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Introduction and Overview

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This is the first of two volumes of selected papers presented at the conference on “Changes in Working Time in Canada and the United States,” which was held in Ottawa, Ontario, on June 13–15, 1996, and was jointly sponsored by the Canadian Employment Research Forum (CERF), the W.E. Upjohn Institute for Employment Research, and Statistics Canada. It reflects a renewed interest in recent years in the empirical evidence for changing labor supply—both hours of work and labor market participation—and the implications for employment, income support benefits, and taxation policies and programs.

To place this policy and research issue in a Canadian context, a February 1995 Parliamentary Committee report on Social Security reform called for initiatives to better understand and make policy recommendations regarding the redistribution of working time. What was clear to policymakers was that employment and income security policies, including unemployment insurance and welfare reform, needed to address significant changing patterns of work arrangements. At the same time, policymakers were handicapped by the absence of a knowledge base in this area. The research literature made sporadic references to the growth of a contingent workforce, flexible working arrangements, and nonstandard employment, but there was a lack of focus that pulled together the relevant concepts and empirical evidence.

This myopia is understandable. Through the 1980s, hours of work received little attention by academics and policy analysts, at least compared with issues such as unemployment (in Canada) and wage inequality (in North America). Average hours worked had declined slowly over many decades and then stabilized. This stasis produced little excitement. Labor supply topics received considerable attention during the 1970s, but this work also waned through the 1980s.

During the 1990s, however, researchers observed that although average hours worked changed little, the manner in which the economy distributed working time was being transformed. Hours were becoming more polarized; some workers were working more hours, others fewer. This held implications for earnings inequality, unemployment and underemployment (for some), and overwork (for others). Many began to wonder what had happened to the promise of increased leisure. Paradoxically, within the context of high unemployment in Canada and Europe, many analysts were concerned about overwork and increased time-stress among a significant portion of the population. Work sharing or short-time compensation was seen as one response to the unemployment problem in Europe and Canada.

Issues regarding hours of work among women in particular also materialized. Often related to the conflict between work and family responsibilities, these concerns led to research on “flexible hours,” job sharing, and other ways of providing increased flexibility in hours. The impact on worker performance and firm productivity of this potentially increased working-time flexibility also came to the fore. These and other events refocused the limelight on working time and resulted in the conference from which chapters in these volumes were selected.

The conference was international in coverage, in recognition that the same economic trends leading to pressures for changing employment relationships were present in Canada, the United States, and other industrialized countries. Noted researchers such as Richard Freeman have identified this issue to be of central importance in understanding how labor markets are evolving. The International Labor Organization (ILO) also recognized the transformations taking place in Michael White’s *Working Hours: Assessing the Potential for Reduction*.¹ A more recent and more provocative piece in the U.S. literature is Jeremy Rifkin’s *The End of Work*.²

The purpose of this book and the companion volume is to describe and place this transformation in a comparative and historical perspective, as well as to examine some of the new research and policy issues that have emerged in its wake. Most of the chapters in these volumes examine the situation in Canada or the United States, though some also look at working-time issues in western Europe and Australia. The essays in this volume present no central thesis, although there are

recurring themes. It should be noted that the original conference papers have been revised for this collection.

The three chapters in Part I offer statistical overviews and analyses of the trends in working hours for Canada and the United States. Michael Sheridan, Deborah Sunter, and Brent Diverty provide empirical evidence on the Canadian trends in weekly hours of work from 1976 to 1995. Drawing on data from the monthly Labour Force Survey (LFS) and the Survey of Labour and Income Dynamics, they quantify the perceived shift away from the standard workweek (35–40 hours). Specifically, the analysis assesses movements in weekly hours as they relate to key labor market indications, including class of work, age, sex, education, occupation, and industry. The data support the concept that, while working hours are in flux, the distribution of hours has polarized over time. Evidence from the last 20 years suggests that hours have shifted from standard to both long (41 hours or more) and short workweeks (34 hours or less). The shift to shorter workweeks appears to have been triggered by the recessions of both the early 1980s and 1990s, while most of the growth in the share of long working time appears to be a more recent occurrence. Over the period, the 10.7-percentage-point decline in the proportion of people working standard hours was coincident with increases of 7.6 percentage points in short hour weeks and 3 percentage points in long hours. Further, this primarily unidirectional shift toward the hours distribution poles is evident when workers are grouped by various characteristics. The hours polarization persists, though to a lesser extent, when special groups such as the self-employed, multiple jobholders, young workers, and managers are removed from the analysis.

