



The Creation of a Shared Prosperity in Canada

Unions, Corporations and
Countervailing Power

Jordan Brennan





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Abstract

THE PROCESSES THAT shape the distribution of income in Canada are not well understood. Mainstream ('neoclassical') economics presumes that 'market forces' distribute income in accordance with productivity, but this assertion is rooted in deeply problematic assumptions, concepts and measurements. Historically speaking, unions played a crucial role in redistributing factor income from capital to labour (profits to wages) and from the upper to the lower parts of the income hierarchy. The institutional growth of unions from the First World War to the mid-1970s helped create a shared prosperity or 'middle class' in Canada. The erosion of unions since the late 1970s has meant wage stagnation, a shrinking national wage bill and heightened income inequality. Given these facts, union renewal could play a crucial role in restoring middle class security and mass prosperity.

1. Introduction

The produce of the earth... is divided among three classes of the community... To determine the laws which regulate this distribution is the principal problem in Political Economy...

— *David Ricardo (1817), the great classical political economist*

EVERY GENERATION OF human beings risks forgetting the hard-won lessons learned by previous generations. The preservation of past experience in cultural memory can be forgotten, often with serious social consequences. Without an adequate understanding of the past we are bound to misunderstand the present. And misunderstanding the present hampers our ability to realize future goals. But can we forget something we do not sufficiently understand in the first place?

The institutional legitimacy of labour unions is being called into question today in Canada. And while attacks on union security are not unprecedented, the success that some factions of the government-business alliance are having in undermining unions is fuelled, in part, by collective cultural amnesia. It is easier to be apathetic, even cynical, about attacks on a social institution if one does not understand why that institution emerged or what role that institution plays in enhancing the quality of human life. Many Canadians, even (especially?) those with a public voice, do not have the luxury of forgetting about the socially beneficial aspects of labour unions for the simple reason that they never understood that role to begin with.

Have labour unions played a role in elevating living standards? Do unions lessen income inequality? This paper will direct itself to these questions.

As the quote at the beginning indicates, David Ricardo believed that the primary task of political economy is to lay bare the underlying patterns and regularities which govern the distribution of income and wealth. Given the centrality of income in conditioning human possibilities on both an individual and social scale, it's no wonder he thought it imperative to come to a satisfactory account of distribution.

It is typically left to economics to sort out how the distribution of income works. Indeed, orthodox ('neoclassical') economics would confidently assert that it has firm knowledge about how incomes are formed, and by implication, how they are distributed. However, there are good reasons for doubting the validity of neoclassical dogmas.

This paper will map the distribution of income in Canada alongside an exploration of the changing institutional and organizational structure of the political economy. The chief argument of this paper is that the institutional growth of labour unions helped increase average hourly earnings and the national wage bill and helped lessen income inequality. The expansion of unionization in Canada from the First World War to the mid-1970s helped forge that vague social entity commonly referred to as the 'middle class'. What we call the 'middle class' today had little precedent in human history until unions helped create it.

Unions were the main institutional lever in assuring that the 'ordinary worker' received a portion of the gains from growth.¹ The erosion of unions since the late 1970s has meant wage stagnation, a shrinking national wage bill and heightened income inequality. Furthermore, unions have acted as a 'countervailing power' to dominant corporations in the general evolution of policy, politics and culture. Given these facts, union renewal could play a crucial role in restoring middle class security and a shared prosperity. Certainly, arresting the decline of unionization should be an urgent priority for anyone concerned with achieving greater equity in terms of the distribution of income, wealth and power in society.

The remainder of the paper is broken into five sections. The second section explores the role unions played in shaping the overall standard of living. The third assesses the value of trade unions to the Canadian workforce. The fourth outlines some of the quantitative history of corporate power in Canada and lays bare the role that growing corporate power has played in reshaping the distribution of income between employers and employees. The fifth juxtaposes the institutional strength of organized labour against that of dominant corporations and contrasts both with the evolution of personal income inequality. The sixth section concludes with some policy implications.

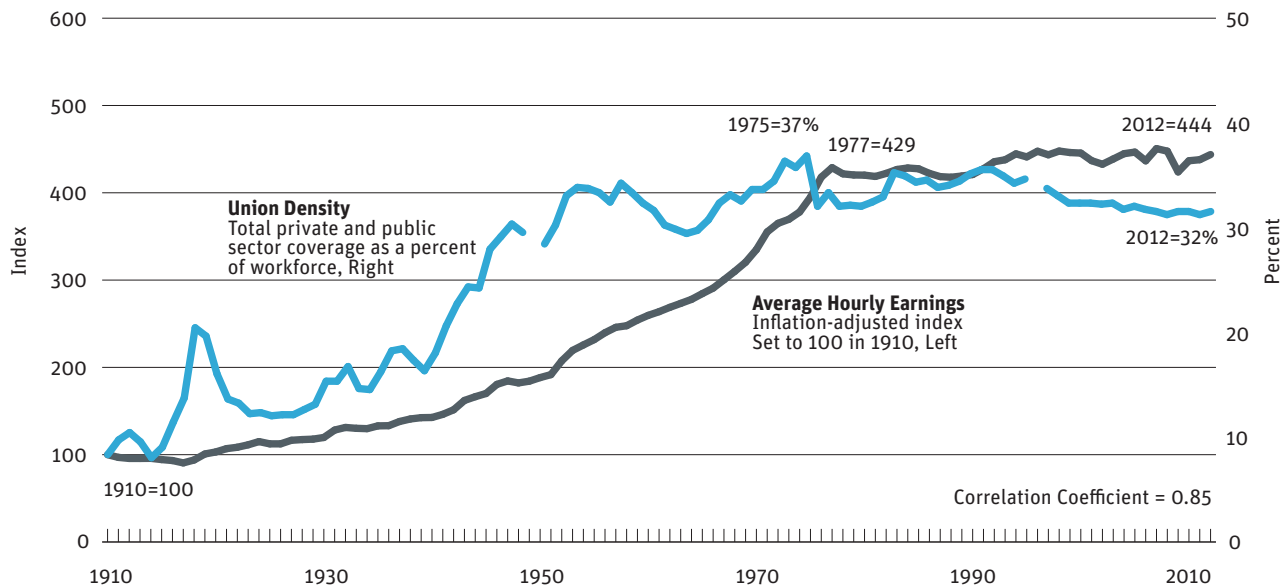
2. Unionization and Distribution

ORTHODOX NEOCLASSICAL ECONOMICS claims that the market for labour is like other commodity markets insofar as the price of labour – the wage rate – and the quantity of labour – the level of employment – are determined by the demand for, and supply of, labour. These ‘market forces’ govern the short-term fluctuations in wages and employment. In the long run, the ‘absolute’ wage rate and the national wage bill reflect the productivity of labour, such that the income fetched by a particular labourer and overall wage bill are shaped by the proportional share of output attributable to the given ‘input’.

In a competitive labour market, so the assumption goes, people ‘get their due’. Whether one earns \$10 per hour or \$10 million annually, each level of remuneration reflects proportional productive contribution. The free market outcome, so the story goes, is both efficient and ‘fair’.

