

## **Varieties of Capitalism and Inequality: Canada from a Comparative Perspective**

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### **Abstract**

The article compares Canada among liberal market economies (LMEs) and Nordic social market economies (SMEs) with respect to economic inequality. The cross-national data depict a Janus-faced portrait of Canada: it has had invariably one of the most egalitarian societies among LMEs, but wage inequality is comparable to that of the United States. Using the varieties of capitalism (VOC) approach, this study explores the individual and combined effects of different labor market institutions, educational and training systems, and welfare states on cross-national differences in market income inequality. Moreover, it compares the redistributive effects of those countries' welfare states. The article argues that Canada's mixed inequality profile is the result of a unique configuration of domestic political-economic institutions.

### **Introduction**

The comparative political economic literature that has emerged in the past decade provides helpful clues about the causes of cross-national differences in the achievement of distributional equality, redistribution, and economic growth and efficiency. It is commonplace for political economists to assert that the strength of liberal market economies (LMEs) rests in their ability to maintain higher employment growth rates, lower rates of unemployment, and robust economic growth rates. The drawbacks of this variety of capitalism are that they are associated with inequalitarian distribution of income, higher poverty rates, and limited social protection. While social market economies (SMEs) are more egalitarian than LMEs, they have witnessed slower employment growth rates, higher unemployment rates, and slower economic growth (Garrett 1998; Pontusson 2005).

This paper explores the extent to which Canada approximates the above characterization of liberal market economies (LMEs), focusing specifically on distributional equality and redistribution. The Canada-centered analysis addresses this topic by focusing on three issues. First, it compares Canada among LMEs and compares LMEs to Nordic SMEs with respect to the level of inequality in market income and disposable income.<sup>1</sup> Second, redistribution—that is, the difference between pre-tax and transfer and post-tax and transfer income—is analyzed cross-nationally and intertemporally in Canada.

Lastly, the analysis uses the varieties of capitalism (VOC) approach to explain cross-national differences in distributional equality. The VOC literature suggests that the institutional arrangements that make up national production regimes—financial arrangements and corporate governance, industrial relations, education and training systems, and welfare state—and the institutional complementarities that these institutions generate when operating together produce important micro- and macro-economic effects (Hall and Soskice 2001). Following in the footsteps of Estevez-Abe, Iversen, and Soskice (2001), Iversen (2005), and Pontusson (2005), this study explores the individual and combined effects of different labor market institutions, educational and training systems, and welfare states on cross-national levels of market income inequality. The limitation of the VOC perspective in accounting for cross-national variance in inequality is that its explanatory leverage is observable primarily on income (i.e., wage) distribution prior to tax and

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<sup>1</sup> The LMEs consist of the United States, United Kingdom, Canada, Australia, New Zealand, and Ireland. The Nordic SMEs consist of Denmark, Norway, and Sweden.

transfers. The aim of the article is not to offer a thorough analysis of inequality, rather it is to shed light on distributive patterns of market income.

The analysis proceeds as follows. The first part looks at cross-national inequality, using different measures of inequality. The second part begins by employing the VOC perspective to account for cross-national differences in market income inequality and concludes by broadening the analysis to explore how the welfare state—through its redistributive function—shapes levels of inequality. The analysis concludes by positioning Canada more concretely relative to other LMEs and Nordic SMEs.

### A Comparative Look at Inequality

There are two ways of analyzing inequality. One way is to measure the income of individuals derived from employment. Most analysts rely on a widely used OECD dataset which provides earnings data for full-time employees, excluding individuals who are self-employed and who work part-time. The other method to analyze inequality is to track the distribution of household income before (market income) and after (disposable income) payroll taxes and cash and near-cash transfers measured by the Gini coefficient. The Luxembourg Income Study (LIS) database provides researchers with comparable data on disposable household income for 30 countries from 1967 to 2004.

Table 1 tracks changes in wage inequality from the late 1970s to 2000s using the 90/10 and 50/10 wage ratios for full-time employees. Consistent with conventional wisdom, wage inequality in Nordic SMEs is consistently lower over time for both ratios than in LMEs. However, the data show that wage inequality (particularly with respect to the 50/10 ratio) has been on the rise in this cluster of countries, with Sweden experiencing a deterioration in its 90/10 wage ratio, while Norway seeing its 90/10 wage ratio improve but its 50/10 wage ratio worsening. The LMEs cluster has witnessed persistently high inequality and deteriorating 90/10 ratios. On the other hand, three of the five LMEs have seen modest improvements in their 50/10 ratios.

**Table 1. Wage Inequality**

	90/10 wage ratio			50/10 wage ratio			
	Earliest	Latest	% Change	Earliest	Latest	% Change	
<b>LMEs</b>	<b>3.28</b>	<b>3.72</b>	<b>13.4</b>	<b>1.82</b>	<b>1.81</b>	<b>-0.6</b>	
Australia (1979-00)	2.75	3.01	9.5	(1990-03)	1.69	1.64	-3.0
Canada (1981-94)	4.02	4.18	4.0	(1997-03)	2.00	1.98	-1.0
New Zealand (1984-97)	2.89	3.41	18.0	(1997-03)	1.56	1.60	2.6
U.K. (1979-00)	2.95	3.40	15.3	(1990-03)	1.84	1.78	-3.3
U.S.A. (1979-00)	3.78	4.58	21.2	(1990-03)	2.03	2.06	1.5
<b>Nordic SMEs</b>	<b>2.07</b>	<b>2.17</b>	<b>5.0</b>	<b>1.37</b>	<b>1.43</b>	<b>4.4</b>	
Denmark (1980-90)	2.13	2.16	1.4	(1996-03)	1.43	1.48	3.5
Norway (1980-00)	2.07	2.00	-3.4	(1997-02)	1.37	1.44	5.1
Sweden (1979-00)	2.01	2.35	16.9	(1990-03)	1.32	1.38	4.5

Sources: 90/10 wage ratio data is adapted from Kenworthy and Pontusson (2005): 464; 50/10 wage ratio data from OECD (2005).

