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Employment Trends in the Information Economy

The reliance on knowledge as a basis for the organization and conduct of economic activities is presently a primary subject of discussion among policy makers. The expanding use of information and communication technologies has given rise to what is called the "information economy" in which the sheer complexity and technical sophistication of economic activities are thought to have significantly transformed the skill requirements of the workforce. Some scholars argue that the extent of these changes is such that we have entered a new techno-economic post-industrial era or, perhaps, a new economy.

In a recent Applied Research Branch (ARB) study, Marie Lavoie and Richard Roy present some of the basic facts regarding the broad employment trends in the new economy. They propose an analysis of the observed changes that helps identify some of the factors causing these trends. The study provides a sense of how widespread the trend toward an information-based economy is - and how significant it is - in terms of labour force composition.

Contrary to what has been done in most studies of the information economy in Canada, this study does not define the information economy on the basis of industrial activities. Instead, the authors argue that the *basic tasks* performed by workers are more useful for understanding the skills required by the information-based economy and the evolving structure of employment. For example, an industrial classification approach to the study of the information economy cannot properly capture the effects of workers' displacement due to organizational changes within firms (such as contracting out).

The classification in the ARB paper is based on the reasoning that human production tasks involve dealing with objects, with people, or with symbols, and are directed at producing goods, providing personal services, or generating information. Against this background, the labour force has been divided into two main categories of workers: information and non-information workers.

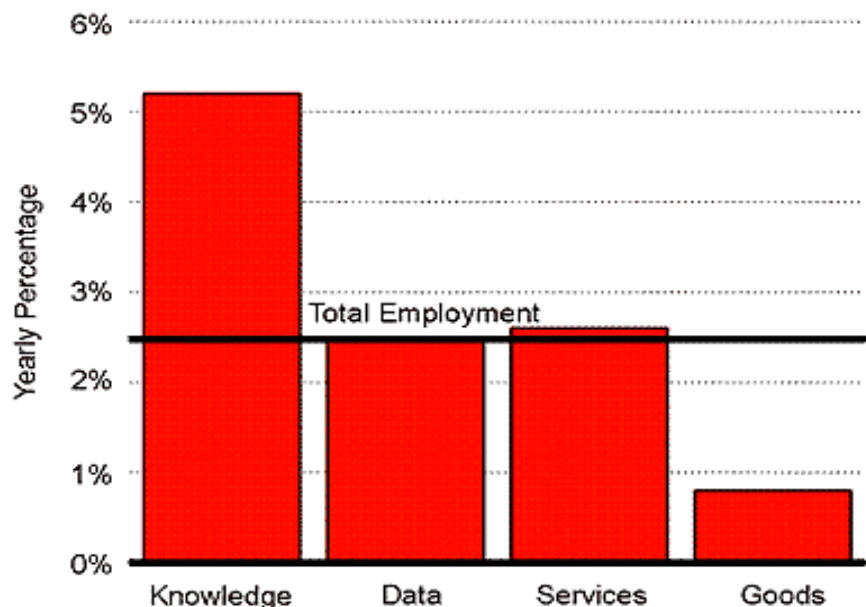
Knowledge workers have been the fastest growing type of workers in the labour force over the last quarter century.

Information workers are further divided into two groups: data and knowledge workers. Data occupations involve the manipulation of symbolic information, whereas knowledge occupations involve the development of ideas or of expert opinions. In other words, data workers, such as in most clerical occupations, use, transmit, or manipulate

knowledge while knowledge workers, such as pure scientists, applied scientists, engineers, and social scientists, produce it. The *non-information category* is composed of goods workers and services workers. Workers in the former category, such as machine operators and assemblers, transform materials whereas workers in the latter group, such as security guards, aestheticians, and babysitters, perform personal services.

Growth in Employment by Type of Workers

Percentage per Annum, 1971-1996



Knowledge workers have been the fastest growing type of workers in the labour force over the last quarter century or so in Canada. Over the period 1971-96, while total employment was growing at an average rate of 2.1 percent per year, the employment of knowledge workers grew at a rate of 5.2 percent per year. This is twice the pace of services workers, the second fastest-growing group of workers over that period. Knowledge workers represented 6.3 percent of total employment in 1971 but 13.1 percent in 1996. In other words, the proportion of knowledge workers jumped from one in every 16 workers in 1971, to one in every 8 workers in 1996. Altogether, information workers constituted 44 percent of employment in 1971 but 54.1 percent in 1996. Clearly, based on the classification system used in the ARB study, the Canadian economy has become more information intensive, mainly as a result of the increasing employment of knowledge workers. The study also shows that this knowledge-worker phenomenon has generally encompassed all major industry groups, including industries normally considered "low-tech." Therefore, the growth in employment of knowledge workers represents a widespread trend in the Canadian economy.

But what is driving this trend towards a growing proportion of knowledge workers? In order to analyse the causes, the authors use a technique that breaks down the total change in the proportion of a given group of workers through time into three different components.

Breakdown of the Change in Employment Composition, 1971-1991				
Percentage Point Change in the Share of Each Type of Workers				
Type of Workers	Substitution Effect	Productivity Lag Effect	Output Effect	Total Change
Knowledge	5.22	1.34	-0.14	6.43
Pure Science	0.08	0.05	-0.03	0.10
Applied Science	0.15	0.19	0.00	0.35
Engineering	1.58	0.12	0.04	1.74
Social Sciences & Humanities	3.41	0.98	-0.15	4.24
Data	1.06	4.81	-0.88	4.99

Services	-1.65	3.79	-0.65	1.49
Goods	-4.63	-4.38	-3.90	-12.91

The first component is a skill *substitution effect* occurring within the production technology of domestic firms or industries. That is, for given levels of industry output and employment, factors such as technological innovations, changes in relative labour costs, and institutional reforms like environmental regulations, may favour a more intensive use of a given type of worker.

The second source of change can be attributed to differences in labour productivity growth rates among industries (*the productivity lag effect*). That is, for a fixed proportion of industry output and workforce composition (i.e., for an unchanged occupational structure), industries with stagnant labour productivity will require a growing portion of total employment through time.

Finally, the third component occurs when, for a given workforce composition and labour productivity, shifts in the composition of *final output* of the domestic industry give rise to proportional changes in the structure of employment. (See table.)

A major finding of the study is that the growth of knowledge workers is mainly attributable to a substitution of knowledge workers for other types of workers in the production recipes of the industry. This result, combined with the fact that knowledge workers have increased across all major industrial sectors, suggests that knowledge workers have now become essential in the production process of most industries. Many factors - such as technology or relative cost changes among the different types of workers - may have caused such a penetration of knowledge workers in the production structure; further research is needed to determine more precisely the sources of change. Another finding is that there are more jobs for data workers because firms intensive in data workers needed more such employees to maintain their share of output. Therefore, the increase in the number of data workers is almost entirely attributable to the productivity lag effect. If these trends continue, the longer-run employment and income prospects for data workers are not very appealing, despite the observed growth in their share of employment over the 1971 to 1991 period.

What is Behind the Declining Youth Participation Rate?

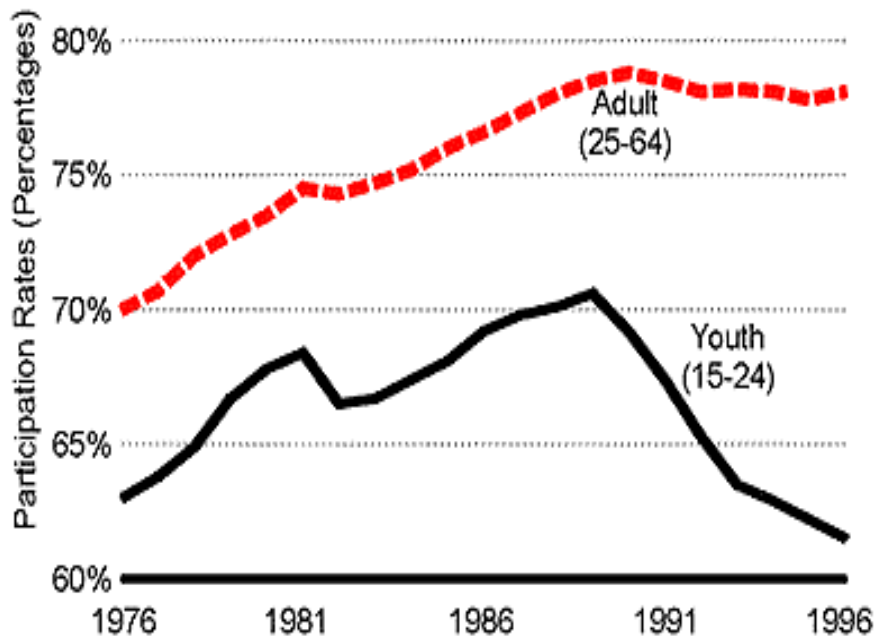
From its peak of 70.6 percent in 1989, the participation rate of youth in the workforce fell to 61.5 percent in 1996 - an unprecedented decline of 9.1 percentage points. The youth rate fell in the last two recessions (early 1980s and early 1990s), and it has continued to decline during the current recovery.