How do unions fit into this picture, according to the neoclassical orthodoxy? First, it is presumed that unions ‘interfere’ with the ‘self-adjusting’ market by raising the ‘real’ wages of workers to ‘arbitrarily’ high levels. Second, neoclassical economics argues that if unionized labour manages to raise its wage rate, it does so at the expense of non-unionized labour. In other words, unions can only redistribute income within a given national wage bill; they are unable to increase the national wage bill as such.² If this set of assumptions and assertions were true, there would be no reason to

FIGURE 1 Organized Labour Strength and Hourly Earnings, 1910–2012



Note Union density was estimated between 1911 and 1920 by taking total union membership as a percent of the Canadian population, with proper rebasing. Union density is defined as the percentage of the non-agricultural paid workforce covered by a union. Average hourly earnings index is adjusted for inflation using the consumer price index and it fuses two series in 1949.

Source Average hourly earnings from Historical Statistics of Canada, Series E198 (1910–1948) and IMF through Global Insight (1949–2012); consumer price index and Canadian population from Global Financial Data; union density from Historical Statistics of Canada, Series E176 (1921–1975) and Cansim Tables 279-0026 (1976–1995) and 282-0078 (1997–2012).

suppose that the average level of wages in Canada bears any relationship to the institutional strength of organized labour.

The historical facts suggest otherwise, however. *Figure 1* contrasts the institutional strength of organized labour and the hourly wage rate from 1910 through 2012. The grey line captures inflation-adjusted average hourly earnings, indexed to 100 in 1910 and scaled on the left. The blue line captures union density, a proxy for the institutional strength of organized labour, measured as total private and public sector union coverage as a percent of the workforce, scaled on the right. The two series are tightly and positively correlated over the past century (correlation coefficient of 0.85 – highly statistically significant).

Between 1910 and 1977, inflation-adjusted hourly earnings rose from 100 to 429 – more than quadrupling in just two-thirds of a century. This period roughly corresponds with the growth of the middle class in Canada and accompanying creation of a shared prosperity. However, the growth of hourly earnings stagnated after 1977, rising a meager 3 percent in inflation-adjusted terms in the generation since. This creates a puzzle: why did hourly

earnings grow rapidly from the early part of the century till the mid-1970s and stagnate thereafter?

A large part of the answer appears to be the enhanced (then diminished) bargaining position of wage earners resulting from the growth and maturity of unions. Union density increased from 8 percent in 1911 to 20 percent in 1920. A deep recession in the early 1920s reduced union membership from 374,000 to 261,000 (a 30 percent decline). Unionization increased modestly in the interwar years, rising from 12 percent in 1924 to 16 percent in 1940.

Things began to change more rapidly after 1940 when federal legislation ratified and supported collective bargaining and the right of workers to form unions. By 1944, with the Cooperative Commonwealth Federation's popularity surging, the Mackenzie King Liberals drafted legislation ('PC 1003'), sometimes referred to as the 'Magna Carta for Labour', that mirrored the Wagner Act of 1936 in the United States.

After the war, with workers agitating to cement the gains they made during the war, Justice Ivan Rand made a landmark decision, commonly referred to as the 'Rand formula', which entrenched 'agency shop' and 'dues check-off' as core aspects of labour relations in Canada. In sum, between 1940 and 1946 a framework was created within which the right to union security was established.³

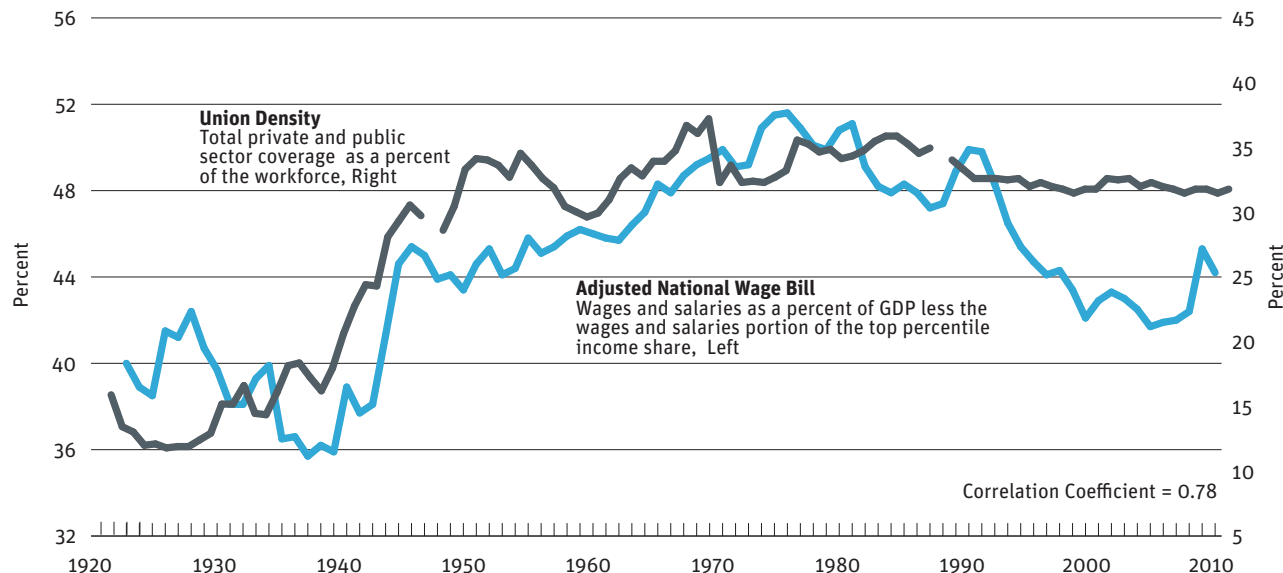
The fight for union security came largely through negotiations, but was backstopped by the largest strike wave Canadians had ever experienced. The result was a surge in unionization, rising from 16 percent in 1940 to a historic high of 37 percent in 1975. The gradual decline in union density since 1975, reaching a five-decade low of 32 percent in 2012, corresponds with the stagnation of hourly earnings.⁴

Private sector union density has declined even more dramatically than overall density, so if we assume that private sector conditions lead bargaining trends, then it follows that the decline in density in the private sector is what drives the stagnation of hourly earnings.

The average wage rate in Canada is shaped by things other than unionization, of course, but when we examine hourly earnings on a generational scale, it becomes clear that the institutional strength of organized labour plays an important role in determining the average standard of living in Canada, both for unionized and non-unionized workers alike.⁵ Why?

Unions represent workers at the bargaining table with employers and, because they are able to negotiate as a collective unit, their bargaining position is enhanced relative to what it would be if each individual bargained in isolation.⁶ An enhanced bargaining position (often) enables unions to

FIGURE 2 Organized Labour Strength and the National Wage Bill, 1921–2010



Note Adjusted national wage bill is wages and salaries as a percent of GDP less the wages and salaries portion of the top percentile income share. See endnote #8 for further explanation.

Source Wages and salaries portion of the top percentile income share from Saez and Veall (2007), Veall (2010) and Veall (2012) with series updated to 2010 by Michael Veall; union density from Historical Statistics of Canada, Series E176 (1921–1975) and Cansim Tables 279-0026 (1976–1995) and 282-0078 (1997–2010), respectively; wages and salaries and GDP from Historical Statistics of Canada, Series F1-13 and Cansim Table 380-0016.

increase their compensation and benefits to a greater extent than would otherwise occur.⁷

Furthermore, by increasing the remuneration of organized workers, labour unions serve to raise social expectations around the compensation of work more broadly. This has spillover effects in non-unionized workplaces, hence the increase in *average* hourly earnings, not just the earnings of unionized workers.