In focusing on the latest data, Canada ranks fourth in both measures, slightly more egalitarian than the United States. In 2003, the median worker earned 1.98 times as much as the worker in the 10<sup>th</sup> percentile, in comparison to his English counterpart who earned 1.78 times as much and to the Swedish one who earned 1.38 as much. In the early 1980s, Canada had the unfortunate distinction among the LMEs of being the sole country with a 90/10 ratio exceeding 4.00, performing worse than the United States. While the 90/10 ratio gap between Canada and the

United States, on the one hand, and the remaining LMEs, on the other, is quite large, the LMEs are much more tightly grouped with regard to the 50/10 wage ratio, with a difference of 0.46 between New Zealand's 1.60 ratio (lowest) and the United States' 2.06 ratio (highest).

Canada's standing within the LME cluster changes drastically if one looks at the data on distribution of income. Table 2 illustrates LIS data on working-age households, defined as a household led by an individual between the ages of 25 and 59, and distinguishes pre-tax and transfer income (market income) from post-tax and transfer income (disposable income). The data reinforces the earlier observation that the societies of Nordic SMEs are more egalitarian than those of LMEs. In fact, although inequality has increased within both clusters of countries, the differences in the Gini coefficients for household market income and disposable income between the two groups have widened between the early 1980s and early 2000s.

Two other points about cross-national differences in inequality are noteworthy. First, as the data illustrate, the total percentage change in the Gini coefficients for household market income is higher than for disposable income for both groups. In other words, the redistributive effects of taxes and welfare benefits have not managed to offset the growth of market income inequality. The clearest case that diverges from this trend is Denmark between 1987 and 2004, witnessing an increase of market income inequality but a distribution of household disposable income that is more equitable.

**Table 2. Distribution of gross income and disposable household income, as measured by Gini Coefficient and percentile ratio**

	Gini Coefficient				Percentile Ratio	
	Market income		Disposable income		P90/P10	
	Earliest	Latest	Earliest	Latest	Earliest	Latest
<b>LME</b>	<b>0.343</b>	<b>0.420</b>	<b>0.293</b>	<b>0.330</b>	<b>4.081</b>	<b>4.615</b>
Australia (1981-1994)	0.348	0.397	0.281	0.312*	3.928	4.241*
Canada (1981-2000)	0.333	0.396	0.284	0.312	4.050	4.101
Ireland (1987-2000)	--	--	0.328	0.313	4.226	4.477
U.S.A. (1979-2000)	0.359	0.436	0.301	0.370	4.669	5.683
U.K. (1979-1999)	0.332	0.450	0.270	0.343	3.530	4.574
<b>Nordic SME</b>	<b>0.295</b>	<b>0.352</b>	<b>0.225</b>	<b>0.243</b>	<b>2.806</b>	<b>2.837</b>
Sweden (1981-2000)	0.293	0.375	0.197	0.252	2.430	2.959
Denmark (1987-2004)	0.308	0.345*	0.254	0.228	3.223	2.750
Norway (1979-2000)	0.284	0.337	0.223	0.251	2.764	2.801

Source: Luxembourg Income Study, [www.listproject.org/keyfigures.htm](http://www.listproject.org/keyfigures.htm)

Note: \*Australia 2003; Denmark 1997. Some data calculated by author.

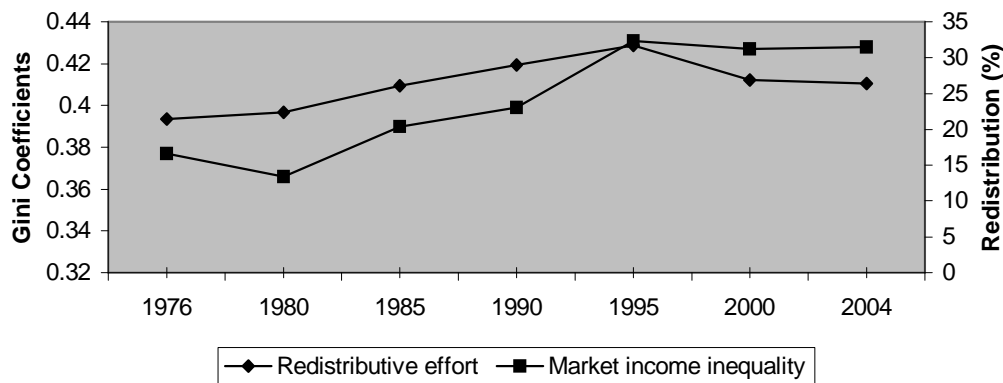
Another point is that the rise of household market income inequality outpaced that of wage inequality in both groups. Whereas total percentage change in market income inequality in the LMEs and Nordic SMEs during the observed periods stood at 22.4 percent and 19.3 percent respectively, those for earnings inequality (90/10 ratio) stood at 13.4 percent and 4.8 percent respectively. Norway stands out in that earnings inequality declined between 1980 and 2000 while market income inequality among working-age household increased. In Canada, the rise of market income inequality between 1980 and 2000 (19%) was far higher than the growth of wage inequality (4%) during a slightly shorter timeframe (1981-1994). Considering that many comparative political economists agree that labor earnings constitute a substantial proportion of total income, changes in wage inequality should closely follow changes in market income inequality. Thus, "The divergence between trends in individual earnings inequality and household income inequality," as Kenworthy and Pontusson (2005: 453) observe, "represents a substantive

puzzle rather than an artifact of the different properties of Gini coefficients and 90/10 ratios as measures of inequality.”

In comparison to other LMEs, Canada has the lowest Gini coefficient for market income using the latest data, and, along with Australia, has the lowest Gini coefficient for disposable income. Moreover, it places first with regard to the 90/10 ratio. Figure 1 uses data from Statistics Canada to track the evolution of income inequality and redistributive profile of taxes and benefits in Canada between 1976 and 2004. To ensure comparability, Statistics Canada, “adopt[s] a set of procedures that are identical to those used in the processing of Luxembourg Income Study data” (Heisz 2007: 15). Statistics Canada’s data for market income Gini coefficient is higher than those reported by LIS or OECD. This is because Statistics Canada looks at family income—which represents all age cohorts rather than just working-age cohort—and it can better account for the sources of non-work related income, both of which would cause inequality to be higher.

