

Applied Research Bulletin - Volume 2, Number 2 (Summer-Fall 1996)

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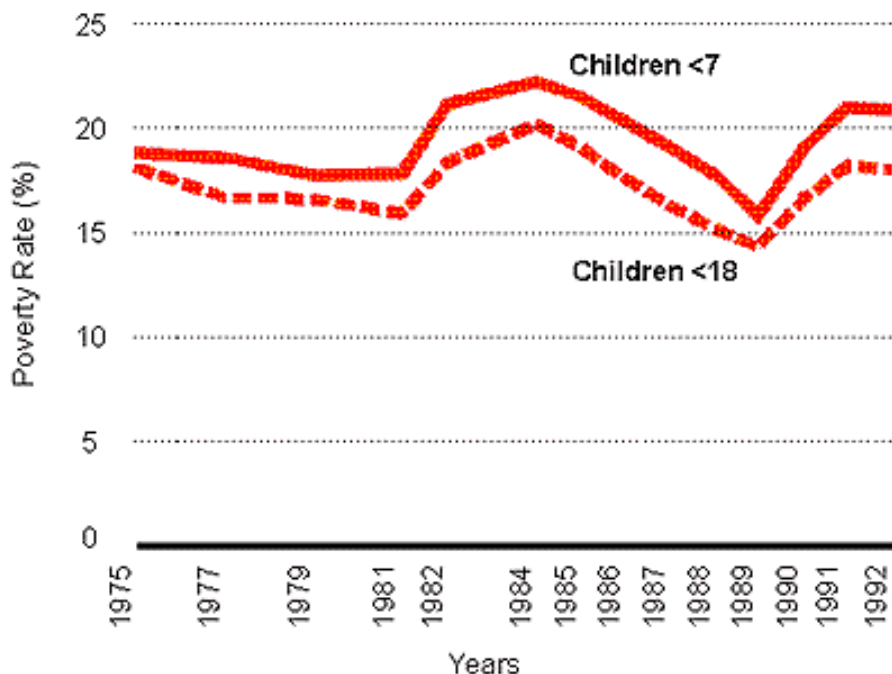
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Why Has the Child Poverty Rate Failed to Fall?

Poverty rates for children in both two-parent and lone-parent families were lower in 1992 than they had been in 1975. But this positive news is accompanied by a disturbing trend. The aggregate child poverty rate, calculated by including the children of both two- and lone-parent families, remains stubbornly high. In 1992, that rate stood at 18 percent — the same place it was back in 1975. Why has the aggregate child poverty rate failed to fall? A recent Applied Research Branch research paper by Myles Zyblock provides some interesting insights into this trend.

Child Poverty in Canada: 1975-1992

Children <18 and Children <7



Note: Poverty rate calculations are based on Statistics Canada's Low Income Cut-Off Lines (1986 based).

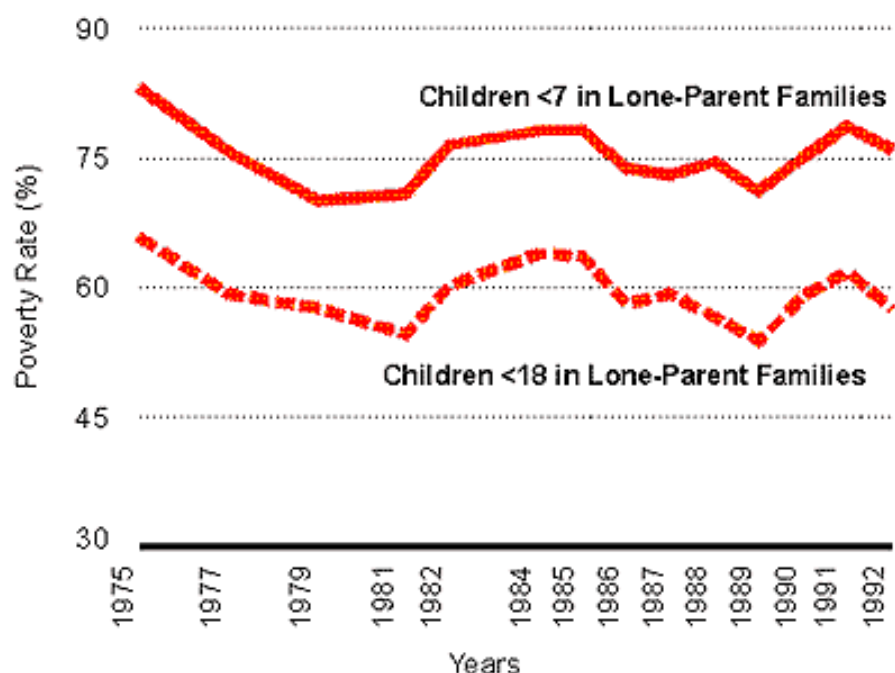
Source: Survey of Consumer Finances

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The paper focuses on the years 1975 and 1992, two similar years in the economic cycle, and examines the forces determining the trends in child poverty rates. Changing economic conditions are a major factor influencing trends in child poverty rates. Sustained economic growth, for example, reduces the long-run risk of children falling into poverty. In 1975, the poverty rate for children under 18 years of age in lone-parent families stood at 65.8 percent. By 1992, that number had fallen to 57.6 percent. For children under 18 in two-parent families, the poverty rate fell from 13.5 percent in 1975 to 11.2 percent in 1992. Similar findings were reported for children under seven.

Child Poverty in Canada: 1975-1992

Children <18 and Children <7 in Lone-Parent Families

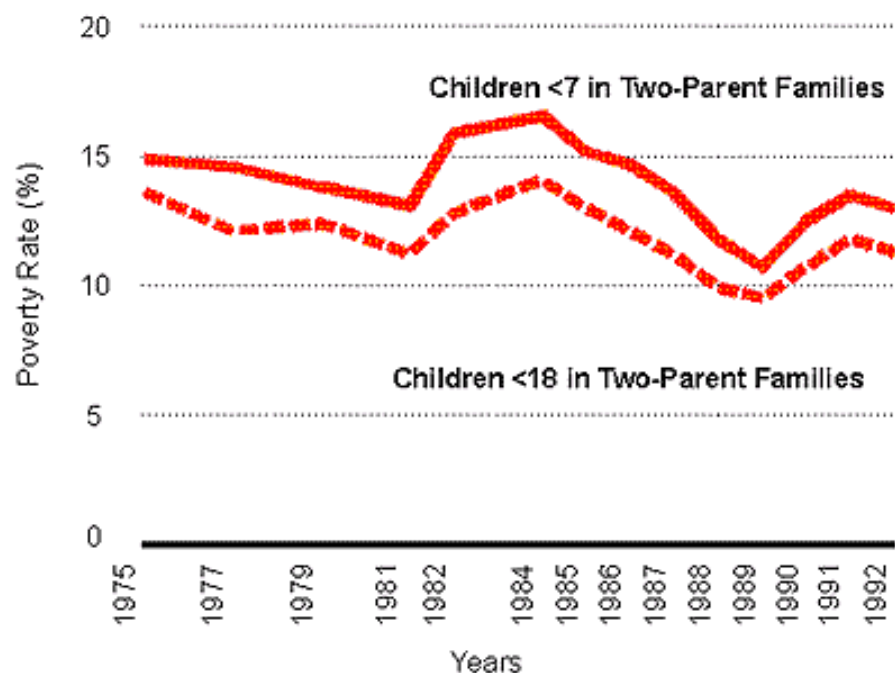


Note: Poverty rate calculations are based on Statistics Canada's LowIncome Cut-Off Lines (1986 based).

Source: Survey of Consumer Finances

Child Poverty in Canada: 1975-1992

Children <18 and Children <7 in Two-Parent Families



Note: Poverty rate calculations are based on Statistics Canada's LowIncome Cut-Off Lines (1986 based).

Source: Survey of Consumer Finances

Despite the decreasing economic risk of falling into poverty, poverty rates for all children have not decreased from 1975 to 1992. Why? During this time period, a dramatic shift occurred: many more children are now growing up in lone-parent families. This change has offset the benefits of economic growth. In 1975, 8.7 percent of children lived in lone-parent families. By 1992, nearly one million children — 14.7 percent of all children — lived in lone-parent families. For children under seven, the increase was even more dramatic. In 1975, 5.8 percent of young children lived in lone-parent families. By 1992, that number jumped to 12.6 percent.

The growth in the proportion of children in lone-parent families has offset the benefits of economic growth for child poverty.

The growth in the proportion of children under seven in lone-parent families has been so dominant that it has more than wiped out the benefits of the decreasing risk of poverty for children in both two- and lone-parent families. If the relative proportions of children under 18 living in two- and lone-parent families remained at the 1975 levels, the aggregate child poverty rate would have been 2.8 percentage points lower in 1992.

Although the aggregate poverty rate has remained high, the depth of child poverty, defined as the difference between the poverty line and the family's income, has declined from 1975 to 1992. In 1975, poor lone-parents with children under 18 had 56 percent of the income needed to escape poverty. By 1992, these lone-parents had 62 percent of this poverty-line income. Poor two-parent families with children also increased their incomes from 67 percent of the income needed to move across the poverty line to 69 percent. During the same time period, poor parents, especially those with young children, became much more dependent on government transfers as a major source of income.

Proportion of Income from Government Transfers for Poor Families

Family Type	1975	1992
Lone-Parent, Children under 18	59.7%	71.3%
Lone-Parent, Children under 7	63.3%	78.9%
Two-Parent, Children under 18	26.7%	42.9%
Two-Parent, Children under 7	24.6%	47.7%

Note:Poverty rate calculations are based on Statistics Canada's Low Income Cut-Off Lines(1986 based).