The participation rate shows the percentage of the population engaged in the labour market, either working or actively looking for work. On the surface, a declining participation rate may suggest that people think that they have fewer chances of finding a job.

The participation rate is affected by overall labour market conditions and long-term structural trends. Both the adult and the youth participation rates rose from the mid-1970s to the end of the 1980s, a trend that can be largely attributed to the rapid increase in the number of women in the labour force. However, the youth participation rate has undergone significant cyclical swings since 1976, whereas the adult rate has tended to decline very little during periods of economic slowdown. Since 1989, the participation rate of adults has decreased by less than half a percentage point, compared to a fall of 9.1 percentage points in the youth rate.

Youth and Adult Participation Rates

1976-1996



Source: Labour Force Survey, Annual Averages

A recent analysis by Philip Jennings of the Applied Research Branch attempts to explain the declining youth participation rate. The author used data from the Statistics Canada Labour Force Survey to assess the contribution of various factors to the decline in the participation rate. Estimates for this analysis are based on annual averages calculated over the January-April and September-December school periods.

Which factors have had the most effect?

Jennings reports that the decline stems from a number of factors, specifically:

- **Increase in school enrollment** - Youth attending school full-time are less likely to participate in the labour force than youth not in school. Therefore, an increase in enrollment rates decreases the overall youth participation rate. Youth enrollment rates have been increasing since the early 1980s, increasingly so since 1989. The proportion of 15- to 24-year-olds attending school has increased by 8.8 percentage points since 1989, reaching 56.5 percent in 1996. The increase in the enrollment rate has been more marked for the 20-24 age group than for the 15- to 19-year-olds.
- **Decrease in student participation** - During the 1980s, 15- to 24-year-old students participated in the labour force at an increasing rate. Since 1989, however, the student participation rate declined from 44.4 percent to 37.9 percent in 1996. The participation rate for the younger (15-19 age group) students has declined considerably, whereas the rate increased slightly for older (20-24 age group) students.
- **Decrease in non-student participation** - The participation rate for non-students shows the same pattern as that for students: an increase over the 1980s and a decline since 1989. The participation rate for youth not enrolled in full-time studies stood at 84 percent in 1996, a decrease of 3.3 percentage points from its peak in 1989.

The upward trend in enrollment rates seems to be only slightly affected by cyclical fluctuations in the economy. Enrollment has increased steadily since the end of the 1990-91 recession, and this fact suggests that a significant cyclical reversal of the enrollment gains is unlikely.

On the other hand, movements in student and particularly non-student participation have been strongly cyclical. The student participation rate remains higher than it was in the early 1980s, whereas the non-student participation rate is now slightly lower.

Comparing the participation rates between the 15-19 and the 20-24 age groups reveals that the gap between these two groups has been widening in the 1990s, both for students and non-students. This observation suggests that the younger group has been inordinately affected by the latest recession. The growing gap in participation rates has been to the detriment of the youngest.

Youths in the 15- to 19-year-old age group have been inordinately affected by the latest recession.

According to the analysis, the upward trend in enrollment rates is the most important factor contributing to the decline in youth participation over the 1989-1996 period. This rising proportion of students in the youth population accounted for well over two-fifths (44 percent) of the decline. The falling participation in the labour market by students and non-students alike accounted for a further 38 percent and 18 percent of the drop, respectively.

For older youths (20- to 24-year-olds), the increase in the enrollment rate explains over three-quarters (77.3 percent) of this group's lower participation rate. On the other hand, more than 70 percent of the drop in the participation rate for the younger group (15- to 19-year-olds) results from the fall in student labour force participation. (See table.)

Factors Accounting for the Declining Youth Participation Rate, 1989-1996			
as a Percentage of the Total Change			
Change in...	Overall Youth Participation (Ages 15-24)	Younger Youth (Ages 15-19)	Older Youth (Ages 20-24)
Enrollment Rate	44.0	16.0	77.3
Full-Time Student Participation	38.1	70.9	-6.0
Non-Student Participation	18.0	13.1	28.7
<i>Total Change</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Note: This table presents the result of a breakdown of the factors accounting for the decline in the youth participation rate. Totals do not necessarily equal 100%, due to rounding off of figures.

Good News, Bad News

The analysis provides important insights into the dynamics involved in the decline of youth participation. On the positive side, more young people appear to be staying in school. Perceptions of a more promising future for those with more education and, perhaps to a lesser extent, a difficult labour market combine to help explain this increased school attendance.

On the other hand, a growing proportion of non-students are dropping out of the labour force - a disturbing trend. While this group is still relatively small, it is a segment of the youth population that may be increasingly left behind in the new economy.

How Do We Know that Times Are Improving in Canada?

Leading economic indicators have become pulse-takers for progress and growth. They tend to focus on measures such as inflation, growth in the Gross Domestic Product (GDP), and the rise and fall of stock market indices. But individuals and communities often find that these indicators tell them little about their own experience. How do we know that things are getting better?

The most commonly used indicator of growth, the GDP, has traditionally also been used to measure well-being. But given the complexity of today's social and economic transformation, no single indicator can capture the total impact of change. The use of GDP is criticized for two reasons. First, the GDP has its limitations. It does not measure non-market activities such as volunteer work or child rearing, which also contribute to both well-being and economic growth. Nor does it reflect economic activities that actually impose costs on the economy (environmental damage caused by the *Exxon Valdez* oil spill, for example).

Secondly, the assumption that economic growth is always accompanied by increases in social well-being is questionable. GDP was used as a proxy measure for social well-being in the past, because when the economy did well, measures of social well-being also rose. Since the 1990s, however, this has not been the case. Even in periods of growth, the benefits are unevenly distributed, with some sectors prospering while others lose ground. In addition, some aspects of social well-being are improving; others are slipping.

As early as 1934, Simon Kuznets, who was involved in the development of the GDP, warned that "[t]he welfare of the nation can scarcely be inferred from a measurement of national income." Since then, efforts have been made to develop simple and easily understood measures that would better indicate the improvement of the human condition and social well-being. While much work has been done on a number of social indicators, the development of a single index is a work still in progress.

The Index of Social Health

The search for a single quantitative measure of social well-being resulted in the development of the Index of Social Health (ISH) in 1986 by Marc Miringoff at Fordham University in the United States. The Index focuses on specific social problems, to determine if there has been an improvement or a decline over time.

The Index of Social Health identifies 16 social issues dealing with health, mortality, inequality, and access to services. The indicators are stratified by stages of life. (See table.)

Components of the Index of Social Health		
Children	Youth	Adults
- Infant mortality	- Teen suicide	- Unemployment
- Child abuse	- Drug abuse	- Average weekly earnings
- Children in poverty	- High school drop outs	- Health insurance coverage (U.S.)

Elderly	All Ages
- Poverty among those 65 and over	- Homicides
- Out-of-pocket health cost for those 65 and over	- Alcohol-related traffic fatalities
	- Food stamp coverage (U.S.)/ Social Assistance beneficiaries (Canada)
	- Access to affordable housing
	- Gap between rich and poor

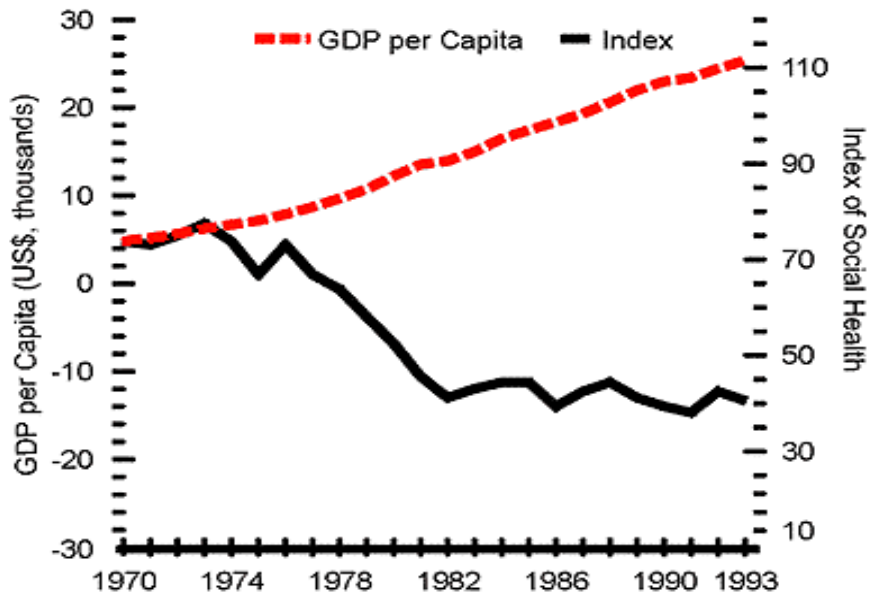
ISH indicators are monitored in terms of relative improvement or decline in performance from 1970 to 1995. Each indicator's best year of performance over the period is scored 10 while the worst year of performance is rated zero. All remaining observations are rated proportionately between zero and 10. The scores for the indicators are then averaged and expressed as a percentage to derive the aggregate Index of Social Health.