One striking feature of the data is that redistributive efforts move in tandem with market income inequality. Redistribution was at its lowest level in 1976 when market income inequality was relatively low; redistribution reached its highest level in 1995 when income inequality was at its highest level. Transfers carry most of the redistributive load (roughly 66 percent of it). While taxation has had a milder effect on reducing market inequality, the redistributive profile of transfers and taxes has augmented as market income inequality has deteriorated, while declining as inequality has ameliorated. From a comparative perspective, cash benefits has been the preferred instrument for all advanced political economies, with the exception of the United States where taxation has figured largely in the government’s redistributive efforts (Pontusson 2005: 155-6). Not surprisingly, transfers have played a much more prominent role in combating market inequality in Nordic SMEs than in the LMEs.

**Figure 1. Inequality and Redistribution**



Source: Heisz (2007): 54

Note: Redistributive data calculated by author. It reflects the difference between market income and post-tax and transfer income.

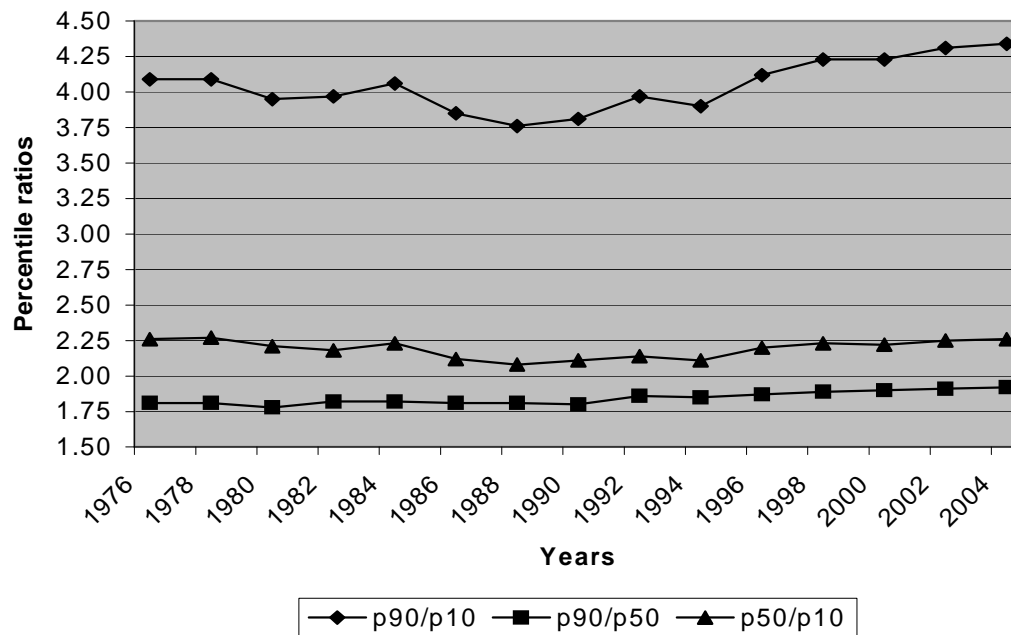
In their comparative analysis, Kenworthy and Pontusson observe that Canada’s level of “redistribution elasticity” (measuring the sensitivity of redistribution to a change in market inequality) is comparable to that of Norway and much higher than those of other LMEs (Australia, United Kingdom, and United States) and of Denmark and Finland between 1970 and 2000. Figure 1 seems to confirm the logic of the Meltzer-Richard model—namely, that demand for redistribution increases as inequality rises. This suggests that the median voter in Canada maintains a favorable view of governmental efforts to mitigate adverse market outcomes.

However, this positive attitude toward redistribution is not supported by public survey results. According to a 1992 ISSP survey, less than 50 percent of respondents agreed that it was the government’s responsibility to reduce the income gap between the rich and poor (47.9%), to

provide work to anyone wanting it (40.1%), and to provide everyone with a guaranteed basic income (48.6%) (Svallfors 1997). Thus, it appears that redistribution is not driven by the policy preference of the median voter, as the Meltzer-Richard model asserts. One thing is certain, as market income inequality has stayed relatively high since 1995, the level of redistribution has dropped. Forced to operate in a climate of fiscal austerity, Canadian governments in the 1990s and early 2000s pursued cost containment and re-commodification measures with the effect of reducing income maintenance efforts and activating the unemployed via labor market participation policies.

The fact that redistributive elasticity is particularly elevated in Canada in comparison to other LMEs does not translate into a more compressed distribution of income. Figure 2 tracks the distribution of disposable income (measured by the Gini coefficient) between 1976 and 2004. The 90/10 ratio reached its lowest level in 1989 (3.64) and has gradually increased since 1993 reaching its highest level in 2004 (4.34). The 90/50 and 50/10 ratios have been slightly more stable over this period—with the former starting at 1.81 in 1976 and reaching 1.92 in 2004, while the latter starting at 2.26 and ending at 2.26. The three indicators of income distribution depict an improvement (a more compressed income distribution) at the end of the 1980s and a deterioration (a more dispersed distribution) since the early 2000s.

**Figure 2. After-tax income inequality**



Source: Heisz (2007): 55.

### Varieties of Capitalism and Welfare State

The VOC perspective focuses on how firms overcome contracting and time inconsistency problems as they seek to obtain labor with certain skills, finance, and technology. The VOC perspective conceives institutions not merely in terms of constraining the actions of agents. Hall and Thelen (2005: 6) observe that institutions serve as “resources that actors use to attain their ends, ...providing opportunities for particular types of action, and especially collective action.” Different institutional frameworks engender different coordination solutions. In liberal market economies, firms coordinate their endeavors via competitive markets; in coordinated market economies, coordination is achieved via strategic interaction.

LMEs are characterized by arm's-length, contractual-based, and short-term relationships so as to minimize agency costs, maximize flexibility, and reduce market risks stemming from long-term obligations. Thus, the building blocks of LMEs are supportive of flexible and short-term oriented arrangements. Whereas LMEs are based on the logic of exit, coordinated market economies are based on the logic of voice in which economic actors foster mutual obligations toward each other and employ leverage and influence over each other to enhance collective gains from mutual cooperation. SMEs are characterized by longer-term, trust and obligation-based relationships. Such arrangements bring parties (employers and employees, banks and firms, management and shareholders, government, and producer groups) closer together, creating an environment where such parties have a stake in each other's activities, are disposed to sharing the burden of adjustments, and maintain a long-term horizon.