The chapter by Philip Rones, Jennifer Gardner, and Randy Ilg supplies a parallel analysis of trends in hours of work in the United States. Like Canada, the United States has experienced a sizable increase in the fraction of workers working very long hours, though, unlike Canada, the United States has not seen an increase in the fraction working short hours. The growth in the share of workers working 49 or more hours per week accounted for a modest increase in average weekly hours worked from 1976 to 1993. Interestingly, growth in the fraction working very long hours occurred among both men and women and within all major occupational categories.

Even more striking has been the growth in annual hours worked by women since the 1970s. From 1976 to 1993, average annual working hours among prime-age working women (25–54 years old) increased by 45 percent. This large increase was due both to the increase in labor force participation among women and to the fact that, when they join the labor force, women are more likely to work year round. Average annual hours worked by men has changed little since the 1970s.

Linda Bell and Richard Freeman placed the discussion of hours worked within an international context by asking why U.S. and Canadian workers work harder (i.e., more hours per year) than their European counterparts. During the past two decades, the gap between time worked by employed North Americans and employed western Europeans increased noticeably. So too did earnings inequality. This chapter puts forth the hypothesis that higher inequality in outcomes (earnings) induces workers to work harder (i.e., longer). In Europe, where pay differences are relatively small, workers will gain little by working harder (or lose little by not working harder). In high-inequality countries, where pay differences are larger, often employment is less secure and unemployment benefits more modest; thus, there is much more of an inducement to work harder.

In support of this hypothesis, the authors observe that the greater work ethic in North America is fairly recent. From the 1950s to the 1970s, workers in the United States worked fewer hours than those in many European countries; by the 1980s and 1990s, they were working substantially longer hours than workers in all European countries. It seems unlikely that cultural differences alone could explain this change. Gross domestic product (GDP) per capita cannot explain the differences either. In some “wealthy” countries, such as Germany, employees work relatively few hours, while in others, such as Japan and the United States, they work very long hours. A corollary to this observation is that GDP per capita has some shortcoming as a measure of labor productivity and welfare. Productivity will be overestimated in countries with longer working hours, as will welfare. The additional leisure achieved by workers in countries with shorter working hours would add to a worker’s utility, but this is ignored in the measure.

Turning to U.S. data on full-time workers, Bell and Freeman use a regression framework and find a clear positive association between wage inequality and hours worked. When part-time workers are

included, this association is weakened. In sum, the authors argue that in the United States, and to a lesser extent in Canada, employees work hard because they face a “carrot” for doing so, and a substantial “stick” if they do not. This holds implications for labor supply models, because an inequality measure is not often included in labor supply equations.

In the research and debate on the rising earnings inequality in Canada and the United States, working time has been largely ignored. Earlier studies by Burtless (1990) and Moffitt (1990) concluded that the rise in earnings inequality in the United States is associated primarily with an increased dispersion in hourly wages, not hours of work. There appears, however, to be an association between a polarization in hours of work and that of annual earnings in Canada. In Part II, Garnett Picot reviews the evidence for this in the Canadian research literature and extends the analysis to determine whether it is changes in weeks worked per year or hours per week that explain the changing distribution of working time and its impact on earnings inequality. A series of special household surveys are used to construct comparable data on weekly hours and hourly wages over the period 1981–1993, including the Survey of Consumer Finances, the Survey of Work History, the Survey of Union Membership, the Labour Market Activity Survey, and the new Survey of Labour and Income Dynamics.

The chapter finds that the rise in inequality among prime-age males, and the decline among their female counterparts, is associated primarily with changes in hours of work, while changes in the distribution of hourly wages played a much smaller role. While changing hours plays an important role in rising inequality in general, it does not have the same effect for younger workers. Rather, declining real and relative hourly wage adjustment appears to be concentrated among the young.

Within the context of increasing wage inequality and male joblessness in the United States, Robert Haveman, Lawrence Buron, and Andrew Bershadker ask whether one can devise a more encompassing and informative measure of labor market performance than, say, the unemployment rate, or any other existing single indicator. They focus on the underutilization of male labor in the United States over the 1975–1992 period. Changes in total annual hours worked are central to their measure of underutilization. Potential earnings is defined as

the amount that individuals would earn if they worked full time, all year long; this is based on a predicted hourly wage. The difference between this potential and actual earnings is defined as foregone potential earnings (FPE), the primary measure of interest in the chapter.