And what of the neoclassical claim that unionized labour can only redistribute income within a given national wage bill, but not raise it? *Figure 2* contrasts union density against an adjusted national wage bill in Canada from 1921 to 2010. The adjusted national wage bill equals total wages and salaries divided by GDP less the wages and salaries paid to the top percentile of the population.⁸

By removing the wages and salaries portion of the top percentile income share from the national wage bill, we more closely approximate the class-based distribution of income. Also, because most people who are in the top percentile income group are not in a union, we will be able to determine if there is a relationship between the level of unionization and the share of national income going to what used to be called the ‘working class’.

Figure 2 plots the relationship between the institutional strength of organized labour and the adjusted national wage bill. Unionization trended upward from 1921 to the mid-1970s and trended downward thereafter. The national wage bill began to trend upward from 1930, peaked two years after the level of unionization peaked, and then trended sharply downward over the past three decades. The two series have a correlation coefficient of 0.78 over the past century (which is statistically significant).⁹

It isn't a historical accident that average hourly compensation stagnates and the national wage bill declines from the mid-1970s onward. The main driver of a shared prosperity — unionization — declined after 1975. The decline of unions since the late 1970s has been associated with the stagnation of hourly compensation, and if hourly earnings do not increase then the gains from growth goes elsewhere. Hence the shrinking national wage bill.¹⁰

The orthodox economic argument that unions cannot increase 'absolute' hourly wages and are similarly unable to increase the national wage bill is not supported by the historical facts. Unions were (*are*) integral in raising the average standard of living. In other words, labour unions are a key part of the institutional basis of a shared prosperity.

If labour unions elevate the compensation of workers both individually and collectively, can we determine how much labour unions are 'worth' to the Canadian workforce as a whole?

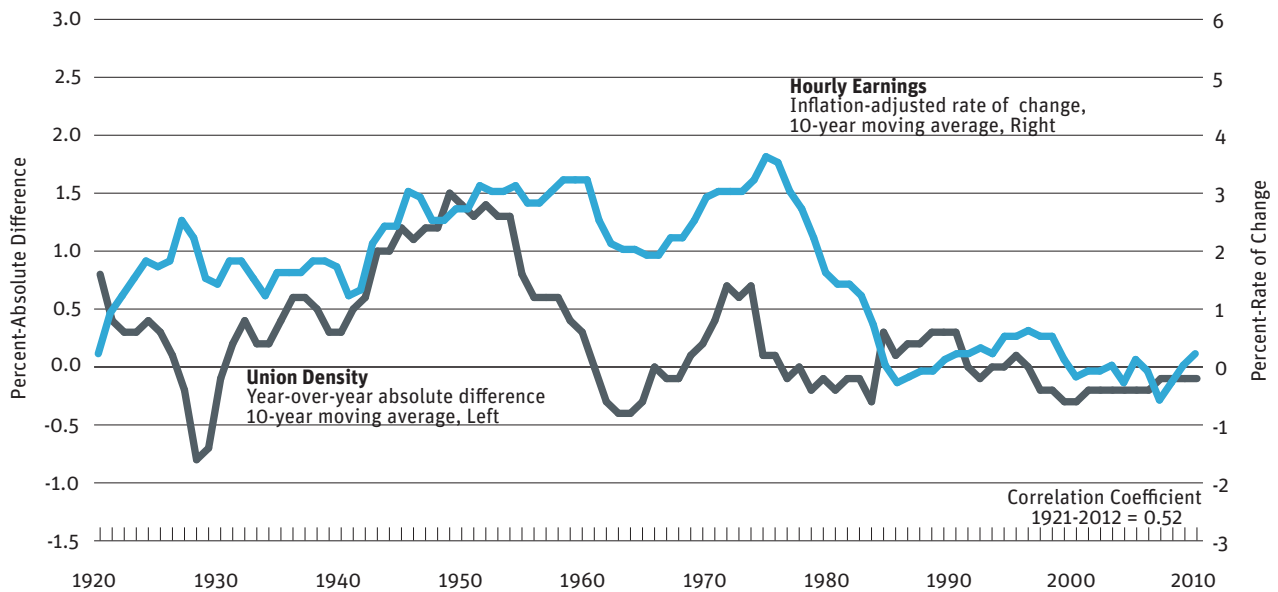
3. The Value of Trade Unions to Canadian Workers

SOME MIGHT ARGUE that the statistical relationship between union density and average hourly earnings is ‘spurious’, meaning the two series are correlated, but the correlation does not imply causation (i.e., increases in union density do not *lead to* increases in average hourly earnings). In other words, it’s pure coincidence that the overall level of each series exhibits a similar pattern over the past century.

One way of ‘testing’ this objection to see if it has any merit is to determine if there is a statistical relationship between the *absolute difference* in union density and the *rate of change* of inflation-adjusted average hourly earnings. If the correlation in *Figure 1* is spurious then we wouldn’t expect a positive relationship between the relative change of each variable.

Figure 3 demonstrates that changes in the overall level of unionization are statistically associated with the rate of change of hourly earnings by contrasting two series. One series portrays the rate of change of average inflation-adjusted hourly earnings, smoothed as a 10-year moving average. By plotting a 10-year moving average, we eliminate the effects of the business cycle and capture the ‘secular’ trend. The other series is the absolute difference in the overall level of unionization, also cyclically-adjusted.

FIGURE 3 Union Density and Average Hourly Earnings: Cyclically-Adjusted Rate of Change, 1920–2012



Note Union density was estimated between 1911 and 1920 by taking total union membership as a percent of the Canadian population, with proper rebasing. Union density is defined as the percentage of the non-agricultural paid workforce covered by a union. Average hourly earnings index is adjusted for inflation using the consumer price index and it fuses two separate series in 1949.

Source Average hourly earnings from Historical Statistics of Canada, Series E198 (1910–1948) and IMF through Global Insight (1949–2012); consumer price index and Canadian population from Global Financial Data; union density from Historical Statistics of Canada, Series E176 (1921–1975) and Cansim Tables 279-0026 (1976–1995) and 282-0078 (1997–2012)..

A correlation of 0.52 is statistically strong, given the analytical breadth and duration (nine decades) of the two series. *Figure 3* shows that when union density increases, average hourly earnings tend to grow faster. When union density grows less quickly (or contracts), hourly earnings grow at a slower rate (or shrink).

Note the pattern. The secular trend in hourly earnings growth was positive and rising between 1920 and 1975. Unsurprisingly, this is also the period when unionization was expanding. Wage growth slowed abruptly in the late 1970s before plummeting in the 1980s and again in the 2000s. In this latter period, the imprint of unions on the Canadian political economy was fading.

The argument being made here is that there is a causal relationship between union density and hourly earnings, but establishing causation is difficult. How can we be sure that the two variables don't just happen to move in tandem, rather than changes in one variable inducing changes in the other?

When we probe the concept of causation we find that it implies sequential time. One event happens, followed by another. An additional way of testing whether changes in unionization lead to changes in hourly earn-

ings, then, is to lag each variable to see if the correlation grows stronger or weaker ('lag' means to delay in this context).

If union density plays the causal role — that is, if it is the 'independent' variable — then the strength of the statistical relationship should increase if it is lagged (since its effects will be felt later). If hourly earnings plays the consequent role — if it is the 'dependent' variable — then the strength of the statistical relationship should decrease if it is lagged. After all, if unionization increases (decreases) it will take *some* time for this to be transmitted through to the collective bargaining process and then, eventually, to wage gains (losses).

When we lag union density by five years the correlation strengthens modestly from 0.52 to 0.60. When we lag hourly earnings by five years the correlation is drastically weakened, falling from 0.52 to 0.29. This suggests that the changes in unionization *precede* changes in hourly earnings, which lends weight to the notion that unionization plays a causal role.

