>0.306</td>
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Across a relatively narrow range, reducing inequality from 10 to 15% in the case of all earners taken together, from 10 to 17% in the case of men, and from 10 to 16% in the case of women. Furthermore, there is no clear pattern to these effects. The effects of averaging are, for example, quite similar for Newfoundland, Ontario, and Manitoba -- three provinces that are quite different in many ways (size, industrial structure, etc.), including their general levels of earnings inequality (high, medium, low).

Thus, while the two sets of inequality measures -- based on annual versus averaged earnings -- differ in the predicted manner and might be worth further study in their own right, of most importance to this paper is that the averaging exercise has relatively little effect on the earnings inequality rankings by province (Figure 3b).
While this paper focuses on earnings inequality, it seems worth making at least some initial investigations into other income measures in order to place the earnings results in a broader perspective and to begin to treat the role of other sources of private income and government transfers and tax structures on inequality at the provincial level. Figure 4 thus presents Gini coefficients for individuals' earnings (as before); total income (including other sources of private income, including investment income and net self-employment and professional income, plus government transfers, including tax credits); and disposable income (post-transfer, post-tax) for the 1992-94 period. 16

Although labour market earnings comprise by far the largest component of personal income -- especially for the samples used here (which are kept unchanged through this exercise) -- adding other private sources and government

16. The underlying tables are available from the author on request. This exercise is not possible with the pre-1992 LAD data, as social assistance is reliably reported only from that year forward.
transfers clearly affects the general level of inequality, generating substantially lower Gini coefficients at the national level and in all provinces. Note that this result would not necessarily have been predicted ex ante, since income sources which go predominantly to individuals who typically enjoy higher earnings (e.g., investment income) are now considered along with those which are more important at the bottom end of the distribution (income from social programs and tax credits).

Furthermore, the effects of adding these other income sources varies to a considerable degree by province. In particular, Newfoundland remains a high inequality province when total income is used, but is now much less of an outlier than was the case for earnings alone; Prince Edward Island moves from being the province with the second highest level of inequality to the lowest; and New Brunswick also has relatively less inequality when the other income sources are included. As for (relative) movements in the other direction, Manitoba is no longer the lowest inequality province, Alberta moves from being in the middle rank to being the jurisdiction with the highest level of inequality (approximately tied with Newfoundland and Nova Scotia in the case of women), and British Columbia also becomes a somewhat more unequal province as compared to its ranking based on earnings alone.

Adding the effects of taxes further affects the provincial rankings -- and mostly in the same direction. Alberta is, for example, now the province with the most unequal overall distribution by a fair margin; British Columbia also moves further towards being one of the greater inequality provinces, along with Newfoundland and Nova Scotia; while Manitoba is even more solidly in the middle rank (rather than low). Conversely, Prince Edward Island is now (again) the lowest inequality jurisdiction, Quebec is also a relatively low inequality province in terms of disposable income, and New Brunswick is found in the middle rank rather than in the high inequality group it was with respect to just earnings. Ontario and Saskatchewan remain in the low-to-middle rank across all measures. In short, the different income measures are characterised by substantially different levels of inequality generally, and certain important shifts in the inequality rankings by province.

**Conclusion**

**Summary of the Main Findings**

The principal findings of this paper may be summarised in terms of the questions posed at the beginning:

- There were indeed significant and enduring inter-provincial differences in earnings inequality, with almost uniformly greater levels of inequality in the Atlantic provinces than elsewhere; Manitoba having the lowest levels; Ontario, Quebec, and Saskatchewan tending to also be on the lower side; and Alberta and British Columbia generally lying in the more middle ranges. Apart from the Atlantic theme, the patterns are not easily to characterise in terms of provinces' industrial structures, general income levels, or along any other single dimension.

- These inter-provincial differences are largely -- although not perfectly -- consistent across particular age-sex groups: provinces with greater than average earnings inequality among men have tended to be those where women's earnings are also more unequally distributed, and the patterns largely hold at the more detailed age-sex group level as well.