These trends in the characteristics of poor families suggest future increases in child poverty. There are two specific concerns:

- If the growth in the proportion of children in high-risk, lone-parent families continues, child poverty may become increasingly independent of changing economic circumstances.
- If the trend toward increased dependency on government transfers by poor parents continues, the benefits of economic growth may not be transmitted to the poor since they will not share in the gains of economic growth.

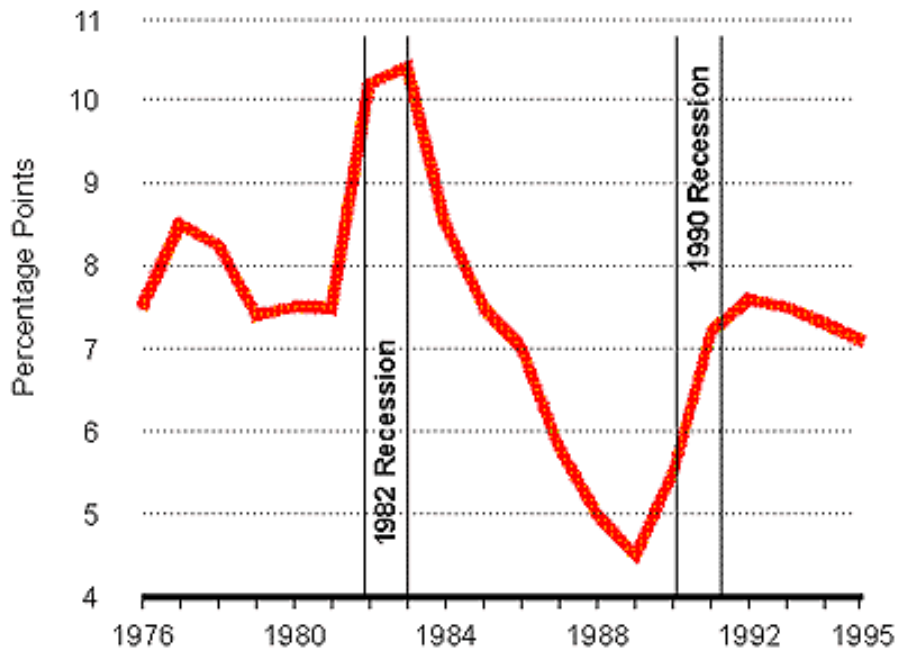
To gain a more accurate picture of the outlook for child poverty, the influences of government transfers, demographic change and economic forces must be further disentangled from one another. Look for two upcoming Applied Research Branch papers concerning these issues. One will focus on the effects of parents' earnings in the labour market on the risks of child poverty; the second will analyze the influence of economic growth on rates of child poverty.

Youth Employment: Some Explanations and Future Prospects

There are big differences between the employment situations for youth and adults. Youths (15 to 24 year olds) experienced an unemployment rate consistently higher and more cyclical — increasing more in economic

downturns and falling more in upturns - than the unemployment rate for adults (25 year olds and over). Moreover, youth employment has still not recovered from the last recession. The number of 15 to 24 year olds working fell by about 500,000 while adult employment rose by one million between the first quarter of 1989 and the fourth quarter of 1995. What's happening here? A recent study conducted by Claude Lavoie of the Applied Research Branch addresses that critical question.

Difference Between Youth and Adult Unemployment Rates



[Text Version](#)

Lack of seniority of young workers appears to be a key factor explaining why the youth unemployment rate has been consistently higher and more cyclical than that for adults. This factor and an atypically weak economic recovery combined to produce the significant decline in youth employment since 1989. The grim condition of youth unemployment is primarily the result of layoff practices in the labour market. Employers seem to give significant weight to seniority or job tenure in determining the order of layoffs and recalls. The practice is particularly evident in strongly unionized sectors of the economy where collective agreements play a major role in determining layoff rules. The result? Youth unemployment obeys a "last-in-first-out" pattern. This means that young workers are more affected by economic downturns and experience a higher turnover rate than their older counterparts.

A comparison of the differential between the youth and adult unemployment rates reveals that the contributors to the differential are the flows from *employment* to *nonemployment* status, either to *unemployment* or *out of the labour force*. The high flow of youths from *employment* to *unemployment* raises their unemployment rate relative to the adult population by increasing the number of unemployed youths while leaving the size of their labour force unchanged. The flow of youths from *employment* to *out of the labour force* also contributes to increase their unemployment rate relative to that of adults. It decreases the size of their labour force while leaving the amount of unemployed youths unchanged.

Interestingly, the share of *voluntary* quitters in these flows out of employment, especially among nonstudents, does not appear to be higher among youths than adults. Therefore, the high youth unemployment rate must be related to the higher propensity for youths to lose their jobs.

Further, the higher propensity for young workers to become nonemployed does not reflect the characteristics of the jobs youths usually hold. More than half of the youth workforce is concentrated in six occupational groupings — youth-intensive occupations — and in seven industries — youth-intensive industries. Adult employment in youth-intensive occupations is as stable as in non-youth-intensive occupations. Young workers, on the other hand, have a higher propensity of becoming nonemployed in both youth- and adult-intensive occupations.

Gross Flow Contributions to the Youth-Adult Unemployment Rate Differential

(Percentage Points)

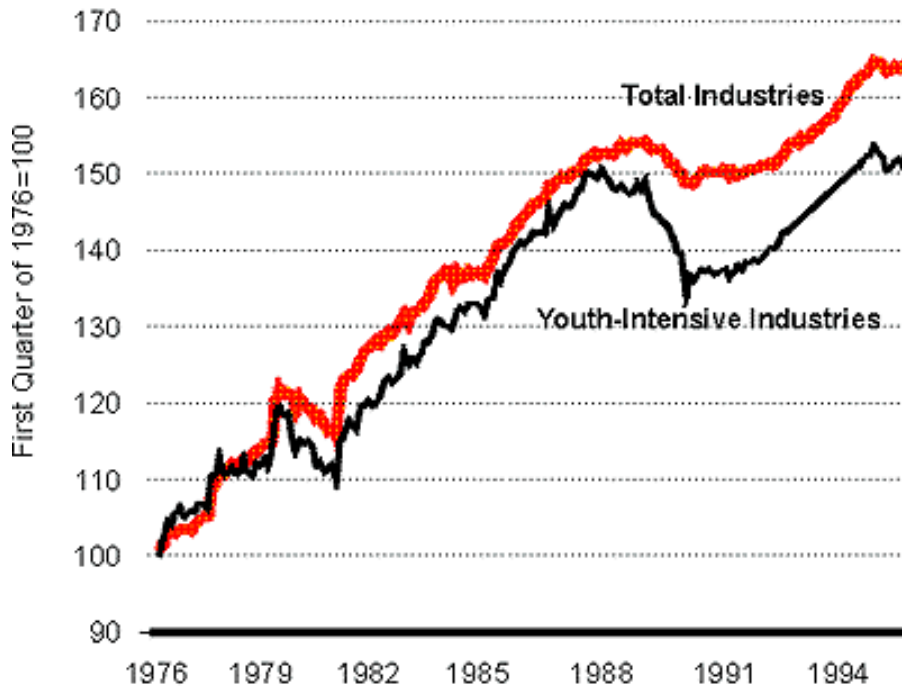
Year	(1)	(2)	(3)	(4)	(5)	(1)+(2)+(3)+(4)+(5)
	Becoming unemployed when employed	Leaving the labour force when employed	Leaving the labour force when unemployed	Becoming employed when unemployed	Becoming unemployed when entering the labour force	Total unemployment rate differential
1985	4.8	5.6	-0.8	-1.2	-0.8	7.6
1986	4.9	5.4	-0.7	-1.3	-1.3	7.0
1987	4.7	5.2	-0.8	-1.7	-1.4	6.0
1988	4.0	4.8	-0.6	-1.5	-1.4	5.3
1989	3.6	5.1	-0.6	-2.0	-1.5	4.6
1990	4.1	4.8	-0.9	-1.1	-1.3	5.6
1991	4.9	6.5	-1.3	-1.2	-1.7	7.2
1992	4.9	7.4	-1.6	-1.5	-1.4	7.8
1993	4.9	8.0	-1.8	-1.6	-1.8	7.7
1994	4.1	7.9	-1.8	-1.0	-1.8	7.4

Note: Using Statistics Canada gross flows series, the unemployment rate gap between the youth and adult populations may be broken down in terms of differences resulting from the labour market transition probabilities. This table provides such a decomposition. Each column gives the unemployment rate equivalent, in percentage points, of the youth-adult unemployment rate differential. The total differential is, by definition, equal to the sum of the five columns.

The first two columns show the differences resulting from the probabilities of moving from employment to unemployment (column 1) and from employment to out of the labour force (column 2). The high flow of youths from employment to unemployment raises their unemployment rate relative to the adult population by increasing the number of unemployed while leaving the size of their labour force unchanged. On the other hand, the flow of youth from employment to out of the labour force contributes to increasing their unemployment rate relative to the adult population by decreasing the size of their labour force while leaving the amount of unemployed youths unchanged. Young workers have a higher propensity than adult workers to leave the labour force when unemployed, contributing to reduce the unemployment rate gap between these groups (column 3). This table also shows that a young individual entering the labour force has a better chance than adults of finding work when entering the labour force (column 5) or finding reemployment when displaced (column 4).