Plainly, the rate of growth of hourly earnings is shaped by processes besides the level of unionization. However, the facts contained in Figures 1–3 strongly suggest that unions are a key driver of average compensation levels in Canada. If the institutional growth of unions is associated with rising average hourly earnings, can we determine how much unions are 'worth' to the Canadian workforce?

When we perform a basic regression of the adjusted national wage bill on union density between 1926 and 2010 we get a coefficient of 0.454 and an R-squared statistic of 0.60 (see Appendix for regression results and explanation). The coefficient measures the marginal contribution of the independent variable to the dependent variable and the R-squared statistic may be interpreted as the fraction of the variance of the dependent variable explained by the independent variable. Both the coefficient and the R-squared statistic are high and the coefficient on union density is strongly statistically significant. The coefficient implies that a 10 percentage point change in union density leads to a 4.54 percentage point change in the national wage bill (measured as a share of GDP).

Armed with this information, we can project what impact an increase or decrease in unionization would have on the adjusted national wage bill and hence on average annual per person earnings. In 2012, union density was 31.5 percent. Given this level of unionization, the estimated ('fitted') adjusted national wage bill was \$833.1 billion.¹¹ This works out to an average annual income of \$48,062 per person for the 99 percent of the workforce that work to earn those wages.

What would the adjusted national wage bill have been in 2012 if union density had stayed at 36.8 percent — the historic high reached in 1975? The adjusted national wage bill would have been \$876.9 billion, which would have translated into an average income of \$50,587 per person. So the decline of unionization from its historic high of 36.8 percent to 31.5 percent in 2012 suggests that \$43.8 billion in wages was redistributed away from workers. This works out to more than a 5 percent decrease in average annual income per person (or around \$2,500 per worker per year).

What if the level of unionization in Canada were to be halved from its level in 2012? How much would a decline in union density from 31.5 percent to 15.75 percent cost (resulting, perhaps, from some dramatic change in labour laws such as has been proposed by Conservative politicians in several Canadian jurisdictions) the typical Canadian worker? The adjusted wage bill would fall to \$703.1 billion — a \$130 billion decline. Average incomes for the bottom 99 percent of the workforce would decline from \$48,062 to \$40,560 — a 16 percent (or \$7,500) decline.

Note here that we are not speaking of production: it's not the industrial activities of Canadian workers that has changed in these scenarios. Instead, we are speaking about distribution. Distributive outcomes in contemporary capitalism are shaped by power institutions — large firms, labour unions and the state being three key institutions. When the relative balance of power shifts between these institutions, that shift is inevitably registered in the distribution of income and wealth.

The above exercise suggests that for each percentage change in unionization (either up or down), the bottom 99 percent of the Canadian workforce (*including* non-union workers) has their annual incomes adjusted by close to \$500 dollars.¹² This is the average 'value' of labour unions to the Canadian workforce.

If labour unions redistribute national income, it must be redistributed from another group. The other major player in the employment relationship is business. What role do corporations, especially *large* corporations, play in shaping the distribution of income?

4. Corporate Power and Distribution

IN *THE TWENTIETH Century Capitalist Revolution* (1955), Adolf Berle noted that conventional economic thinking had failed to come to a satisfactory account of the power underpinnings of the modern corporation. Half a century later, Alfred Chandler Jr. echoed the spirit of Berle's assertion, claiming that the multinational corporation is the 'new Leviathan of our time', but political science – the discipline nominally concerned with power – has systematically managed to 'ignore the subject'. This is remarkable, Chandler insisted, when we consider the fact that corporations are beginning to embody core political ideas such as sovereignty and transparency (Chandler and Mazlish 2005: 11).

The reason why mainstream economics and political science lack an adequate understanding of the modern corporation was spelled out by Robert Gilpin (1975: 5) in his study of U.S. multinationals: economists are unwilling to admit the reality of power while political scientists ignore markets. The modern corporation is simultaneously a power institution that operates through markets.

Can corporate power be measured? If it can, does the evolution of corporate power in Canada play a role in shaping the distribution of income? Intuitively, we would expect there to be a link between firm size and power, such that smaller firms have little or no power and larger firms have comparatively more power. So how do we measure corporate size and how do we measure corporate power? And are the two, in fact, related?

Aggregate concentration is one way of measuring the overall power of large firms by determining their relative position in the entire corporate sector. Numerous writers have studied the linkages between concentration, power, prices and distribution. In his path-breaking research, Gardiner Means (1935) connected concentration and prices in a way which indicated that the existence of larger corporate units (higher levels of concentration) leads to ‘non-classical’ price formation or ‘administered prices’. In contrast to competitive prices which are flexible and change frequently, an administered price is rigid, changes infrequently and is inflexible (1935: 401–2).

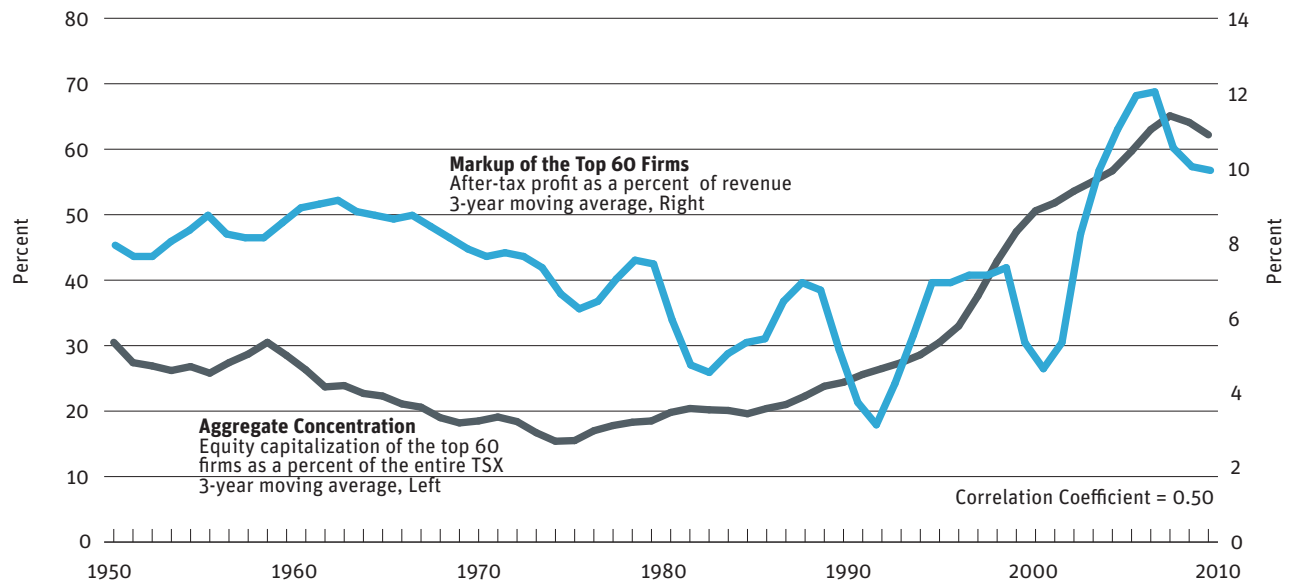
Michal Kalecki (1971) also connected the existence of larger corporate units to differences in price formation through his concept of the ‘degree of monopoly’. Kalecki devised the concept to capture price formation in semi-monopolistic settings. Among the numerous factors influencing the degree of monopoly, Kalecki (1943: 49–50) tells us, are the ‘process of concentration’ and subsequent ‘formation of giant corporations’. Nitzan and Bichler (2009: 50–1) build upon Kalecki’s degree of monopoly, which they measure using the markup (the percent of profit in sales revenue). In what follows the markup will be used as a quantitative proxy for market power.

