

Income Maintenance Programs: Their Effect on Labour Supply and Aggregate Demand in the Maritimes

A Joint Report of the Council of Maritime Premiers and the Economic Council of Canada

> N. Swan P. MacRae C. Steinberg



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ECONOMIC COUNCIL OF CANADA

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Foreword

In September of 1972, the Council of Maritime Premiers contacted the Economic Council of Canada and expressed "the interest of the Council of Maritime Premiers (CMP) in exploring possibilities for having public policy areas of special interest and concern to the Maritime Provinces studied by a team of experts from the Economic Council of Canada (ECC) working with officials from the Maritime Provinces".¹ A committee was subsequently set up to do this exploration, and after some months' study it suggested that the subject that ought to be examined first was "the relation between programs of incomes security and the performance and development of the economy. Particular attention would be directed to determining the effect of incomes security programs on labour market performance and on aggregate demand in the Maritime economy."² This has since been referred to as the Joint Income Security Study.

A small group began work on this topic in the fall of 1973. The CMP immediately appointed one person to work on the study while the Government of New Brunswick provided one person from the beginning of 1974. The ECC provided the director for the study, and had assigned two further ECC staff members to it by November. The Nova Scotia Government appointed an academic on contract in the spring of 1974. This report covers what this rather heterogeneous group has discovered concerning the effect of income maintenance programs on economic development in the Maritimes.

Two quite distinct motives inspired the CMP and ECC to co-operate in setting up the Joint Income Security Study.

The first is implicit in the title. Expenditures on incomes security programs of all kinds, by all levels of government, have risen with extraordinary rapidity in the last few years. Three examples will illustrate: unemployment insurance payments in the Maritimes rose from \$36.2 million in 1966-67 to \$172.6 million in 1972-73; social assistance expenditures went from \$30.8 million to \$80.4 million over the same period; and old age pensions (including supplements) from \$93.9 million to \$235.2 million. By 1973, 18 per cent of personal income came from public transfer income in the Maritimes, as

¹ Minute of Council Meeting No. 7: September 9, 10, 11, 1972, Agenda Item 9(b).

² Memorandum from the Secretariat to the Council of Maritime Premiers of May 29, 1973.

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compared with 12 per cent nationally. These are not trivial changes, and it is important to know their effect on the economy of the Maritimes, especially on the incentive to work on the one hand and, through their effect on the ability of Maritimers to spend on goods and services, on the availability of jobs on the other.

The second motive is implicit in the very fact of this being a joint federal-provincial study. It is still relatively rare for federal and provincial officials to work continuously together for several months at a time in a joint effort to solve a particular problem of common interest. Co-ordination does occur, but more commonly involves periodic joint meetings seldom lasting more than a few days. It was thought possible that if federal officials, represented in this case by ECC personnel, were to work with provincial officials in the Maritimes they would gain greater insight into both the day-by-day difficulties experienced by provinces in doing research and into the kinds of issues that are considered important there. By the same token, it seemed possible that provincial officials, by working with ECC personnel, might gain a greater insight into the research methods of the ECC than they could get by simply reading its publications or talking during occasional visits with ECC staff. This Joint Income Security Study may therefore be viewed as a pilot experiment on whether day-to-day co-operation over long periods between federal and provincial research workers is useful to both, and on how easy or difficult it is.

Acknowledgments

The authors would like to make clear their obligation to the research assistants who worked on the project. Tony Glynn, of the Economic Council of Canada, was responsible for much of the detailed work in Nova Scotia, spending a total of three months in Halifax, where he was ably assisted by Elizabeth Huskilson at the Council of Maritime Premiers. Glynn also did much of the work in connection with the analysis of the unemployment insurance system in Chapter 1. Neil McMartin, formerly of the Economic Council of Canada and now with the Department of Finance, spent three months in New Brunswick and handled much of the statistical work there. He had a considerable input of ideas as well as data into the analysis of the "demand for welfare" in New Brunswick covered in Chapter 3 and in Appendix A. To these three, and to many others of the Economic Council and the Council of Maritime Premiers who gave their comments and time, we would like to express our thanks. It goes without saying that the remaining errors are ours rather than theirs.

Income Maintenance Programs: Their Effect on Labour Supply and Aggregate Demand in the Maritimes

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1 Introduction

The last seven years have witnessed a transformation in incomes security in Canada. The changes wrought by the Canada Assistance Plan of 1966, the revisions to the Unemployment Insurance Act in 1971 and 1972, the introduction of the Canada Pension Plan in 1967, recent revisions to Old Age Security, and a number of other lesser developments have together had a major impact on the income that can be expected by those who do not work. Sometimes they cannot because they are sick, disabled, or carrying sole responsibility for the care of young children; sometimes because they have not been able to find a job; or sometimes because they are retired. There may be some, of course, who deliberately choose not to work.

Expenditures under the various income maintenance programs have risen with great rapidity. Table 1-1 shows, for each of the Maritime Provinces, how expenditures under the three main income maintenance programs have changed from 1966-67 to 1972-73.¹

Expenditures on social assistance, for example, doubled in Nova Scotia and quintupled in New Brunswick between 1966-67 and 1972-73. There was little change in Prince Edward Island. Payments of unemployment insurance benefits were between four and five times as high in all three provinces. Payments to the retired in the form of old age pensions, guaranteed income supplements, and in recent years Canada Pensions, were two and a half times as high.

That some increases should have occurred is not surprising: the population was rising over the period, and in addition, somewhat higher payments could be justified simply in terms of keeping real buying power stable in the face of generally rising prices. Moreover, the unemployment rate was higher in 1972-73 than 1966-67. Only a small part of the phenomenal rises in Table 1-1 can, however, be accounted for in these ways.

There are programs which help to maintain people's income beyond the major types enumerated in Table 1-1, notably Family and Youth Allowances, and the payments made during technical and vocational training and under the

^{1 1972-73} was chosen as the last year for which reasonably comprehensive data were available at the time of writing. 1966-67 is the last year before effects of the Canada Assistance Plan were evident.

	Maritimes
	the
	in.
	Expenditures
Table 1-1	Maintenance
	Income
	Major
	in.
	Changes
	Recent

		Nova Scotia		Z	ew Brunswi	ck	Prin	ce Edward I	iland
			1972-73			1972-73			1972-73
	1966-67	1972-73	1966-67	1966-67	1972-73	1966-67	1966-67	1972-73	1966-67
				(Mi	llions of dol	lars)			
Social Assistance	15.6	34.4	2.2	7.5	37.2	5.0	7.7	8.8	1.1
Unemployment Insurance	16.9	6.62	4.7	16.3	80.0	4.9	3.0	12.7	4.2
Supplement, Canada Pension Plan	49.0	123.1	2.5	36.2	91.2	2.5	8.7	20.9	2.4

octal Assistance in Nova scotta includes Provincial and Municipal Social Assistance along with Disabled Persons Allowances and Blind Persons Allowances and was obtained from Welfare Services in Nova Scotia, Nova Scotia Department of Social Services. The New Brunswick data are similar but include items of Special Need and Health Services and were obtained from the Quarterly Statistical Bulletins and Annual Reports of the New Brunswick Department of Social Services. The Prince Edward Island figures were obtained from the Statistics Canada publication Provincial Government Finance, Cat. No. 68-207.

The Unemployment Insurance data were obtained from the Statistics Canada monthly publication, "Statistical Report on the Operation of the Unemployment Insurance Act", Cat. No. 73-001.

The Old Age Security and Guaranteed Income Supplement data for 1966-67 were obtained from the Annual Report of the Department of National Health and Welfare while the 1972-73 data were obtained from the Income Security Branch of the same department.

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Local Initiatives and Opportunities for Youth programs. Allowing for them would strengthen the basic message of Table 1-1, which is that from 1966-67 to 1972-73, payment in the Maritimes under income maintenance programs roughly tripled.

This recent surge in income maintenance spending raises a number of interesting and important issues. First and foremost, it is clear that in the Maritimes there is substantial concern that income maintenance programs both permit and encourage people to live without working, and some fear that a significant number of persons do so. The following quotation from an editorial in the Halifax Mail Star expresses in extreme form what we have often heard and read in the Maritimes:

"Social assistance programs have mushroomed in recent years and constitute a tremendous demand on the tax dollar. Nobody objects when the ministry is to legitimate need. It is quite another matter, however, when a hard-working individual finds himself forced to pay the shot for the life of ease enjoyed by an able-bodied neighbor." (Editorial, *Mail Star*, Halifax, May 26, 1973)

By no means everyone subscribes to the view in this quotation, but enough do so to warrant serious investigation of the hypothesis implied by it: is it or is it not the case that the incentive to work in the Maritimes has been affected to a significant degree by the recent rapid growth of income maintenance expenditures of the federal and provincial governments?

The effect of income maintenance on work effort is the main concern of the two following chapters. In the first of these we look at the impact on work effort in the Maritimes of the greatly increased payments under the federal unemployment insurance system. Are people increasingly taking advantage of the UIC system in order to work less? In the second of these chapters, we examine a somewhat broader range of issues with respect to the effects of provincial-municipal social assistance programs, but continue to pay special attention to work incentives: are people increasingly taking advantage of the social assistance provided by provincial and municipal governments in order to work less?

A second issue of major importance is the effect of rising income maintenance expenditures on the availability of jobs in the Maritimes. Viewed as a collectivity, the people of the Maritimes gain more in spending power from income maintenance payments than they lose in the form of taxes to pay for them. This is not only because of matching grants for social assistance but also because federal payments direct to individuals in the Maritimes, such as unemployment insurance, old age pensions, and guaranteed income supplements, are disproportionately great in relation to taxes paid. The increase in expenditure on goods and services that income maintenance programs make possible increases activity within the Maritimes, and this increased activity generates additional jobs. Estimation of the strength of this effect is the main concern of Chapter 4.

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There are a number of other possible effects of income maintenance programs, some of which are touched upon within the report, but which are not dealt with in any detail. With the limited time and resources available, it seemed best to concentrate on getting as much insight as possible into the two critical issues already mentioned. Examples of the issues we have been unable to cover, or to cover in as much depth as we would have liked, include the question of how serious a tax burden income maintenance programs represent for the Maritime Provinces; whether or not labour mobility is hindered in such a way as to inhibit development; the extent to which health, morale and discipline of workers are affected by welfare, thereby changing productivity; whether Maritime attitudes differ sufficiently from the rest of Canada to imply more serious effects in the region than elsewhere; and, finally, whether the complex of programs, when coupled with other federal assistance such as that provided by the Department of Regional Economic Expansion, is so large as to create feelings of dependency in Maritime residents that are socially undesirable.

Thus, while the present study attempts to answer two important questions, it also poses additional ones for future review.

In this chapter we present the results of our analysis of the effect on work effort of changes in the coverage and generosity of the unemployment insurance system.

Section A describes the changes that have occurred in Canada's unemployment insurance system since its inception. In Section B, the kinds of effects that these changes could have are discussed. Sections C, D and E are empirical ones, concerned with estimating, as far as possible, how big the effects actually were, and in what direction they went. Section C describes the difficulties involved in actually measuring how many people genuinely want to work at any point in time. Section D explains the techniques used to estimate the effect of the changes in unemployment insurance, using the measure of work effort described in Section C, and presents detailed results. Since Section C, among other things, notes that the best available measure of work effort may be defective, and defective in such a way that it cannot be corrected directly, Section E indicates how the results of Section D might change if fully accurate information were available. A brief summary of our conclusions follows Section E.

A Changes in the System of Unemployment Insurance

The various Unemployment Insurance Acts, from the original one in 1940 to the most recent in 1971, reveal a changing governmental view of what the basic purpose of unemployment insurance should be. In 1940, unemployment "insurance" actually was insurance against the risk of unexpected unemployment. By 1971, unemployment "insurance" had become, and remains, an income maintenance system. It covers loss of income not only when unexpected unemployment occurs, but also for expected unemployment, such as seasonal layoffs. Moreover, the premiums today do not come close to covering the costs of the benefits. Both philosophies of unemployment "insurance" have their merits, which it would be inappropriate to consider here, but they have different implications in terms of the coverage, the accessibility, and the generosity of benefit payments. The shift to the income stabilization view has brought widening coverage, less onerous work requirements for benefit and a greatly increased level of the benefits

themselves. The enhanced coverage and generosity of the unemployment insurance system opens up the possibility of effects on the incentive to work which previously did not exist.

In 1940, coverage was generally made compulsory for wage earners earning less than \$2,000 a year. There were exceptions apart from the general one imposed by the income ceiling, when the risk of unemployment was considered too minor to warrant insurance, as with government employees, or the costs of administration were thought too high, as with agricultural workers. Seasonal occupations were also excluded, on the grounds that unemployment in them was quite predictable and so not an insurable phenomenon.

Between 1941 and 1950, most of the changes in the Act were changes which extended coverage. Coverage was extended to employment in public utilities (1943), employment in hospitals and charitable institutions (1943), transportation by air (1945), professional nurses (1945), lumbering and logging in British Columbia (1946), inland transportation by water (1946), stevedoring (1948), and to lumbering and logging elsewhere than British Columbia (1950).

In February 1950, a major break with insurance principles occurred when the Act for the first time provided benefits, called supplementary benefits, during the period January 1 to March 31, to persons who could show some attachment to insurable employment but who were unable to qualify for regular benefits. These benefits were really seasonal benefits although exhaustion of regular benefits from any cause was in principle a sufficient condition for eligibility.