The FPE indicator is a more encompassing measure of changes in economic performance than the unemployment rate or changes in wages because it includes multiple dimensions of change (i.e., changes in the participation rate, the unemployment rate, hours worked, and wages paid). Furthermore, change in FPE can be decomposed into reasons, such as unemployment, illness/disability, retirement, voluntary part-time work, and housework/child care.

The authors find a declining utilization of the stock of male human capital over the 1975–1992 period. This trend was concentrated among very young workers, older workers, those with the lowest education levels, and nonwhites. In the aggregate, FPE associated with exogenous constraints (i.e., unemployment, discouraged worker effect, and illness) fell over the period, but this was more than offset by a rise in FPE due to individual responses to incentives, such as retirement, voluntary part-time work, and family responsibilities.

In a chapter concerned with spatial as well as temporal change in labor market conditions, Bob Gregory and Boyd Hunter focus on the growth of income and employment inequality in Australian cities between 1976 and 1991. Their data, which cover just over a third of the Australian population, reveal a dramatic change in that society. In an era of rising individual income inequality in Australia, inequality among neighborhoods (areas containing 200–300 dwellings) increased significantly. Among the 5 percent of neighborhoods with the lowest socioeconomic status (SES), average household income *fell* 23 percent; among the 5 percent of neighborhoods with the highest SES, income *increased* 23 percent over the period. Most of this rising spatial inequality was associated with employment changes. In 1976, employment was more or less equally distributed across neighborhoods, no matter where they fell on the SES scale. By 1991, employment in the lowest SES neighborhoods had fallen 37 percent; it was much more inequitably distributed among neighborhoods. The authors ask whether it matters if undesirable outcomes such as declining employment opportunities and falling incomes are concentrated spatially.

They suggest that greater economic polarization in our cities will increasingly lead to the emergence of “bad neighborhood” pathologies.

The chapters in Part III examine issues related to labor supply and hours constraints. To improve our understanding of labor supply changes, Richard Mueller conducts a detailed analysis of hours worked per day and days worked per week. He essentially moves beyond the traditional approach to labor supply issues, which is based on hours per week and weeks per year, and asks whether further disaggregation to hours per day and days per week makes any difference. He concludes that using weekly hours or more aggregated labor supply measures masks important differences in the labor supply decisions of individuals. His analysis shows, for example, that the reduction in female labor supply associated with having young children occurs more along the days dimension than hours per day. This suggests that the costs associated with these women supplying labor are borne more on a daily rather than an hourly basis. This would be missed in a more aggregate model. He also finds interesting associations between hours and days worked, and job change. He concludes that many job-changers desire increased flexibility. Not only do job-changers show more variability in their hours and days worked in their initial jobs, but this variability increases when they move to their new jobs.

Overall, Mueller notes that in spite of the heightened concern over “flexibility” of working time, the overwhelming norm is rigidity in weekly work schedules, particularly in days per week. He concludes that, taken together, the evidence suggests that workers desire more flexibility in their choice of hours and days worked, particularly days worked. He argues that to carry such research forward, it is necessary to disaggregate the analysis of labor supply decisions (including constraints) into its days and hours components.

Kevin Lang and Shulamit Kahn consider, both theoretically and empirically, workers’ survey responses on the number of hours they would prefer to work at the same hourly rate compared with how much they actually do work. They observe that hours are constrained given the gap between preferred hours and actual hours, especially in Canada and the United States. By studying how hours constraints may determine working hours, the chapter urges caution regarding mandated hours reductions such as work sharing without first understanding why both hours constraints and unemployment exist.

The extent of hours constraints is investigated using the Panel Study of Income Dynamics, which provided the data on the relation between desired and actual hours for U.S. workers over the period 1968–1987. Results for similar surveys in Canada and the European Union are compared. To inform the empirical analysis, four primary theories in the literature are presented that may explain why workers are constrained to work more or less than they desire. These include theories on long-term contracting, hedonic wage/hours locus, fixed-wage contracts, and hours as a screening device. The analysis suggests that hours constraints are best understood in the context of the imperfect matching of wages and hours as predicted by a hedonic model. Such an imperfect matching model would allow hours policies to be evaluated in circumstances where unemployment as well as vacancies can arise. The main conclusion from their empirical analysis is that mandated hours restrictions to increase work sharing would tend to increase unemployment and lower welfare.