GDP Versus ISH: How Are We Doing?

In the United States, when the economic performance as measured by the GDP per capita is compared with the ISH, the two indices diverge sharply. (See graphic.) The gap began as early as 1974 and continues to grow. Clearly, the GDP is not a good measure of social performance.

Index of Social Health and Gross Domestic Product (GDP) per Capita, United States

Current Prices

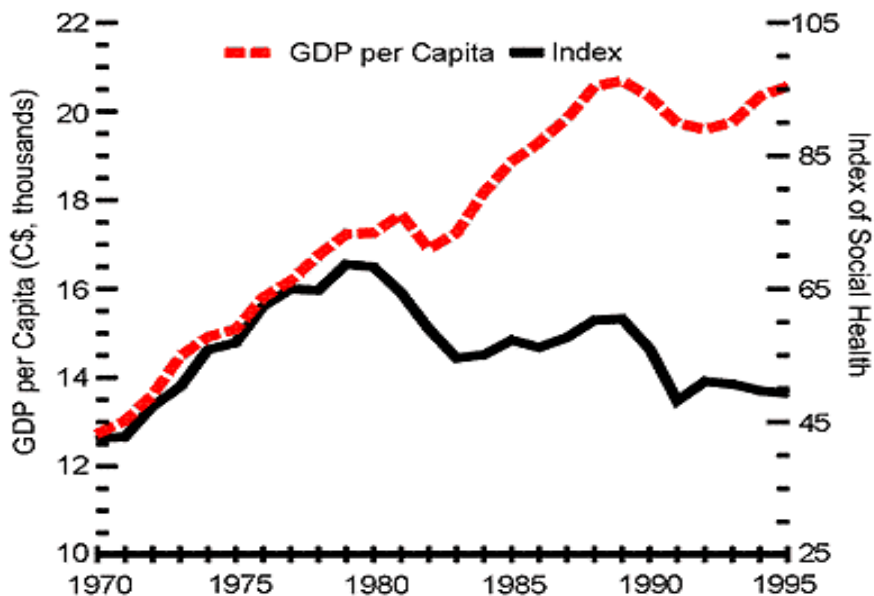


Sources: Fordham Institute for Innovation in Social Policy, *1995 Index of Social Health: Monitoring the Social Well-Being of the Nation, 1995*. GDP and population figures are from the *Statistical Abstract of the United States*, U.S. Department of Commerce, several years.

Does Canada's experience mirror that of the United States? Applied Research Branch analysts worked with Statistics Canada to modify the ISH for the Canadian context. The Canadian version of the index relies on 15 indicators rather than 16. Since health insurance is universal in Canada, the analysts dropped this indicator. Moreover, the number of social welfare recipients in Canada replaced the number of recipients of food stamps in the U.S.

Index of Social Health and Gross Domestic Product (GDP) per Capita, Canada

1986 Prices



Source : Applied Research Branch and Statistics Canada, 1997

Comparing the GDP and ISH for Canada shows that our record differs appreciably from that of the United States. While the two indices diverge, they do so later in Canada. In terms of social well-being, Canada experienced its best years in the late 1970s, according to the Index. The ISH and GDP per capita moved in tandem until 1982 after which the gap between them began to grow. The ISH appears to be sensitive to economic recessions, although it does not necessarily respond to recoveries.

Potential of the ISH

The ISH fills an important gap because of the growing demand for measures of social well-being. The Index has great appeal because the indicators of social malaise resonate with the general public and the measure itself is simple to understand. It is valuable too because it provides a national picture of the rise or fall of social well-being. (The Index is reported every year for the United States.)

However, it shares the weaknesses of other single indicators. And its interpretation must be in line with the constraints of its design. There are possibilities for improving or augmenting this measure as well as potential to develop others. Nevertheless, there may never be a perfect measure of well-being suitable for all purposes.

Payroll Taxes and Part-Time Employment

Part-time employment in Canada has increased significantly over the past two decades. Between 1976 and 1995, it more than doubled, whereas full-time employment increased by only 28.5 percent.

How the Tax System Encourages Part-Time Work

Under the old Unemployment Insurance program, which ceased in 1995, employers and workers did not pay premiums when the employee worked fewer than 15 hours a week for a single employer and earned less than \$163 a week from that employer. Some employers took advantage of these provisions by discriminating in favour of part-time employment of 14 or fewer hours a week. This meant that a significant number of workers might have worked fewer hours than they wished. The Canada Pension Plan (CPP) and Quebec Pension Plan (QPP), which also have minimum earnings below which premiums do not have to be paid, are other taxes which encourage employers to hire part-time workers to reduce their labour costs. Thus, payroll taxes create distortions in the distribution between part-time and full-time employment.

On the other hand, under the new Employment Insurance program, since January 1997 everyone pays premiums beginning with the first hour worked and the first dollar earned, up to an annual maximum. Adoption of this hours-based system for the Employment Insurance program should help to reduce the incidence of involuntary part-time work.

Income Effect and Substitution Effect

In a study recently published as a research paper by the Applied Research Branch (ARB), Marcel Bédard considers how three payroll taxes - CPP, QPP, and Unemployment Insurance - have contributed to an increase in part-time work. Using statistics for 1984 to 1993, the paper addresses two questions in particular: (1) How much do changes in premium rates and minimum earnings affect part-time employment? (2) What might be the effect on part-time employment of the Employment Insurance program's adoption of an hours-based system?

The analytical framework of the ARB study takes into account two components of the effect on part-time employment of an increase in payroll taxes. The first component, called the *income effect*, indicates the impact of an increase in a payroll tax on the overall demand for workers. The second component, called the *substitution effect*, indicates the effect on the hiring of part-time employees caused by a change in the relative cost of part-time employment as compared with full-time employment. The relative cost of part-time employment is affected by the presence of minimum earnings for tax purposes since these minimums increase the difference between the cost of an hour worked part-time and the cost of an hour worked full-time. An increase in the premium rate for a given

minimum or an increase in the minimum encourages employers to replace full-time workers with part-time workers. It should be noted that the substitution effect has no impact on the total number of hours worked. It simply changes how the total amount of work is distributed between part-time and full-time employment. Since the number of part-time and full-time workers required to work a given number of hours differs, the substitution effect has an impact on the number of people employed.

The estimates of these two effects are based on hypotheses about the parameters of the substitution effect and the income effect taken from empirical data. By combining the two effects, the author obtains the net effect on part-time employment of the increase in premiums and minimum earnings for the three types of payroll taxes.

Income Effect: Part-Time Employment Decreases

Between 1984 and 1993, the combined employer and employee amount of contributions for the three payroll taxes expressed as a percentage of total wages and salaries increased by three percentage points to nine percent. According to the author's estimates, the effect of this increase was a decrease of 0.2 to 0.5 percent of total employment, or a loss of 26,000 to 56,000 full-time jobs, and a proportional decrease of 4,000 to 9,000 part-time jobs.

Substitution Effect: Part-Time Employment Increases

In 1993, the cost of part-time employment in wages and premiums was 71.3 percent of the cost of full-time employment, a decrease of 1.5 percent in relation to 1984. The author estimates that the increase in minimum earnings and premium rates caused a decrease of one percent in the relative cost of part-time employment. It seems that this decrease encouraged employers to replace 4,000 to 8,000 full-time workers with 10,000 to 20,000 part-time workers.

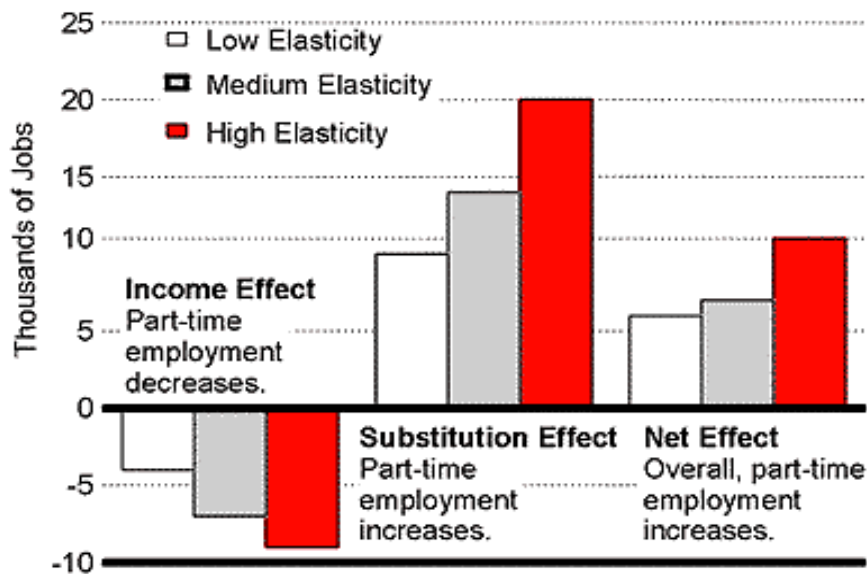
Net Effect: Modest Increase in Part-Time Employment

The author concludes that the positive effect of the decrease in the relative cost of part-time employment on the amount of part-time employment was greater than the negative effect of the increase in premium rates, and resulted in a net increase of up to 16,000 part-time jobs. This figure represents only 2.8 percent of the net increase of 568,000 part-time jobs between 1984 and 1993. Consequently, the effect on the amount of part-time work seems to be rather minor.