Further coverage changes came in 1955 (horticulture, forestry, municipal police and some parts of agriculture), and in 1957 (fishermen). In April 1957, the period over which seasonal benefits were payable was extended to run from December 1 to May 15 instead of from January 1 to March 31.

The latest Act,¹ of 1971, virtually completed the extension of coverage. All salaried workers were now included, not just those below the ceiling level of earnings as in earlier years, as well as all government employees, all police forces, teachers, nurses and members of the armed forces.

Work requirements for benefit have generally been too complex to describe in a brief way, but it nevertheless is clear that they have gradually been reduced. Originally, in 1940, no benefit could be drawn unless one had worked for 30 full weeks in covered employment in the last two years. With that minimal qualification, one would obtain 7 weeks of benefit. At the other extreme, full-time work in covered employment during a five-year spell, with no unemployment, generated 52 weeks of benefit. These rules stayed unchanged until 1955, when four changes were made.

1 At the time of writing.

Changes in the System of Unemployment Insurance 9

First, partial weeks of employment could be counted as full weeks for purposes of accumulating the minimal 30 weeks of covered employment. Even one day of covered employment required a week's worth of unemployment insurance contributions, and thereby counted as a "full" week. On the other hand, one now needed, in addition to the 30 weeks cited, a minimum of 8-week contributions within the last year. Third, the minimum 30- and 8-week contributions entitled one to 15 weeks of benefit rather than 7 as before. Finally, the maximum permissible benefit period was reduced to 36 weeks. Two years later, however, this maximum period was restored to 52 weeks.

The 1971 Act eased the process of qualifying for benefit even further. The requirement of 30-week contributions in the last two years was eliminated, so that all that was and is now required to qualify for the minimum period of benefit, now 18 weeks, is 8-week contributions during the year preceding unemployment. The maximum benefit, now 51 weeks instead of 52, can be obtained from only 20-week contributions in the last year. Under certain conditions, however, one can get as many as 44 weeks on the basis of only the 8 weeks minimum qualifying period. These conditions often hold in the Maritimes; they are related to the general state of unemployment in the economy, which now affects the length of time for which benefits can be drawn by persons with given contribution records.

A five-phase benefit plan now obtains. Following the two-week waiting period, Phase I begins and provides benefits for three weeks. Twenty or more weeks of contributions are needed for eligibility for Phase I.

Phase II provides benefits for those ineligible for Phase I and also for those having completed Phase I and remaining unemployed. The duration of benefit depends on the number of weeks between 8 and 20 spent in employment during which contributions were accumulated, and lasts from 8 to 12 weeks.

Phase III is directly related to the national unemployment rate and all those completing Phases I and II are eligible for it. If the national rate of unemployment (seasonally adjusted three-month moving average) is 4 per cent or less, benefits last for 10 weeks; but if the rate is higher than 4 per cent, claimants receive additional weeks of benefit depending on the excess rate. A maximum of 18 weeks is set for the phase.

Phase IV is directly related to the length of time spent in employment. For each two weeks in excess of 20 weeks, the claimant is entitled to one week of benefit up to a maximum of 18 weeks for the phase.

Phase V is related to regional labour market conditions, and applies when the regional rate of unemployment is above 4 per cent and exceeds the national average by more than 1 per cent. A maximum of 18 weeks is set for the phase. However, maximum duration of benefit from all phases is limited to 51 weeks. It should perhaps be pointed out that, although this complex plan makes the benefit payments easier to get in many cases, it does so in

such a way that a considerable counter-cyclical force is generated in the economy as a whole.

The rate of benefit payable during unemployment has not shown the same frequency of change as coverage and qualification requirements. For workers earning below the ceiling on contributory earnings, the rate of benefit was equivalent to almost the same percentage of the wage while in work right from 1940 to 1971. The percentage varied somewhat according to the particular act in force and according to the number of dependents of the claimant, but was in the range 35 to 45 per cent for most of the people most of the time. For those who earned more than the maximum contributable earnings, benefits as a percentage of the wage were even lower. In actual dollars, benefit payments did of course rise steadily, since wages have risen steadily since 1940, and since the ceiling on covered earnings has been raised periodically to reflect changing general wage levels. The comparison in terms of the wage at work is, however, the relevant one from the work effort point of view.

In 1971, the benefit as a percentage of the wage while working rose very considerably, to 66 2/3 per cent and, in some cases to 75 per cent (claimants with one or more dependents who are past the tenth week of Phase III described above). Although benefits were made taxable in 1971, the tax rates applicable to most workers who draw unemployment benefit are not high enough to upset the conclusion of a very substantial increase since 1971 in the rate of benefit under unemployment insurance.

Somewhat curiously, at the same time that benefits were increased, the amount of allowable earnings, whose presence is an incentive to work part-time if possible even while unemployed, was slightly reduced.

As far as seasonal benefits are concerned, despite initial claims to the contrary, the unemployment insurance scheme since 1950 has provided seasonal benefits for periods varying between December 1 and May 15. The 1971 Act formally abolished these benefits, but, in practice, by lowering the eligibility requirements to 8 weeks in the last 52 weeks, it really retained them as part of the regular benefit schedule.

B Theoretical Considerations on the Effect of Unemployment Insurance Payments

There is an extensive theoretical and empirical literature² in economics concerning the effect of unearned income on the amount of work done by a person. The word "unearned" in this theory has no moral connotation; it means income which is not a payment linked *directly* to work performed. Interest and dividend payments on past savings or a bequest would be

² Much of it is written in connection with the analysis of the effects of welfare payments. A small sampling of this literature is cited in Chapter 3, footnote 17.

Theoretical Considerations on the Effect of UI Payments 11

referred to as unearned in the context of this theory, as would be payments by a father to his offspring at university, and also all types of income maintenance payments by governments to individuals, including old age pensions, family allowances, social assistance payments, negative income taxes if paid, and unemployment benefits.

The theoretical effects of income maintenance payments as derived in this literature are by no means clear-cut. An increase in the availability or size of such payments to a given individual may cause that person to work less than before, or it may cause him or her to work more than before, or it may have no effect. Since the effects may differ among individuals, the impact on aggregate work effort of all individuals eligible for the payments is not predictable. That anything is possible, in terms of work effort, does not make the theory irrelevant, because many people's first impression is that income maintenance payments will inevitably reduce work effort. The theory is useful as a corrective to this understandable but erroneous point of view.

This document is not the place to prove in a formal manner the statement that it is impossible to predict on purely theoretical grounds what the effect of income maintenance programs on work effort will be, but some comments regarding the possible effects of the increasing availability and generosity of unemployment insurance benefits should illustrate the possibilities well enough.

People who feel uncomfortable about living on the state are not likely to quit just because unemployment insurance benefits would be available while they looked for a new job, and they will therefore not work less as a result of unemployment insurance. A group of such people undoubtedly exists; many of the most vociferous critics of the generosity of unemployment insurance benefits and other income maintenance programs are themselves members of it. The evidence from Nova Scotia,³ of numerous people who work full-time despite the fact that they could obtain more on social assistance, attests to this.

People without prejudices against drawing benefits, and who would have chosen to work full-time without unemployment insurance (or with a less generous system of unemployment insurance), may choose to quit or arrange to be fired more frequently under a generous system. The combination of income and leisure represented by a number of weeks of work and a number of weeks of leisure with benefit at some fraction of the wage may well be thought superior to full-time work. It can be shown that this need not be so, even for a person who has no aversion in principle to drawing benefit, but it certainly can be so. It follows that there will almost certainly be less work

³ See C. Steinberg, "The Impact of Municipal Assistance on Labour Force Participation", a Research Study prepared for the Department of Social Services, Province of Nova Scotia, in concert with the Council of Maritime Premiers and the Economic Council of Canada (Halifax: Queen's Printer, 1974), Chapters 5 and 6.

effort by former full-time workers. At least some will work less, and by definition of "full-time" none can work more.⁴

At the other extreme from former full-time workers are former nonworkers. With or without unemployment insurance, there is a large group whose members do not engage in paid work in the market. Women who work at home form the majority of this group, but it also includes many students and retired persons, and some others. Some persons in this group might well be attracted into the labour force by a generous unemployment insurance system. Common sense suggests and theory confirms the possibility that periodic spells of paid work interspersed with periodic spells of "leisure" time on unemployment insurance benefit may be a superior alternative to either full-time "leisure" or to periodic spells of paid work without the payment of benefit during the "leisure" spells. The word "leisure" is in quotation marks here because for many persons, such as housewives and students, such leisure is actually unpaid work. For this group, unemployment insurance benefit is a payment that may be obtained if a person works part of the year, but not if a person does not work at all or works full-time. The effect will almost certainly be, for the part of the group that used not to work at all, to increase average participation in the labour force from zero to some positive amount.

The third and final group consists of those who, in the absence of a generous UIC system, would have worked part of the year. They may wish to work more, in order to build up longer periods of benefit entitlement, or they may work less, since a given annual income can be obtained with less weeks in paid employment.

Division of the Labour Force Between Employed and Unemployed

To this point, we have discussed the possible effects of income maintenance in changing the number who work or want to work, the total of these two groups being called the labour force. Whether the labour force rises or falls, it is likely that the division of it at any point in time into those currently employed and those currently unemployed will be influenced by the existence and generosity of income maintenance programs, including unemployment insurance.

There are two reasons to expect that the proportion of the labour force which is out of work, i.e., the unemployment rate, will be affected by the availability of better unemployment insurance benefits. First, people may shop around more for jobs, quitting more frequently and looking for better work, because the penalty for quitting in terms of lost income is reduced. Thus, turnover increases and at any given time more people than before will be out of work and looking for it. There may even be a minor effect in this direction from the employers' side, in that the decision to fire an unsuitable

⁴ Unless overtime is deliberately used during the time in work in order to offset the partial income loss during unemployment.

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employee, or not to renew his contract if he is on contract, is less difficult to take in the presence of generous income maintenance provisions.

Second, once a person is out of work he often has a choice between taking a moderately acceptable job fairly quickly and waiting rather longer in the hope of finding a really good one. Because good income maintenance programs decrease the hardship of waiting, they permit people out of work to spend longer searching for a good job, rather than having to take the first or second one that happens to come along. Consequently, the average time spent looking for work, during which one is counted as unemployed, is likely to rise.⁵

The two effects, one increasing the flow of people out of employment into unemployment, and the other increasing the time spent unemployed, together mean that a greater proportion of the labour force will be unemployed on average.

We conclude that unemployment insurance payments may have two distinct effects. First, they may change the size of the labour force, the number who either are employed or who would like to be. Whether the change is an increase or a decrease cannot be known in advance of an examination of actual data. Second, they may alter the proportion of the labour force that is unemployed, probably upwards.⁶ This study examines only the first effect of unemployment insurance on the size of the labour force. This reflects a judgment on our part that, given limited resources, our efforts should be focused on the effect which seemed likely to be quantitatively the more important.⁷

C Measuring the Number Who Want to Work

As was noted above, the usual way to measure the number of people who work or want to work is to add up the number of employed and unemployed, the total being called the labour force. If the labour force is divided by the working-age population, one obtains the participation rate, which may be

⁵ Finding a better job may also prolong the period before the person next quits or is fired, tending perhaps to offset the first effect on quitting and layoffs discussed above.

⁶ Consistently with this, it is possible that the proportion of the whole adult population that is employed could also rise if it so happened that unemployment insurance increased the size of the labour force by enough to outweigh the tendency for a higher proportion of the labour force to be unemployed.

⁷ Much research has been done on the second effect. Some of it will appear in a study on the labour market by the Economic Council of Canada. In forming a judgment about the importance of the second effect, one should be very careful, in our view, to distinguish between the effect of unemployment insurance in raising the *measured* unemployment rate (which includes those who are drawing benefits but not genuinely seeking a job, good or bad) and the effect in raising the *true* unemployment rate. We would readily concede that the first effect may be rather large, and our work following can be interpreted as a confirmation of this, but are not convinced that the second effect is. The distinction between true and measured magnitudes, as far as the labour force is concerned, is taken up further in the next section.

viewed as a fractional or percentage measure of the desire to engage in paid work. A difficulty with the measure is that not all of the unemployed may really want to work. Some of those counted as unemployed by Statistics Canada may prefer, at least for a while, to remain at leisure drawing their unemployment insurance benefits. Given this possibility, it is necessary to distinguish between the true labour force, consisting of the employed and those of the unemployed who genuinely want work, and the measured labour force, consisting of the employed, the unemployed who genuinely want work, and the unemployed who do not really want work. We have:

True participation rate = (employed + genuinely unemployed) ÷ workingage population

Measured participation rate = (employed + genuinely unemployed + unemployed not really wanting work) ÷ working-age population

We have chosen to measure the effect of the unemployment insurance system by measuring its effect on the true participation rate. Given this effect, the effect on the output of goods and services will be in the same direction.⁸

As we have seen from the earlier theoretical development, the true participation rate could rise, fall, or stay unchanged as the unemployment insurance system becomes more generous. Some persons will want to work fewer weeks per year, some to work more, and some will continue as before. The first effect reduces the number employed and does not increase the number of genuinely unemployed. The second effect increases the number employed, and, to the extent that work is not found immediately, also increases the number genuinely unemployed. The net effect on the true participation rate could go either way.