Figure 4 contrasts a measure of corporate concentration against Kalecki’s degree of monopoly, the latter measured using the markup. In this instance, the equity capitalization of the top 60 Canadian-based firms, ranked annually, is divided by the equity capitalization of all the firms listed on the Toronto Stock Exchange (TSX). This metric captures the relative position of the largest firms. The markup measures the percent of profit in sales revenue for the top 60 Canadian-based firms and may be understood as a proxy for market power.

According to *Figure 4*, there is a strong and persistent relationship between the relative size of the largest firms and their market power. The concentration of equity capitalization declines from roughly 30 percent in the early 1950s to 15 percent by the late 1970s before rising sharply in the 1990s and 2000s, reaching a peak of 65 percent in 2009.

Keep in mind that the TSX and TSX Venture Exchange together are home to more than 4,000 corporations. Yet the largest 60 firms made up roughly two-thirds of all equity market value in 2009, which is a stunning degree of concentration. Also note that the aggregate concentration ratio holds the number of firms used to compute the numerator constant at 60, while the population of firms used to calculate the denominator (all the stocks on the TSX) more than doubles between 1950 and 2011. This should have had the

FIGURE 4 Corporate Concentration and Market Power, 1952–2011



Source Compustat through WRDS for common shares outstanding, closing share price, net income and total revenue; Canadian Financial Markets Research Centre; Moody's Corporate Manuals through Mergent Webreports; Report on Business's Top 1000 Companies (various issues from 1985–2010); equity capitalization from Global Financial Data, TSX Review, TSX e-Review and the TSX Factbook.

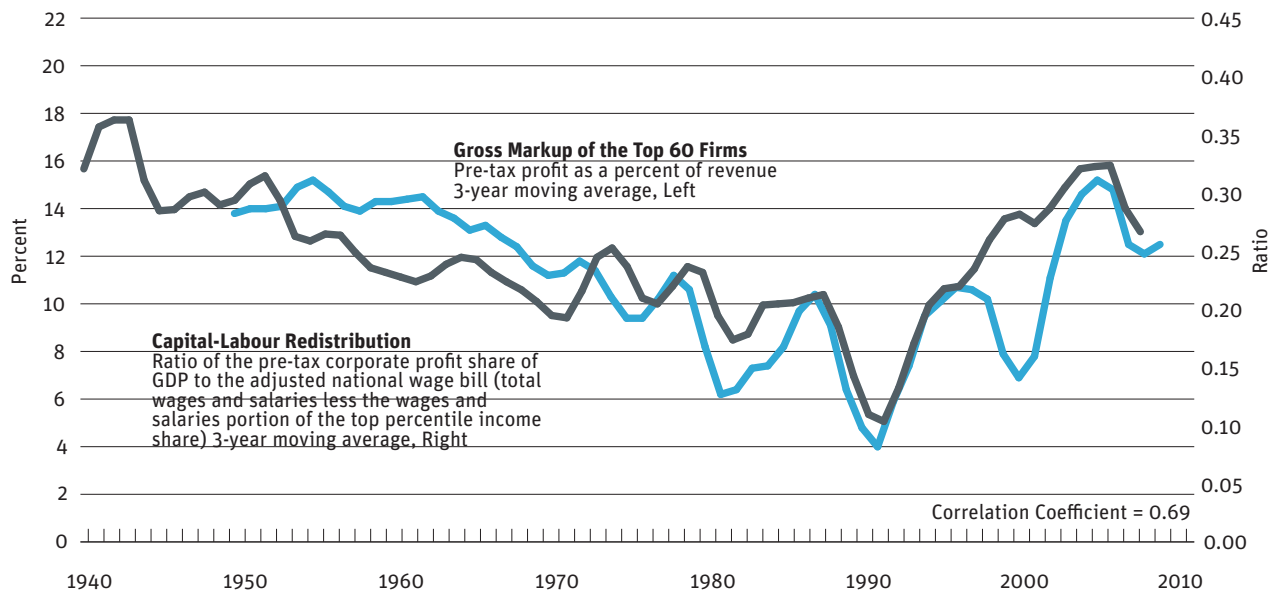
effect of shrinking the overall level of concentration, and yet it has surged since 1980.

The markup is heavily cyclical, but it declines for the four decades to 1990 before rising to a historic high in the two decades to 2011. When the largest firms were occupying less 'space' in the political economy, their market power diminished. As their relative position increased, their market power increased. Why would there be a positive relationship between size and market power?

In the language of neoclassical economics, 'perfect competition' is a condition in which a large number of buyers and sellers, perfect information, free entry and exit and homogenous products prevail. Under this market structure, sellers have no ability to influence price. But as firms combine and the market structure moves from the competitive end of the spectrum towards the oligopolistic and monopolistic end, large firms go from being 'price-takers' to 'price-shapers' and 'price-makers'.

Blair (1972: 60–1) argues that as aggregate concentration increases, market behaviour changes. 'Communities of interest' form around powerful families and financial groups and this enables them to coordinate their activities to a greater extent than would otherwise be possible. Independent (read:

FIGURE 5 Market Power and Capital-Labour Redistribution, 1940–2011



Note Adjusted national wage bill is wages and salaries as a percent of GDP less the wages and salaries portion of the top percentile income share.

Source Wages and salaries portion of the top percentile income share from Saez and Veall (2007), Veall (2010) and Veall (2012) with series updated to 2010 by Michael Veall; Computat through WRDS for shares outstanding, closing share price, total revenue and after-tax income; Canadian Financial Markets Research Centre; Moody's Corporate Manuals through Mergent Webreports; Report on Business Top 1000 Companies; GDP, wages and salaries and corporate profit from Historical Statistics of Canada, Series F1-13 Cansim Table 3800016.

competitive) behaviour is lessened as dominant proprietors and executives openly or tacitly agree that firms should avoid the disruptions associated with 'price competition' and aim, instead, at a 'healthy target profit rate'.

In light of this picture of evolution of corporate power in Canada, how do we analyze the distribution of factor income between profit-seeking corporations and wage-earning workers? Kalecki argued that the degree of monopoly is of 'decisive importance for the distribution of income between workers and capitalists' (1943: 51). In his words:

The long-run changes in the relative share of wages... [are] determined by long-run trends in the degree of monopoly... The degree of monopoly has a general tendency to increase in the long run and thus to depress the relative share of wages in income... [although] this tendency is much stronger in some periods than in others (1938: 65).

Is this true?

Figure 5 plots the markup of the largest firms against a measure of the distributional struggle between capital and labour over profits and wages. 'Capital-labour redistribution' is a ratio which uses pre-tax profit of the cor-

porate universe as the numerator and the adjusted national wage bill as the denominator. When this ratio rises, capital is redistributing income away from labour and when it declines labour is redistributing income away from capital.

The two series are tightly intertwined over six decades, trending downward for the four decades to 1990 and upward thereafter. Kalecki was correct for Canada: the degree of monopoly shapes the distributive struggle between capital and labour over profits and wages.

If the degree of monopoly is a quantitative proxy for the market power of the largest firms, how do we account for its level and pattern?