Youth-intensive industries are less cyclical than other industries. Therefore, industry cyclical patterns cannot explain the higher sensitivity of the youth employment rate to economic cycles. Occupation and industry dimensions do not seem to be important factors in explaining the higher and more cyclical youth unemployment rate.

Real GDP by Type of Industry



[Text Version](#)

In the final analysis, the greater vulnerability of youth to job loss must result from their *own* characteristics. The two major characteristics setting young and older workers apart are education and lack of seniority or experience. The level of education does not appear to be a significant factor. That leaves lack of seniority or experience as the main source of variance. As long as this factor continues to carry significant weight, young people will continue to face greater vulnerability in the job market.

The recovery from the recession of the early 1990s is not yet completed and a substantial amount of slack remains in the economy. This makes the "last-in" factor an important reason why youth employment is still weak. But there are other reasons. The industrial composition of output during the recent recession displays an unusually strong decline in youth-intensive industries. Due to relatively weak consumption spending, those industries, especially the retail trade industry, were hit harder than other sectors. Some structural factors, such as a decline in relative demand for lesser-skilled labour, may have also caused a decline in the labour demand for young workers.

Positive news is on the horizon. As the recovery, especially domestic consumption, gains momentum, it can be expected that labour demand for youth will start growing at a faster pace and that the youth unemployment rate will fall more than its adult counterpart in the coming years. The most recent projections provided by the Canadian Occupational Projection System indicate that there will likely be an excess demand for new workers in the skill groupings that correspond to college and secondary education levels. Around 70 percent of the youth population falls into these skill groupings. That excess demand is expected to translate into a happy combination — a fall in youth unemployment and better working conditions.

Labour Market Polarization... What's Going On?

According to the conventional wisdom of the 1980s, the labour market has become a more polarized place — more people earning more, more earning less — and all because the earnings of men and those of women working full time and full year have become more polarized. A closer look at this issue, however, challenges the conventional wisdom. In fact, labour market polarization for the labour force as a whole has not increased from 1984 to 1993.

An Applied Research Branch study by Myles Zyblock examines polarization within 31 different population groups, using several different measures of polarization. In this article, a commonly-used measure of polarization is employed; it is defined as the proportion of individuals earning less than 50 percent and more than 150 percent of the median earnings of their population group. If, for example, a growing proportion of individuals command earnings at levels falling outside the middle earnings group as defined by the 50 and 150 percent boundaries, then that means polarization is increasing.

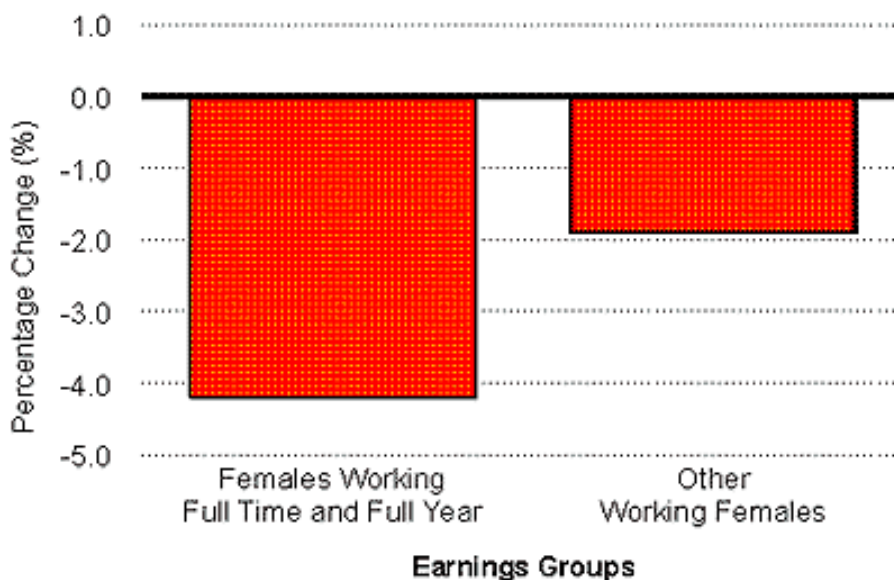
The ARB study focused on 1984 and 1993, two similar years in the business cycle. Overall polarization in the labour market remained unchanged at 58.9 percent from 1984 to 1993. This result reflects the outcome of two opposing forces within the labour market — women's earnings becoming *less* polarized and men's earnings becoming *more* polarized.

Female earners have become a less-polarized group.

Polarization fell from 31.2 percent in 1984 to 29.9 percent in 1993 for women working full time and full year. Similarly, the polarization percentage for those years dropped from 62.4 to 61.2 for all other working women. From 1984 to 1993, polarization for all working women decreased also. Most of the decrease in polarization resulted from significant earnings gains within the bottom 30 percent of each female population group.

Percentage Change in Labour Market Polarization:

Females, 1984 to 1993



Note: Polarization is measured as the proportion of individuals earning less than 50 percent and greater than 150 percent of the median earnings of their group.
Source: Myles Zyblock, 1996

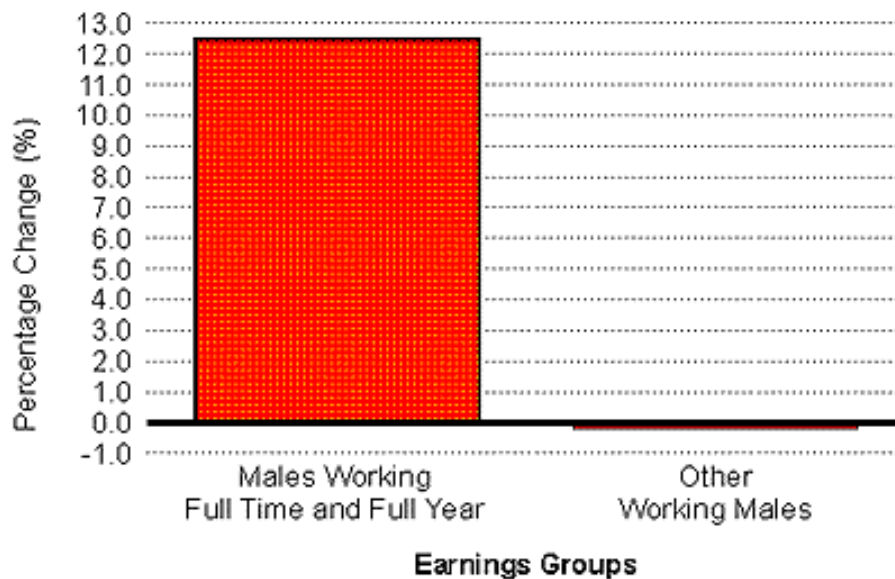
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The labour market continues to polarize men's earnings.

Men's real earnings stagnated from 1984 to 1993. Men working full time did not fare well in the labour market over this period. Their real earnings trickled ahead 1.5 percent. The top 30 percent of men working full time and full year experienced weighty gains in their earnings. This increased polarization in the male population. From 1984 to 1993, polarization posted a 12.5 percent increase for men employed full time and full year. The polarization for all other working men showed no noticeable increase from 1984 to 1993.

Percentage Change in Labour Market Polarization:

Males, 1984 to 1993



Note: Polarization is measured as the proportion of individuals earning less than 50 percent and greater than 150 percent of the median earnings of their group.
Source: Myles Zyblock, 1996

[Text Version](#)

Men and women had different labour market experiences with polarization. The result? Combined, the differences wash out, leaving the aggregate working population at the same level of polarization in 1993 as it experienced in 1984.

Caveat: Rising polarization is a problem for the young.

Young workers, under 35, regardless of gender, have become a more polarized group from 1984 to 1993. The problem is more severe for young men because polarization is rising while real average earnings are falling. Real earnings for young men tumbled six percent from 1984 to 1993. At the same time, polarization for this group increased 3.5 percent over the period. Although young women's earnings advanced by 3.5 percent from 1984 to 1993, they too became a more polarized group going into the 1990s. Polarization for young females rose 2.9 percent during this period.

[Employer-Sponsored Training in Canada: Those Who Got, Get?](#)

Lifelong learning has become a new reality for many Canadians. The nature of occupations is constantly evolving and only a well-trained labour force can provide the capacity to adjust to the profound changes facing the economy. This means that workers must acquire new skills and regularly update existing ones. By providing training opportunities, the workplace will play an increasingly important role in workers' skill development.