- Amidst generalised increases in earnings inequality over time, there was some evidence of convergence in the levels of earnings inequality across provinces among men, but not for women.

- Averaging individuals' earnings over a number of years reduces the general level of inequality relative to that which obtains using annual earnings (as expected), but taking earnings mobility into account in this way has perhaps surprisingly little effect on the inter-provincial patterns of inequality.

- Using broader measures of income and taking the tax and transfer system into account results in generally more equal distributions and changes the provincial rankings in some important ways: Alberta becomes the province with the generally highest levels of inequality and British Columbia is also pushed into the higher inequality ranks; Newfoundland still has a relatively high degree of inequality, but not nearly so great as for earnings alone, while Nova Scotia remains in the upper group by all measures; Prince Edward Island plunges from being one of the highest inequality provinces to the lowest, New Brunswick also moves to a relatively lower level (leaving them in the middle rank), and Quebec becomes somewhat less unequal than when earnings are considered alone (moving into the low range); while Manitoba is now in the middle rank of the distributions, along with Ontario and Saskatchewan (whose rankings are generally stable across all measures).

**Policy Implications of the Findings**

Entrenched in the Canadian political-economic-social psyche is the notion of "have" and "have not" provinces, but the results reported above allow us to now also speak in terms of "more inequality" and "less inequality" provinces. A number of policy implications may be identified.

Banting et al (1995: 2) offer a list of broad concerns which lie at the centre of the current (growing?) interest in inequality and polarisation in general, these including the effects on economic efficiency, social problems, and the resulting political reverberations. It is surely useful to know how inequality varies across the provinces to help us assess how these concerns might vary in importance across the nation due to the more local situation.

In particular, these findings could enhance our understanding of inter-provin-
cial differences in the demand for, the supply of, and the effects deriving from various policy measures related to the inequality of incomes. These could include minimum wage legislation, unionisation and other institutional structures, the major social insurance programmes (EI, Social Assistance), and the general structure of the personal income tax-and-transfer system (e.g., its level of progressivity). The importance of EI reform to the Atlantic provinces -- and the subsequent reversals of some of those initiatives by a Liberal party looking to recover votes in that region -- are but one obvious example.

The findings reported here could perhaps prove particularly useful in a context where a "social union" is being forged in a manner which is intended to achieve (among other goals) a certain coherence to social programmes at the national level, while respecting the desire and need for flexibility from one province to another. With concerns relating to income inequality comprising a central aspect of this structuring of general arrangements and specific programs, the documentation of the inter-provincial patterns of earnings inequality provided here should be useful. For example, given that the Atlantic provinces are generally characterised by relatively high levels of earnings inequality, it might make sense to allow those provinces to address their particular situations in the manner they see most fit -- or for the federal government to itself attend to the related policy issues equipped with a good understanding of the special nature of the Atlantic situation.

Avenues for Further Research

One important path for future research would be to attempt to identify the underlying sources of the unequal inequality documented here. Various factors worth investigating might include the provinces' demographic characteristics (age, the size of the immigration population, etc.), other work force characteristics (e.g., levels and types of human capital and labour force attachment (part-time versus full-time, hours worked, and so on)); industrial structure (noting again that no obvious broad patterns emerged in the results reported above); institutional arrangements (e.g., the rate of unionisation); and various government policy levers, such as the minimum wage and the various components of the tax and transfer system(s), including the nation's major social programs.

Such investigations could be undertaken with aggregate (provincial level) data, while deeper studies would probably involve microdata which possessed the necessary detail on individuals' wage rates, hours and weeks worked, occupation and industry of employment, and so on. Either way, no standard analytical framework for work of this type currently exists, and such analyses would almost certainly require moving beyond the LAD data employed here to other sources. That said, the results reported here could represent a useful starting point for such investigations, perhaps even providing the dependent variables to be used in such studies (e.g., the Gini coefficients presented here could be regressed on various provincial characteristics).

References