Part IV focuses on “short-time compensation (STC) programs.” Karen Needels and Walter Nicholson study the programs’ effect on how firms adjust their labor forces during cyclical downturns. Short-time compensation (sometimes called a work sharing agreement) involves providing the equivalent of unemployment insurance (UI) benefits to workers who have not been completely laid off but whose hours of work have been reduced. An evaluation of such programs needs to know what effect they have on unemployment levels, the tendency of firms to turn to hours adjustments rather than layoffs, whether they increase or decrease the total amount of compensated unemployment, and whether these programs represent an effective use of benefit payments. The authors find that neither theory nor current empirical methodologies are up to the task of providing definitive answers to such questions. Much of the theory is based on “stylized” versions of the UI and STC programs and do not allow for the complex interaction that in fact takes place between the two.

Empirical methodologies relying on self-reporting by firms of the impacts of STC often reach implausible conclusions. Methodologies that use statistical matching methods (matching similar firms in similar economic environments that do and do not use STC programs) hold more promise, as used in Canadian evaluations of work sharing. In their own study of U.S. firms based on this methodology, the authors

reached two conclusions: 1) firms that use STC programs also make extensive use of layoffs, and 2) selectivity effects (i.e., unmeasured differences between firms that participate in the STC programs and those that do not) pose major, and possibly insurmountable, problems in statistical inference. Given the difficulties facing research on the effects of STC, the authors argue for more innovative use of aggregate data, random-assignment experiments, or carefully designed case studies.

To further improve the evaluation of short-time compensation initiatives, Alec Levenson draws attention to the need to account for the incidence of private short-time work (STW) arrangements in the absence of formal UI-funded work sharing programs. Based upon data drawn from the Current Population Survey (CPS), the March Annual Demographic Files, and the CPS Outgoing Rotation Group Files, his analysis shows that, compared with the very low STC take-up rates, STW was a prevalent phenomenon in the United States for the period 1968–1993. The data suggest the STW rate ranges from 50 to 70 percent of the layoff rate. The study concludes that analyses that ignore the role of STW most likely overstate the potential for layoff reductions under STC or work sharing and, as a corollary, understate the degree of public subsidy provided by such UI programs to firms that already use STW. It is recommended that existing patterns of STW be used to provide baseline estimates in future work sharing evaluations to determine the program impact on employment versus hours adjustment in the United States.

In a policy evaluation chapter on short-time compensation, Tom Siedule, Ging Wong, and Carol Guest turn to the Canadian Work Sharing Program, first implemented in 1981. They review a 1993 evaluation of the program and conclude that it clearly avoided layoffs. The evaluation suggested that about two-thirds of the layoffs that one might have expected the program to avert were in fact prevented. The program appeared to benefit both workers and firms, but it was more expensive to run (i.e., it was a bigger draw on the UI fund) than the comparable layoff alternative.

In extending this work, the authors ask whether the demand for work sharing is sensitive to changes in economic activities. If so, it is conceivable that the increased demand would create financial hardships for the UI fund during a severe economic downturn. To test this, they first estimate the likelihood of a firm participating in the program as a

function of the change in the unemployment rate and of various firm characteristics. They find that work sharing is sensitive to the change (rather than the level) of economic activity and that participation is higher among firms with highly skilled workforces. Based on a macro-economic simulation of a high-unemployment counterfactual for the 1987–1990 period, they then estimate the additional number of firms that would have used the work sharing program during this period had a more depressed economic scenario existed. They assess the additional cost of this increased demand for the program. The authors conclude that the “reasonable” depressed economic scenario chosen, which was driven by reduced exports, would have led to a 1.5-percentage-point increase in the unemployment rate by 1990. This, in turn, would have resulted in a 9 percent increase in work sharing, at a cost of \$14 million. Work sharing represents such a small portion of the total UI budget (0.43 percent in 1990), such an increase (to 0.53 percent) would not be a financial burden. However, they also note that the cost of extending work sharing to all potential layoff situations could be prohibitive.

Notes

1. White, Michael. 1987. *Working Hours: Assessing the Potential for Reduction*. Geneva: International Labour Office.
2. Rifkin, Jeremy. 1995. *The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era*. New York: G.P. Putnam’s Sons.

Working Time in Comparative Perspective

Volume I

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