Employer-sponsored training already represents a considerable proportion of the training undertaken by the adult population. In 1993, for example, over 50 percent of the training courses and nearly 16 percent of the educational programs were supported, partially or fully, by an employer. Who receives this employer-sponsored training? And who receives the training of the longest duration? A study by Philip Jennings of the Applied Research Branch answers these questions, exploring data from the 1994 Adult Education and Training Survey, conducted by

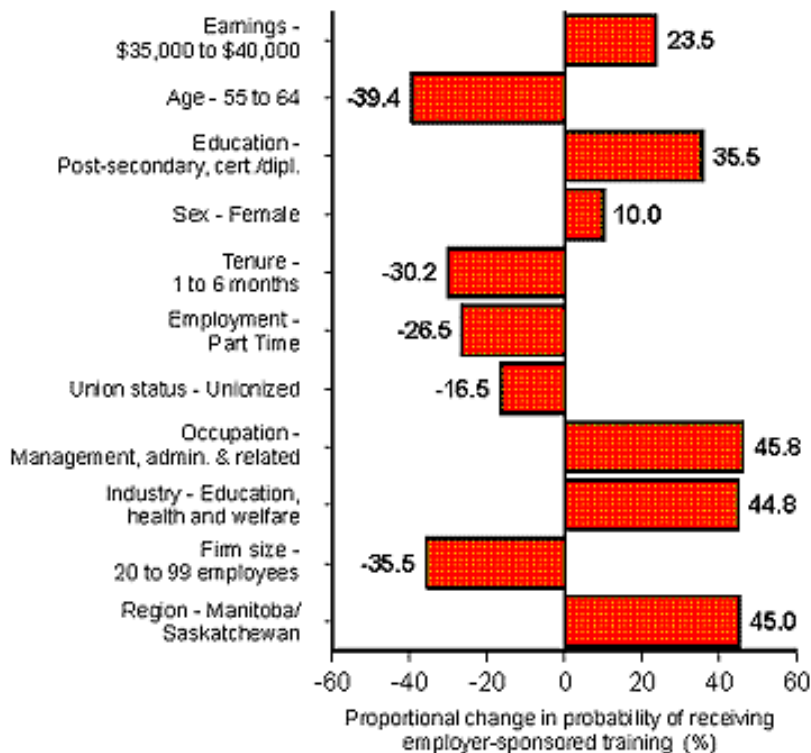
Incidence of Training

There is a disparity in the incidence of employer-sponsored training between different segments of workers. High-income, white-collar workers with post-secondary education had a much higher participation rate relative to blue-collar workers with lower incomes and less education. An econometrics investigation revealed that individuals were more likely to participate in training if they had the following characteristics:

- post-secondary education,
- income of \$35,000 or more,
- female,
- between 25 and 34 years of age,
- worked in a white-collar occupation,
- worked full time,
- worked more than five years with the same employer,
- non-unionized,
- worked for a large firm, and
- employed in Western Canada.

A worker earning between \$35,000 and \$40,000, for example, has a 23.5 percent higher probability of receiving training than the "baseline" worker (defined as a male worker with earnings of \$25,000 to \$30,000, 35 to 44 years old, high school education, one to five years tenure, working full time in a non-unionized clerical occupation in the trade industry for a firm with 500 or more employees located in Ontario). In this comparison, the two workers share common characteristics but for their income levels.

Factors Affecting the Probability of Receiving Employer-Sponsored Training



Note: The probabilities are in relation to the "baseline" worker.

[Text Version](#)

Duration of Training

The likelihood of receiving training is one side of the coin. The duration of the training is the other. In 1993, trainees with the following characteristics received the most hours of employer-sponsored training:

- post-secondary education,
- income of \$20,000 or less,
- male,
- between 17 and 24 years of age,
- worked less than one year with the same employer,
- worked in the construction industry, and
- employed in Western Canada or in the Atlantic provinces.

Different groups of workers appear to receive different types of training. For many variables, including gender and income, there seems to be an inverse relationship between incidence and duration of training. There is evidence of a dual training model: frequent, short training sessions for older and more experienced workers, and infrequent, broader skills training for their younger and less experienced counterparts.

The formal educational background of the trainee appears to be of major importance. It is one of the few determinants that increases both the incidence and the duration of training. This suggests that employer-sponsored training exacerbates the gap in skills between the more and less educated. In other words, employee investments in schooling are further augmented by employer investments in training — those who got, get.

A lifelong learning regime that relies strongly on employer-sponsored training may widen the already unequal distribution of skills.

The lack of basic literacy skills may present the largest obstacle to opening up training opportunities to everyone in the workplace. Preliminary findings from the 1994 International Adult Literacy Survey, the Canadian component sponsored by ARB and the National Literacy Secretariat, show that the link between literacy and access to employer-sponsored training may be stronger than that between formal education and access to this training.

This ARB analysis raises an important concern about Canada's training system; a lifelong learning regime that relies strongly on employer-sponsored training may widen the already unequal distribution of skills. Compared to a more broadly accessible public system, employer-sponsored training limits access to adult education and training for the unemployed and those out of the labour force, as well as providing unequal training opportunities among employed workers.

Working With Technology - Changing Skill Requirements in the Computer Age

Almost one in two Canadians used a computer at work in 1994. That's meant the creation of higher skilled jobs and the elimination of unskilled jobs. And the deepening of computer-based technology (CBT) use in the workplace has caused a general up-skilling of existing jobs. These observations form part of the third wave of the Working With Technology Survey (WWTS III).

Conducted by Kathryn McMullen, from the Canadian Policy Research Networks, for Human Resources Development Canada, the WWTS III supported the general findings of recent international research on the effects of CBT on the skill structure of the economy. Earlier waves of the WWTS showed the progression of technology in all sectors of the Canadian economy except for the agriculture, construction and public sectors. Between 1980 and 1985, the majority of CBT consisted of stand-alone applications. Office applications were more common than manufacturing-process applications. Automation of clerical and secretarial tasks was the predominant result of this CBT. From 1986 to 1991, the emphasis shifted to more sophisticated applications involving data and communications networks. In addition, the focus of applications shifted to work performed by managers and professional/technical workers.

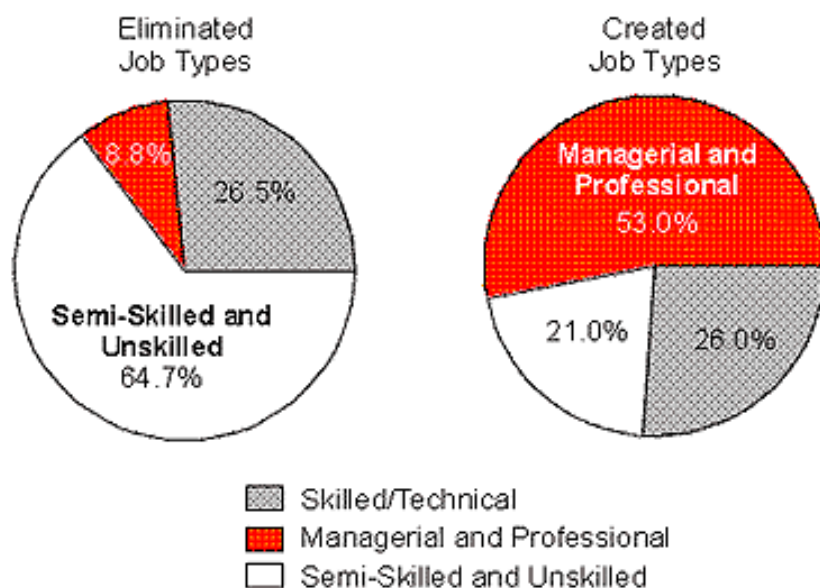
These previous surveys implicitly reinforced the view that, as CBT reaches more deeply into business operations, a

process of skills upgrading occurs. The WWTS III was designed to explicitly address the links between CBT change and the impact on the skills of workers. This survey gathered data directly from employers about computer technology and the way it is affecting skills requirements. The WWTS III focuses on three different dimensions of skill:

- **know-how** — specialized technical knowledge needed to plan and carry out required work;
- **problem-solving** — ability to identify and resolve problems encountered in carrying out work; and
- **autonomy**— scope available to the employee to control the way in which the required work is performed.

Skill Effects of Computer-Based Technology

Percent Distribution of Job Types, 1992-1994



Source: Working with Technology Survey (WWTS III), HRDC

[Text Version](#)

Here are some of the observations of the WWTS III:

- By the end of 1994, the mean percentage of employees in the respondent firms using CBT reached 43. In high-growth industries related to the service economy, including business services, finance, insurance and real estate, the mean was about 20 percentage points higher.
- From 1992 to 1994, the introduction of CBT resulted directly in the creation of largely professional and skilled technical job types and in the elimination of unskilled job types.
- Not only did the share of professional and skilled technical jobs grow over the period, so did the skill requirements for "know-how" for these occupational groups.
- Within the lower-skilled intermediate and unskilled occupational groups, skill requirements relating to "problem-solving" increased. The evidence suggests that these groups are experiencing increasing requirements for skills relating to "autonomy" and "know-how" as well.
- These increases in skill requirements are reflected in a substantial amount of employer-sponsored training which focused, in particular, on computer software and on the skills required of technical, skilled workers.
- Almost four in five of respondents who put some CBT in place during the study period reported that the technology led to the reorganization of work processes.
- While respondents identified a number of obstacles to the introduction and use of CBT, no one factor stood

out. The three most frequently cited obstacles were disruption of work processes and scheduling, the cost of training, and the lack of technically-qualified personnel.

Think about people. Taken together, these findings highlight the need for policymakers to look beyond encouraging investment in new technologies to the people who will be using CBT. To reap the productivity-enhancing benefits of technology, the people side of the equation — how to organize production and management systems, who to train and how — requires attention.

The small size of the WWTS III — 263 respondents — limits the extent to which these conclusions can be unquestioningly generalized across all Canadian firms. The results of the WWTS III, however, are consistent within the survey itself and with related evidence reported by other researchers. See, for example, "Increasingly Complex Jobs = Higher Skills" in this Bulletin. The WWTS III results represent an important addition to Canadian knowledge in the area of CBT.

A related Applied Research Branch report, *Canada Technological and Organizational Change and Labour Demand/Flexible Enterprise: Human Resource Implications*, was recently completed for the Organization for Economic Co-operation and Development. It reports extensively on the results of the WWTS III and related Canadian research, exploring the relationship between technological and organizational change and labour demand in Canada. Organizational issues related to technology will be the subject of an OECD conference hosted by HRDC in December 1996.

Increasingly Complex Jobs = Higher Skills

Jobs have become more complex. The people performing those jobs have higher levels of skill than ever before.