A number of scholars informed by the VOC perspective contend that divergent patterns of distributional equality among advanced industrial countries are owed in large part to the presence of distinct institutional configurations linking wage bargaining system, educational and training system, and the social protection. As Estevez-Abe et al. (2001: 177, 181, and 182) point out, "Earnings dispersion, by far the most important determinant of the overall distribution of income, is closely related to particular skill systems as well as the wage-bargaining institutional that tend to go with these systems. By themselves this pair of dichotomous variables account for nearly 70 percent of the cross-national variance in income inequality." The importance of social protection in this cause-effect chain is revealed, as the authors note, through its role in "determin[ing] the profile of skills that is likely to emerge in an economy."

Thus, two general configurations are apparent and generally reflect the differences between SMEs and LMEs. In SMEs, where there is high equality and redistribution, wage setting institutions are centralized and coordinated, acquisition of asset-specific skills in the workforce is prevalent, and the welfare state provides generous social protection. In the low equality, low redistribution LMEs, wage-setting institutions are decentralized and uncoordinated, general skills constitute the core skills of the workforce, and the welfare state provides limited protection against economic risk. The rest of this section elaborates on these arguments theoretically and empirically.

### *Wage-Setting Institutions*

Numerous studies have shown that wage-setting institutions have a significant effect on macroeconomic performance—such as inflation and unemployment—and on distributional equality. Quantitative analyses single out union density and wage bargaining centralization as two aspects of labor market arrangements that figure prominently in determining wage equality. To summarize, higher union density and higher wage bargaining centralization are associated with lower wage inequality or a more compressed pay distribution. Union density is defined as union members as a proportion of the labor force. While several models have been used to measure wage bargaining centralization, this article uses the one developed by Iversen (1999). Iversen's centralization index combines level of bargaining (plant/firm-level; industry-/sector-level; national-/peak-level) and degree of union membership concentration to arrive at a measure of organizational centralization. Unlike other indexes of centralization, Iversen's is tailored to capture the structural features of the wage bargaining process (Kenworthy 2001).

Empirical evidence reveals the existence of negative correlations between wage bargaining centralization and pay inequality and between union density and pay inequality (see Freeman 1980; Iversen 1999; Wallerstein 1999; Rueda and Pontusson 2000; and Pontusson 2005). The egalitarian effect of wage-setting centralization stems from this institution's ability to minimize the dispersion of wages across firms, industries, and sectors. Iversen (1999: 29) notes that efforts to "work out a distributive compromise between high-wage unions and low-wage unions...tends to result in egalitarian wage policies because low-wage unions can veto proposals that do not distribute wage increases 'fairly' among members." Wallerstein (1999: 674-5) adds that collective

pay-setting significantly alters “how the norm of fairness is applied.” Whereas fairness in a decentralized bargaining setting “depends on the worker’s usefulness to the firm and his or her alternative opportunities,” as Wallerstein points out, the norm of fairness in centralized pay-setting “depends on the importance of the work force as a whole and their outside opportunities as a group.”

Higher union density is associated with lower wage inequality to the extent that union membership facilitates the standardization of pay. Freeman (1980) and Swenson (1989), among others, observe that unionization tends to promote wage compression because unions strive to reduce wage differentials among equivalent workers across firms and to secure a wage premium for union members in the bottom and middle portions of the income distribution. Following the logic informing the Meltzer-Richard model, as the wage earnings of lower-paid workers falls below the mean wage, the majority of union members will demand higher wages thus ensuring more egalitarian results (Rueda and Pontusson 2000: 360-1).

The difference between LMEs and Nordic SMEs is quite vivid with respect to union density at the turn of the 21<sup>st</sup> century, as Table 3 illustrates. Whereas well over half of the labor force remained unionized in 2000 in Denmark, Sweden, and Norway, less than one- third of LMEs’ labor force was unionized—with Ireland proving to be the only LME to exceed this level. Moreover, the level of de-unionization has been much higher in LMEs than in Nordic SMEs. What sets Canada apart from other LMEs is that its de-unionization level has been lower than any other LMEs. However, the most striking historical development within this cluster of countries is the sharp drop in union density for Ireland, United Kingdom, and Australia, and especially for New Zealand. Accordingly, Canada and the United States have the distinction of being the two LMEs with unionization rates that have declined the least.

**Table 3. Wage bargaining institutions**

	Union density			Collective bargaining coverage			Centralization of wage bargaining		
	1980	2000	Change	1980	2000	Change	1973-83	1984-93	Change
<b>LMEs</b>	<b>47</b>	<b>26</b>	<b>-21</b>	--	<b>36</b>	--	--	<b>0.18</b>	--
Australia	48	25	-23	80	80	0	0.47	0.46	-0.01
Canada	35	28	-7	37	32	-5	0.07	0.07	0
Ireland	57	38	-19	--	--	--	--	--	--
New Zealand	69	23	-46	60	25	-35	--	--	--
United Kingdom	51	31	-20	70	30	-40	0.21	0.12	-0.09
United States	22	13	-9	26	14	-12	0.07	0.07	0
<b>Nordic SMEs</b>	<b>72</b>	<b>69</b>	<b>-3</b>	<b>73</b>	<b>80</b>	<b>+6.7</b>	<b>0.58</b>	<b>0.51</b>	<b>-0.22</b>
Denmark	79	74	-5	70	80	+10	0.65	0.58	-0.06
Norway	58	54	-4	70	70	0	0.52	0.53	0.01
Sweden	80	79	-1	80	90	+10	0.57	0.41	-0.17

Sources: OECD (2004): 145 & 151; centralization of wage bargaining: adapted from Iversen, (1999): 7.

Changes in collective bargaining coverage—that is, the share of the labor force covered by a collective agreement—tend to follow changes in union density. However, coverage can far exceed union density, as it does in France and Belgium, because of a government decree requiring that all companies in a specific sector fulfill the terms of a collective agreement. The gap may also be attributed to the fact that a collective agreement approved by an employers’ association requires all affiliated firms to extend collective contracts to non-union workers. The coverage rate in Nordic SMEs increased even though unionization declined between 1980 and 2000. This is owed to the existence of industry-level and multi-employer wage bargaining, which has facilitated the extension of collective agreements to non-unionized workers.