The measured participation rate will rise more, or fall less, than the true one, as unemployment insurance becomes more generous. This is because it is subject to the same influences as the true rate and also to an increase attributable solely to the extra numbers of unemployed who do not really want work. If unemployment were properly measured by Statistics Canada in accordance with their own criteria for defining an unemployed person, this increase would be zero, because the Statistics Canada definition of the

⁸ Unless the proportion of the labour force truly employed is so strongly affected by the unemployment insurance system, in the same direction as the participation rate, as to give an opposite effect on employment from the effect on the labour force. Later results are such as to make this extremely unlikely, other than temporarily. One can argue that any labour supply increase, including one attributable to more generous unemployment insurance benefits, will *temporarily* cause the unemployment rate to rise, and conversely for a decrease in supply. This is correct, but after awhile, i.e., in the long run as economists say, either deliberate policy (through aggregate demand), or market forces, will restore the unemployment rate to its long-run average level. How else could one explain the successful long-run absorption into employment of the vast increases in the labour force in the postwar period caused by natural increase and immigration? It is the long-run effects that concern this study.

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unemployed is those who are actively seeking work. Someone drawing unemployment insurance but actually at leisure will not be actively seeking work. He (or she) may nevertheless inform the labour force survey interviewer that he is, fearing that a statement that he is not might get back to the UIC authorities and result in his benefits being cut off. Since the interviewer does stress the confidentiality of the information gathered by the labour force survey, mistatements of a person's unemployment status may be the exception rather than the rule, but it is impossible to be certain of this. Moreover, the overstatement of the number unemployed may have become increasingly serious with the increasing generosity and availability of unemployment insurance benefits.

The measurement problem may be summed up by referring to Chart 2-1, which shows the changes occurring as a result of an increase in the generosity of unemployment insurance.



The box on the extreme left represents the employed people. Some of them will cease work, quitting in order to enjoy leisure while drawing unemployment insurance benefits (flow marked B). They may withdraw from the measured labour force (flow B (i)), telling the labour force survey that they are not seeking work, or they may stay in the measured labour force (flow B (ii)), telling the labour force (flow

In the box at the extreme right are those who are outside the labour force. Some of them will seek employment, attracted by the prospect of later enjoying leisure financed by unemployment insurance benefits. The total of such people is marked as flow A. Within this group some will find work immediately, flow A (i), and will become counted as employed. Others will not find work straight away, but will be actively seeking it, and will be counted as genuinely unemployed, flow A (ii).

It is clear that the change in the true labour force is A (i) + A (ii) - B (i) - B (ii). The change in the measured labour force, on the other hand, is A (i) + A (ii) - B (i).⁹ The changes in true and measured participation rates are these changes divided by the working-age population.

No way was found to correct the Statistics Canada measure of the labour force and participation rate for the number who are not really seeking work (the cumulated sum of flows B (ii)). The analysis in Section D therefore works with measured participation rates, but in Section E we draw upon some rather complex algebraic analysis¹⁰ to get a rough estimate of the corrections needed to the results in view of the measurement problem.

D Estimating the Effect of Changes in Unemployment Insurance Legislation on Measured Participation Rates

The question concerning the effect of unemployment insurance benefits on work incentives may now be put into the following form: has the increasing availability and generosity of benefits increased or decreased measured labour force participation rates?

This is a difficult question to answer empirically, because participation rates change for all sorts of reasons other than changes in the system of unemployment insurance. They change seasonally by large amounts; for women, changes in the number and ages of their children can cause participation to alter; for both sexes, changes in wage rates sometimes cause changes in participation. Over the years, traditions are changing in that more adult women are working and less adult men (due to earlier retirement

⁹ To avoid misunderstanding, it should be noted that flows A and B are not continuous, but represent the total once-and-for-all shifts occurring as a consequence of any one-time increase in the availability and/or generosity of unemployment insurance benefits.

¹⁰ Explained in N. Swan, "Unemployment Insurance and Labour Force Participation, with Application to Canada, and the Maritimes", Discussion Paper No. 31, Economic Council of Canada, 1975.

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and to better pensions after retirement). A lengthening span of the educational process has affected participation. For these and other reasons the observed rate of participation is in constant flux, and isolating the single effect of unemployment insurance is very difficult. The problem is analogous to that of discovering how much extra wheat one gets from extra fertilizer under conditions where the rainfall, the sunlight, the alkali content of the soil, and several other influences on crop size are changing simultaneously with the application of the fertilizer.

In technical language, the problem is that the observed changes in size of the participation rate, called the "dependent" variable, are caused by changes in *several* "independent" variables, only *one* of which is the generosity of the unemployment insurance system. One is hard put to know whether a given change in the participation rate, say a decrease of half a percentage point in the third quarter of a particular year, is due to a change in the rate of benefit that quarter, or to a rise in the wage rate, or to a drop in the birth rate, or to a normal seasonal shift, etc.

Given a large enough number of observed changes in the participation rate, however, the separate effects of even a large number of independent variables (causes of change) can be sorted out. The sorting out process is more reliable the larger the number of separate observations that can be made on the values of the participation rate (the dependent variable) and on the values of the independent variables. The technique most favoured by economists for sorting out these effects is known as "linear regression analysis", or more shortly as "regression analysis". For those not familiar with this technique, a brief explanation is offered in the following subsection.

The Technique of Regression Analysis

The problem which regression analysis tries to solve is that of explaining the observed values of one variable, in our case the participation rate, in terms of the observed values of several other variables, such as in our case the average wage rate, the birth rate, the rate of benefit under the unemployment insurance system, some measure of the seasons,¹¹ etc. The "explanation" is in the form of an equation linking the value of the participation rate at any time, call it PR(t) which is to be read as "participation rate at time t", to the values at the same time of several explanatory variables. One might refer to the first of these variables, say the wage rate, by one symbol, such as X(t); to a third by Z(t), and so on. The equation linking PR(t) to the other variables is an approximate one

(1) $PR(t) = a + b X(t) + c Y(t) + d Z(t) + \dots$

11 Mean temperature would be possible, though this is not in fact normally used.

in which a, b, c, d... are numbers whose size is to be estimated so as to make the values of the whole right-hand side of the equation, one value for each time period, as close as possible on average to the corresponding values in each time period of PR(t) on the left. The numbers a, b, c, d... are called "coefficients". The process of estimating actual values for the coefficients a,b, c, d... is called fitting the equation to the observations. To illustrate, one might, if it turned out that only the two explanatory variables birth rate and rate of unemployment benefit were important in explaining the participation rate, end up with a result such as

(2) PR(t) = 35.40 - 0.10 X(t) + 0.05 Y(t),

in which the coefficient values for a, b, and c are +35.40, -0.10, and +0.05 respectively. In this example, for a birth rate (X(t)) of 28 per thousand and a benefit rate (Y(t)) of \$60.00 per week the value for PR(t) on the basis of the equation is 35.6 (per cent).¹² It is unlikely that the actual participation rate will be exactly 35.6 at all times when the birth rate is 28 and the benefit rate \$60.00, but if there is a genuine causal relationship between participation on the one hand, and birth rates and unemployment benefits on the other, the actual participation should be close to 35.6. Similarly, for other values of X(t) and Y(t) that occur, equation (2) should give reasonably good estimates of the observed participation rates.

Once a well-fitting equation similar to (1) and (2) has been obtained, one can use it to deduce what effect any particular variable has on the dependent variable of interest. In the *hypothetical* example of equation (2), one could describe two such effects; first, for every unit increase in the birth rate, X(t), the participation rate would fall by 0.10 percentage point; second, for every unit (one dollar) increase in the rate of unemployment benefit the participation rate would rise by 0.05 percentage point.

Variables Included in the Regression Analysis

The use of regression analysis to estimate the effect of unemployment insurance on measured participation rates requires that one specify, if possible, all the other important possible causes of variation in participation, and include appropriate variables in the regression equation to capture their effects. Only in this way can one be confident that coefficients on the variable or variables chosen to measure the generosity of the UIC system are correct measures of the influence of that generosity on the level of participation.

An enormous volume of work has been done by economists on the determinants of labour force participation,¹³ and we were able to draw upon

¹² $35.40 = (0.10 \times 28) + (0.05 \times 60.00) = 35.6$.

¹³ See, for example, W. G. Bowen and T. A. Finegan, The Economics of Labour Force Participation (Princeton, N.J., 1969), for an introduction to U.S. work, and N. Swan, "The Response of Labour Supply to Demand in Canadian Regions", Canadian Journal of Economics, for references to work on Canadian data.

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that work in deciding what to include in our own regressions. Because certain essential data are unavailable, we were unable in New Brunswick, Nova Scotia and Prince Edward Island to explain male and female participation rates separately, only the combined rate for both sexes. We used quarterly observations on the participation rate and the determining variables, which, apart from those designed to represent the generosity of the UIC system, were: a birth rate variable, entered as the average of the birth rate in the current and next quarter, the detrended, deseasonalized level of average wages and salaries per employed person, the deseasonalized Canada-wide unemployment rate (to capture discouraged or additional worker effects),¹⁴ a time-trend, and special variables to capture seasonal effects known as seasonal dummies. The birth rate is included to capture the effect of family responsibilities on the part of participation accounted for by married women; its effect is expected to be negative. The wage rate variable is usually expected to have a positive effect, with people being encouraged by higher wages to work more, but the effect could conceivably be negative, if people aim simply at getting a given income, because then a higher wage allows a given annual income to be obtained with fewer weeks' work. The time-trend variable usually has a positive effect for women, picking up the social trend to more women working, and a negative effect for men, picking up the social trend to earlier retirement. The net effect on overall participation can go either way. Apart from the variables so far mentioned, in Nova Scotia the results from early regressions indicated that some additional unknown factor was reducing participation between the end of 1963 and the beginning of 1966. We could not find what it was, and have perforce allowed for it by incorporating another special dummy variable over this period, a procedure which is not as good as knowing what the effect was and allowing for it properly, but which is an improvement over doing nothing at all.

A number of variables were considered for measuring the degree of generosity of the UIC system. The features of the system that might affect participation include the dollar level of the benefits relative to current wage rates, the rate at which benefit weeks may be accumulated by working, the minimum period of work required before any benefits can be drawn, and the length of the waiting period (the time after becoming unemployed before

The Canada-wide rather than the local unemployment rate was used to avoid bias due to common measurement error between the participation rate and the unemployment rate. Had it not been for this econometric problem, the local unemployment rate would obviously have been a better measure of local economic conditions. We do know, however, that national and local rates are very closely related.

¹⁴ A "discouraged" worker effect occurs if people who really would like work stop looking for it and so no longer are counted as unemployed and therefore as part of the labour force because they think work cannot be found. An "additional" worker effect occurs if members of a family who do not wish to work permanently nevertheless take work, or look for it, at times when the family breadwinner becomes unemployed. Both effects are related to the level of the unemployment rate, and consequently so is the participation rate. Since they work in opposite directions, the net effect of the unemployment rate on participation may be either negative or positive.

benefits become payable). It turned out, after some experimentation, that the rather abstract concept "degree of generosity" could be adequately captured by two measurements. One was the rate at which additional benefit weeks accumulate by further work beyond the minimum required to obtain any benefit at all. This variable is called THETA in the regressions. The other was a composite variable constructed as the ratio of two measurable characteristics of the UIC system: the maximum possible weekly dollar benefit and the minimum period of work in weeks required to qualify before any benefits could be drawn. This is called MXB/MQWS in the regressions.¹⁵

The Results of Participation Rate Regressions

The full regression results are given in Table 2-1, and also in "Unemployment Insurance and Labour Force Participation, with Application to Canada, and the Maritimes",¹⁶ where there are detailed comments on the measured effects of all the variables. The regression equations fitted very well by the standards normally applied by professional economists, but it would not be relevant to our main concern here to describe them in full. Instead, we focus exclusively on the impact of those variables that were put in to measure the degree of generosity of the unemployment insurance system.

One regression was estimated for each of the Maritime Provinces and one for all of Canada for purposes of comparison. Quarterly observations from 1953 through the second quarter of 1973 were used. The results can be summarized quite quickly.

The variable MAXB/MQW had a definite positive effect on measured participation in New Brunswick, Prince Edward Island, and in Canada as a whole. In Nova Scotia, the effect may have been positive or it may have been zero, we cannot be sure.¹⁷ Insofar as MAXB/MQW is a measure of the generosity of the system, the implication is that the increasing generosity has *increased* participation in New Brunswick and Prince Edward Island,¹⁸ and may have increased it or left it unchanged in Nova Scotia. For New Brunswick and Prince Edward Island, one can calculate how much the increases were. The value of MAXB/MQW was 1.1 at the beginning of our period of observation

15 Those familiar with the theory of work-leisure choices will perhaps feel that MXB/MQWS should be deflated by a variable measuring the opportunity cost of leisure, such as the average wage rate or the minimum wage. Initially this was done, with the unfortunate effect of masking a troublesome perfect collinearity between MXB/MQWS and some other measures of the generosity of the unemployment insurance system. Troublesome regressions resulted, because the determinant of the independent variables was very small. Due to the deflation of MXB/MQWS, however, it was not identically zero, so that it was some time before the source of the problem was discovered. Thereafter, to facilitate detection of this problem if it arose again, MXB/MQWS was kept undeflated throughout. A check at the end indicated that deflation in any case neither improves nor worsens the results found.

16 Op. cit.

- 17 For those familiar with regression analysis we note that the effect was positive but not significant.
- 18 And in Canada as a whole, of course.