Norman Leckie from the Canadian Policy Research Networks measured the changing skill level of jobs in the Canadian economy during the 1970s and 1980s. The results of his study, prepared for Human Resources Development Canada, are available from the CPRN. This study provides an additional piece of the "skills puzzle," supplementing analysis based on data concerning the educational attainment of workers. Most studies of occupational skill requirements use the level of education as a "proxy" for skill level, focusing on the *workers*. This study, on the other hand, focuses on the *jobs*, examining the changes in the occupational composition of national employment.

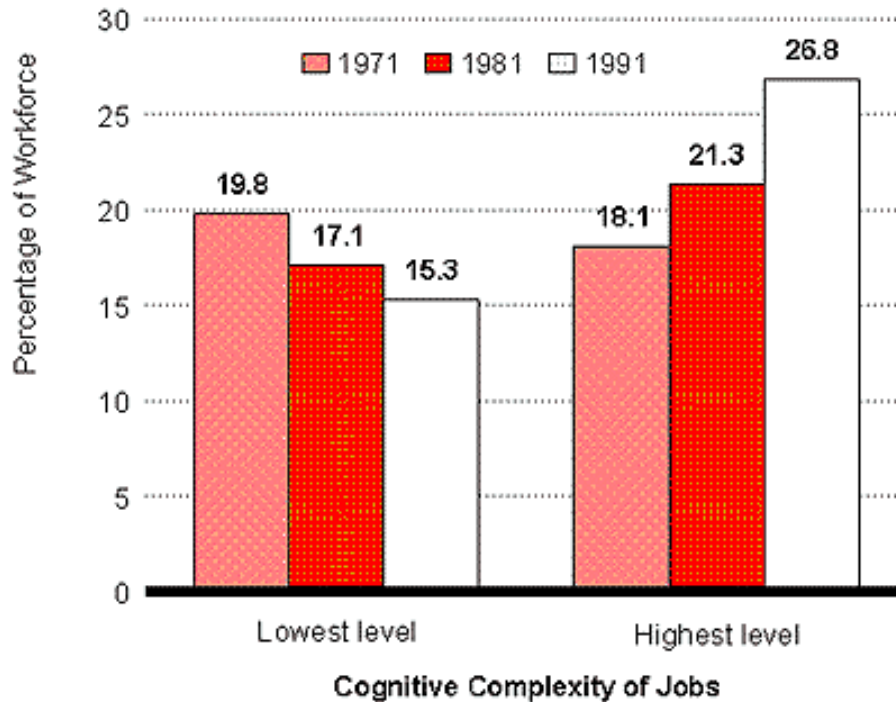
To understand the skill trends, the study begins by examining changes in the broad mix of occupations. Skill levels are arbitrarily assigned to these occupations. The share of total employment in managerial, technical and professional occupations, for example, increased from one-fifth in 1971 to one-third in 1991 — evidence that overall skill requirements in the economy increased over that period.

The second part of the study uses changes in employment by detailed occupation to derive five skill measures: general educational development, specific vocational preparation, cognitive complexity, task diversity and responsibility. The advantage of this approach is that it permits a multi-dimensional examination of skills which are linked directly to the occupations of workers.

For four of the five skill measures (all but responsibility), the distribution of employment at the highest skill level increased steadily over the 20-year period under scrutiny. For example, a person was 12 percent more likely to be in a cognitively more complex job in 1991 than in 1971. Skills upgrading appears to have accelerated during the 1980s, picking up speed during the latter part of that decade.

Change in Cognitive Complexity of Jobs

1971 to 1991



Source: Ekos Research Associates Inc.

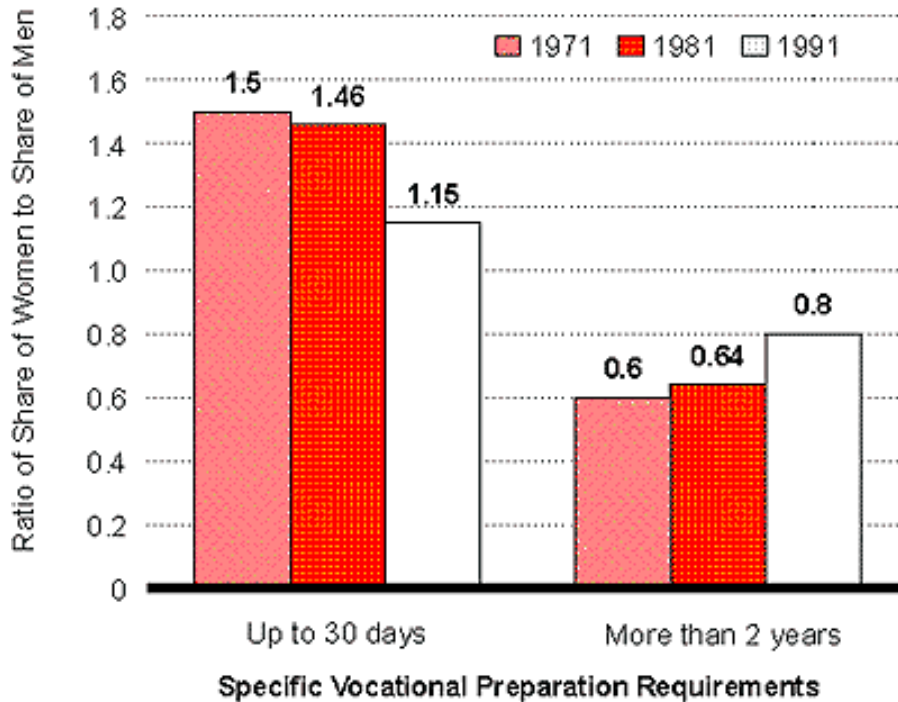
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Despite increases in occupational skill requirements, a large proportion of Canadian jobs continue to be low skilled. In 1991, almost one-half of workers were still in jobs requiring less than six months of training. Almost 40 percent were in jobs that involved the repetition of fairly simple tasks.

Women are more heavily concentrated in lower-skilled jobs than men. In 1991, 52 percent of women but only 44 percent of men were in jobs that required less than six months of training. The study does, however, point to a narrowing of the skills gap in employment for men and women. The female-to-male ratio, in both high- and low-skilled jobs, moved toward parity from 1971 to 1991. In 1971, women were only 60 percent as likely to be in jobs requiring the highest level of training. By 1991, for example, that ratio had increased to 80 percent — a considerable reduction in the occupational skills gap as measured by training requirements.

Training Requirements of Jobs

Relative Shares of Women and Men, 1971 to 1991



Source: Ekos Research Associates Inc.

[Text Version](#)

The approach of this study is limited by its necessary reliance on the skills measures based on a national occupational classification system developed in the late 1960s, and the implicit assumption that the skill content of occupations has remained constant over the years. Despite this limitation, the results of this study are generally consistent with the findings of other Canadian studies, making it a valuable addition to our knowledge of the changing skill levels of Canadian jobs. For more on this topic, see "Working With Technology — Changing Skill Requirements in the Computer Age" in this Bulletin.

Changing Notions of Retirement: A Phased-In Approach

Our notion of retirement may be poised to change. Most of us still view retirement as a singular and abrupt lifetime event. And for many Canadians it's just that. In 1994, for example, 86 percent of those leaving the labour force did so without any adjustment in their work schedules prior to their retirement. Current trends and circumstances, however, suggest that a phased-in approach to retirement may deserve more consideration. A recent report commissioned by Human Resources Development Canada and prepared by human resources specialists William M. Mercer Limited examines issues surrounding phased-in retirement.

Flexible Pension Design

Phased-in retirement starts with a joint decision by employer and employee to reduce the employee's total hours of work over a period of time as the worker moves toward a full and complete retirement. That decision could accommodate the choice to retire before the normal date of retirement as established in the pension plan (e.g. before age 65) or it could accommodate an individual's choice to continue working beyond the normal date of retirement. Either way, flexible pension design could take one of three forms:

- receipt of final pension is delayed completely, enabling the employee to earn new pension credits based on a reduced work schedule;
- receipt of all or part of the final pension, but the employee earns no new pension credits while continuing to

work on a reduced schedule; or

- receipt of the final pension and the employee continues to earn partial pension credits, necessitating the recalculation of the value of the pension when full retirement occurs.

Today's pension plan environment already provides limited opportunities for certain workers to phase-in their retirement. Lengthy service with a single employer, above-average earnings, access to relatively generous employer-sponsored benefits and some investment income are the common features that appear to support existing phased-in approaches to retirement.

Benefits of Phased-In Retirement

Many trends point to the benefits of phased-in retirement. A recent report by the Organization for Economic Co-operation and Development underscores the future fiscal unsustainability of rising social security costs. A crucial means of keeping these costs down could be to counteract the effects of the rate of increase in the total dependency ratio (defined as a comparison of the number of persons in the population who are both older and younger than those of working age, to the number of persons who are between the ages of 15 and 65). This could be done by encouraging workers to stay in the work force longer via phased-in retirement.

From a practical perspective, individuals who begin paid employment later in life, or who interrupt employment due to education or family care needs, for example, may either want or need to remain working longer. This growing legion of workers probably requires a set of more flexible pension plan rules that will not unduly penalize them for having followed non-traditional career paths.

Employers can reduce payroll costs by implementing phased-in retirement. In addition, this approach may create additional employment opportunities within their organization, ensuring higher morale by satisfying the individual needs and aspirations of workers. At the same time, employers can continue to draw on the energies and knowledge of experienced workers, albeit for reduced periods of time.

Employees who can afford to do so may want to broaden their horizons outside of the confines of working life. The continued regular earnings that a phased-in retirement provides may help them to realize some of these other goals while adjusting to the reduced income that usually accompanies full retirement.