In LMEs, the trend has been for the coverage rate to catch up with declining union density, with one exception. Australia's coverage rate has been consistently higher than union density because of its unique industrial relations system, which until the 1990s was based on centralized wage bargaining, state intervention, and coordinated multiemployer wage regulation. As Briggs (2006: 869) observes, the "multiemployer award system encompassed between 90% and 95% of [union and non-union] employees throughout the 1970s and 1980s until the decentralization of bargaining in the 1990s." Despite decentralization, governmental regulation of the labor market helped keep the coverage rate very high during the 1990s and early 2000s.

Decentralization of wage bargaining has occurred in LMEs and SMEs in light of pressures to render industrial relations flexible enough to respond effectively to changing markets conditions. However, Thelen (2001: 78) observes that whereas SMEs achieved "flexibility through controlled decentralization [leading to the] reregulation of various issues at lower bargaining levels," decentralization in LMEs has shaken loose collective bargaining arrangements resulting in enhanced managerial autonomy. In Britain, Prime Minister Thatcher's assault on organized labor via a succession of legislative blows caused the wage bargaining system to lose its collective and coordinative features. As Thelen (2001: 95) observes, "Whereas in 1980, 43 percent of workplaces were involved in multi-employer bargaining, by 1998 this was down to 14 percent." In Australia, mounting pressure from skilled industrial workers to decentralize wage bargaining in 1980s opened a window for the neoliberal-informed government to dispose of labor market regulations in 1990s.

Labor market deregulation was pursued with vigor by New Zealand's Conservative government in the early 1990s, amounting to "the most radical neoliberal reform in the OECD" (Briggs 2006: 874). In effect, by 2000, decentralization efforts had completely transformed New Zealand's labor market system into one quite comparable to Canada's and the United States' deregulated systems, while Australia's reforms still left some modicum of collective representation. The labor market arrangements of Canada and of the United States have been stable and consistently flexible since the early 1980s compared to other LMEs. In fact, Canada's set of wage bargaining institutions has the distinction of being the most stable, witnessing the least amount of change in union density, coverage, and centralization. While the policy reforms in LMEs reflect the dynamic of competitive deregulation, Canada seems to be a laggard in the race to the deregulated bottom, opting to make minimal changes to its labor market regime.

### *Education and Training System*

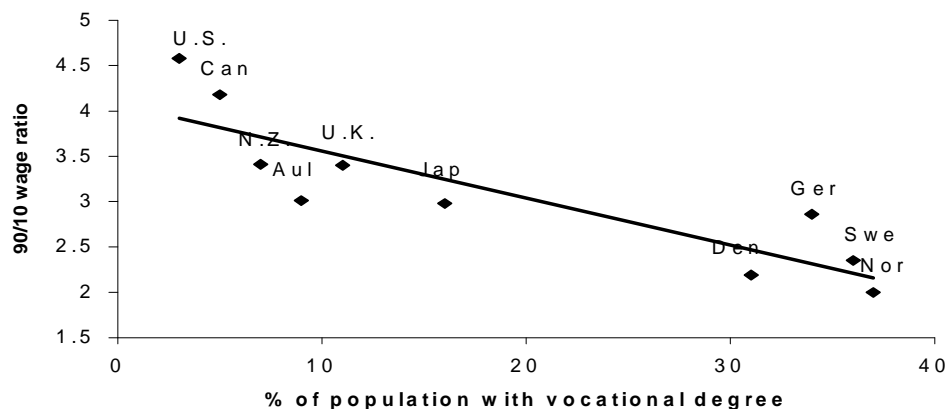
In recent years, political economists have explored the impact of a country's educational and skill provision system on the product market strategies of firms (Estevez-Abe, Iversen and Soskice 2001; Soskice 1999; Thelen 2004), preferences for redistribution (Estevez-Abe, Iversen and Soskice 2001; Cusack, Iversen, and Rehm 2006), coordination of economic activities (Hall and Soskice 2001; Culpepper 2007), occupational segregation (Estevez-Abe 2006), cognitive abilities of workers (Pontusson 2005), and distributional equality (Estevez-Abe, Iversen and Soskice 2001). This section explores the impact of different skill provision systems and educational spending and achievement levels on equality.

The general skills system tends to be found in liberal market economies. Firms contribute little to the skill formation of workers; instead, workers enroll in general education institutions to acquire general skills that are marketable across industries. Thus, the investment risk involved in the acquisition of general skills is low because such skills are valued by employers in most sectors of the economy and an individual possessing such portable skills faces good alternative job prospects in the event of layoff. In the industry-specific skills system, found in coordinated market economies, an individual enrolls in apprenticeship and vocational schools to acquire skills that are valued by any employer within an industry. The investment risk facing an individual is higher in this system than in the general skills system because of the higher asset-specific content of such

skills which translates to lower portability of skills and less positive replacement job prospects in the event of an industry-wide downturn. Finally, in the firm-specific skills system, exemplified by Japan, individuals acquire highly asset-specific skills that have little usability outside the firm in which they are used. Therefore, the acquisition of firm-specific skills is contingent on the level of employment protection.

Individuals acquire industry- and firm-specific skills by undergoing vocational training. Some vocational training systems emphasize company-based training (such as Japan, and France and Italy to a lesser extent), while others emphasize industry-based training via enrollment in vocational schools (Nordic SMEs) and/or apprenticeships (Germany). A small share of the population in LMEs undergoes vocational training in contrast to Nordic SMEs, explaining why the vocational training system is weak in the former group. Within the Nordic SMEs, industry-specificity of skills (with some degree of firm-specificity) in Sweden and Norway is the product of vocational school training, whereas in Denmark it is a product of a combination of apprenticeship and vocational school training. Median employment tenure is an indicator used to gauge the stock of firm-specific skills within the labor force because the acquisition of such skills requires a long-term commitment by both an employer and its employees. Employment tenure rates are low in LMEs as well as in Denmark, while Norway and Sweden (and especially Germany (10.7), Japan (8.3), Italy (8.9)) have higher tenure rates, indicating that the stock of firm-specific skills is larger in the latter group of economies but nearly absent in the former group.