These positive but modest results also indicate that the distribution between part-time and full-time employment was distorted, which affected the quality of the jobs in the economy. When an increase in a payroll tax with minimum earnings changes the cost of one type of work in relation to the other, demand shifts toward the less expensive type of work. To the extent that less expensive jobs are filled involuntarily or are of lower quality, because of either lower wages, fewer benefits, or less job security, the overall well-being of society suffers.

Effect of the Increase in Premium Rates and Minimum Earnings on Part-Time Employment

By Selected Elasticity Values, 1984-1993



Explanation: Elasticity measures the degree of reaction of employers and/or employees to a change in market conditions (e.g., the change in employers' labour demand as a result of an increase in the cost of labour, which would be caused by an increase in payroll taxes).

Employment Insurance Will Improve the Quality of Jobs

The study also evaluates the impact on part-time employment of eliminating minimum earnings, as occurs under the new Employment Insurance system. Employers and employees now pay premiums from the first dollar earned up to an annual maximum of \$39,000 in insurable earnings. According to the author's calculations, eliminating the minimum insurable earnings feature might increase the cost of part-time work in relation to full-time work by 1.8 percent. Based on 1993 data, this increase in the relative cost of part-time employment may motivate employers to replace 20,000 to 40,000 part-time jobs with 8,000 to 16,000 full-time jobs. Such a result would decrease part-time employment by 1 to 2 percent - a relatively minor impact. Viewed on its own, this provision of the Employment Insurance program eliminates the bias of the old Unemployment Insurance system in favour of part-time work and thereby helps to improve the quality of jobs in the Canadian economy.

Youth Prospects: Optimism at Work

Despite high youth unemployment rates in Atlantic Canada, nine out of ten students who applied to the Nova Scotia School-to-Work Transition (NSSWT) program feel hopeful about their future. In 1995, Grade 11 students were invited to take part in this program, a long-term research project supported by Human Resources Development Canada. The NSSWT studies whether interventions like work placements and courses about jobs and the labour market will be effective in facilitating the school-to-work transition of participants. (See box at end of article, for details on the project.)

One of the main reasons for the students' optimism is their strong sense of their own ability, researchers have found. When asked their views about themselves on a questionnaire, 90 percent of participants responded that they feel they can do things as well as most people, and about eight in ten think that they can make their plans work. About three-quarters believe they have control over things that happen to them. (See table.)

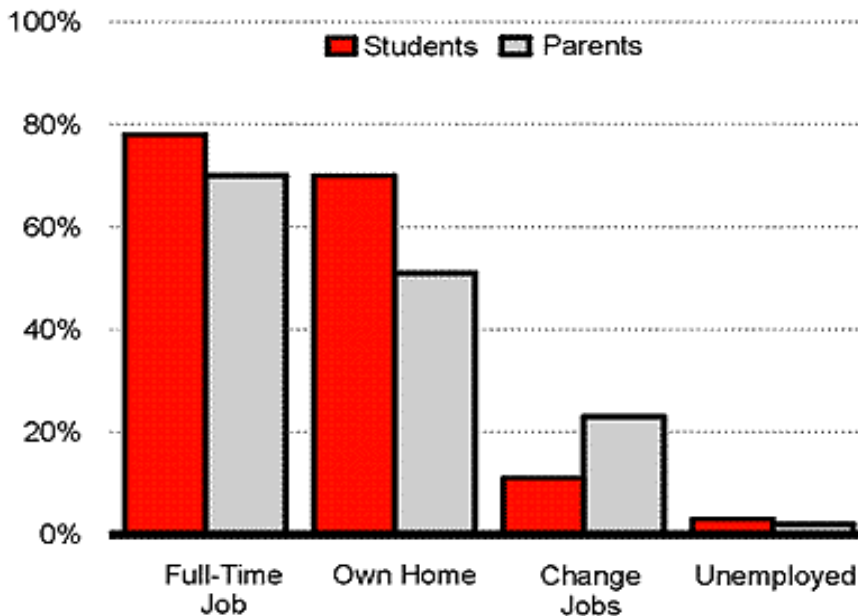
Students' Views About Themselves

	Strongly Agree	Agree Somewhat	Neither Agree nor Disagree	Disagree Somewhat	Strongly Disagree	Total
I am able to do things as well as most people.	42	48	7	2	1	100%
I feel I have little control over things that happen to me.	6	20	19	23	32	100%
When I make plans, I am almost certain I can make them work.	31	48	16	5	0	100%
I don't have enough control over the direction my life is taking.	4	10	17	21	48	100%

The NSSWT participants' sense of personal ability and empowerment probably underpins their buoyant assessment of their employment prospects. Only three percent of the students applying to the program considered the odds "high" or "very high" that they would be unemployed in the future. They also felt it unlikely that they would change jobs more than three times in their life, and 70 percent believed they would have full-time employment.

Is this simply the optimism of youth? The parents of the students were asked to assess the chances for these same events for their daughter or son. To a large extent, parents share the optimism. Their scores agree with those of their children about the likelihood that their sons or daughters will be unemployed. Parents are, however, considerably less optimistic about their children's chances of future purchasing power and of not having to change jobs frequently. Only about half (51 percent) consider the odds better than even that their children will own their own homes in the future, whereas 70 percent of the children believe they will beat these odds. (See graphic.)

Percentage of Students and Parents Assessing the Chances of Various Future Events as "High" or "Very High"



Note: The wording of the question was: "When you think about (your, your daughter/son's) future, how likely do you think the chances are for each of the following?" The four events charted are "will have a full-time job," "will own (my/her/his) own home," "will change jobs more than three times," and "will be unemployed." The response options ranged from "very low" through "about fifty-fifty" to "very high".

Some additional interesting and potentially important interim results:

- Fully one-quarter of students attracted to the NSSWT program are academically ambitious, aiming to obtain a post-graduate degree. Given that jobs with potential will increasingly require more than a high school diploma, their academic aspirations are sensible and realistic. Students know that they will have to work, at least part-time, to finance their education; more than 80 percent of those planning to attend a university full-time plan to work during their studies.
- Applicants rate themselves as average or higher on generic job skills. Their self-appraisal is lowest with respect to their problem-solving and numeracy skills, and highest in terms of their ability to work in a team.
- Participants like the NSSWT program. They feel the program has had a positive effect on such factors as making decisions about what to do after high school, developing job-related skills, attitude to school, and self-confidence. Participants also cite the acquisition of knowledge and general workforce preparation as the main advantages of the program. On the negative side, about one-quarter felt that the NSSWT program interfered with their schoolwork.
- Participants were placed in a large variety of jobs, usually in settings requiring good work habits and generic job skills. Students consistently give high marks to all aspects of their work experience, particularly the high level of employer support.

Researchers expect the students' optimism to continue to exhibit itself in results following the second and third years of the study, thus defying the portrait of hopelessness often attributed to Atlantic Canadian high schoolers by the media.

The Nova Scotia School-to-Work Transition Project

The Nova Scotia School-to-Work Transition (NSSWT) project was set up by the Nova Scotia Department of Education and Culture, with the financial assistance and research guidance of Human Resources Development Canada. It takes place in six regions of the province. About 275 Grade 11 students are participating, having joined the project at the beginning of the 1995-1996 school year.

The NSSWT is an applied research project, monitoring two groups of students. The first group (who are participating in the program due to their own interest) are given in-class training and supervised work experiences over a two-year period. The second group of students acts solely as a control group, for comparison.

All students are being tracked over a three-year period. In Grade 11 and Grade 12, the project monitors the changes in participants' knowledge about the labour market and job skills. After students graduate, their transition from school to work or post-secondary education is studied.

Independent information is being obtained from students and their parents, educators, site co-ordinators, guidance counsellors, and employers. Researchers obtained information on the students' base levels of various generic job skills before those students began the NSSWT project, and this information will be compared to the levels at the end of the program to measure effectiveness of the training and work experience. Questionnaires, interviews, focus groups, official school records, and on-site case studies also provide rich information on the participants, the program, the community, and the school.

[Beyond Cinderella and Snow White: Challenging the Myth of the Wicked Stepmother](#)

Stepmothers may have less fun parenting, but there's no evidence to support the myth that they are tougher on their stepchildren than other mothers are toward their biological or adopted children. That's the conclusion of a report by David Cheal sponsored by Human Resources Development Canada.

The author used data from the National Longitudinal Study of Children and Youth (NLSCY) - particularly the questionnaires filled out by 10- and 11-year-olds - to construct an in-depth portrait of step-families in Canada.