Key Findings of Mercer Report

The Mercer report concludes that the current set of supervisory rules and regulations surrounding existing occupational pension plans, in both the private and public sectors, would need to be modified in a number of ways to facilitate a broader adoption of a phased-in approach to retirement. For example, for defined contribution plans, the regulatory requirement that pension plans provide pensions in "equal periodic amounts" represents a barrier to the possibility of earning partial pension credits while receiving part of the accrued pension. If the pension starts in two stages, then the pension will not have been paid in equal payments throughout the employee's retirement.

This regulatory barrier also exists for defined benefit plans. In addition, regulations do not allow employees receiving defined benefit pension payments to earn further pension credits. The report recommends that these regulatory features be examined with a view to supporting increased choice by both employers and employees.

The regulatory requirement that pension plans provide pensions in "equal periodic amounts" represents a barrier.

The Mercer report notes two other major drawbacks to phased-in retirement. The current structure of most pension plans would mean that a more "gentle" or phased-in move to retirement would severely reduce the final value of one's pension at the time of full and final withdrawal from paid work. Another drawback — current attitudes toward retirement. The general expectation of full retirement at an increasingly early age may work against the likelihood that phased-in retirement will gain greater acceptance.

Here are some of the other key findings of the Mercer report:

- A phased-in approach to retirement is more likely to be successful in a situation where an employer has already made generous provision for early retirement, for example, with an early departure incentive.
- Phased-in retirement will be attractive only to the extent that employees can afford to go into semiretirement

rather than remain working full time. Affordability is the ultimate barrier. Data on pensions and RRSP savings suggest that the proportion of the Canadian population who could afford to retire early, without financial incentives, is small.

- Of the two types of pension plan systems, defined contribution plans rather than defined benefit plans are most amenable to a phasing-in of retirement benefits. The sponsors of defined contribution plans, however, tend to be small business owners and operators who may lack the capacity to provide flexible working time arrangements — a critical ingredient in the phase-in process.
- Current Canada Pension Plan retirement provisions are not particularly conducive to a phased-in approach to retirement.

Does phased-in retirement lie ahead for Canadians? Assuming that pension systems become more flexible and that corporate cultures and individual attitudes change, phased-in retirement may be an appealing alternative for employers and employees alike.

Immigration: An Urban Phenomenon

In the past six years, Canada has welcomed nearly 1.5 million new Canadians — the largest consecutive six-year total since the time of Confederation. Today, immigration accounts for over 50 percent of Canada's population and labour force growth. Despite the fact that immigration policies and levels are discussed within a national context, immigration is anything but a national phenomenon. A recent review of immigrants' settlement and migration patterns conducted by the Applied Research Branch revealed that geographical concentration was the norm. The vast majority of recent immigrants settle in Canada's largest metropolitan areas.

Canada's immigration is localized

Over 90 percent of new Canadians settled in Ontario, Quebec, British Columbia or Alberta. Ontario received the lion's share of these new Canadians — more than half of all the immigrants who landed between 1983 and 1995 — even though Ontario's population in 1991 represented only 36 percent of Canada's overall population.

British Columbia and Quebec are the distant second and third most popular provincial destination for new Canadians. Quebec recently lost its second-place position to B.C. This is due to Quebec's adoption of a more labour-demand-responsive system of immigration. Developed in response to depressed labour markets, it resulted in a significant decline in the relative number of immigrants landing in that province after 1993. On the other hand, very few immigrants — less than two percent — intended to reside in one of the Atlantic provinces.

Settlement and secondary migration patterns reveal that the provincial retention rate — the percentage of immigrants who remained in the province in which they intended to reside — was highest in provinces where unemployment was lowest and the GDP per employee was highest. These patterns were consistent from 1983 to 1992. The vast majority of immigrants who, at the time of landing, intended to take up residence in Ontario (87 percent) and Quebec (77 percent) were living there 10 years later. In the case of Quebec, language considerations would have contributed to reduced mobility. Similarly, 80 percent of new Canadians who settled in British Columbia and 68 percent of those who settled in Alberta continued to reside there 10 years after landing in Canada.

The strong provincial retention rates in the most economically vibrant provinces contrast sharply with the low rates reported in provinces with high unemployment and low rates of GDP per employed person. In Newfoundland, the province with the highest overall rate of unemployment over the 10-year study period, only 37 percent of new Canadians who intended to live in that province upon landing in Canada were still there 10 years later. Low retention rates in Nova Scotia (54 percent) and New Brunswick (47 percent) — two other provinces with relatively high unemployment and low GDP per employed person — suggest that new Canadians did not remain in areas where their chances of securing employment were the lowest.

Province of destination for Immigrants Landing, 1983-1995
(Landing Year and Percentage of Immigrants Landing in Province)

Intended Destination	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Atlantic Provinces	2	2	2	2	1	1	1	1	1	1	1	2	2
Quebec	18	17	18	20	18	16	18	19	22	19	21	12	12

Ontario	45	47	48	50	56	55	55	53	51	55	52	52	54
Manitoba	4	4	4	4	3	3	3	3	2	2	1	1	1
Saskatchewan	2	2	2	2	1	1	1	1	1	1	0	0	0
Alberta	12	12	11	10	8	9	8	9	7	7	6	8	6
British Columbia	16	15	15	13	12	14	13	13	14	14	14	21	20

Source: 100% LIDS file; Citizenship and Immigration Canada

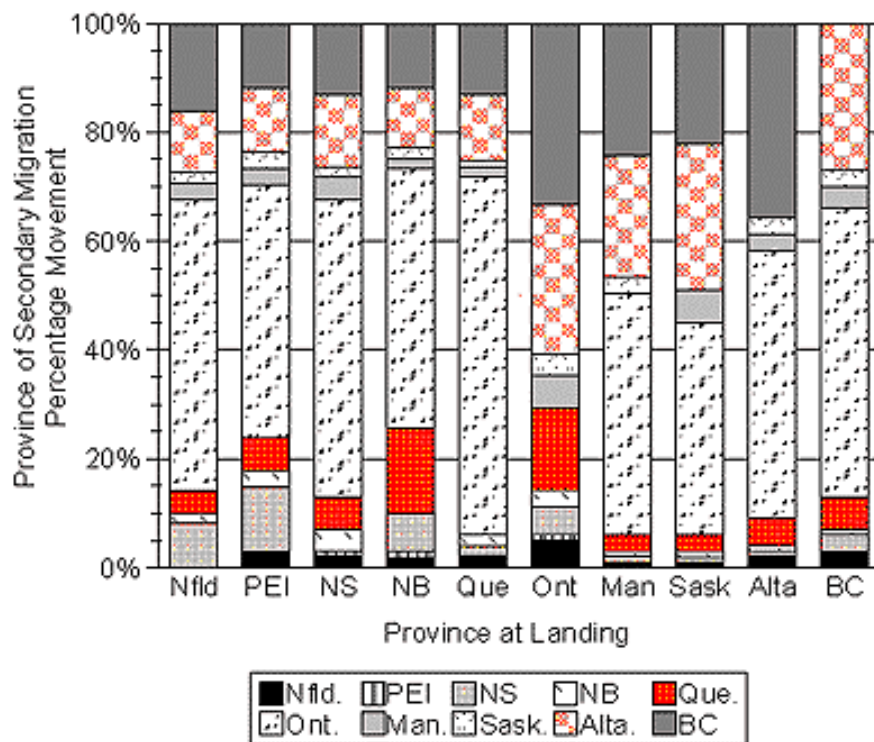
Ontario: A Key Destination

Ontario was, far and away, the most popular provincial destination for new Canadians who chose to relocate between 1983 and 1992. More than half of all the immigrants who left Newfoundland, Nova Scotia, Quebec and British Columbia relocated to Ontario. Comparing the interprovincial mobility estimates for all Canadians to new Canadians only reveals that immigrants were much more likely to relocate to Ontario. In 1989, for example, 47 percent of Canadians who moved from New Brunswick relocated to one of the other Atlantic provinces. That was nearly eight times the proportion of immigrants who landed in New Brunswick and subsequently relocated within Atlantic Canada. Only 17 percent of all Canadians who moved from New Brunswick relocated to Ontario. But for new Canadians that number jumped significantly; 48 percent of immigrants who settled in New Brunswick but later relocated chose Ontario as their home.

Quebec is the only province to which the federal government has delegated responsibility for selecting immigrants. Even in that province, the exodus to Ontario was apparent. All Canadians — immigrants and non-immigrants — leaving Quebec spread across Canada evenly; 20 percent went to Atlantic Canada, 31 percent to Ontario and 33 percent to Alberta and British Columbia. Immigrants relocating from Quebec, however, were more likely to settle in Ontario than in any other province. In fact, two-thirds of all immigrants who intended to reside in Quebec and subsequently decided to move relocated to Ontario.

Inter-Provincial Migration of Immigrants

1983 - 1992



[Text Version](#)

Most immigrants settle in cities

The ARB review revealed a substantial concentration of immigrants in Canada's biggest cities. By 1991, for example, 90 percent of all immigrants who arrived in Canada between 1981 and 1991 were living in an urban centre. The proportion of non-immigrants living in an urban centre in 1991 was only 56 percent — 34 percentage points lower.

Nearly three-quarters of new immigrants were in one of the five largest Census Metropolitan Areas: Toronto, Vancouver, Montreal, Ottawa/Hull and Edmonton. Only one-third of non-immigrants were living in one of those five areas.