**Figure 3. Vocational Training Intensity and Inequality**



Note: This table combines data from Iversen (2005: 55) and the latest 90/10 wage ratio data from Table 1.

There is a strong negative association between wage inequality and vocational training intensity. As figure 3 illustrates, the greater the incidence of vocational training, the lower the 90/10 wage ratio. Estevez-Abe et al. (2001:177) attribute this to the fact that in specific skills systems young adolescents who are not interested in further pursuing a general education through academia can still improve their economic well-being by acquiring asset specific skills that labor markets compensate with earnings that far exceed minimum wages. As they point out, “Because specific skills systems generate high demand for workers with good vocational training, young people who are not academically inclined have career opportunities that are largely missing in general skills systems. Whereas a large proportion of early school leavers in [specific skills systems] acquire valuable skills through the vocational training system, in [general skills systems] most early school leavers end up as low-paid unskilled workers for most or all of their working lives.”

Although the logic of this argument has been criticized (see Pontusson 2005), the skills system argument suggests that wage dispersion is attributed, to some extent, to the skills profile of the labor force. Canada’s general skills system, as the argument goes, offers one promising career

opportunity—that is, enrolling in academia in order to acquire general skills that will subsequently be refined with job experience with various employers. In this system, failure to follow this career path (“to go to college”) almost guarantees a lifetime of working at the minimum wage level given that the vocational training opportunity is one that is afforded to a small segment of the labor force. The picture has become more complicated, however, in light of the growing evidence that the returns to college degrees and nonprofessional master’s degrees have dropped, while the returns to professional graduate degrees and doctorates have risen (Scheve and Slaughter 2007). While this development should not lead to higher 90/10 ratios, it is expected to have an adverse impact on the wage gap between the 90<sup>th</sup> percentile and 50<sup>th</sup> percentile. Recent 90/50 ratio data for Canada show that the distance between gross earnings of full-time employees in the two income groups has begun to widen.

Studies have shown that spending in human capital formation also is associated with equality. As the argument goes, higher educational spending contributes to a more even distribution of literacy skills which is conducive to a more equitable distribution of earnings. Table 4 measures educational spending as a percentage of GDP in 2001. With respect to overall spending, the United States stands out as the biggest spender, while Canada and Australia are not far behind Norway and Sweden. However, the situation changes when the focus shifts to spending in primary/secondary education. The levels for Canada and the United States are below those of Nordic SMEs, while Australia’s spending level matches those of Denmark and Sweden. Thus, in contrast to other countries, the United States, Canada as well as Denmark allocate a larger share of their total educational spending to tertiary education. Moreover, overall public spending in education is higher in Nordic SMEs than in LMEs, while private spending figures more prominently in the United States and to a lesser extent in Australia.

**Table 4. Educational Systems**

	Spending on education as % of GDP, 2001				Literacy test scores for Individuals aged 16-65, 1994-98		
	All levels		Primary/Secondary		Mean	Bottom 5 <sup>th</sup>	Ratio of top 5 <sup>th</sup> to bottom 5 <sup>th</sup>
	Public	Total	Public	Total			
<b>LMEs</b>	<b>4.8</b>	<b>5.9</b>	<b>3.5</b>	<b>3.8</b>	<b>271</b>	<b>146</b>	<b>2.49</b>
Australia	4.5	6.0	3.6	4.3	274	146	2.46
Canada	4.9	6.1	3.1	3.4	280	145	2.57
Ireland	4.1	4.5	2.9	3.1	263	151	2.34
New Zealand	5.5	--	4.3	--	272	158	2.29
U.K.	4.7	5.5	3.4	3.9	267	145	2.48
U.S.A.	5.1	7.3	3.8	4.1	272	133	2.79
<b>Nordic SMEs</b>	<b>6.4</b>	<b>6.7</b>	<b>4.4</b>	<b>4.4</b>	<b>296</b>	<b>212</b>	<b>1.73</b>
Denmark	6.8	7.1	4.2	4.3	289	214	1.65
Norway	6.1	6.4	4.6	4.6	294	207	1.75
Sweden	6.3	6.5	4.3	4.3	304	216	1.79

Source: adapted from Pontusson (2005): 134 and 136.

Pontusson (2005) shows that higher public education spending is associated with a more even distribution of literacy skills and lower wage inequality. The literacy test scores come from the International Adult Literary Survey, which tests individuals from different countries in the areas of prose literacy, document-reading ability, and arithmetic operations. The scores reflect the averages for three different literacy tests, each one having a total of 500 points. Table 4 provides the average score, the scores of the lowest 5<sup>th</sup> percentile, as well as the ratio of test scores in the top 5<sup>th</sup> percentile to the scores in the bottom 5<sup>th</sup> percentile. Nordic SMEs have higher average scores than LMEs, with Canada not far behind Denmark. The difference between the two clusters of countries is especially clear with respect to scores of the bottom 5<sup>th</sup> percentile and the 95-5 test

score ratios. Whereas the test scores of those at the lower end of the skills distribution (low-skill workers) in Nordic SMEs are in the low 200s, those of LMEs are in the mid-100s. Because the cognitive abilities of low-skill workers are relatively higher in Denmark, Norway and Sweden, their 95-5 test score ratios are significantly lower than those in LMEs.

Within the LMEs, the distribution of educational attainment is quite uneven, with Canada and the United States standing out as having the highest 95-5 score ratios despite being the biggest education spenders. This is attributed to the practice of targeting human capital expenditures on postsecondary education. Pontusson (2005: 137 and 139) observes that different human capital formation patterns have different effects on the 90/10 wage ratios. "Public investment in [primary and secondary] education compresses the distribution of cognitive abilities...by raising cognitive [skills] at the lower end of the distribution." While other factors must be combined with cognitive scores to better account for wage compression, studies have shown that the higher quality of the cognitive abilities of low-skilled workers makes it easier for firms to achieve productivity growth, which in turn is conducive to higher wage levels at the bottom of the income distribution.