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in 1953, and had risen to 12.5 by the end of it in 1973, for an increase of 12.5 - 1.1 = 11.4 units. In New Brunswick, the estimated value of its coefficient is 0.55. The apparent effect of MAXB/MQW is therefore to have increased the measured participation rate in New Brunswick by $11.4 \times 0.55 = 6.3$ percentage points. This is an extremely large effect when one notes that the participation rate is typically around 50 percentage points, and, in view of the measurement problems discussed above, it is obviously too high. Nevertheless, the evidence certainly seems to favour the view that in New Brunswick the increasing generosity of the UIC system has increased labour force participation on balance.

In Prince Edward Island, the estimated coefficient on MAXB/MQW was not quite as large as in New Brunswick, being 0.46. This would imply an increase in participation of 5.2 percentage points, also a very big effect.

In Canada as a whole, the coefficient on MAXB/MQW implies an increase in participation also, but rather smaller, of some 2.1 percentage points. Variable THETA, measuring another aspect of generosity of the system, turned out important only in Canada as a whole. Its value rose from 0.20 to 0.57 over the period, an increase of 0.37. Since its coefficient in Canada was estimated at 2.2, this implies a further increase in participation of 0.37 x 2.2 = 0.8 percentage point, giving a total increase in the measured Canadian participation rate due to the system's generosity of 2.9 percentage points. In view of the fact that this is over half the increase in Canadian participation since 1954, it also seems rather large. Nevertheless, it represents the best estimate we can make.

To sum up: the measured participation rate has been strongly increased by the rising generosity of the unemployment insurance system in New Brunswick and Prince Edward Island, moderately increased in Canada as a whole, and either moderately increased or left unaffected in Nova Scotia.

E Allowing for the Differences Between Measured and True Participation Rates

As we have seen, the measured participation rate overstates the true participation rate, and it might be expected that this overstatement of participation would become increasingly serious as the generosity and availability of unemployment insurance benefits grew. The positive effect of the benefits found above would then be overstated. It can be shown rigorously that this is indeed the case, and that the regression results so far presented do overstate the positive impact on participation.

It is possible, using the analysis in "Unemployment Insurance and Labour Force Participation, with Application to Canada, and the Maritimes",¹⁹ to work out what determines the size of the adjustment one has to make to the above results to allow for errors in measuring participation rates. The

19 Op. cit.

	UIC V	ariables				Cc	ontrol Vari	ables					Fit Criteria	
Dependent Variable PR	MAXB	THETA	BR+	TØGW*	UMCAN*	Con- stant	Time	SD1	SD2	SD3	D62III- 66I	RHØ1	D.W.	R ² ²
New Brunswicl	c 0.55 (3.5) ³	1.33 (0.7)	-1.48 (-3.2)	-19.73 (-7.4)	0.29 (3.2)	59.31 (16.1)	-0.08 (-2.9)	-1.17 (-6.8)	0.63 (2.5)	2.54 (13.1)		0.71	2.07	0.89
Nova Scotia	0.18 (1.0)	1.08 (0.5)	-0.47 (-0.8)	-21.11 (-7.0)	0.12 (1.5)	51.39 (11.4)	-0.02 (-0.5)	-1.58 (-9.5)	-0.08	1.61 (10.0)	-0.62 (-1.4)	06.0	1.94	0.87
Prince Edward Island	0.46 (2.0)	-0.21 (-0.1)	-0.95 (-1.6)	-21.24 (-7.1)	-0.24 (-1.5)	57.87 (13.8)	-0.06 (-1.7)	-3.72 (-10.0)	0.65 (1.3)	3.35 (9.0)	1	0.55	1.97	0.84
Canada	0.18 (4.6)	2.25 (2.9)	-0.85 (-6.0)	-1.04 (-0.9)	0.16 (4.5)	61.14 (40.4)	-0.04 (-2.8)	-0.67 (-9.1)	0.86 (8.6)	1.95 (27.2)	I	0.59	1.69	0.97
 Estimates of Not correcte Values in pa 	first-order d for degre rentheses al	serial correl ses of freedo re t statistic	lation coefi om (40 obsi s.	ficient. Moc ervations).	lified Hildret	h-Lu regre Definitio	ssions wer ns of Varia	e used. ibles						
Dependent							1	Independent (continued	0				
PR	: the meas	ured partici	ipation rate					MAXB/MQW	: maxim	um rate of	benefit unde	er unempl	oyment ins	urance, in
Independent									contrib	ution requir	red to qualif	y for any	benefit at a	II;
BR+ D62111-661	: average b : dummy	variable, un	t current an uity from t	ld next quar	rter; ir of 1962 t	o first		SD1, SD2, SD THETA	3 : seasons : the nur week's	dummies; nber of ext contributio	ra weeks of n beyond th	benefit a	cquired for m number	one extra of weekly
rogw*	duarter o	alized and	detrended	Canadian	wage rate	in all			contrib	utions need	led for entit	lement to	benefits (n	ormally a
UMCAN*	regression deseason in all regr	ns; alized and ressions;	detrended	Canadian u	nemploymer	nt rate								

Table 2-1

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adjustment turns out to depend on one's estimate of what fraction of the group quitting work to enjoy benefits is erroneously measured as unemployed.

The larger one assumes this fraction to be, the more one should adjust downwards the positive effects on participation that we found. In order to avoid overstating these positive effects, we took what we viewed as a large estimate of the value of this fraction, 0.6, and adjusted the effects on participation accordingly.

In both New Brunswick and Prince Edward Island, this adjustment, as expected, lowers the estimated effects, but they remain positive and surprisingly large. In both provinces, participation appears to have been increased by UIC benefits by as much as 4 percentage points. In Nova Scotia, the effect may be positive, but we cannot be sure of this. In Canada, the increase seems to be about 2 percentage points.

These results are surprising enough, and important enough, to warrant further checks on their validity. One such check could be made in principle by making use of a further prediction of the theory about why participation should be affected. This prediction is that participation of females is more likely to be positively affected than participation of prime-age males. Previously nonworking females can enter the labour force in large numbers in response to the incentive of generous unemployment benefits later, whereas this is not true for prime-age males, since far more of them are already working. Participation of some of the females already working, especially those working full time, could of course decline in response to better unemployment benefits, and it could increase for some of the few prime-age males who do not work full-time, but it remains true that a net positive effect is far more likely for females than prime-age males.

The problem in checking this out is that adequate time-series data on beneficiaries by sex under the unemployment insurance system are unavailable for either Canada or the provinces, and these data are indispensable for the algebraic and regression techniques involved in properly allowing for the mismeasurement of labour force participation rates. Even data on measured participation rates by sex are available in a long enough time series only for Canada, and not for New Brunswick, Nova Scotia, and Prince Edward Island.²⁰

Regression analysis using Canada-wide measured participation rates did show, however, that the increasing generosity of the UIC system has affected measured participation of females strongly and positively, and has had a much smaller effect on participation of prime-age males.²¹ This is precisely what we expected, and increases the confidence that one can place in the results cited for the individual Maritime Provinces.

²⁰ Data were available from 1964 onwards, but it was felt that with UIC rules changing in 1971, six years data prior to this date were insufficient.

²¹ See "Unemployment Insurance and Labour Force Participation, with Application to Canada, and the Maritimes", op. cit.

Conclusions

While the degree of approximation involved in obtaining the numerical results given is quite high, one would be quite safe in reaching three conclusions on the basis of the analysis underlying them. First, the greater generosity of the unemployment insurance system has not decreased true labour force participation in the Maritimes. Second, participation has increased in New Brunswick and Prince Edward Island, and more so than in Canada as a whole. Third, participation has not decreased in Nova Scotia.

3 The Effect of Provincial and Municipal Social Assistance Programs

Introduction

The late 1960s and early 1970s were a period of extremely rapid growth in the social assistance caseload in both New Brunswick and Nova Scotia. Data were not collected for Prince Edward Island, but it is likely that the same was true there. Table 3-1 shows some of the relevant information.

			Nova Scotia ²	
	New Brunswick ¹	Provincial	Municipal ³	Total
1963	8,966	7,651	n.a.	n.a.
1964	8,989	8,148	n.a.	n.a.
1965	9,455	8,812	n.a.	n.a.
1966	9,357	8,951	n.a.	n.a.
1967	10,825	9,335	n.a.	n.a.
1968	11,674	10,546	n.a.	n.a.
1969	13,861	11.072	n.a.	n.a.
1970	14,512	11.589	3,939	15.528
1971	18,171	12,790	6.106	18,896
1972	20,983	14.049	5.656	19,705
1973	20,974	14,166	5,814	19,980

Total Caseloads Excluding the Aged and Children, and Including Blind Persons' Assistance and Disabled Persons' Assistance Programs

Table 3-1

n.a.: Not available.

1 Excludes Old Age Assistance.

2 Excludes Old Age Assistance, foster children, abandoned children, unemployable women 60-65.

3 Excluding an estimate of the aged and of those already counted in the provincial totals.

Sources: Annual and Quarterly Reports of the New Brunswick and Nova Scotia Departments of Social Services.

Caseloads in New Brunswick more than doubled from 1963 to 1973, although there was a period of slow growth in the early 1960s. In Nova Scotia

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they did not quite double, rising by 85 per cent over the same period.¹ Adding dependents, this implies that something like 10 per cent of the population of New Brunswick and 6 per cent of the population of Nova Scotia is now supported or partly supported by welfare. The increase in total welfare dependency has been a little less than the increase in caseload, due to a decline in the number of dependents per case, but has nevertheless been very substantial indeed. If we take cognizance of other families and persons who are in receipt of federal income maintenance payments, notably unemployment insurance benefits and old age pensions and supplements, the level of dependency is very substantial.

We have already argued in Chapter 2, however, that the increased generosity of unemployment insurance has increased rather than decreased participation in the labour force in New Brunswick and Prince Edward Island, and left it unchanged in Nova Scotia. Better old age pensions and supplements may or may not have decreased participation of older folk, but even if they have that is not an important issue for this study, for few would argue that such a change is bad.

Unlike pensions, social assistance is most often a payment to people of working age. If the payments are permitting or inducing these people to stay out of the work force, the economic loss in a place as poor as the Maritimes may well be considered serious. In addition, the human and social cost of welfare dependency is even worse.

This chapter is therefore mainly concerned with the question of whether the increasing availability and generosity of provincial (or municipal) welfare has seriously reduced the number of people working for a living. In trying to give an answer to this question, we have adopted a number of approaches.

First, it is important to know how many people and what kinds of people have been added to the welfare rolls. How many are men and how many are women, how many are sick and how many well, how many have family responsibilities and how many do not, etc. With this information at hand, a reader can make some intuitive first judgment of his own on whether welfare recipients could be working, and whether they should be working. This discussion is in Section A.

Second, in Section B, we have tried to assess how many of those on welfare are capable of working, in the sense that they are able-bodied or close to it, and touch briefly upon the issues of whether or not mothers on welfare should be working.

The third approach is used in Section C, in which we tackle the question of how many people have chosen welfare in preference to work, and how the proportion in this group differs from what it used to be. Brief consideration is also given to the effect on the amount of work done by welfare clients of reducing the welfare payment if a person works on a part-time basis.

¹ This statement assumes that municipal caseloads, for which data over the whole period are not available, moved similarly to total caseloads.
Fourth, in order to give perspective to the whole question of employability of welfare recipients, it is important to know what the availability of jobs is for people on welfare. This is examined in Section D.

Conclusions based on all four approaches are presented in Section E.

While the impact of welfare on work effort is the main concern of this chapter, a number of other issues connected with the welfare program deserve some investigation. These are given a very brief examination in Section F.

A The Pattern of Welfare Growth

We first describe welfare growth in Nova Scotia, and then in New Brunswick. No detailed information is available for Prince Edward Island.

The Pattern of Welfare Growth in Nova Scotia

The detailed information for Nova Scotia is in Table 3-2.² Of the approximately 20,000 welfare cases in 1973, about 11,000 were disabled in one way or another, forming 56 per cent of the total. This includes persons on the joint federal-provincial programs, in receipt of Blind Persons' and Disabled Persons' Allowances, persons in receipt of Provincial Social Assistance, and an estimate of persons classified as disabled on municipal rolls other than those already counted in the other two categories. About 7,000 more of the cases were families headed by persons whose spouse was dead, missing or disabled.³ This group was 34 per cent of the welfare caseload. The remaining small portion of the cases, 10 per cent in all, was made up of about 1,600 unemployed (8 per cent of the total) and 490 retraining or employed but not earning enough to support their families (2 per cent).

For comparisons over more than four years only provincial data were available. They show that of the growth of 6,515 from 1963 to 1973, about 60 per cent was in the disabled category and 40 per cent was single-parent families.

For the single-parent families, none of the growth came from widows or wives of disabled husbands – the number of cases of these two kinds actually fell over the decade. All the growth was in groups that traditionally were not given provincial assistance before the 1960s, namely deserted, divorced and separated wives, unmarried mothers, and "dependent fathers".⁴ Leaving the last category out, we can say that greater support of deserted, separated,

² The aged and children have been excluded from the table, and, as far as possible given the data, throughout the analysis.

³ For convenience we shall refer to these cases as single-parent families, though they include a few cases of wives with disabled husbands. Not all are women; nearly 1,000 disabled fathers receive assistance.

⁴ Defined as fathers who are disabled and have a dependent child in their care and custody. In fact, the disability has to be serious enough to preclude the father caring for the child (or children) at home. See *Welfare Services in Nova Scotia*, Nova Scotia Department of Social Services, published annually.