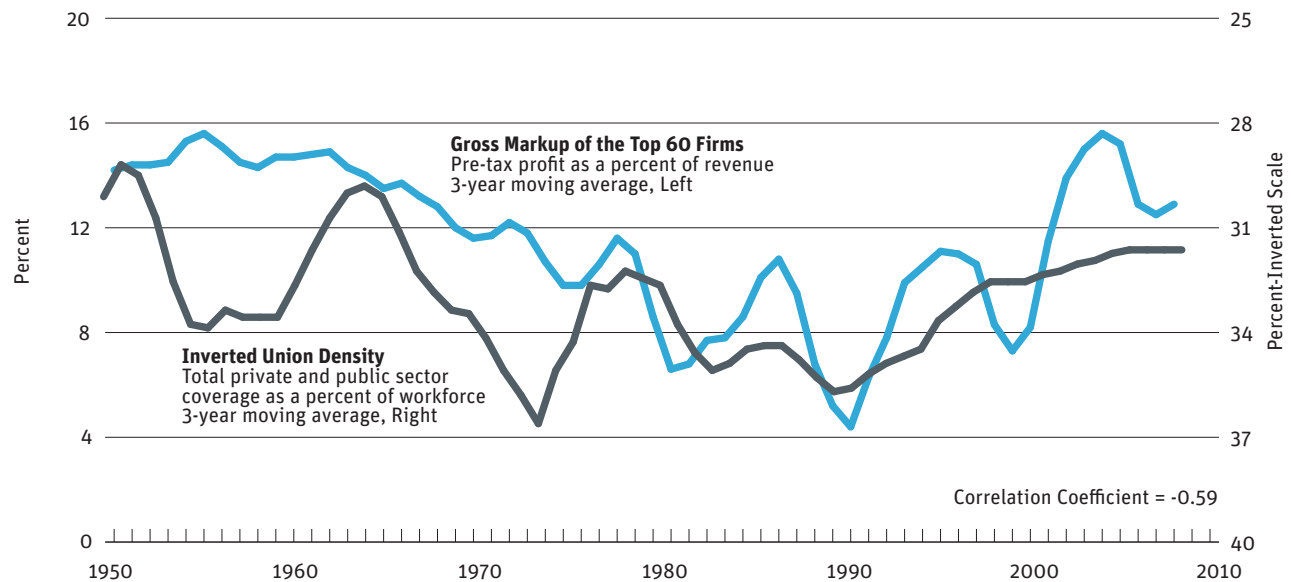
5. Income Inequality and the Concept of Countervailing Power

KALECKI IMAGINED THAT the strength of trade unions would be a check on the power of large firms insofar as a greater degree of monopoly (a high ratio of profits to wages) ‘strengthens the bargaining position of trade unions in their demands for wage increases since higher wages are then compatible with “reasonable profits” at the existing price levels’ (1943: 51). In other words, the relative strength of trade unions collides with the power of corporations.

Figure 6 documents the historical relationship between the market power of largest firms (represented by the markup) and the institutional strength of organized labour (represented by union density). The two series are strongly and *negatively* correlated over six decades. Note that union density is plotted on an inverted scale to ease the visual assessment of the relationship between the two series.

As the ranks of organized labour swell and collective bargaining pushes up the compensation of workers, one consequence is the squeezing of earnings margins. The market power of the largest firms falls from the 1950s till the 1980s, only to go into reverse in the 1990s and 2000s. The trade and investment liberalization regime instituted in the early 1990s (including the NAFTA, the WTO and other institutions) could have contributed to this turn-

FIGURE 6 Countervailing Power: Dominant Corporations Versus Organized Labour, 1950–2012



Source Union density from Historical Statistics of Canada, Series E176 (1921–1975) and Cansim Tables 279-0026 (1976–1995) and 282-0078 (1997–2012); markup from Compustat through WRDS for shares outstanding, closing share price, total revenue and pre-tax income; Canadian Financial Markets Research Centre; Moody’s Corporate Manuals through Mergent Webreports; Report on Business Top 1000 Companies.

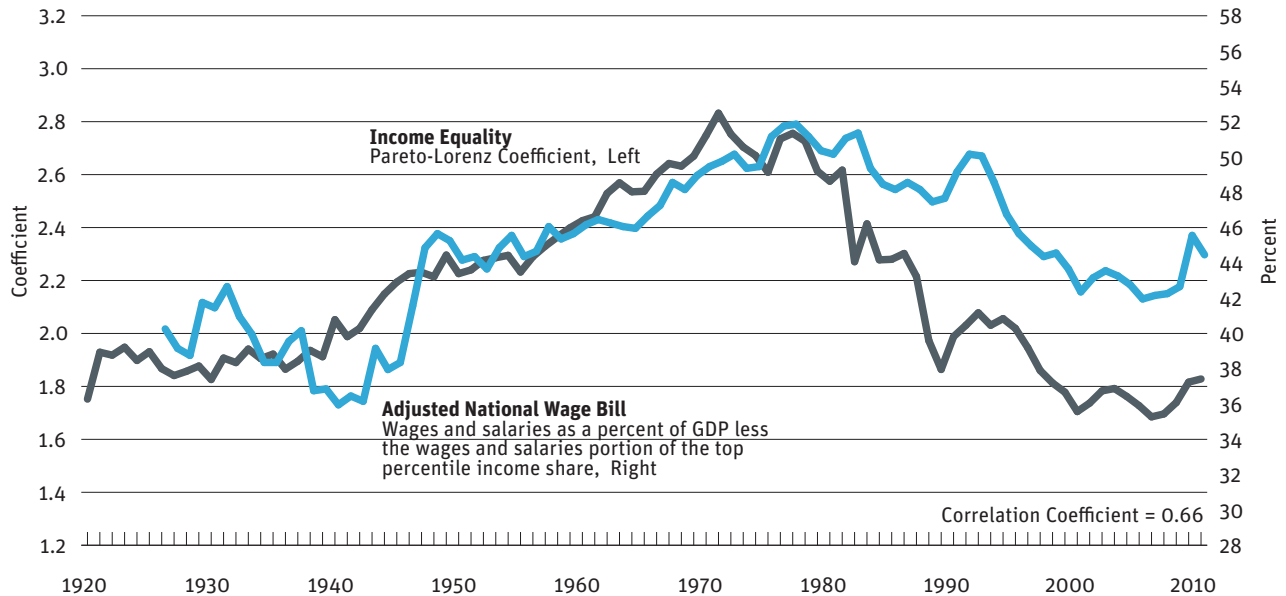
ing point. Organized labour experienced a decline in its membership and large firms experienced a surge in earnings margins.

These facts are all the more remarkable because ‘globalization’ and ‘free trade’ are often advertised (officially at least) as processes and policies that unleash the ‘forces of competition’. It is assumed that competitive pressures reduce market power and keep prices low. And yet the relative size and market power of the largest firms and the corporate universe as a whole has reached historic extremes in recent times. Might the dramatic increase in corporate power in recent decades be related to personal income inequality?

In his study of American capitalism, the Canadian-American political economist, J.K. Galbraith (1952), utilized the term ‘countervailing power’ to denote an institutional setting in which the power of large corporations is offset or opposed by the power of labour unions and governments. In other words, the power of labour unions acts as a ‘check’ or ‘balance’ on the power of large firms. This way of thinking of institutional development is supported by the facts in *Figure 6*, which provide proxies for each type of power and shows the statistical relationship between them to be negative.

If unions act as a hedge against corporate power, what role have unions played in shaping the distribution of personal income? *Figure 7* contrasts

FIGURE 7 The National Wage Bill and Income Equality, 1920–2010



Note Adjusted national wage bill is wages and salaries as a percent of GDP less the wages and salaries portion of the top percentile income share. See endnote 4 for further explanation.