It is clear that immigration is an urban phenomenon centred predominantly in Ontario, British Columbia and Quebec. Further, current immigration levels are significantly increasing Canada's population. In recognition of these facts, Human Resources Development Canada recently contributed to a Citizenship and Immigration Canada - Social Sciences and Humanities Research Council initiative to establish four Canadian Centres of Excellence for immigration research. Located in Toronto, Montreal, Vancouver and Edmonton, these centres combine the talents of 15 of Canada's leading universities with the goal of improving our understanding of immigration — how it affects our social, economic and cultural life, as well as education, housing and health care needs. These Centres of Excellence are major components of Canada's participation in the Metropolis Project, an international initiative examining the impact of immigration on cities around the world.

A Look at Discrimination Against Visible Minority Men

When differences in the quality of education and experience are taken into account, the amount of discrimination against visible minority men turns out to be quite small — about one percent in earnings. That conclusion is one of the main findings of a recent research paper by Arnold de Silva, Applied Research Branch, with Craig Dougherty, Citizenship and Immigration Canada. Previous studies looked at two factors to explain the earnings differentials between visible minorities and non-visible minorities — productivity and discrimination. Whatever was not accounted for by productivity differences was attributed to discrimination. This study, however, examines an additional dimension — the differences between the two groups in the quality of education and training received.

The visible minority population in Canada has increased rapidly in recent years. In 1986, 1.24 million members of the visible minority community lived in Canada. By 1991, that number had increased to 2.04 million — an increase of 64 percent. Over the same period, the proportion of visible minority individuals in the Canadian population increased from five to 7.5 percent. Immigration from the Third World explains much of this increase.

It is widely believed that visible minority workers earn significantly less than other workers. Discrimination is one of the most frequently mentioned explanations for this differential. If the earnings gap is due to discrimination, some would argue, this would be a valid rationale for affirmative action programs. On the other hand, if the earnings differential is mainly caused by productivity differences between the two groups, attempts to achieve parity in earnings through affirmative action would lead to an inefficient allocation of resources. This makes it important to identify the factors contributing to the wage differential. Unfortunately, the exact causes are still not clear.

The existing research on this subject suffers from a major weakness. Most studies assume that there is no difference in the quality of education and work experience between visible and non-visible minorities. Yet, differences are inevitable given the fact that the vast majority of visible minority males — over 90 percent compared with 16 percent of non-visible minority males — are immigrants who probably acquired most of their education and experience abroad. As a result, any research that overlooks these differences is likely to overstate the amount of discrimination.

The ARB study looks at the earnings differential between visible minority men and their non-visible minority counterparts in the 25 to 64 age bracket, working as full-time, paid employees. Self-employed men are left out. Similarly, those living in the Atlantic region are not examined in this study due to a lack of detail on the visible minority population in this region. Of foreign-born visible minority males, only those with permanent resident status are included in the study.

The earnings gap is largely a reflection of quality differences in education, language proficiency and experience.

The analysis was undertaken in two phases. In the first, the impact of a number of factors generally believed to influence the earnings differential was examined, including age, education, language, marital status, occupation, the urban-rural distinction, province of residence, and the number of weeks worked each year. After determining the contribution of each of these factors to the earnings differential, the unexplained portion of the earnings differential is attributed to discrimination.

This portion of the study found that the earnings of visible minority men, both immigrants and those born in Canada, are 27 percent lower than those of non-visible minority men. Only 14 percent of this differential can be explained by productivity differences. This means that the unexplained portion of this earnings differential is very high — 86 percent. The results reinforce the popular perception that visible minority men are subject to considerable discrimination.

However, these estimates were derived without making any direct adjustment for differences in the quality of education, work experience and degree of fluency in one of Canada's official languages.

Most studies stop at this point, but the ARB study continues on to a second phase — a comparison between Canadian-born visible minority men and their Canadian-born non-visible minority counterparts. As in the first phase, a decomposition of the earnings differential is undertaken to determine the amount of discrimination. Why is this done? Unlike visible minority men who came here as immigrants, the quality of education and work experience of Canadian-born visible minorities is likely to be similar to non-visible minority men born in this country. However, if there is discrimination, even Canadian-born visible minorities may not be immune to it. This is, therefore, an indirect way of separating out quality differences in education, language proficiency and experience from discrimination. The earnings gap between Canadian-born visible minority and non-visible minority men is very small — non-visible minorities earn 3.5 percent more than their visible minority counterparts. Productivity differences are responsible for about 62 percent of this gap. Discrimination accounts for the remaining 38 percent.

Traditionally, discrimination is blamed for earnings differentials between visible minority and non-visible minority individuals. According to this analysis, those differentials are largely a reflection of quality differences in the education, language proficiency and experience between visible minority and non-visible minority men.

Literacy: Use It or Lose It

Literacy is of fundamental importance — to individuals and to nations. A recent report clearly illustrates the links between investments in education and economic success. The international report of the International Adult Literacy Survey, *Literacy, Economy and Society*, was released in December 1995 by the Organization for Economic Co-operation and Development. In a few short months, the IALS has been recognized as a breakthrough in the measurement of human capital.

Here are some of the major findings of the IALS:

Canada's place in the world — Among the countries studied (Canada, Germany, the Netherlands, Poland, Sweden, Switzerland and the United States), Canada's overall literacy performance is relatively good but there are no grounds for complacency. Although it is not advisable to rank the countries on a single scale or grade, Canada has a greater proportion of its population at the highest levels of literacy than most of the other nations. Our proportion of population at the lowest level of literacy is about average. Sweden has a higher proportion of its population at the highest levels (levels 4/5) than Canada in each of the three dimensions of literacy measured (prose, document and quantitative literacy). Germany has a higher proportion at the highest levels of quantitative literacy. Many Canadians lack the foundation skills to meet the needs of the changing workplace and to take advantage of education and training opportunities. Differences in literacy levels are due to a number of factors including years of formal education, the quality of that education and literacy practices at home and in the workplace.

Literacy is a continuum — Literacy is not simply a matter of whether or not one can read or meet some minimum

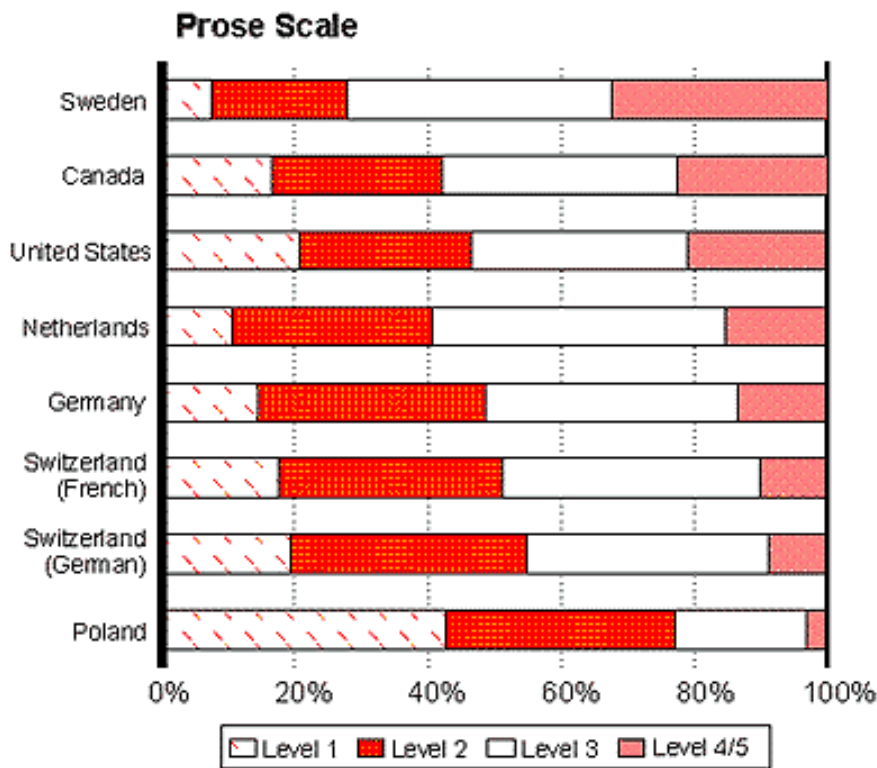
standard of numeracy. Literacy should be seen as a continuum with benefits related to each successive level of literary achievement. While the patterns vary slightly from country to country, for example, both the proportion of unemployed and the proportion in the lowest level of income decline as the literacy level increases. Literacy strongly influences individual and social well-being.

The relationship between education and literacy — Adults with higher levels of education, on average, are more literate than those at lower levels but the relationship is not always that clear-cut. In each country surveyed, significant numbers of less-educated persons performed at the highest levels of literacy and some well-educated people performed at the lowest.