	Single-Par							
	Widows, Prisoners' Wives, Wives of Disabled Husbands	Deserted Wives, Divorced Wives, Unmarried Mothers and Dependent Fathers	Blind and Disabled (Provincial or Joint Federal- Provincial)	Disabled (Municipal)*	Spouse Absent (Municipal)*	Unemployed (Municipal)	Insufficient Earnings or Retraining (Municipal)	Total, Provincial and Municipal
1963	2,475	285	4,891					
1964	2,486	304	5,358					
1965	2,545	348	5,829					
1966	2,460	370	6,121					
1967	2,486	619	6,230					
1968	2,754	940	6,852					
1969	2,724	1,153	7,195					
1970	2,686	1,468	7,435	1,245	884	1,265	545	15,528
1971	2,560	2,096	8,134	1,758	1,334	2,354	660	18,896
1972	2,487	2,763	8,799	1,807	1,349	1,839	661	19,705
1973	2,271	2,983	8,912	2,272	1,484	1,568	490	19,980

Types of Welfare Cases, Nova Scotia Table 3-2

28 Effect of Provincial and Municipal Social Assistance Programs

divorced and unmarried mothers accounted for one-quarter of the total growth of the provincial caseload from 1963 to 1973. Table 3-3 gives an accounting of the growth in provincial and joint federal-provincial welfare from 1963 to 1973 (municipalities are excluded).

	Number	Per Cent of All Growth
Growth in disabled	4,021	62
Growth in deserted, separated, divorced and unmarried mothers	1,716	26
Growth in dependent fathers	982	15
All other (widows, prisoners' wives, wives of disabled husbands)	-204	-3
Total growth	6,515	100

Table 3-3

Accounting for Growth of Provincial Welfare in Nova Scotia, 1963-73

Source: Welfare Services in Nova Scotia, Nova Scotia Department of Social Services.

Rather more than a quarter of the 1973 caseload in Nova Scotia was carried by the municipalities. Data for them were not available for years before 1970. Over the limited period 1970-73, the growth accounting for municipal data is quite similar to that for provincial, a surprising result when one considers that the municipalities support the unemployed and the employed poor as well as single-parent families and the disabled.

The municipal caseload, after netting out an estimate of those already counted into provincial social assistance (Disabled Persons' Allowance and Blind Persons' Allowance) and also excluding the aged as noted above, grew by 1,875 cases, or by 48 per cent from 1970 to 1973. Some 1,027 of these, or 55 per cent, were in the disability category. Most of the remainder, 600 or 32 per cent, were single-parent families. The unemployed and employed poor accounted for only 13 per cent of the growth. There is evidence that the last two groups increase in size in recession periods (see the data for 1971 and 1972 in Table 3-2), but little evidence of trend growth.

The salient facts about Nova Scotia's welfare growth can now be stated quite quickly. The cases on provincial or federal-provincial welfare grew by 85 per cent from 1963 to 1973. Cases on municipal welfare grew by 48 per cent from 1970 to 1973. For both the province and the municipalities, about three-fifths of the growth was in cases classified as disabled, while the rest of the provincial growth, and most of the rest of the municipal growth, was in cases classified as single-parent families. Increased desertion, separation, divorce, and unmarried motherhood were the main sources of growth of

single-parent families. The number of unemployed getting welfare is very small, and it has not changed significantly.

The Pattern of Welfare Growth in New Brunswick

Detailed information for New Brunswick is found in Table 3-4. As in Nova Scotia, children and the aged are excluded, but those on Blind Persons' Allowance and Disabled Persons' Allowance are included.

	Single-Pare	nt Families					
	Widows and Prisoners' Wives ¹	Deserted, Separated, Divorced and Unmarried Mothers	Age, Health and Disability ²	Unemployed	Employed	Total	
1963	2,1	138	6,	828	_	8,966	
1964	2,2	202	6,	787	-	8,989	
1965	2,2	289	7,	166	_	9,455	
1966	2,2	227	7,	130	-	9,357	
1967	2,	770	8,	055	-	10,825	
1968	688 ³	1,195	6,401	2,849	541	11,674	
1969	1,349	1,284	7,394	3,443	391	13,861	
1970	1,277	1,511	7,710	3,612	401	14,511	
1971	1,305	2,055	8,706	5,128	477	18,171	
1972	1,471	2,243	10,489	6,558	222	20,983	
1973	1,453	2,402	10,959	5,421	739	20,974	

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Types of Welfare Cases, New	Brun	swick
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1 Also widowers and cases where the spouse is hospitalized.

2 Includes Disabled Persons' Allowance and Blind Persons' Allowance, but excludes Old Age Assistance.

3 Some doubt has been cast on this figure. It probably should be larger. See Peter H. MacRae, "Social Assistance and Work Effort", Cabinet Secretariat, Government of New Brunswick (1974), p. 116.

The symbol "-" means zero.

Source: Adapted from Tables 2.1 and 5.10 in Peter H. MacRae (see footnote (3) of the table), on pp. 22 and 111 respectively. The primary sources were Annual Reports and Quarterly Statistical Bulletins of the New Brunswick Department of Social Services.

The total caseload in New Brunswick more than doubled from 1963 to 1973. Significant detail of the breakdown of cases is not available before 1968. At that time, just over half the caseload was in the disability category (55 per cent), one-quarter were unemployed (24 per cent), a sixth were single-parent families (16 per cent) and the remainder (5 per cent) were employed poor. These proportions had hardly changed by 1973, indicating that all groups in New Brunswick grew at roughly the same rate over the period. Despite this, if unemployed people have been increasingly classified as disabled as a consequence of the exercise of caseworker discretion, it may be

The Employability of Welfare Recipients 31

that the role of welfare in supporting the unemployed has been increasing faster than appears. This question is dealt with in more detail elsewhere.⁵ With this proviso, Table 3-5 gives information on how the New Brunswick caseload growth was accounted for.

Numbers	Per Cent of Total Growth
4,558	49.0
1,207	13.0
765	8.2
2,572	27.6
198	2.1
9,300	100.0
	Numbers 4,558 1,207 765 2,572 198 9,300

Table 3-5	
Accounting for the Growth of Provincial Welfare in New Brunswick.	1968-73

Source: See Table 3-4.

As in Nova Scotia, the most important part of growth was due to there being more in the disabled category. Half of New Brunswick's growth was here, compared to about three-fifths in Nova Scotia. The most important contrast with Nova Scotia is in the unemployed. In New Brunswick, they constituted just over a quarter of all the growth, but virtually none of it in Nova Scotia. Desertion, separation, divorce and unmarried motherhood, which were a quarter of the growth in Nova Scotia, were only one-eighth of it in New Brunswick, but if we add in widows, a full one-fifth of New Brunswick's growth is in fact accounted for by single-parent families. The numbers of employed poor have fluctuated erratically, with no clear trend emerging.

Considering both provinces, the increase in people receiving welfare because they are categorized as disabled dominates; it accounts for between 50 and 60 per cent of all growth. In Nova Scotia, most of the rest is due to an increase in single-parent families. In New Brunswick, the remainder of the growth is divided roughly equally between single-parent family growth and growth in the numbers unemployed.

B The Employability of Welfare Recipients

If welfare has seriously reduced the number of people working for a living, it must be the case that a substantial number of welfare clients are in fact

5 MacRae, op. cit., pp. 100-101, Table 5-9, and passim.

physically capable of work. This is certainly necessary, although it is clearly far from sufficient.

While the unemployed are obviously capable of work, they form a minority of the caseload and its growth. People classified as sick and disabled are much more numerous, but if the classification is accurate, they are unemployable.⁶

Examining the tremendous growth in the latter category in New Brunswick, however, raises some doubts about how accurate the classifying process is. Table 3-5 shows that, from 1968 to 1973, the number of sick and disabled rose by 49 per cent. It is unlikely in the extreme that actual sickness and disability have increased anywhere near as much as this, and we may infer that if in 1968 the welfare system had operated in the same way as it did in 1973, many more people would then have been classified as sick or disabled. Obvious questions arise as to how employable such people are, and how they would have survived without welfare in 1968. Would some, or many of them have worked? If so, a number of those on assistance in 1973 were surely also employable. If they did not work, how did they live?

Growth in the sick and disabled was less dramatic in recent years in Nova Scotia than in New Brunswick. Table 3-2 shows that the numbers on provincial and federal-provincial programs increased by 30 per cent from 1968 to 1973. This is still large enough, however, to make one wonder how the kinds of persons so classified today obtained their income in previous years. Nova Scotia data go back before 1968 (unlike New Brunswick's) and show that the category has been growing strongly for several years. It seems likely that about half the growth before 1968 was due to transfers of municipal disabled to provincial care, but this still leaves a considerable expansion in this early period.

It has been possible to gather together for New Brunswick a number of pieces of evidence which allow a rough estimate to be made of what proportion of those classified as sick and disabled might be employable, in the sense of being physically capable of work. Later we shall comment briefly on the case of Nova Scotia.

Part of the evidence comes from a random sample of case files for New Brunswick. Some 397 files were examined, dealing with welfare recipients during the last 20 years. Within this sample, 103 cases had been placed on welfare because of sickness or disability. In 26 cases there was no evidence whatsoever, direct or indirect, about employability beyond the categorization of the person as being sick or disabled. Among the remaining 77, one might

⁶ According to MacRae, op. cit., pp. 102-103, "The Department has used various criteria in classifying unemployable ... clients. Paraphrasing ... they are ... Illness: When the recipient is considered unable, due to physical or mental illness or disability, to meet needs and when the nature and the duration of the problem is uncertain or where medical and other evaluation indicates improvement within one year; Disability: When the recipient is considered unable, as a result of physical or mental incapacity (including retardation), to meet needs and where no change in employment status is expected within one year."

The Employability of Welfare Recipients 33

take as fairly conclusive evidence of unemployability while on welfare any one of the following reasons for later leaving welfare: death; qualification for a pension or compensation; entry to hospital; recovery from a work-related injury. One might also take it that a person is unemployable if he or she stays on welfare continuously for two or more years. Using these criteria, 47 of the 77 cases could be classified as unemployable. The remaining 30 are all known to have worked sometime, because their record shows them as leaving welfare either to take a job or to draw unemployment insurance benefits. This does not necessarily mean that they were employable at the time of drawing welfare; some, perhaps most, were sick then and recovered later. There is no way of knowing for sure, therefore, whether and to what extent 30 is an overstatement of the number who were employable at the time they were on welfare, but it seems unlikely that more than half could have worked if jobs had been offered. If so, at most 15 people out of the 77 for whom some information existed were technically employable when on welfare, or roughly 20 per cent. We shall therefore assume that at most 20 per cent of all those classified under New Brunswick social assistance as sick and disabled were in fact at least technically employable, in that they could have worked in a labour market characterized by plentiful vacancies and tolerant employers. In 1973, this would have been about 1,700 persons, or 16 per cent of all the sick and disabled, including those on Disabled Persons' Allowance and Blind Persons' Allowance as well as those on the social assistance program proper.

The file records also throw light on whether the incidence of employability has been rising through time. If it has, we might infer that one needs to be less sick or disabled to get welfare now than formerly, and that the incentive to work has fallen. We separated the file data according to the date when a person first received welfare and also according to whether the recipient had ever left welfare for work. The results are shown in Table 3-6. If we assume as before that half of those who worked sometime after drawing welfare were employable, then 17 per cent (11 out of 65) were employable prior to 1970, and 21 per cent afterwards (8 out of 38). This is not much of a change,⁷ and we conclude that the incidence of employability among the sick and disabled has risen very little if at all.

Aside from the direct file evidence, we do know that in 1969, when the numbers of aged, sick and disabled in the New Brunswick social assistance caseload⁸ rose sharply from 3,600 to 4,609,⁹ the amount spent by the

7 For those who like statistical methods, a chi-square test gives $\chi^2 = 0.7$, not significant at 5 per cent.

⁸ Which excludes Disabled Persons' Allowance and Blind Persons' Allowance programs.

⁹ MacRae, op. cit., p. 111, Table 5.10, rows 1, 2, 14 and 15. These particular numbers differ from those in Table 3-4 because the latter include people on the Disabled Persons' Allowance joint federal-provincial program and on the Blind Persons' Allowance joint federal-provincial program.

Sie	ck or Disabled Welfare Recip	pients, New Brunswick	
First Received Welfare	Not Known to Have Worked After Coming on Welfare	Worked Sometime After Drawing Welfare	Total
Before 1970	43	22	65
1970 or later	22	16	38
Total	65	38	103

Table 3-6

Source: Random sample of New Brunswick Case Files.

province on medical care also rose sharply, from \$1.35 million to \$3.21 million.¹⁰ The juxtaposition of these changes is consistent with the new clients' classification as sick and disabled being an appropriate one. A similar test cannot be made in later years because the introduction of medicare in 1971 meant that the province no longer paid a substantial part of the medical bills of its welfare clients, and it has not proved possible to obtain similar information on federal expenditure of medical funds on welfare recipients.

From 1970 to 1972, there was a dramatic rise of nearly 3,000 in the numbers in the aged, sick and disabled category in all programs in New Brunswick. It seems extremely likely, in view of the file evidence that employability within the category did not increase significantly after 1970, that the increased accessibility of physicians following the 1971 introduction of medicare led to large numbers of genuinely sick and disabled people acquiring the necessary knowledge about, and proof of, entitlement to welfare. The argument for this is made at greater length elsewhere,¹¹ and it seems a reasonable one. After 1972 the growth rate in the category slowed down, indicating perhaps that the majority of the cases entitled to welfare had acquired it.¹²

A final piece of evidence for New Brunswick relates not so much to the aged, sick and disabled category as to the general employability of all welfare recipients. If the kind of person now receiving welfare typically did not get it years ago, and if in addition he (or she) is not employable and so could not work, then in the past he would have been very very poor, poorer than, even though drawing welfare, he typically is today. Indirect evidence of the unemployability of welfare recipients would therefore exist if it could be shown that the numbers of persons in desperate poverty had fallen *pari passu* with the growth of the welfare caseload. This question is examined in detail

¹⁰ Ibid., p. 81.