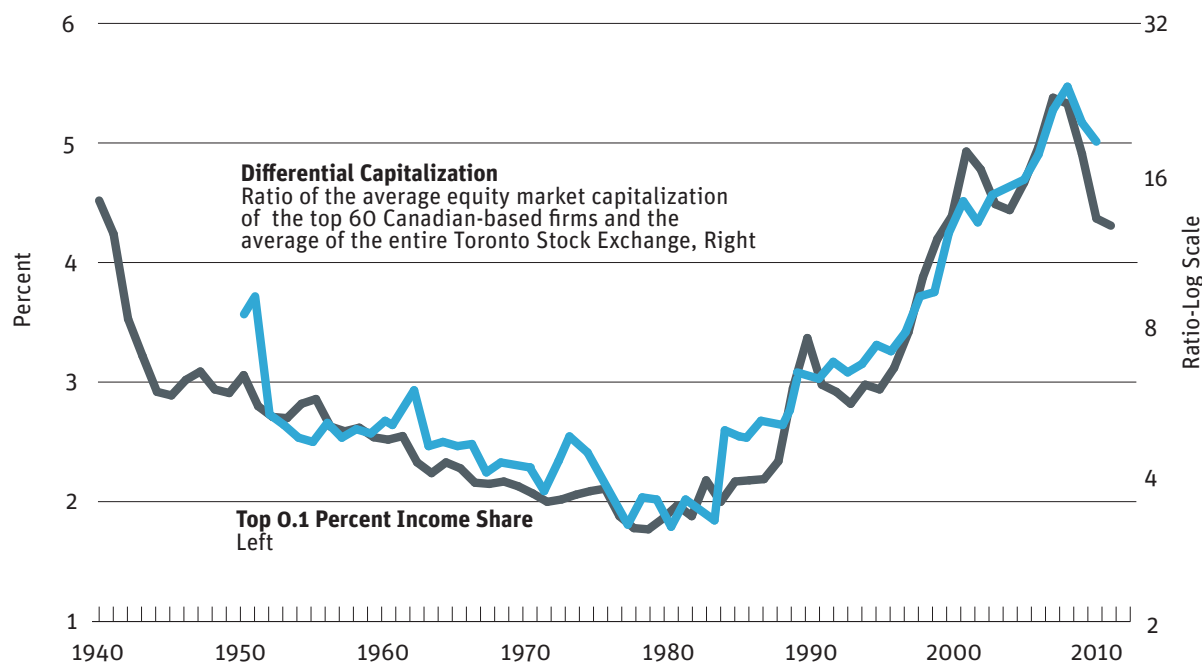
Source Pareto-Lorenz Coefficient and the wages and salaries portion of the top percentile income share from Saez and Veall (2007), Veall (2010) and Veall (2012), retrieved from: <http://topincomes.g-mond.parisschoolofeconomics.eu/>; wages and salaries and GDP from Historical Statistics of Canada, Series F1-13 and Cansim Table 3800016.

the adjusted national wage bill and personal income inequality – the latter measured using the Pareto-Lorenz coefficient.¹³ The two series are tightly and positively correlated over the past century. Income equality increases between 1920 and the 1970s and decreases thereafter. The pattern taken by the national wage bill is remarkably similar, rising from the 1940s to 1980 and falling thereafter.

The institutional strength of organized labour appears to increase inflation-adjusted wages by strengthening the bargaining position of workers relative to employers.¹⁴ If wage gains manage to outstrip increases in the overall price level, this should have the effect of increasing the national wage bill (measured as a share of GDP). But an additional consequence of growing unionization, we now see, is a decrease in income inequality, as evidenced by *Figure 7*.¹⁵ Unionization thus serves to increase the share of national income going to workers, but also to ensure that the national wage bill is divided more equally among workers.

If unionization mitigates personal income inequality, does it follow that corporate power exacerbates inequality? Jonathan Nitzan and Shimshon Bichler have developed new concepts and new measurements to understand the power underpinnings of contemporary capitalism.¹⁶

FIGURE 8 Differential Accumulation and Income Inequality, 1940–2010



Source Compustat through WRDS for common shares outstanding and closing share price; Canadian Financial Markets Research Centre; Global Financial Data for total market capitalization and number of listed stocks; top income share from Saez and Veall (2007), Veall (2010) and Veall (2012), retrieved from: <http://topincomes.g-mond.parisschoolofeconomics.eu/>.

They argue that the performance of a corporation or an investor isn't measured against an absolute standard like profit maximization (the standard assumption of neoclassical economics). Instead, it is measured against a relative benchmark. There exists a 'normal' rate of return which investors try to beat. Investors are conditioned to outperform rivals and accumulate faster than the average, i.e., they strive to accumulate *differentially*.

Nitzan and Bichler assert that 'differential accumulation' by 'dominant capital' captures the 'power drive' of accumulation (2009: 325). *Figure 8* contrasts Nitzan and Bichler's 'differential capitalization' and income inequality from 1940 through 2010. In this instance, differential capitalization is measured as a ratio of the average equity capitalization of the top 60 Canadian-based firms and the average equity capitalization of all firms listed on the Toronto Stock Exchange.

The result is an extremely close correlation over six decades. Differential capitalization falls fairly steadily from a value of 8 in 1950 to a value of 3 in 1980. By 1995 an average firm within the top 60 had risen to 7 times the average of the TSX before surging to 23 in 2008—a three-fold increase in just 13 years. The relative size and performance of the largest firms appears to shape income inequality.

The largest firms are owned and managed by a small number of people. This group undoubtedly occupies the upper echelons of the top 0.1 percent income group. How do we know this? In *Canada's CEO Elite 100*, Hugh Mackenzie (2012) examined executive compensation. Of the top 100 executive salaries listed, 59 of them are from firms within the top 60 (the numerator in the differential capitalization ratio). A further 16 of the top 100 derive an income from firms that are in the top 100, though in positions 61 through 100.¹⁷

If ownership and control of the corporate sector in Canada is to be found in the top 0.1 percent income group, why would there be a relationship between the differential performance of the top firms and income inequality? Larger firms have greater market power, higher profits, more cash flow and so more money to spend on executive salaries, stock options, dividend payouts and other forms of disbursement to their owners and top managers. And it is those very high salaries and capital incomes — so concentrated among Canada's richest 0.1 percent — that are playing a key role in driving income inequality.

The institutional growth of unions until the 1970s underpinned the growth of a shared prosperity, declining income inequality and, potentially at least, reduced (or at least counter-balanced) corporate power. The decline of unions since the 1970s has been accompanied by wage stagnation, the growth of corporate (read: commodified) power and heightened income inequality.

6. Conclusions and Policy Implications

IN HIS 1971 Presidential address to the American Economic Association, Nobel Laureate Wassily Leontief lamented the state of contemporary economics. The enthusiasm for generating new mathematical and statistical techniques had come to overshadow the more substantive goal of the discipline, namely strengthening the empirical validity of its assumptions and testing their usefulness for generating conclusions. His call was to renew the discipline by deepening its empirical foundations through ‘systematic large-scale factual analysis’ (1971: 5).

Canadians find themselves in a curious position: ours has been described as an ‘Age of Unequals’, and yet we do not have an adequate understanding of the processes that shape income inequality. Neoclassical economics presumes that distribution is a consequence of production. Another presumption is that power, if it exists at all, is ‘external’ to the proper functioning of the ‘economic’ system. Mainstream political science ignores markets, corporations and income inequality altogether. Even though political science is the discipline explicitly concerned with power, it presumes that power is concentrated in the various organs of the state. But what if power and markets are bound up with each other?