Data show that 4.3 percent of children aged 11 or younger live with a biological parent and a step-parent. The analyst found that stepmothers are more likely than biological and adoptive mothers (34 percent compared to 28 percent) to report that they rarely had fun with their children, but they are no more likely to frequently punish their children for breaking rules. About 40 percent of all parents report that they often punish their children.

More children live with stepfathers than stepmothers.

One major gap between myth and reality has to do with raw numbers. Only 12.1 percent of all the stepchildren surveyed by the NLSCY live with a stepmother and biological or adoptive father. "In the past, stepmothers were undoubtedly more prevalent than they are now," since more mothers died young. But "since more than 70 percent of divorce court decisions on child custody in recent decades have awarded sole custody to mothers, most stepfamilies today comprise a mother with her biological [or] adopted children and a stepfather."

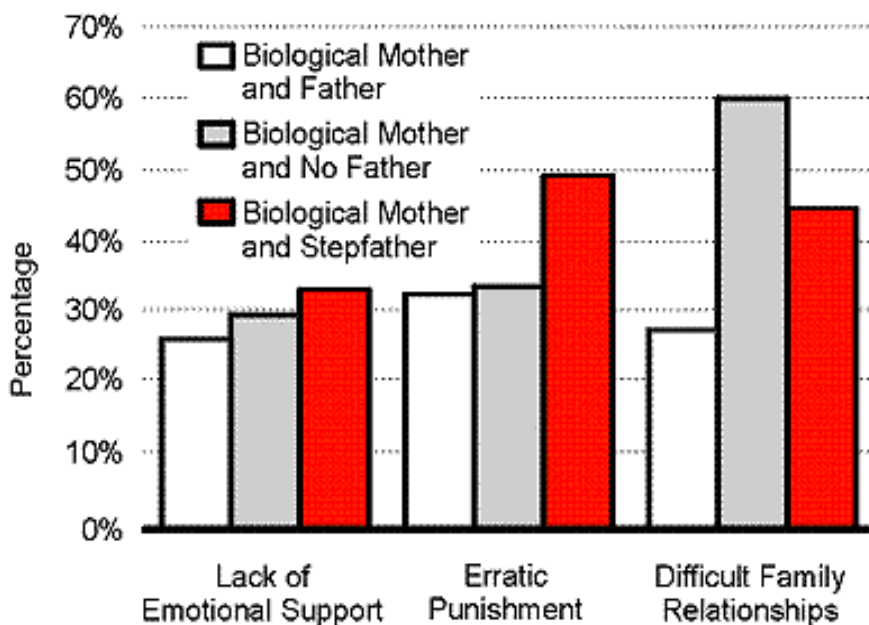
While the wicked stepmother doesn't appear in the data, unfortunately there do seem to be more problems in step-families. "Punishment for rule-breaking was most common in blended families where both partners brought their own children from previous relationships into the new marriage Such families probably have multiple stresses, including financial strains, which some parents may find hard to handle."

Stepchildren report more difficult family relationships.

In addition, the study compared the feelings of children in stepfamilies to those living with both biological parents. While the majority of stepchildren aged 10-11 had "moderate to good experiences with parents," the study noted that stepchildren "reported more difficulties in family relationships, less emotional support and more punishment than children who lived with both of their biological/adoptive parents." The difference in parents' emotional support was relatively small, but stepchildren were considerably more likely to report erratic punishment and difficult family relationships.

Children's Perceptions of Family Life by Family Type

Children 10 to 11 Years Old



Workplace Practices and Organizational Performance: No "Easy Fixes"

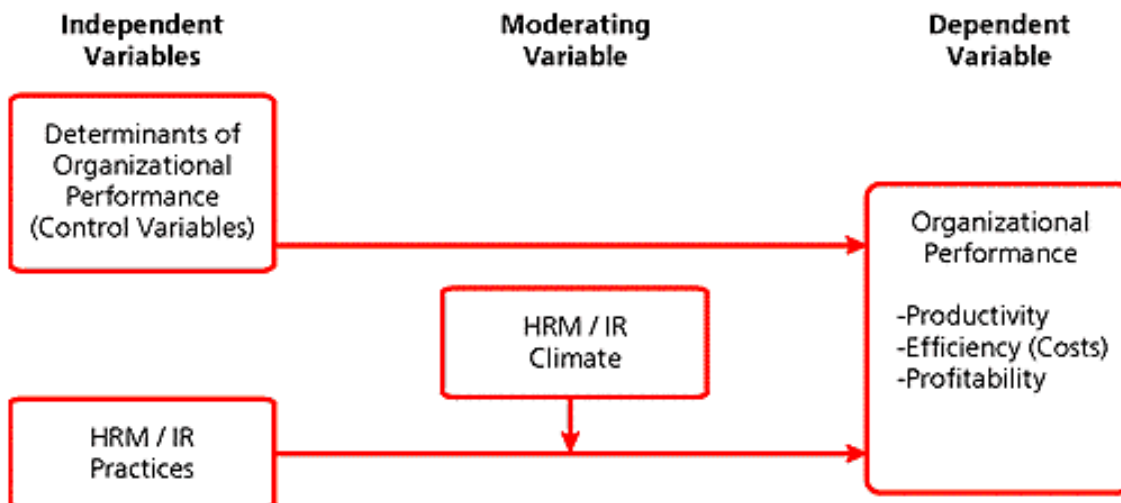
Do innovative human resource management and industrial relations practices improve organizational performance? This is the central question tested in a study by Patrice Jalette, *The Impact of Human Resource Management and Industrial Relations Practices on Organizational Performance of Credit Unions in Quebec*.

This service sector study, sponsored by Human Resources Development Canada, is based on 1994 data from 241 small- and medium-sized establishments in the Desjardins Federation of Credit Unions in Quebec. The Federation represents an ideal field for the study of the links between human resource management and industrial relations practices and organizational performance - similar activities and technology, establishment autonomy in the adoption of programs and practices, both unionized and non-unionized establishments, and the availability of financial establishment-level data.

The links tested in the paper between workplace practices and productivity, efficiency, and profitability are indicated in the diagram. The empirical results confirm the existence of links between practices and organizational performance. In addition, they reveal a rich picture of how these practices, which enhance flexibility, participation, conflict resolution, employee voice, ability, employee development, and motivation, may be influencing the organization's performance.

Three interrelated models are used to test the relationship between workplace practices and performance measures: production and cost functions and a profitability determination model. The step-by-step analysis first introduces 15 individual workplace practices into the three models, followed by the aggregate number of practices, and then clusters of practices. Lastly, a human resource management and industrial relations climate index, based on turnover, disciplinary actions per employee, days of absenteeism per employee, and days lost because of work accidents per employee, is included in the estimations to test the potential moderating influence of work climate, morale, trust and commitment on the relationship of workplace practices to an organization's performance.

Relationships between Organizational Performance and Human Resource Management and Industrial Relations (HRM/IR) Practices and Climate



The analysis shows that individual practices do not have much of an impact on organizational performance. Rather, it is when practices are grouped that they tend to have more significant effects. In this financial sector sample, the system of workplace practices is found to be composed of three dimensions: 1) *Mobilization* - involving the presence of a monetary incentive plan, social activity committee, colloquium, and suggestion system; 2) *Voice* - associated with problem/grievance resolution, labour-management/personnel committee, written specification of

working conditions, health and safety committee, and training committee; and 3) *Human Resource Development* (HRD) - associated with a training program, succession plan, performance appraisal, and information meetings.

Among the groups of workplace practices, *Mobilization and Voice* are significantly associated with increased productivity. This result is not surprising in light of the theoretical and empirical literature linking participation, commitment practices, and union presence to productivity. However, what is somewhat surprising is that *Voice* practices are found to be associated with increased productivity in both unionized and non-unionized establishments. *Voice* is the only measure of workplace practices significantly linked with increased production costs. This association suggests sharing power and control with employees can be costly.

The hypothesis that workplace practices increase profitability is not confirmed by all the results, although the estimated relationships are as expected: *Mobilization* clearly increases profits; *Voice* is positively associated with profits; and *Human Resource Development* (HRD) practices are negatively associated with profits. The upfront training costs associated with the HRD practices, and the likelihood that the benefits are spread out over time, explain the association of these practices with decreased profitability in the short term. The enhanced productivity associated with the *Voice* practices is sufficient to compensate for its costs, resulting in a positive although not significant effect on profitability.

Finally, poor work climate, morale, trust relationships, and low commitment - what the author has termed "human resource management and industrial relations climate" - are significantly associated with lower productivity and higher production costs, with the net effect of lowering profitability. This result supports the view that human resource management and industrial relations performance play an important role in the relationship between workplace practices and organizational performance. In other words, good practices implemented in a poor climate are not as effective as those implemented in a good climate.

Poor workplace climate diminishes returns from other organizational changes.