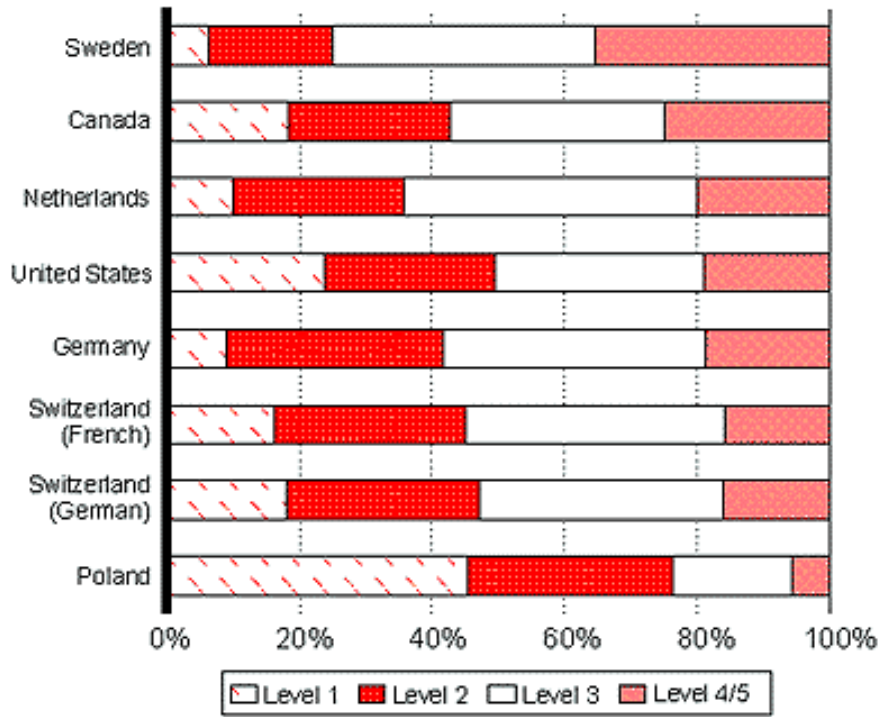
Practice, practice, practice — Literacy is maintained and strengthened in daily practice. Literacy practices at home and in the workplace are crucial to literacy. Like physical fitness, "literacy fitness" requires continual practice. What you don't use you lose.

Complex connections — The IALS suggests that the skill requirements of the workplace and the actual skills possessed by workers may be connected in a complex way. Do workers lose skills because their jobs do not require them? Conversely, can jobs be upgraded to foster and reinforce the development of a more skilled workforce? These questions are among the issues that the IALS will help address.

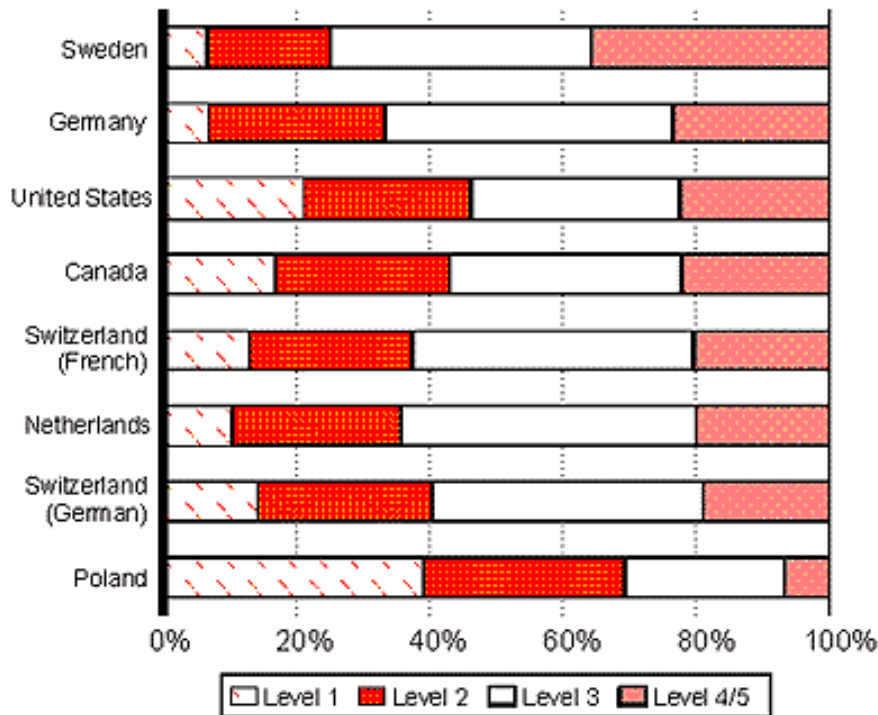
Changing literacy — Literacy can be changed through public policy and private initiative. There are effective means of fostering literacy. For example, the dramatic improvements in literacy across generations illustrate the effect of increases in education of Canadians. Literacy, in the broadest sense, is a shared responsibility. Governments, institutions, communities, families and individuals have a vital role to play.



Document Scale



Quantitative Scale



[Text Version](#)

Note: "The prose scale" refers to the literacy needed to understand and use information from texts including news stories and fiction. The "document scale" is the literacy required to locate and use information contained in various formats including job applications, maps and tables. The "quantitative scale" refers to the knowledge and skills required to apply arithmetic operations to numbers embedded in printed materials - balancing a chequebook, for example. The reader should consult the OECD report for a guide to the scales and their interpretation.

Level 1 on these scales is the lowest level measured and level 5 is the highest. For example, at the lowest level, one can read a label on an aspirin bottle and extract a single straightforward piece of information such as the maximum number of days that one can take the medication. Reading tasks at level 5 may require the reader to search for information in dense text that contains a number of plausible distracters. High level inferences or specialized knowledge may be required.

In partnership with the National Literacy Secretariat and Statistics Canada, the Applied Research Branch has sponsored a series of policy research monographs based on the results of the IALS. Some of Canada's most renowned academic researchers will study several major themes: literacy and the economy; literacy, poverty and unemployment; the role of literacy in youth transitions; the effect of immigration on literacy; and the connections between literacy practice and achievement.

The OECD coordinated this seven-nation study and Statistics Canada, in collaboration with the Education Testing Service of the United States, provided the operational and technical leadership. Human Resources Development Canada was the principal sponsor of the Canadian survey. Summary data on Canada is contained in the international report. The detailed Canadian results were released in September of this year.

Tallying the Economic and Social Costs of Unemployment

Unemployment costs Canada — economically and socially. After reviewing the economic literature, Marcel Bédard of the Applied Research Branch has provided estimates of the economic and social toll of unemployment.

Unemployment represents a loss of revenue for society. Bringing unused human resources back to work produces goods and services that allow the unemployed to earn a salary, firms to make profits, all levels of government to collect taxes, and those already employed to increase their hours of work. It is commonly perceived that the total cost of unemployment equals lost revenue from unproduced goods and services. However, this is but a fraction of society's loss.

The social costs of unemployment must be added in order to obtain a comprehensive measure of the costs of unemployment. The social problems which generate psychological costs as well as costs related to health care, protection against crime, social tensions, human resources losses — to name a few — must be recognized.

Economic Costs Associated with Unemployment

Canada's economy suffers losses in production because of unemployment and, as a result, does not reach its potential level of production. If full employment could be reached, it is estimated that production could be significantly increased. For example, the ARB analysis points out that the 1994 total production loss associated with cyclical and structural unemployment was estimated by various studies to range from 3.8 to 10.2 percent of the gross domestic product of \$748 billion. That adds up to a loss of \$29 to \$77 billion.

Unemployment and Government Budget Costs

Governments, like other economic agents, share a portion of the economic costs created by unemployment. Governments raise revenues from production in the form of taxes. Those taxes are then redistributed, via various economic agents, in the form of transfers and subsidies. Governments suffer revenue losses and increased expenditures because of unemployment. For all governments, the budget costs of Canada's unemployment rate of 10.4 percent in 1994 compared to — let's say — an unemployment rate of 8.5 percent might range from \$8 to \$12 billion. For the federal government alone, the budget costs might range from \$5 to \$6 billion. This means that if the economy in 1994 had operated at its potential level, the federal deficit could have ranged from \$22.5 to \$23.5 billion, instead of \$28.5 billion.

The Social Costs of Unemployment

The ARB analysis reviews several studies with different approaches to better understand the impact that unemployment may have on people's physical and mental health and to determine the social costs it entails for

individuals and society. Some of the studies seek to assess the psychological impact of unemployment. Others attempt to determine the effects of unemployment-related stress or shock on the incidence of various illnesses or on mortality. These two types of studies are generally based on assessments conducted among laid-off unemployed workers or studies of the unemployed. They show that the unemployed visit doctors much more frequently than workers and are more often admitted to hospital. These studies, however, are not able to establish a systematic relationship between the incidence of use of hospital services and an increase in unemployment.

Studies conducted by Dr. M. Harvey Brenner in the United States, however, are among the few that establish a direct link between unemployment and social pathologies. In the research he conducted for the U.S. Congress in 1984, Brenner estimated the direct relationship between the increase in the U.S. unemployment rate and the occurrence of several social pathologies, including the mortality rate, cardio-vascular or cirrhoses deaths, the homicide and suicide rates, admissions to psychiatric hospitals and arrests and incarcerations. For example, Brenner estimates that a 10 percent increase in the unemployment rate would have the direct effect of increasing the mortality rate by 1.2 percent, the suicide rate by 0.7 percent, and the rate of incarcerations by six percent. Serious studies like Brenner's indicate that social problems are attributable to unemployment.

Estimates of Direct Effects of 10% Increase in Unemployment Rate on Incidence of Social Pathologies in the United States:

Results of Brenner Study, 1984

Mortality	1.2%
Mortality attributable to cardio-vascular diseases	1.7%
Mortality attributable to cirrhoses	1.3%
Homicide rate *	1.9%
Suicide rate	0.7%
Admissions to psychiatric hospitals	4.2%
Incarcerations *	6.0%
Arrests	4.0%

*** Increases in the rates for homicides and imprisonments are related to an increase in the unemployment rate for young men (18-24 years old), expressed as a percentage of the total unemployment rate.**

Tallying these costs, the ARB analysis makes clear that it is not enough to look at economic costs in isolation. The toll that unemployment extracts from Canada must be looked at as the sum of the economic and social costs it creates.

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