### *Welfare State*

So far this study has analyzed the causal effects of wage-setting institutions and of skills and education on inequality. This section will discuss two functions of the welfare state. First, by performing a social protection function, the welfare state significantly shapes the skills profile of the workforce, which, as elaborated earlier, affects wage distribution. Moreover, the welfare state's redistributive function shapes the distribution of post-tax and transfer income. Thus, the equalizing effects of the welfare state are felt both indirectly (through skills provision) and directly (through the redistributive profile of transfers and taxes).

Estevez-Abe et al. (2001: 147) argue that "different types of social protection influence the propensity of individuals to invest in particular skills, which, in turn, determines the skill profile of an economy." The need for social protection is lower in general skills-based economies because such skills are portable across different economic sectors and retain their labor market value. However, social protection figures prominently in the risk calculation that an individual makes when deciding whether to acquire more specific skills. Since specific skills are less transferable and lose significant market value outside the domain (firm or industry) in which they are cultivated, those who possess such skills are vulnerable to longer unemployment spells and future income loss.

Estevez-Abe et al. observe that two types of protection can effectively alter the incentive structure that militates against acquisition of specific skills. High levels of employment protection, that is regulations that restrict the ability of firms to layoff and dismiss workers at their discretion, induces individuals to invest in firm-specific skills. When firms offer workers the assurance of long-term employment, workers calculate that returns to highly specific skills will span over a long enough time to make such risky skills investment worthwhile. On the other hand, individuals have an incentive to invest in industry-specific skills if they are assured generous unemployment protection—that is, security against loss of income while unemployed as well upon rejoining the workforce. As Estevez-Abe et al. (2001: 152) note, a high replacement ratio and longer benefit duration "permits the unemployed industry-specific skill-holders enough time to find another job that matches their skills...[and] ensures that their reemployment will generate the same skilled wages as before."

As Table 5 illustrates, there are significant differences in the protection levels between and within the LMEs and Nordic SMEs. According to the skills-protection nexus argument, Denmark's generous unemployment protection is owed to its heavier use of industry-specific skills while Sweden's higher level of employment protection is attributed to its more balanced use of the two types of specific skills. Although the majority of the workforce in LMEs possesses general skills, there is a fair amount of divergence in their levels of protection, with Ireland and Canada

providing the highest levels of employment and unemployment protection and the United States providing little economic security.

However, Canada's level of unemployment protection dropped in the 1990s due to successive cuts in unemployment insurance, stricter eligibility criteria, and activating labor market policies. Banting (2006: 425) estimates that the replacement rate fell from 57 percent in 1993 to 50 percent in 1996 for repeated beneficiaries. Moreover, as a result of tougher eligibility requirements, the number of unemployment insurance recipients as a share of the total unemployed dropped sharply from around 85 percent in the early 1990s to about 45 percent in 1999. These retrenchment measures have brought Canada closer to the LME average in recent years.

**Table 5. Employment protection and unemployment (1980s-1990s)**

	Employment protection (index scores)	Unemployment protection (index scores)
<b>LMEs</b>	<b>0.27</b>	<b>0.22</b>
Australia	0.27	0.22
Canada	0.30	0.30
Ireland	0.36	0.37
New Zealand	0.29	0.27
U.K.	0.25	0.11
U.S.A.	0.14	0.10
<b>Nordic SMEs</b>	<b>0.71</b>	<b>0.73</b>
Denmark	0.53	0.91
Norway	0.66	0.64
Sweden	0.94	0.63

Source: Iversen (2005): 47 and 50.

### *A Second Look at the Welfare State*

Welfare states do more than insure individuals against labor market risks; social welfare also has a direct effect on equality via its redistributive impact. In the latest literature on this topic, some scholars have sought to explain why the redistributive profile of welfare states in some countries is more significant than in other countries. Bradley et al. (2003), for example, argue that where leftist parties have been the dominant party in government for a long time, the egalitarian effects of welfare states are more pronounced. Other scholars have focused on how to gauge or size up the redistributive punch of welfare states. This section focuses on the latter issue.

The conventional measure used to gauge the redistributive profile of the welfare state is to compare the difference between market income and disposable income. The highly redistributive effects of public policy in Nordic SMEs have helped significantly to reduce market income inequality. Whereas the average percentage reduction of income inequality for these countries was 31 percent in the early 2000s, it stood at 21 percent for the LMEs. Within the LMEs, the United Kingdom redistributed the most while the United States redistributed the least (see Table 2).

A number of scholars in recent years have criticized how the size and redistributive effects of the welfare state are conventionally measured. Hacker (2002) and Howard (2003) argue that using public social expenditure as a share of GDP to measure the size of the welfare state distorts the actual size of the welfare state in many countries because it fails to take into account taxation of social benefits and indirect forms of government assistance, such as tax expenditures, minimum wages, and other welfare-enhancing regulations. Once taxes and indirect assistance are factored

in, the gap between Nordic SMEs and LMEs closes significantly because the average size of the welfare states of the former group drops from 33.9 to 26.5 percent while the average for the latter group drops from 19.8 to 18.1 percent (Howard 2003: 412).<sup>2</sup> Canada is slightly above the LME average prior and after the recalibration of welfare state size.

Garfinkel et al. (2006) have devised an alternative method to calculate the effects of welfare state programs on inequality. The drawbacks with using disposable income are that it does not take into account indirect taxes—which include value-added, sales, property, and corporate taxes—and it omits in-kind benefits such as health insurance and education. Such omissions are hard to justify, as Garfinkel et al. (2006: 898) note, because “in-kind as well as cash transfers reduce inequalities in standards of living [and] indirect taxes reduce the living standards of households no less than direct taxes.” Thus, the authors use a new measure called full income, which starts with disposable income and adds to it health care subsidies (public expenditures and employer-provided) and education (elementary and secondary schooling and public expenditures on early childhood education) and subtracts from it only those indirect taxes used to finance cash transfers and in-kind benefits.