¹¹ MacRae, op. cit., pp. 112-114.

¹² Better coverage under the revised unemployment insurance system may also have contributed to the slowdown.

The Employability of Welfare Recipients 35

elsewhere¹³ and it appears that desperate poverty in New Brunswick did decline as welfare grew, and by an amount not inconsistent with the increase in welfare. To be quite specific, from 1960 to 1970 (census years were all that was available) the number of nonfarm families of two or more, excluding the self-employed, who had an income of less than \$1,000 at 1960 prices fell by about 3,500. Relative to the rise in the welfare caseload, which was about 7,700 from 1960 to 1970, this is a large number, although any desperately poor families headed by persons over 65 should be excluded from it since they are mostly excluded from our estimate of growth in the welfare caseload.¹⁴ On the other hand, one should add to the 3,500 those farm families and unattached individuals under 65 who also moved out of desperate poverty during the decade, and for whom data were unavailable.

Since there remained in 1970 about 4,000 nonfarm non-self-employed families in New Brunswick with less than \$1,250 (equivalent in purchasing power to \$1,000 in 1960), the growth of 7,000 in the welfare caseload from 1970 to 1973 must have further reduced the incidence of desperation poverty.

To sum up: two conclusions may be drawn from the various pieces of evidence just cited. First, among those classified as sick or disabled in New Brunswick, at most 16 per cent are employable, and probably many fewer. Second, the proportion who are employable in this category has not changed significantly during the last ten years.

We have no direct file evidence on Nova Scotia, and it is much harder to judge employability among the sick and disabled there. Steinberg, on the basis of an investigation of the disability review process, a questioning of department officials, and an examination of what data are available, concludes that employability among the welfare disabled in Nova Scotia is negligible.¹⁵ Moreover, we noted earlier that growth in the category over the 1968-73 period was only about two-thirds as rapid in Nova Scotia as in New Brunswick. Putting the evidence together, it seems impossible that more than 10 per cent of the sick and disabled in Nova Scotia could be employable, and the percentage is probably much smaller than this. We expect that the percentage has remained more or less unchanged through the years, as was found to be the case in New Brunswick.

13 MacRae, Appendix B.

- 14 There will not be many desperately poor families with old heads, because for a couple OAA and federal old age security paid \$1,620 in 1960.
- 15 C. Steinberg, "The Impact of Municipal Assistance on Labour Force Participation", a Research Study prepared for the Department of Social Services, Province of Nova Scotia, in concert with the Council of Maritime Premiers and the Economic Council of Canada (Halifax: Queen's Printer, 1974), pp. 43-44. The definition of disability quoted there is: "disabled person' means a person who has a major physical or mental impairment or a combination of mental impairment and physical impairment that is likely to continue for a prolonged period of time and who is disabled to such an extent that the person is unable to be employed and includes an unemployable person".

Employability of the Heads of Single-Parent Families

Mothers who are widowed, divorced, separated, or unmarried,¹⁶ are the second largest group on welfare after the sick and disabled, and they account for a substantial part of its recent growth.

Common sense suggests, and the New Brunswick file evidence confirms, that the great majority of spouseless mothers are capable of work, in the sense of being able-bodied; indeed, without wishing to appear trite, it is worth commenting that motherhood is a demanding occupation.

Whether mothers with children to mind should work is an issue which we do not feel it appropriate to discuss in this report. What is clear is that society and they could benefit by their having a realistic choice between work and welfare. At present it rarely pays a mother financially to choose work over welfare, and yet, ignoring the question of how desirable full-time care of the children by the mother is, it would very often pay society if she chose work. In fact it would pay whenever the wage the mother could obtain exceeded the cost of providing suitable day care.

In our judgment, the person best qualified to decide whether a job would benefit the family overall or not, assuming it benefitted them financially, is the mother herself, or father, if he is alone with care of the children. If this is granted, it would follow that more subsidies for day care could benefit both society and the family heads who make use of the subsidy. Whether it is desirable to make the implied transfer of real income to single-parent families that is implied is something that should be discussed by each provincial government.

It may be relevant, however, to comment that experience of a job may be valuable in preventing a mother from staying permanently on welfare after the children grow up. Given the rising trend of welfare in this group, such a result may be worth striving for.

Conclusions on the Employability of Welfare Recipients

Table 3-7 summarizes the results on the employability of welfare recipients. Excluding mothers with dependent children and no husband present, in Nova Scotia at the very most 3,200, or about one in six of all the people getting welfare, may be able-bodied and so physically capable of work. Of the 3,200, about half are unemployed, one-sixth are working already but earning too little to live on, and one-third are classified as sick or disabled.

In New Brunswick, a maximum of 7,900 may be able-bodied (excluding mothers), 37 per cent of the total welfare caseload. Almost three-quarters of them are already classified as unemployed (70 per cent) and nearly another tenth are already employed, with the remainder, about a fifth of the total, being classified as sick or disabled.

16 And a few fathers with custody of their children.

Table 3-7

Estimates of the Maximum Employability of Welfare Recipients in Nova Scotia and New Brunswick, 1973

		Nova Scotia			New Brunswic	k
Welfare Case Category	Total in Category	Upper Limit of Number Employable	Upper Limit of Number Employable as a Percentage of All Cases	Total in Category	Upper Limit of Number Employable	Upper Limit of Number Employable as a Percentage of All Cases
Unemployed	1,568	1,568	100	5,421	5,421	100
Sick or disabled	11,184	1,100	10	10,959	1,700	16
Mothers ^a	6,738	q	q	3,855	q	q
Others	490	490c	100	739	739d	100
Fotal	19,980	3,158	16	20,974	7,860	37
a Including fathers with depender	it children.					

a including fatters with dependent children. b Nearly all are able-bodied; but see text discussion of work by this group. c Employed already, or being trained. d Employed already. Source: See Tables 3-2, 3-4 and text.

C The Number Attracted to Welfare by the Growing Size of the Payments

The growth in the caseload documented in Section A, and the not insignificant fraction of the caseload that is at least technically capable of working described in Section B, makes it important to ask whether some of the able-bodied on welfare have deliberately chosen to be on welfare, because they find it financially attractive.

Table 3-8 shows how income from work at the minimum wage compared with income from assistance in April 1974, by size of family in Nova Scotia and New Brunswick.

Table 3-8

Income¹ from Work and from Social Assistance, Nova Scotia and New Brunswick, April 1974

	Income from	n Work ²	Income from	Welfare
	New Brunswick	Nova Scotia	New Brunswick	Nova Scotia ³
Single person	273	276	145	170
Couple, one earner	294	301	235	219
Couple, ⁴ child aged 1 year	294	303	245	258
Couple, ⁴ two children aged 2-4	294	303	255	285
3, 4, 7	294	303	265	328
3, 6, 10, 13	294	303	275	372

(Dollars per month)

1 Excluding family allowances.

2 At minimum wage, 40-hour week, net of income tax, Canada Pension Plan and unemployment insurance deductions.

3 Tenants, Municipal Social Assistance, relevant because in Nova Scotia it is the municipalities who handle those on welfare who are unemployed.
4 Or a single parent.

Source: Income from work, direct calculation as in footnote 2; income from welfare: New Brunswick, MacRae, op. cit., Table C-5, p. 193; Nova Scotia, Steinberg, op. cit., Table 10, p. 57.

In Nova Scotia, welfare does not pay more than work to a couple (or single parent) unless there are three children or more to support, although, if work-related expenses such as travelling costs are allowed for, a couple with only two children could be about as well-off on welfare as by working at the minimum wage. Allowing for child-care expenses, a single parent is clearly better off on welfare independently of family size. Very recent legislation has insured that in New Brunswick welfare never pays better than work, provided one ignores child-care or work-related expenses, but before it was passed the situation there was very similar to that in Nova Scotia. Even now, the

Number Attracted to Welfare by Growing Size of Payments 39

financial advantage of work at the minimum wage is quite small for any family or single parent with children.

There are certainly enough persons with dependent children, and whose earnings possibilities are work at the minimum wage or close to it, to make it a real possibility that some will choose welfare over work. It should be remembered, however, that having children and a low income are not enough to entitle one to welfare; one must also be sick, or unemployed, or fit into some other welfare category. Even if welfare is both attractive and known to be attractive financially compared to work, only a proportion of the people who genuinely meet the necessary conditions for welfare will choose it, due to the stigma still attached to it by many. Those who do will often be single mothers with children, and society may well prefer that such people choose welfare even if they could work. Among those who cannot legitimately meet the necessary legal conditions for welfare, only a small proportion are likely to desire welfare strongly enough that they will deliberately break the law.

Granted all this, there may be some who choose welfare over work. Can some of the welfare growth be accounted for by this?

To answer this question we have used the technique of regression analysis, explained above in connection with our examination of the unemployment insurance system. The theory underlying the use of regression analysis in this context is one in common use in economics literature.¹⁷ We applied the analysis to both New Brunswick and Nova Scotia.

New Brunswick

In our regression analysis for New Brunswick,¹⁸ we made use of data on caseloads and payments per case, for the provincial system only,¹⁹ in each quarter over the period 1964 to 1973 inclusive. The factors other than the size of the welfare payment for which we tried to control were general economic conditions and the availability of other kinds of transfer incomes from government.

General economic conditions were measured by the national unemployment rate, the national inflation rate, and variables designed to capture seasonal effects. All of these variables did affect the welfare caseload. The

18 Complete regression results and data used are given in Appendix A.

19 That is, excluding Blind Persons' Allowance and Disabled Persons' Allowance.

¹⁷ The literature is extensive. The interested reader might consult the following: C. T. Brehm and T. R. Saving, "The Demand for General Assistance Payments", American Economic Review, Vol. 54 (December 1964); Lowell E. Gallaway, "The Aged and the Extent of Poverty in the United States", Southern Economic Journal, Vol. 33 (October 1966); Bruno Stein and Peter S. Albin, "The Demand for General Assistance Payments, Comment", American Economic Review, Vol. 57 (June 1967); Hirschel Kasper, "Welfare Payments and Work Incentives: Some Determinants of the Rates of General Assistance Payments", Journal of Human Resources, Vol. III, No. I (Winter 1968); and J. Donald Rowlatt, "Welfare and the Incentive to Work: The Alberta Case", Human Resources Research Council of Alberta, Edmonton (November 1971).

conclusion they lead to is that the year-to-year and season-to-season variability in economic conditions, particularly in job availability, causes a corresponding (though not equal) year-to-year and season-to-season variability in the welfare caseload. This does appear to imply that much of the time a good portion of the caseload is on welfare because jobs are not available; were it otherwise, the caseload would surely not decline as it does when job conditions improve.

The availability of other methods of income support was measured by the coverage of UIC benefits, by the ease of building up entitlement to those benefits in terms of the number of weeks' work necessary to qualify and the rate at which further work increased the length of time one could stay on benefit, and by the size of the total payments to persons other than the aged under the Canada Pension Plan. The results showed that the caseload has been strongly influenced by the increasing availability and generosity of UIC benefits. The effect is a negative one; the increasing generosity of the UIC system has significantly decreased the number of people going on welfare. The effect of the Canada Pension Plan was perverse. For reasons we cannot explain, the regression analysis shows it as having increased the welfare caseload, a result which makes little sense.

Controlling for general economic conditions and the availability of alternative income maintenance schemes, it appears that the level of the welfare payments available in New Brunswick did increase the size of the caseload, but not by very much. To illustrate, over the period 1964 to 1973, average payments per case rose from a level equal to 46 per cent of the average wage²⁰ to a level equal to 70 per cent of it. This is a rise relative to the wage of about 50 per cent. Our analysis indicates that as a result of this change the provincial caseload increase was between 2 and 14 per cent larger than it would otherwise have been.²¹ Since the increase was about 12,000 cases, this means that between 240 and 1,680 cases might not have been on the rolls in 1973 if payments had been held at 46 per cent of the average wage over the whole ten years. The total provincial social assistance caseload in 1973 was about 18,000, so that one may conclude that even a drastic cutback of welfare payments (to their 1964 level in terms of the average wage) would serve to reduce the caseload at the very most by about 9 per cent (1,680 is 9.3 per cent of 18,000). This is a very small drop for such a drastic reduction in benefits. At the centre of the range of the estimates, only 5 per cent of the caseload (960 cases) would be eliminated.²²

20 See Appendix A for a precise definition of this and all other variables used.

21 The method does not permit greater precision than this.

22 Payment per person supported by welfare rose more than payment per case, because the number of dependents per case fell. Similarly, the number dependent on welfare rose less than the number of cases did. It follows that if the regressions were re-run, using persons instead of cases, a procedure which is not as good in our view as using cases, the effect of the payments in attracting people to welfare would appear even smaller than that estimated above. Number Attracted to Welfare by Growing Size of Payments 41

Nova Scotia

In Nova Scotia we made use of data relating mainly to the unemployed.²³ This allowed a test of whether, within a group of persons on welfare, most of whom we knew to be unambiguously able-bodied and so physically capable of working, a number were choosing welfare over work. The information consisted of the numbers of recipients in each of 47 municipalities in 1971 and 1972,²⁴ and of the average assistance payments to them. As theory suggests is appropriate, these payments were divided by the hourly rates of pay available for "general labour".²⁵

The municipal caseloads do not consist exclusively of aid to the unemployed, but include those of the aged and the disabled who cannot get support under federal and provincial income maintenance programs. A good part of the aid to the aged and disabled goes to recipients in nursing homes, 26 and we were able to exclude these, but not the others. Our dependent variable was therefore the number of cases on municipal assistance under Form 1, measured as a fraction of the working-age population in the municipality.