In short, this study confirms that it is important to examine the relationships between human resource management and organizational practices and performance outcomes by using clusters of practices, recognizing the potential synergistic effects. The results indicate that a comprehensive system of workplace practices in this financial industry is linked to higher productivity. They also show that costs of practices, not only virtues, should be considered before implementing practices. Finally, a poor work climate with low trust and commitment will diminish the returns expected from the implementation of workplace practices. Before changing workplace practices, firms are advised to take action to enhance workplace trust, commitment and morale.

The implementation and evaluation of workplace practices and systems is a complex business. The potential for improved productivity and profitability is there, but there are no "easy fixes."

Intergenerational Compact or Conflict?

Intergenerational equity has entered the public debate for reasons as varied as the size of the public debt, the dependency ratio, and sustainable development. A February 1997 conference on the subject "Intergenerational Equity in Canada" sponsored by Human Resources Development Canada and Statistics Canada dealt with intergenerational dimensions of government programs and labour markets on the first day, and social institutions and the intergenerational transmission of welfare on the second day. Proceedings from the conference will be available in the fall of 1997 from Statistics Canada.

The concept of intergenerational equity itself was under scrutiny. Current measures tend to focus on public expenditures. But the general consensus at the conference was that the productive capacity that one generation passes on to another was the appropriate indicator. Unless the concept is more comprehensive in its application, it will be impossible to draw explicit conclusions or to develop policy prescriptions related to intergenerational welfare. Because of the strong interrelationships, productive capacity should include the quality of political, social, and economic institutions; quality and quantity of knowledge; quality of the environment; and traditional economic measures. Otherwise, trade-offs and returns on investment within the system of productive capacity cannot be properly assessed.

The multiple dimensions of productive capacity are difficult to measure with scientific rigour. The

recommendations presented in the conference papers can be grouped into three approaches.

The first of these examines the age or lifetime distribution of taxes and transfers. Analysis shows that, on average, the federal tax/transfer system makes net beneficiaries of older Canadians, whereas the provincial tax/transfer system makes net beneficiaries of younger Canadians. Given the jurisdictional arrangements, this result is to be expected. However, older Canadians appear to benefit more from transfers.

Inequality is due more to differences within generations than between generations.

The second approach to estimating intergenerational equity which has won some legitimacy is generational accounting. It uses a simulation technique to examine the impact of government fiscal policy on current and future generations. Papers examined the sustainability of such policies as well as the long run impacts of reducing transfers. In general, the simulations show that the impact and the number of generations affected depend on the speed of cuts due to debt reduction and on the tax mix during the years of transition. A key finding from generational accounting showed that when the composition of inequality is examined, intergenerational differences *within generations* are the major component (90 percent) compared to intergenerational inequity *between* generations.

The third approach examines intergenerational transmission of welfare through the family and the family's access to income, health, and education. The many papers using this approach demonstrate that parental socio-economic status has a major impact on the benefits children receive from health and educational services. Furthermore, parents' labour market experiences affect educational investment and attainment of their children. Several papers also described intra-family transfers during normal family life as well as during periods of stress such as unemployment of adult children.

Productive capacity that one generation passes on to another is the appropriate indicator of intergenerational equity.

A number of criticisms were levelled at the three approaches. All measures used are partial, focussing exclusively on either public expenditures or family efforts. No approach includes environmental and social goods that may improve or decrease other kinds of capital available to individuals and households. Public expenditures were measured only in a limited sense: some public expenditures are in fact investments, yielding current and long-term benefits. Productive capacity depends at least to some extent on the accumulation of social, intellectual, and human capital as assets and as culture. Some comments were also made about the nature of exchanges being in both directions, rather than only from current generations to future ones. A holistic view, which would examine both public and private exchanges of the multi-dimensional elements of productive capacity, was lacking.

Indeed, some participants at the conference questioned whether the focus on intergenerational equity itself was misguided. The real problems in the public perception appear to be the fiscal burden of the aging population and concerns about the future of the current youth cohort (and in particular a disadvantaged portion of youth who tend to be excluded from work).

The conference participants recommended examination of the new generational compact in the present societal and family context. Shaky assumptions and data gaps need to be replaced with cross-disciplinary approaches in order to provide information helpful to the public debate. The role of the family in the intergenerational transmission of advantage and disadvantage needs to be better understood if interventions are to be effective. Such interventions may be limited to support at sensitive junctures in an individual's lifetime, common to all generations. Such sensitive junctures might include exclusion due to external factors and the management of transitions from education to work and from work to retirement. It was general consensus that increasing the productive capacity of society should be common cause, rather than a conflict for resources.

Family Market Income Inequality: What's Pushing It Up? What's Holding It Down?

Au cours des dernières années, de nombreux travaux de recherche ont porté sur l'*inégalité des gains familiaux* au Canada et aux États-Unis. Toutefois, l'*inégalité du revenu marchand* familial, qui présente plus de pertinence sur le

plan de la politique sociale, a reçu moins d'attention. (Le revenu familial marchand est le revenu de toutes sources autres que les paiements de transfert des gouvernements.)

Deux études récentes, l'une se penchant sur l'apport de la macroéconomie et l'autre, sur la contribution des facteurs structurels à la hausse de l'inégalité du revenu familial marchand au Canada au cours des dernières années, a jeté un éclairage nouveau sur les forces qui favorisent et limitent cette hausse.

La première étude, réalisée conjointement par Andrew Sharpe du Centre d'étude de niveau de vie et l'analyste Myles Zyblock, examine l'hypothèse selon laquelle une hausse de longue durée du taux de chômage au Canada entre 1975 et 1994 est responsable d'une partie importante de la hausse de l'inégalité du revenu familial marchand au cours de cette période. La deuxième, un document de travail de Myles Zyblock, ventile une hausse de 30,7 % de la variation des revenus familiaux marchands entre 1984 et 1993 en vue de déterminer le rôle qu'y a joué les changements d'âge et de structures familiales.

Sharpe et Zyblock signalent qu'entre 1975 et 1994, il y a eu une croissance importante de l'inégalité du revenu familial marchand au Canada et aux États-Unis, mais qu'au cours de cette même période, le taux de chômage au Canada est passé de 6,9 % à 10,4 %, pendant que le taux aux États-Unis passait de 8,5 % à 6,1 %.

Un tiers de la croissance de l'inégalité du revenu familial marchand est attribuable à la hausse du chômage.

C'est donc dire que si une augmentation à long terme du taux de chômage ne peut avoir été une cause de la hausse de l'inégalité du revenu familial marchand aux États-Unis, elle peut avoir contribué de façon marquée à l'inégalité du revenu familial marchand au Canada.

Pour vérifier cette théorie et comme fondement d'une analyse de régression, les auteurs se sont servis de données de l'Enquête sur la population active et de données microéconomiques sur le revenu familial marchand à l'égard de chacune des cinq régions du Canada et d'un éventail de genres de famille sur plusieurs années pendant cette période, qui viennent de l'Enquête sur les finances des consommateurs de Statistique Canada.

Les auteurs signalent que la hausse à long terme du taux de chômage au Canada fut effectivement un facteur important qui a contribué à la croissance de l'inégalité du revenu familial marchand au pays, et qu'il explique près du tiers de la progression au cours des 20 dernières années.

Dans une explication des mécanismes de cet impact, Sharpe et Zyblock précisent qu'au Canada, la détérioration plus marquée des conditions du marché du travail pour les hommes que pour les femmes s'est traduite par une augmentation de l'inégalité du revenu chez les hommes qui a alimenté la progression globale de l'inégalité du revenu de la famille. L'accentuation de l'inégalité des gains chez les hommes pendant cette période est le reflet d'une inégalité accrue à la fois des heures travaillées et des salaires horaires. En outre, un nombre beaucoup plus élevé d'hommes connaissent des périodes de chômage d'une durée supérieure à un an, et beaucoup plus d'hommes abandonnent la population active.

Les auteurs aboutissent à la conclusion que la principale incidence de leur document de travail sur le plan des politiques est la suivante : le rendement macro-économique influe sur la répartition du revenu [familial marchand] au Canada, contrairement à ce qui se passe aux États-Unis. Une croissance économique plus vigoureuse au Canada et la baisse du taux de chômage qui s'ensuivrait contribueraient à réduire l'inégalité du revenu marchand. Bien qu'elle ne constitue absolument pas une panacée, la réduction du chômage est une condition nécessaire à un retour à une ère moins marquée par la disparité du revenu marchand.

Compte tenu des réductions récentes des paiements de transfert des gouvernements, comme les prestations de bien-être et d'assurance-emploi, ajoutent les auteurs, on s'attend à ce que les revenus des personnes situées dans les quintiles inférieurs soient touchés de façon néfaste et disproportionnée. Par conséquent, une plus grande égalité des revenus marchands s'impose afin d'éviter une hausse de l'inégalité du revenu familial global, principal indicateur de l'inégalité pour la société.

Toutefois, même au Canada, des facteurs structurels - tant économiques (la mondialisation et la technologie) que démographiques (les changements dans la composition des familles selon l'âge du chef de famille et le genre de famille) - jouaient somme toute un rôle deux fois plus important que les facteurs macro-économiques dans la croissance de l'inégalité du revenu familial marchand. Aux États-Unis, les facteurs structurels doivent de toute évidence avoir été à l'origine de la totalité de la progression.