**Table 6. Comparing inequality measures: disposal income versus full income**

	Disposable Personal Income			Actual Full Income		
	p10/50	p90/50	p90/10	p10/50	p90/50	p90/10
<b>LMEs</b>	<b>45</b>	<b>201</b>	<b>455</b>	<b>53</b>	<b>182</b>	<b>345</b>
Australia (1994)	45	192	422	52	172	331
Canada (1997)	47	186	399	52	173	334
U.K. (1999)	47	214	454	55	190	349
U.S.A. (2000)	39	210	543	53	193	365
<b>SMEs</b>	<b>57</b>	<b>170</b>	<b>300</b>	<b>56</b>	<b>163</b>	<b>289</b>
Sweden (2000)	57	168	295	58	156	269
Germany (2000)	56	177	316	57	166	293
Finland (2000)	57	164	290	54	166	306

Source: Garfinkel et al. (2006): 908.

Income inequality looks different when one substitutes full income for disposable income. Table 6 shows that when lower indirect taxes and receipt of in-kind benefits are factored into a measure of household economic assets, inequality declines in each LME countries and cross-national differences in inequality decreases within the LME cluster. While the equality-enhancing effects of these two factors are modest in Canada, they are significant in the United States. Canada’s standing changes among LMEs, from having the least inequitable disposable income distribution to sliding right behind Australia as having the least dispersed full income distribution.

When comparing LMEs and SMEs using full income, the inter-group differences in inequality—especially with respect to the 90/10 ratio—are far less pronounced than those associated with disposable income. In contrast to disposable income inequality, full income inequality in LMEs is lower because in-kind benefits improve the standard of living of low income households to a greater extent than do cash benefits. Moreover, SMEs lose some of their egalitarian edge over LMEs because cash benefits are taxed at higher levels. Thus, an analysis based on full income reveals that cross-national differences in the net value of welfare transfers and in the well-being of households at the bottom of the income distribution are not as wide as they appear to be when using conventional measures.

<sup>2</sup> These percentages were calculated by the author using Howard’s data in Table 1.

## Conclusion

The above analysis reveals three important findings about over-time changes in Canadian inequality and cross-national differences in distributional equality between and within the two clusters of economies. First, the level of inequality in Canada over the past three decades has increased modestly. Market income, as measured by the 90/10 wage ratio and the Gini coefficient, shows a slight increase from the late 1970s to the early 2000s. As for post-transfer and tax income, the Gini coefficient for disposable income shows a slight increase. Moreover, Canada witnessed the lowest levels of inequality, however it is measured, in the late 1980s and early 1990s when the Conservative Party was in power.

Second, as Table 7 illustrates, Canada's performance is superior than the LMEs average in each of the equality variables with the notable exception of the two wage ratios (90/10 and 50/10). In fact, wage levels in Canada are not far below American levels. However, in observing the data on inequality among LMEs, it appears that Canada, Australia, and Ireland have increasingly clustered together while the United Kingdom has traveled the farthest in emulating some trends in the United States. Another way of putting it, contrary to the dual convergence thesis that LMEs are converging toward the United States, when it comes to patterns of inequality there are two recognizable groups within the LMEs that show few signs of convergence.

**Table 7. Canada from a Comparative Perspective**

	<u>Averages</u>				<u>Averages</u>		
	LMEs	Nordic SMEs	Canada		LMEs	Nordic SMEs	Canada
<b>Equality variables</b>				<b>VOC variables and Redistribution</b>			
90/10 wage ratio	3.72	2.17	4.18 (-)	Wage-setting arrangements:			
50/10 wage ratio	1.81	1.43	1.98 (-)	Union density	26	69	28 (+)
<i>Gini Coefficients:</i>				Collective bargaining coverage	36	80	32 (-)
Market income	0.420	0.352	0.396 (+)	Centralization	0.18	0.51	0.07 (-)
Disposable income	0.330	0.243	0.312 (+)	Skills system:			
90/10 ratio	4.615	2.837	4.101 (+)	Vocational training share	7	35	5 (-)
<i>Full income:</i>				Educational system:			
90/10 ratio	345	289	334 (+)	Public spending (all levels)	4.8	6.4	4.9 (+)
90/50 ratio	182	163	173 (+)	Public spending (pri/sec)	3.5	4.4	3.1 (-)
10/50 ratio	53	56	52 (+)	Literacy test scores (mean)	271	296	280 (+)
				Literacy scores (95/5 ratio)	2.49	1.73	2.57 (-)
				Welfare state:			
				Employment protection	0.27	0.71	0.30 (+)
				Unemployment protection	0.22	0.73	0.30 (+)
				Redistribution	25	35	27 (+)

Notes: the averages are based on the latest data from the tables above. Whereas the (-) sign indicates that Canada's performance is inferior to LMEs' average performance, the (+) sign indicates superior performance. The redistribution data comes from Brandolini and Smeeding (2006: 24) and Pontusson (2005: 154). The redistribution average for LMEs excludes Australia because the data is dated.

Moreover, the differences in inequality between Nordic SMEs and LMEs have persisted. In fact, when looking at Gini coefficients for both disposable income and 90/10 ratio and wage inequality, the gap between the averages of Nordic SMEs and LMEs has increased. This lends credence to arguments that challenge the globalization convergence thesis, namely the two varieties of capitalism remain persistently distant from each other with regard to inequality levels.

Finally, what may explain Canada's comparatively lower post-tax and transfer inequality levels but relatively high wage inequality levels within the LMEs group? Among the VOC variables this paper has explored, some appear to be responsible for elevating inequality in Canada to levels comparable to those of the United States, while others seem to keep these villainous forces in check. Figure 4 identifies certain conditions in Canada that are converging on or similar to those found in the United States and those that are dissimilar or divergent.

The convergent factors may account for why Canada's and the United States' wage inequality levels have been in proximity of one another since the 1960s, while Canada's higher unionization and coverage levels may explain why wage inequality has increased at a slower pace than in the United States. The skills and educational systems exacerbate wage inequality by offering wage premiums for individuals with high educational attainment and who have highly refined and knowledge-intense (general) skills. The higher level of social protection and the greater redistributive effects of cash-benefits and in-kind benefits in Canada have enabled society to achieve a more egalitarian distribution of full income in comparison to the United States and other LMEs.

**Figure 4. Comparing Canada & United States**

<b><i>Converging conditions</i></b>	<b><i>Diverging conditions</i></b>
Wage bargaining	Union density & coverage
Skills system	Redistribution
Educational system	Social protection

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