The factors other than the size of the welfare payment for which we tried to control were general economic conditions and differences in the apparent readiness of municipalities to admit people to welfare. Differences among municipalities in a given year in the availability of other methods of income support are negligible, with the exception of fishing benefits under the unemployment insurance system, which we allowed for in those municipalities for which fishing is important.

General economic conditions were measured by the unemployment rate in each municipality, obtained from the 1971 census.

We included four variables to control for differing readiness to admit to welfare. In those units where assistance is normally given to single unemployed persons, we assigned a dummy variable to take on the value one, with zero being assigned to those units where no such assistance is granted. Granting assistance to single unemployed persons is one indicator of how easy it is to obtain assistance in the municipality. A second variable measured the fraction of earned income excluded from the calculation of the individual's total income for the purposes of arriving at his budget deficit. Some units

24 A more complete exposition of the work summarized here is in Appendix A.

25 These rates are published as ranges for 16 of the municipal units. We took the lower limit of each range. For any unit where the rate was not available, we took the rate in the nearest place to it. These data originated with the Employment Development Section of the Department of Manpower and Immigration and were obtained from a Site Selection Profile published by the Nova Scotia Department of Development in May 1974.

26 Form 2 and 2A assistance.

²³ For Nova Scotia these were the *only* data available in a form suitable for applying the regression technique. In New Brunswick the data on total caseload were all that were available in a suitable form.

include all of earned income while others include only 80 per cent. A third variable was the size of the municipal budget per member of the population. It is possible that wealthier municipalities will be more generous with welfare. A final variable was a measure of the degree of urbanization, which has been used in previous studies as a measure of administrative liberality.²⁷

The results of the regression analysis for Nova Scotia did not support the view that higher welfare payments led to higher caseloads. On the contrary, there was weak evidence that caseloads were higher the lower the payments and conversely. We interpreted this result as meaning that a given budgetary allocation can be spread thinly over a lot of people or thickly over a few. Different choices among municipalities in this regard then lead to an inverse association between the payments and the caseload. We carried out some checks of this idea and found that it appeared to explain the data better than any alternative theory. Even so, our success in identifying factors that explain differences in welfare payments was quite disappointing; only the size of the budget, per unit of population, had a definite effect. In the technical jargon, the coefficients on the other variables were not statistically significant, although they had the expected signs.

Part-Time Work by Welfare Clients

Whether or not the number of welfare clients depends on the level of the payments, the amount of work done by those who are clients will be sensitive to the rules about casual or part-time earnings. An unemployed person, for example, may have occasional opportunities for casual or part-time work. If his earnings from this do not reduce his benefits, or do not reduce them dollar for dollar, his incentive to work is higher than if they do. The same is true for part-time work by mothers and by the partially disabled.

Administrative practices in the Maritimes vary somewhat here. In New Brunswick, a person who is classified as unemployed can earn up to \$20 a month on a casual basis, but beyond this his welfare payments will be reduced dollar for dollar. There is a clear disincentive to do no more than \$20's worth of work per month, and more opportunities for casual work might be taken up if some part of the additional earnings could be kept. There are equity problems, however, in that rules of this kind might enable an unemployed person on welfare, working casually, to end up with more income than many persons employed full-time. Some of the latter already get supplemental welfare help, some not, but the number who might need to be given it (or more of it) to achieve equity among all low-income people, independently of whether or not they were on welfare, could be rather large. Moving to rules that provided a better incentive to people presently on

²⁷ See C. T. Brehm, and T. R. Saving, "The Demand for General Assistance Payments", *American Economic Review*, Vol. 54 (December 1964), and the references cited therein.

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welfare to work might involve governments in a choice between creating inequities or making considerably higher welfare expenditures. These problems are precisely those facing the institution of any kind of guaranteed income plan.

For those categorized as unemployable in New Brunswick, whether through disability or family responsibility, up to \$100 a month in earnings is permitted before the welfare payment is reduced, and it is then reduced dollar for dollar. The work disincentive effect here is obviously less than in the case of the \$20 limit, but still exists. The situation in Nova Scotia is quite similar²⁸ to that in New Brunswick, although generalization is less easy given the division of responsibility for welfare among the province and the numerous municipalities.

While we do think that some disincentive effect to part-time or casual work exists in both provinces, we did not attempt to make estimates of how serious it is. This is an area which warrants further research, although in our view the difficulties of obtaining relevant data would be extremely great.

Conclusions on Welfare Payments and the Number Attracted to Welfare by Them

There is little evidence that welfare payments are attractive enough relative to wages in the Maritimes for people to choose welfare over work. The statistical data indicate that perhaps 5 per cent of the total New Brunswick caseload, and none of the Nova Scotia municipal caseload, are on welfare because it pays well relative to work. No direct evidence on the Nova Scotia provincial caseload was found, but, given Steinberg's finding of the rather strict administrative procedures employed,²⁹ it is unlikely in the extreme that more than 5 per cent of that caseload is deliberately choosing welfare. In short, the number deliberately choosing to be welfare clients rather than to work is essentially negligible. Consistent with this, the rules concerning earnings of those on welfare are such that, for those who are on welfare by necessity rather than choice, a disincentive to do more than a minimal amount of part-time work may exist.

D Job Availability for People on Welfare

Section B showed that a not insignificant fraction of welfare recipients could work, in the sense of being able-bodied, or able-bodied enough. Section

29 Steinberg, op. cit., p. 43.

²⁸ In Nova Scotia, in general, the municipalities provide social assistance to the unemployed and to those working part-time but requiring assistance due to insufficient earnings. In the calculation of an individual's budget deficit, earned income is one of the main components included on the income side. The treatment of earned income is pretty uniform across units in that 100 per cent of such income is included. Some exceptions do exist but they are few. In the majority of units, therefore, each additional dollar earned reduces social assistance by a dollar.

C indicated that very few of those have actually *chosen* welfare over work. In this section we examine whether or not, independently of their wishes in the matter, those on welfare who are technically employable (able-bodied) *could* work if they were to seek it with adequate diligence. We look, in other words, at the availability of jobs for people on welfare.

It is always true that one unemployed man or woman with sufficient drive can get a job, because some vacancies always exist. The question here is whether jobs are available for everyone on welfare who could work; it was examined in fine detail by Steinberg for those of the welfare caseload in Nova Scotia who were classified as unemployed,³⁰ and in rather broad terms for New Brunswick.³¹

In Nova Scotia, end-of-month unfilled vacancies by region were obtained from Canada Manpower Centres for the 12-month period ending in April 1974 and divided by 12 to get mean monthly vacancies. It is known that actual vacancies exceed those reported to Canada Manpower Centres by a wide margin. This was allowed for by multiplying reported vacancies by a factor of three, based on information given in more detail in Steinberg's study.

It turned out that the monthly average vacancies were 9,117. The total number of welfare recipients was available only for March 1973 at the time of writing, and was much larger, 20,974. Only a proportion of these are employable, however, and it may be that for them there are enough jobs available. Let us focus first, as did Steinberg, on job availability only for those who are actually classified as unemployed (all of whom are on municipal welfare rolls).

In March 1974, there were 1,047 unemployed receiving welfare in Nova Scotia. It seems clear on the fact of it that, with 9,117 jobs available, plenty of opportunities existed.

It must be recalled, however, that the unemployed on welfare are not the only people available for jobs. There are a number of unemployed people who are supported by unemployment insurance benefits, and they will be competition for the available jobs as far as the welfare unemployed are concerned. Moreover, they are likely to be strong competition, in that the qualifications and suitability for employment of a recipient of unemployment insurance are typically better than those of a recipient of welfare.³²

Some of those receiving unemployment insurance benefits are not actively seeking work, however, and do not compete for work with those on welfare, such as those on fishing benefits or maternity benefits, longshoremen, and

³⁰ Steinberg, op. cit., especially Chapter VII.

³¹ See MacRae, op. cit., pp. 127-130.

³² A point made in more detail in Steinberg's study, cited above, see especially pp. 141-142.

some others. Excluding these people, there were 30,043 unemployed estimated as receiving unemployment insurance benefits in March 1974.³³

Consequently, although 9,117 jobs were available, jobs were sought by 31,090 people, 1,047 of whom were in receipt of welfare and 30,043 in receipt of unemployment insurance benefits. Putting this another way, for every 9 jobs, 31 people were available, one of whom was on municipal welfare. We conclude that in March 1974, in Nova Scotia, job availability for welfare recipients was very poor.³⁴ This conclusion would be strengthened if we included employable welfare recipients other than those classified as unemployed.

March of 1974 was not an exceptionally good month in the Nova Scotia job market, but neither was it an exceptionally bad month. It is not likely that the conclusions on job availability would change much if other years or other times of the year were examined. Job availability would simply vary between poor and very poor.

If one looks at districts within Nova Scotia, some interesting differences emerge. Seven districts could be distinguished given the way statistical information on vacancies and unemployment insurance is collected and given that we wished to keep as close to sensible labour market areas as possible.³⁵ Table 3-9 shows that vacancies in March 1974 were not that far short of equality with the number unemployed in the Halifax-Dartmouth metropolitan area, with about two vacancies for every three unemployed persons. Conceivably, however, introduction of a job bank in the area has led to a more complete reporting of vacancies, so that the earlier multiplication of vacancies by a factor of three may overstate the true number of jobs available. It is also likely that the 305 unemployed on welfare in Halifax-Dartmouth were less well qualified for work than the 5,762 on unemployment insurance benefits. Nevertheless, it seems that job availability for welfare recipients in Halifax-Dartmouth was much better than in the rest of the province, and perhaps even quite good in an absolute sense.

The rest of the province contrasts dramatically with its major metropolis. The unemployed far outnumber the vacancies, with the ratio of unemployed

³³ See Steinberg, op. cit., for details, in Chapter VII.

³⁴ We feel that the data warrant this conclusion, although it can be argued that the definitions and time dimensions of vacancies and unemployment are different enough to make comparisons of absolute numbers somewhat hazardous. (See David Gower, "The Occupational Composition of Job Vacancies", Canadian Statistical Review, April 1973, p. 118). One's suspicion of the validity of directly comparing the number of unemployed with the number of vacancies might also be increased by the fact that even at what some consider to be full employment in Canada (4 per cent), the number of unemployed typically outnumbers the number of vacancies by a ratio of four or five to one (see Frank Denton et al., Patterns of Unemployment Behaviour in Canada, Economic Council of Canada, Discussion Paper No. 36, September 1975, p. 62).

³⁵ See Steinberg, op. cit., Chapter VII, for an explanation of the choices of districts.

to jobs ranging from 2:1 in Bridgewater to 18:1 in Sydney. For the three-quarters of Nova Scotia's welfare unemployed concerned, job availability is extremely poor.

		Unemploy	
District	Vacancies	On Welfare	On UIC Benefits
Port Hawkesbury	183	40	1,164
Bridgewater	1,026	27	2,072
Halifax-Dartmouth	4,176	305	5,762
Yarmouth	774	46	3,082
Kentville	690	105	4,211
New Glasgow	1,905	249	7,508
Sydney	363	275	6,244
Nova Scotia	9,117	1,047	30,043

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Vacant Jobs and Unemployed People, Nova Scotia, March 1974

Source: C. Steinberg, "The Impact of Municipal Assistance on Labour Force Participation", Table 35, p. 139.

Chapter 2 indicated that the attractiveness of being able to enjoy unemployment insurance benefits after doing a spell of work to qualify for them may attract some people into the labour force. Although our regression analysis indicated that there was only weak evidence of such an effect in Nova Scotia, the possibility of it implies that some of the 30,043 counted above as unemployed because they were receiving unemployment insurance benefits may not actually have been seeking work at all, or may have been seeking it in a minimally enthusiastic manner designed to avoid benefit disqualification. The gap between vacancies and people wanting jobs would then be overstated. No one knows by how much, but no one who has worked on the problem has ever come up with more than one-third of the unemployed not really wanting work, and estimates commonly run much less than this. If we adopted the most sceptical view possible in light of this evidence, we might reduce by one-third the number on unemployment insurance benefits in order to get a better estimate of the number actually wanting work. The conclusions so far reached would be modified a little by this. If one were less sceptical, however, and supposed that a much smaller proportion of the unemployed recipients of UIC benefits were not actively seeking work, say 10 per cent or less (in view of our regression results), then the conclusions on job availability would be hardly modified at all. We incline to this view ourselves.

Lack of time and resources precluded more than a cursory comparison in New Brunswick of the levels of vacancies and the numbers unemployed. That comparison showed results quite consistent with those for Nova Scotia, namely a large excess of unemployed over vacancies.

Conclusions on Provincial Welfare and Work Effort 47

It is clear that there are nowhere near enough jobs for the welfare unemployed, and that this is strong corroborative evidence in favour of the conclusion reached in Section C that none of the unemployed on welfare in Nova Scotia have *chosen* it in preference to work. A finding of large numbers of vacancies going begging would have cast doubt upon that conclusion.

The "no vacancies" situation, however, appears to have disturbing implications for our suggestion in Section B, that social arrangements be considered that would permit mothers on welfare to work if they wished. What is the point of that, if no jobs are to be had?