Selon les auteurs, la situation vécue aux États-Unis montre que les facteurs structurels favorisant l'inégalité, s'ils sont assez vigoureux, ne semblent pas être contre-balançés par les effets de réduction de l'inégalité qu'entraînent une solide performance macro-économique et un faible taux de chômage.

C'est sur l'évaluation de l'incidence de ces facteurs structurels sur la hausse de l'inégalité du revenu familial marchand au Canada que Zyblock se penche dans son récent document de travail intitulé : «Why is Family Market Income Inequality Increasing in Canada? Examining the Effects of Aging, Family Formation, Globalization and Technology.»

L'étude met l'accent sur des familles dont le chef a moins de 65 ans. Elle ventile en premier lieu l'accroissement de la variation de leurs revenus marchands entre 1984 et 1993, les deux plus récentes années creuses dans le cycle du revenu familial. La ventilation a été effectuée pour quatre groupes d'âge (moins de 35 ans, 35 à 44 ans, 45 à 54 ans et 55 à 64 ans) et quatre genres de famille (couples sans enfant, couples avec enfants, parents seuls et autres).

Zyblock soutient que si la croissance a touché principalement un groupe d'âge ou un genre de famille *par rapport* aux autres, c'est que le rôle des facteurs structurels comme la mondialisation ou la technologie doit être relativement faible; par ailleurs, si la hausse survient principalement *dans* les groupes d'âge et les genres de famille, cela signifie que ces facteurs ont un rôle important à jouer.

La ventilation montre que la hausse croissante de l'inégalité *au sein des groupes*, plutôt que *d'un groupe par rapport à un autre*, est le principal élément moteur de l'augmentation de l'inégalité du revenu familial marchand, et donne à penser que la mondialisation et l'innovation technologique ont eu une incidence importante sur la répartition des salaires et (ou) des heures de travail. Confirmant ce que des travaux de recherche antérieurs avaient laissé entrevoir, Zyblock a constaté que l'inégalité au sein des groupes a augmenté surtout dans les familles du groupe des moins de 35 ans, situation qui concorderait avec une explication selon laquelle la concurrence et la technologie peuvent favoriser des pratiques d'emploi du genre «dernier embauché, premier congédié».

Cependant, les forces démographiques ont également exercé des influences importantes sur la répartition du revenu familial marchand, bien qu'elles aient agi dans des directions opposées.

Une part disproportionnée de la croissance de l'inégalité est liée aux parents seuls.

Les déplacements de population entre les groupes d'âge ont tendance à *égaliser* les revenus marchands étant donné que la proportion de familles affichant des niveaux élevés d'inégalité au sein des groupes - celles ayant à leur tête des personnes de moins de 35 ans ou dont l'âge se situe entre 55 et 64 ans - a diminué entre 1984 et 1993. La diminution de 34,2 % à 28,7 % de la part des familles à la tête desquelles on trouve une personne de moins de 35 ans compense les répercussions favorisant la croissance de l'inégalité qui accompagnent une baisse de leurs revenus marchands relatifs, qui passent de 83,4 % à 79,0 % du revenu moyen pour l'ensemble des genres de famille.

Parmi les groupes d'âge, Zyblock a constaté que celui qui contribue le plus à l'augmentation de l'inégalité est le groupe en croissance des familles de 35 à 44 ans qui ont des revenus relatifs élevés et croissants. Ce groupe représente la moitié de l'augmentation de l'inégalité du revenu marchand entre les groupes d'âge. (Voir le tableau.)

Contributions à la hausse de l'inégalité du revenu familial marchand			
Selon l'âge du chef de famille et le genre de famille, 1984 à 1993			
Âge du chef de famille	Contribution en %	Genre de famille	Contribution en %
< 35	22,8	Couples mariés - sans enfants au foyer	28,9
35-44	50,6	Couples mariés - au moins un enfant <18	5,6
45-54	24,9	Parents seuls - au moins un enfant <18	60,8
55-64	1,7	Autres familles	4,7

Source: Zyblock, Myles. *Why is Family Market Income Inequality Increasing in Canada?* Développement des ressources humaines Canada, p. 12 et 17.

Des changements dans la composition des familles selon le genre de famille, cependant, ont contribué à la hausse de l'inégalité globale, étant donné que la part des genres de famille affichant un faible taux d'inégalité au sein du

groupe (comme les couples avec enfants) a diminué, tandis que la part des genres de familles affichant un taux élevé d'inégalité au sein du groupe (comme les parents seuls) a augmenté pendant la période. Ces changements de composition représentent tout près d'un tiers de l'augmentation totale de l'inégalité du revenu marchand des familles pendant la période.

Les parents seuls, qui représentent à peine un dixième de l'ensemble des familles, ont contribué de façon disproportionnée à l'augmentation de l'inégalité. Bien que leur part de la population de familles ait augmenté, leur revenu marchand moyen est passé de 38,1 % à 33,3 % du revenu moyen de l'ensemble des familles; et la répartition du revenu marchand au sein du groupe des parents seuls est devenue plus inégale. Compte tenu de ces trois facteurs qui ont accru leur apport à l'inégalité globale, les parents seuls représentent 60 % de l'augmentation totale de l'inégalité du revenu marchand des familles entre 1984 et 1993.

The Changing Workplace and Public Policy

Workplaces are changing. Research of the Organization for Economic Cooperation and Development (OECD) shows that about one-quarter of enterprises in member countries have adopted new approaches to human resource management and organizational practices.

These new practices are generally aimed at increasing flexibility. They may be broadly characterized as either *numerical or functional*. Numerical practices include hiring and layoffs, altering hours of work, using part-time and contract workers, subcontracting, and outsourcing work. Functional approaches include such elements as fewer hierarchical structures, more fluid job designs, multi-tasking, multi-skilling, self-managed teams, and multi-functional teams. In general, adoption rates for new practices increase with firm size, the rate of technological change, and the degree of international competition.

Workplace innovation has been shown to favourably affect enterprises by enhancing organizational adaptability and by expanding the contribution of intangible assets, including human resources. It is reasonable to assume that these changes have also had an aggregate effect on productivity and output, to the extent that they are diffused throughout national economies. As well, providing opportunities for highly-skilled and rewarding work and increasing human capital investment are clearly desired by employees. However, some aspects of workplace change do raise important concerns for society because of their possible impact on the polarization of economic opportunity and security for workers.

In December 1996, over 150 business, labour, and national experts from OECD countries recently convened in Ottawa at a conference hosted by former Minister of Labour the Honourable Alfonso Gagliano to consider the nature of workplace change and its implications for society. Dr. Gordon Betcherman, Conference Rapporteur, prepared a synthesis of the conference discussions alongside recent research on workplace change in OECD countries. The report highlights the interconnections between workplace change issues and the vital need for business, labour, and government to work together to ensure that potential productivity gains are realized and equitably shared.

Highlighting this need to work together, Bob White of the Canadian Labour Congress reported:

Here in Canada, some unions and employers have achieved good working relationships and have negotiated workplace changes which reduced narrow job classifications, gave more authority to front line workers, increased investments in skills, and generated significant productivity and quality improvements while also improving the quality of life in the workplace. The common feature of these positive examples was a negotiated process of change, in which the union played a major role as the legitimate collective voice of workers.

"Governments cannot impose attitudes and behaviours. They can inform and raise awareness." - Hon. A. Gagliano

Conference participants discussed in depth how governments can support employers and employees to achieve effective and efficient workplace change. Said former Labour Minister Gagliano:

Governments cannot impose attitudes and behaviours. But governments can stimulate study and discussion. They can inform and raise the awareness of the public. They can create the environment needed to effect change.

The conference participants focussed on several key themes for public policy respecting the changing workplace:

- *Fostering the diffusion of results of workplace change research that will lead to desirable macroeconomic outcomes. Many OECD governments are signalling their intention to develop expertise to address the information barriers to "best practice" in organizational change and to encourage institutional frameworks which may support these practices.*
- *Supporting the "learning society." Public policy priorities include ensuring on-going access to basic skills education; supporting efficient human capital development through improved information, counselling, and standard setting; promoting linkages within the education sector, between that sector and the labour market, and with industry technology diffusion policies; and addressing problems of inequitable access.*
- *Providing economic security. New strategies will have to be devised so that one's economic security does not depend upon a standard job with one employer. If increased flexibility in the economy is bought at the expense of worker security, the gains will not likely be sustainable.*

Gordon Betcherman acknowledged:

In the industrial paradigm of the postwar decades, the notion of security involved protection from change. This notion clearly is being redefined in the emerging postindustrial paradigm, with security now being viewed as the ability to change.