The ‘systematic large-scale factual analysis’ that Leontief urged us to perform suggests that power institutions shape the distribution of factor and personal income in Canada. At the broadest level of analysis, the growth

of unions serves to redistribute factor income from capital to labour (profits to wages) and from the upper to the lower strata of the income hierarchy. The growth of corporate power, by contrast, redistributes factor income from labour to capital and from the lower to the upper strata of the income hierarchy. The growth of a shared prosperity was a partial consequence of the growth of labour unions. The erosion of unions since the 1970s has meant a partial erosion of that shared prosperity.

It is never too late to allow novel information to reshape current belief. Beliefs are important, indeed central, in the life of a human being insofar as they frame perception and guide action, both individually and collectively.¹⁸ If a shared prosperity (a ‘middle class’) is something genuinely desired by Canadians, then the renewal of labour unions could be a crucial ingredient in the realization of that goal.

Union renewal will be difficult in the current political climate, especially given the hostility governments at the provincial and federal levels currently express for the very idea of collective bargaining.¹⁹ The optimistic assessment is that governments are attacking unions *despite* the fact that unions play a progressive role in middle class formation. The more cynical assessment is that governments are attacking unions *because* they understand the role that unions play in building a shared prosperity.

In either case, if unions are going to continue their historic role as elevators of working conditions and lifters of living standards, governments must cease their attacks. But the absence of government hostility will not be enough for unions to flourish in the future. Instead, a supportive policy environment, where union security is not only tolerated, but nurtured, is a crucial ingredient in union renewal.

Appendix

TABLE 1 REPORTS the results of a simple econometric regression performed to confirm the apparent correlation between union density and the adjusted national wage bill evident in *Figure 2*.

Union density is the independent variable while the adjusted national wage bill is the dependent variable. For simple linear regressions, the coefficient measures the marginal contribution of the independent variable to the dependent variable. In this regression, the constant variable can be ignored.

The standard error measures the statistical reliability of the coefficient estimates. The larger the standard error, the more statistical ‘noise’ in the estimates. The t-statistic is the coefficient divided by the standard error. The

TABLE 1 Regression Results[†]

Independent Variable: Dependent Variable: Sample:	Union Density Adjusted National Wage Bill 1926–2010				
Variable	Coefficient	Standard Error	t-Statistic	Probability	
Constant	31.48564	1.200771	26.22118	0.0000	
Union Density	0.453658	0.040333	11.24794	0.0000	
R ²	0.603849				
Adjusted R ²	0.599076				

[†] Ordinary Least Squares regression.

last column in *Table 1* reports the statistical probability of accepting the ‘null hypothesis’ that the value of each coefficient is actually zero (that is, that there is no relationship between the independent and dependent variables). Given the high t-statistic, that probability is effectively zero (meaning, we can be very confident about the reported strength of the link between union density and the national wage bill).

The adjusted R-squared value indicates that changes in union density over time explain about 60 percent of the variation in the national wage bill as a share of GDP. In conclusion, these regression results strongly suggest that changes in union density have played a crucial role in explaining changes in the factor distribution of income in Canada over the past century.

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Notes

1 This may be one part of a complex causal picture explaining why societies with a stronger labour movement tend to score higher on subjective and objective assessments of well-being. For example, a recent study used data on 14,000 respondents in 14 countries and found that life satisfaction was directly related to the level of unionization and that union members reported higher life satisfaction than non-union members. See Flavin, Pacek and Radcliff (2010).

2 See Samuelson and Nordhaus (2010: 321), for example.

3 See Taylor (2009: 142) and Unifor (2013).

4 A recent Statistics Canada publication found that unionization declined in all provinces over the past three decades, but most of the decline was registered in the 1980s and 1990s. The decline was observed among men, but not among women. See Galarneau and Sohn (2013).

5 A recent study of the U.S. found that higher levels of state-level unionization help reduce working poverty and that the effects of unionization are larger than the states' macro performance and its social policies. Importantly, unionization reduces working poverty for unionized and non-unionized households. See Brady, Baker and Finnigan (2013).

6 In all likelihood, there wouldn't be any one-on-one bargaining between many workers and their employer in the absence of a union. Most employers impose (from above) a contact on their workers with little or no negotiation.

7 Unions negotiate on many other items as well, including working conditions, job security, seniority and technological changes, for example.

8 The Saez and Veall top income share is comprised of different categories of income: (1) wages and salaries, (2) professional income, (3) business income, (4) dividends, (5) interest income, (6) investment income and (7) capital income. The *adjusted* national wage bill equals total wages and salaries divided by GDP less the wages and salaries portion of the top percentile income share. The latter only has data running from 1946 through 2010, so to estimate the period from 1926–1945 the wages and salaries portion of the top percentile income share in the United States was used as a proxy (with rebasing). The wages and salaries portion of the top percentile income share in Canada and the United States have a correlation coefficient of 0.74 between 1946 and

2010, which is sufficiently strong to accurately impute the wages and salaries portion of the top percentile income share in Canada.

9 The cyclically-adjusted *absolute difference* of each series is also tightly and positively correlated (0.59). The statistical relationship between the level of union density and the level of the *unadjusted* national wage bill (includes the wages and salaries of the top percentile income group) is also strong: 0.68.

10 A shrinking national wage bill in recent decades is not unique to Canada. According to a recent International Labour Organization (2013) report, the share of labour compensation in national income declined in 26 out of 30 developed societies.

11 We utilize the fitted regression value for the dependent variable in 2012 as the base case for our simulation, not the actual value, in order to fully reflect the projected impact of the counterfactual change in union density on the wage bill.

12 This calculation uses 2012 as the reference year. In that year, nominal GDP was roughly \$1.82 trillion and total employment was approximately 17.3 million.

13 The Pareto-Lorenz Coefficient is a measure of the concentration of income (or assets) among the rich. The larger the coefficient, the lower the concentration.

14 Card, Lemieux and Riddell (2003) argue that unions reduce wage inequality amongst men, and that de-unionization helps explain increasing income inequality. A more recent study in the United States found that the decline of unionization between 1973 and 2007 explains one-fifth to one-third of the growth in U.S. wage inequality – a magnitude comparable to the growing stratification of wages by education. See Western and Rosenfeld (2011). For an analysis of the divergent unionization patterns in Canada and the U.S., see Riddell (1993).

15 A recent survey conducted by York University and the *Toronto Star* discovered that 26 percent of respondents believed that a decline in unionization might have helped cause the growing income gap. This was considerably lower than other potential causes, including a lack of job opportunities (69 percent) and increasing salaries of business leaders (65 percent). See Northrup and Jacobs (2014).

16 See their *Capital as Power: A Study of Order and Creorder* (2009), for example. This study and many others are freely available on their website: <http://bnarchives.yorku.ca>.

17 The top 100 firms are ranked annually by equity market capitalization.

18 On this point see Peterson (1999).

19 A popular myth is that the decline of unions is ‘inevitable’ for one or more technologically deterministic reasons. However, magical thinking is behind the assumption that globalization, technology or changes in industrial composition make the decline of unions ‘inevitable’. While union density has fallen in almost all developed societies, it has remained high in the Nordic countries and elsewhere despite the presence of these developments, and appropriate policy responses to new political-economic conditions could surely help to sustain union density and collective bargaining. See Schnabel (2013) for a discussion.



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