- *Refashioning the "social contract." The conference highlighted the recognition that, ultimately, the transformation of the workplace for the knowledge-based economy will depend on a revitalized and workable social contract. In general, OECD economies have operated in the post-war period with the cornerstone goals of full employment and state provision of social security and collective employment insurance. However, over time these cornerstones have weakened. In the process, the social contracts they supported have become more fragile. A key ingredient of a revitalized social contract must be access to human capital investment opportunities that foster lifelong learning and enhance employability.*

A key ingredient of a revitalized social contract must be lifelong learning opportunities that enhance employability.

A key conference consensus was that government must lead the way in workplace change. New strategies, skills and behaviours that enhance the capacity for innovation in the public sector must underpin the leadership in the areas highlighted by the participants. Ed Bales of Motorola Corporation summarized this thought:

One of the major barriers to the implementation of high performance public policy is that most of those organizations trying to define public policy are terrible examples of high performance workplaces.

In a sense, the challenges associated with public workplace-change policy all come down to learning: for employers, to take advantage of knowledge that can improve productivity and profitability; for workers, to increase their security in a changing world; for governments, to enhance their ability to be proactive in support of this process; and, for all stakeholders, to find mutually beneficial ways of refashioning the social contract.

Transfers and Taxes Do Level Out the Differences

Government transfers and income tax provisions have levelled out some of the disparities in market income (i.e., income excluding government transfers). According to a research paper by Applied Research Branch (ARB) analyst Michael Hatfield, between 1984 and 1993 inequality in disposable family income (i.e., income after transfers and income taxes) fell by 3.6 percent. "Government transfers and the income tax system not only reduced the level of family income inequality, they also overcame a trend towards increased inequality in the distribution of market income."

Drawing on data files from Statistics Canada's Survey of Consumer Finances, the report focusses on overall trends in market and disposable income by age and family type (singles, couples with and without children, and lone parents). Real average incomes (incomes corrected for inflation) and income inequality are examined both individually and together.

"The Canadian government ... [personal] transfer and income tax system reduce[s] inequality not only between but

within family types," the paper concludes. Those family types "with relatively low average market incomes have their income levels raised by the combined effects of income taxes and government transfers, while types with relatively high market incomes pay significantly more in income taxes than they receive in ... [personal] transfers."

The author then examines the period between the two most recent trough years in market family income, 1984 and 1993. He divides the period into two phases, the expansion (1984-1989) and the contraction (1989-1993). Real average family market incomes in Canada were only 1.3 percent higher in 1993 than in 1984, and real disposable incomes were almost the same in both years. But the author finds that "these small changes do not reflect stagnation over the entire period. Rather, they are the net result of [the] two sharply opposed trends from 1984 to 1989 and from 1989 to 1993."

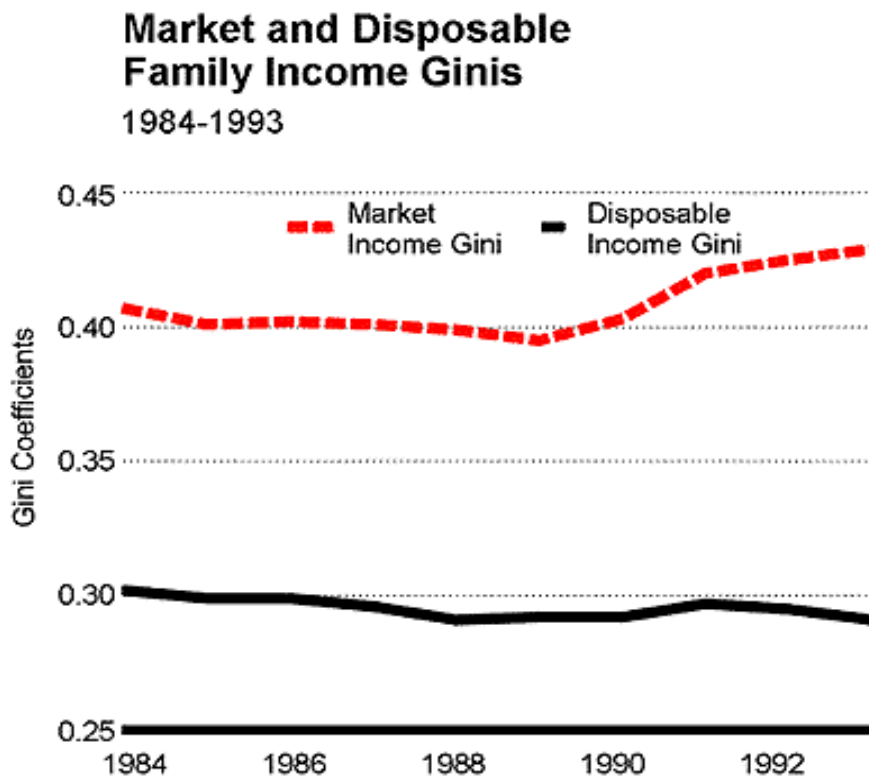
For families with children, government transfers and income taxes have become more progressive.

Over the first phase, real average family market incomes increased by 12.4 percent, while real average family disposable incomes rose by 7.1 percent, both reaching all-time highs. During the second phase, however, both fell sharply - market income by 9.9 percent and disposable income by 6.5 percent. Government transfers and income taxes had their greatest effect during the contraction.

For all family types except older married couples, disposable income became more equal between 1984 and 1989. But in the contraction years, the situation was more complex: real average incomes fell for all family types, while disposable income became more equally distributed for lone mothers, older couples, and older unattached individuals - the family types most dependent on government transfers as a source of income, the study notes.

For families with at least one child under age 18, data from the Canadian Council on Social Development discussed in the report suggest that government transfers and income taxes became more progressive over the period of the ARB study. The proportion of cash transferred to families in the lowest 40 percent of the income distribution rose from 60.4 to 66.1 percent, while the share of income taxes paid by families in the upper 40 percent of the distribution rose from 74.9 to 77.0 percent.

It appears, then, that welfare, Employment Insurance, and the income tax system have worked through time to level out the distribution of income in Canada.



Note: The Gini coefficient is a measure of inequality based on the Lorenz curve. When the Gini equals zero, all units have the same income. When the Gini equals one, one unit has all the income and all the other units have zero

income. Thus, the higher the Gini, the greater the inequality in the distribution of income.

The Earnings Supplement Project

The Earnings Supplement Project (ESP) is a multi-site demonstration project testing the use of an innovative financial incentive designed to hasten the re-employment of displaced workers and repeat users of employment insurance. ESP's financial incentive is based on the notion of "earnings insurance." Eligible participants who left Employment Insurance (EI) for full-time work within a specific period of time and had to take a new job that paid less than their previous one could receive a supplement that made up 75 percent of the earnings loss for up to two years.

Between March 1995 and June 1996, the project enrolled 8,144 participants in Saskatoon (Saskatchewan), Winnipeg (Manitoba), Toronto (Ontario), Oshawa (Ontario), and Granby (Quebec), all of whom had been permanently displaced from their jobs. Also, 3,414 seasonal repeat users of EI were enrolled in St. John's (Newfoundland), Halifax (Nova Scotia), Moncton (New Brunswick), and Levis (Quebec); these participants were applying for benefits for at least the fourth year in a row. Since the project uses a random assignment evaluation design, half of those enrolled were eligible to receive an earnings supplement and half were assigned to a control group.

Under the ESP, displaced workers were given 26 weeks to find a new job; repeat EI-users were allowed 12 weeks. In calculating the supplement amount, earnings in the old job that exceeded the maximum level of EI-insurable earnings were not taken into account. The maximum supplement payment was set at \$250 a week. The ESP project is funded by Human Resources Development Canada and operated by Social Research and Demonstration Corporation.

From the outset, experiences at the displaced worker sites and the repeat EI-user sites were markedly different. About 95 percent of the displaced workers who were offered a chance to take part in the project agreed to do so. In addition, although the eligible displaced workers hoped that they would not have to take up the supplement offer, they were interested in having this extra support available if they needed it.

In contrast, only 40 percent of the repeat EI-users who were contacted completed an ESP application form and agreed to participate. The majority had little interest in the offer and did not see how it would be of use to them. These initial reactions were reflected in take-up rates (i.e., the percentage of eligible participants who actually left EI within the time available to them, experienced an earnings loss, and initiated a supplement payment). Among displaced workers, the take-up rate was 16 percent. Since earlier studies have suggested that only about a third of displaced workers actually end up in lower-paying jobs on becoming re-employed, this take-up rate may represent about half of those who could potentially have benefited from the offer. Among repeat EI-users, however, the take-up rate was only 4 percent.

Based on the low take-up rate, it is very unlikely that the supplement offer had any effect on the labour market behaviour of repeat EI-users. However, it might have made a difference with displaced workers, particularly by encouraging them to consider a broader range of jobs. But take-up does not equal impact. In order to measure the effects that ESP's supplement offer actually had, we need information on the subsequent employment, earnings, and EI-benefit receipt of those who were able to receive a supplement and of project participants in the control group who were not. Data of this sort are currently being collected by Statistics Canada in a 15-month follow-up survey. A preliminary report on the impacts and costs based on this survey will be available in 1998.

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