The point of it is that the number of jobs available is not, in the long run, independent of the number seeking jobs. The clearest evidence of this is that the Canadian labour force has virtually doubled in a generation, and, while the unemployment rate has remained on average rather high, it has never come even close to 50 per cent, as it would have had to if the availability of jobs had not risen along with the availability of people. That jobs become available when more people look for them is not an accident, but an intrinsic feature of the way the economic system works, partly automatically and partly through deliberate macro-economic policy measures. The details and relative importance of the various mechanisms involved are not fully understood; some possibilities are indicated in Appendix B. More importantly, the long-run ability of the economic system, in any region, automatically to provide jobs for a growing labour force is almost certainly independent of the average rate of unemployment in the region. British Columbia's and Quebec's rates of unemployment are much higher, on average, than Ontario's, and yet in all three provinces, over the long run, jobs have appeared for their very rapidly growing labour forces.

It therefore makes perfectly good sense to advocate measures that will lead to an increase in the number of persons seeking work, while simultaneously arguing that those *presently* seeking work cannot find it because vacancies are lacking. If more people seek work, employment will rise in the long run, consistent with there always being, at any point in time, a high unemployment rate, a low vacancy rate, and great difficulty in finding work.

E Conclusions on Provincial Welfare and Work Effort

Welfare caseloads in both New Brunswick and Nova Scotia have grown very rapidly in recent years, roughly doubling in a decade. All categories in New Brunswick grew roughly in proportion: the sick and disabled, single-parent families, and the unemployed. In Nova Scotia the growth was mainly confined to the sick and disabled and single-parent families. By far the great majority of present caseloads in both provinces consists of the sick, the disabled, and mothers with dependent children but no husband.

If one counts mothers with children to look after as unemployable, a *maximum* of 37 per cent of those on welfare in New Brunswick are employable, in the sense of being able-bodied, and a *maximum* of 16 per cent

in Nova Scotia. Most of these are unemployed, but there is some evidence that a very small minority among those classified as sick and disabled would be capable of work if it could be found. Whether or not mothers on welfare with children to look after should seek work is an open question.

The number of people who have chosen welfare in preference to work is very small. Our evidence indicates that they may comprise perhaps 5 per cent of the New Brunswick provincial caseload, less than this percentage of the Nova Scotia provincial caseload, and none of the Nova Scotia municipal caseload.

The welfare clients actively seeking work at present face stiff competition from other unemployed people, mainly those in receipt of unemployment insurance, for a very limited number of vacancies. There is no possibility that even a substantial minority of the unemployed on welfare could find work. Despite this, and paradoxically, it might be worthwhile to give welfare mothers more of an opportunity to seek for work if they wish to do so.

The overall message of our analysis is that the increasing availability and generosity of provincial welfare has had no important effect on the number of people working for a living.

F Other Economic Effects of Social Assistance

The focus in Sections A through E has been on the effect of welfare on work incentives and work effort. It now seems appropriate to comment briefly on four issues other than these that have been raised in connection with income maintenance.

One is whether migration, within the region or outside of it, is sensitive to the availability of income maintenance programs. A second and related matter is whether the economic effects differ among subregions within the Maritime Provinces. The third concerns possible harmful effects of these programs on labour turnover. Finally, the tax burden imposed by the programs is a question of some importance.

Migration

A person may move to improve his earnings, or to find employment. Some concern has been expressed that such moves, which are usually beneficial to the migrants, and which either increase average earnings or reduce unemployment or both in the province or nation, might be inhibited by the increasing availability and generosity of income maintenance programs. If one is made comfortably off where one is, why move?

A distinction should be drawn here between those on provincial or municipal welfare and those drawing unemployment insurance benefits or on programs like LIP.

Most of the growth in welfare caseloads consists of spouseless women with children to care for or sick and disabled people. One might guess that

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members of these groups typically do not often migrate, implying that socially beneficial migration is not being affected by the growth of welfare. We were not able to check with data, however, whether or not members of these two groups are less prone than average to migrate, and the possibility cannot be ruled out that some of the employable among them have been induced not to migrate.

For the unemployed on welfare, and for the much greater numbers of unemployed on unemployment insurance, or on programs like LIP, it is more plausible to argue for migration being inhibited. For this group, except in rather rare cases,³⁶ a job does pay better than welfare or unemployment insurance, but the margin is much narrower than it was in the past. If the out-of-pocket costs of working are allowed for, and the cost of moving taken account of, the total financial advantage of relocation may have been substantially diminished or eliminated for many of the unemployed. There are a number of ways in which this possibility could be checked out, and its quantitative importance assessed: we did not have the resources to do it.

Subregions Within the Maritimes

Differences among regions within the Maritimes in incomes and unemployment rates are often as marked as they are between the Maritimes and the rest of Canada. It is important to know whether income maintenance programs are accentuating these intra-Maritime differences; unfortunately the data to find this out are quite inadequate.

In New Brunswick there is some weak evidence that the growth in social assistance has been slightly greater in the traditionally more prosperous regions³⁷ of the province, but it is perhaps better to stress the inverse proposition, that growth in assistance has not been greater in the economically weak areas. It would still be possible for regional disparities to be somewhat worsened if the small work disincentive effects we found happened to be disproportionately concentrated in the weaker areas of the province. This does seem rather unlikely, since if a comparison is being made between work and welfare both are likely to pay the same anywhere in the province, provided one makes the reasonable assumption that the minimum wage is close to the relevant measure of what work would pay. It is not impossible, however, because reactions to a somewhat smaller economic penalty for not working could differ regionally, perhaps because the availability of jobs differs, perhaps because views on the virtue of work differ.

The increased generosity of the unemployment insurance system appears to have increased participation of women more than men. It is virtually certain that this has happened in New Brunswick; it may also have happened in Nova

37 MacRae, op. cit., p. 97.

³⁶ Family heads in Nova Scotia, with three children or more, who can only earn the minimum wage or close to it if they take a job.

Scotia, in the sense that, controlling for other factors, a fall in the participation of men may have been offset by a rise in that of women. To the extent that opportunities for women are greater in the developed regions, employment and family incomes would have risen most there. Regional disparities would be accentuated by this, but it is perhaps not so serious a matter, in that the poorer areas are not actually worse off, it is only that the richer areas are better off.

Turnover

Labour turnover could in principle increase as a consequence of better benefits on unemployment insurance or welfare. If the cost of quitting one's job is reduced, the likelihood of quitting may be increased. Increased quit rates are not necessarily good or bad. If the end result is greater job satisfaction and greater productivity on the job because the right job is eventually found, both employers and employees could benefit. If the end result is that employers continually spend money training people who leave and do not or cannot make use of their training elsewhere, because it is specific to the firm, then there is a clear loss. There can be a situation where each employer feels he loses, but in aggregate they do not, because the training given by each employer is always made use of by some other employer. If the end result is greater relative bargaining power of employees, because of the ability to quit, whether this is good or bad depends on whether additional bargaining power is used to change working conditions in a way that enhances or worsens productivity, and how one views any shift of income from employers to employees made possible by that power.

It is not feasible or appropriate here to reach a judgment on these complex matters, which involve the question of whether greater turnover would be economically beneficial or not. What we can do is ask the simple question: is there evidence that turnover has gone up recently in the Maritimes?

To answer this, we draw upon some recent work on labour markets done by the Economic Council of Canada.

Three kinds of evidence were looked at by the Economic Council. In October 1966, and in April 1973, Statistics Canada made surveys supplementary to the Labour Force Survey which provided information on the proportion of the working-age population that changed jobs within a 12-month period. This proportion rose from 12 to 15 per cent, a noticeable but not startling change. Some of the rise was due to an increasing weight of females and young persons, who have higher turnover rates than average, but even allowing for this turnover appeared to have gone up, especially in the younger age groups.

The second kind of evidence came from a special survey of firms carried out by the ECC. Some 185 firms were asked to submit information on their recent turnover experience. At the time of writing, 34 of them had provided this information for the period from 1968 or 1969 through 1973. For more

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than half of these firms the turnover had actually declined. An interesting finding was that most firms did not consider unemployment insurance a major factor in their turnover rates.

The third kind of evidence was made available from a random sample of Canada Pension Plan records. Using these, it is possible to work out changes since 1968 in the average number of jobs held per person each year. These data are available for the Atlantic Region separately; they show that there has been no detectable increase over the period 1968 to 1973 in the number of jobs held by persons of a given age, whether male or female. This would mean, for example, that 25-year-old men changed jobs no more frequently in 1973 than they did in 1968, in the Atlantic Region. The same is true for all other age-sex groups, with the possible exception of the under-21-year-olds. In some other areas of the country there is evidence of more job changing, mainly among females.

It is clear that the information concerning whether turnover has changed is rather mixed. What does seem fairly certain is that there has been no dramatic rise in turnover in the Atlantic Region, and probably not in the Maritimes.

The Tax Burden of Income Maintenance Programs

As a percentage of the provincial budget, the cost of social assistance is not large. In New Brunswick, for example, social assistance was only 6.2 per cent of the total budget in fiscal year 1973.³⁸ Since about half of the social assistance program is federally funded, the cost to the province is even lower.

There are nevertheless more taxes on New Brunswickers, Nova Scotians, and Prince Edward Islanders as a result of income maintenance programs than appears at first sight. Each dollar of funds contributed by the federal government under a cost-share program has to be raised in taxes. A proportion of these taxes come from Maritimers, and they end up paying themselves for a fraction of each federal dollar received (only a fraction, because Maritimers are generally in lower tax brackets and the Maritime Provinces gain from unconditional transfers). The dollars for social assistance which cost Maritime governments 50 cents, cost Maritime residents more than 50 cents.

It is equally true that generous old age pensions and guaranteed income supplements mean higher federal taxes for all Canadians, including Maritimers, as do higher unemployment insurance benefits, which are heavily subsidized from tax revenues.

If one is old, unemployed or on welfare, one benefits as a result of the federal and joint federal-provincial income maintenance programs. If one is a taxpayer one loses. It will not infrequently happen that the same person gains at one time, loses at another, and indeed, allowing that nearly everyone

38 MacRae, op. cit., p. 79, Table 5.2.

becomes old eventually, nearly everyone benefits at some time. Nevertheless, it is not too much of a simplification to speak of two groups, one gaining and the other losing.

In the Maritime Provinces, the dollars gained by the gainers considerably exceed the dollars lost by the losers. Nevertheless this may not be adequate comfort for the losers, especially if they look back to the situation some years ago when income maintenance programs were less generous and less widespread. Moreover, and this is a crucial point, the loss is in some respects an involuntary one. It is not feasible for Maritime governments to contract out of unemployment insurance, or old age pensions, since they are an integral part of being in Canada, and yet, if a vote were taken in New Brunswick, or Nova Scotia, or Prince Edward Island, and if the voters knew and appreciated the personal tax burden implied in giving federal levels of benefits to the unemployed, or to old age pensioners, they might prefer not to be so generous. In varying degree, similar comments can be made with regard to other income maintenance programs. This is not to say that Maritimers, if they did prefer to be less generous, are harsher or meaner than other Canadians – far from it. The point is rather that they are not as well off. Perhaps they cannot fully afford federal income maintenance programs, although they have them. On the other hand, it is quite possible that the federal contributions are actually large enough to make adoption of federal or partially federal standards in income maintenance programs quite worthwhile from the point of view of Maritime taxpayers.³⁹ If one would normally buy a Chevrolet, and one is induced to buy a Cadillac at a much reduced price, that may or may not be a bargain.

Quite apart from the possibility that a majority of Maritimers may be paying higher taxes to finance better income maintenance programs than they would prefer, there is the different question of whether higher tax burden affects work effort, assuming that it impacts mainly on individuals. Past history suggests that as income has gone up people have opted for more leisure and less work.⁴⁰ Conversely, if incomes go down, people tend to take less leisure and work more. On this argument higher taxes would encourage more work effort.⁴¹ We were unable to investigate these questions, but they certainly should be considered a topic for further research.

40 The shorter work week is the most obvious evidence of this.

³⁹ The benefits are of two kinds: the satisfaction of having a good system of income support for the needy, and the jobs created by the aggregate demand effect of the programs, covered in the next chapter.

⁴¹ This is quite consistent with the very different proposition that higher marginal tax rates may discourage work effort; we are talking of higher taxes in every bracket, as well as of higher taxes of other kinds.

4 The Aggregate Demand Effect of Income Maintenance Programs

Income maintenance programs allow those who receive income from them to buy goods and services which they could not otherwise have afforded. Producing those goods and services requires that some people be employed who otherwise would not be. It appears then that income maintenance programs create new jobs. In the Maritimes this effect needs to be considered in any assessment of the impact of the programs on economic development.

There is a difficulty with the argument that new jobs are created. Taxes have to be raised in order to pay for income maintenance expenditures. If they are income taxes, the amount of spending that can be done by those paying the taxes is reduced below what it would otherwise be, and sales of goods and services to them fall off, extinguishing jobs. If sales taxes are used, the prices of the goods on which they ary levied rise, forcing people in the end to cut back purchases elsewhere, or to reduce the quantity bought of the taxed goods themselves, since people's total incomes have not been increased along with the tax changes. These cutbacks in quantities purchased extinguish more jobs. Similar arguments may be made for any method of financing income maintenance expenditures (other than the creation of new money), so that we are forced to the conclusion that income maintenance programs in effect destroy as many jobs as they create; essentially they just shuffle income around.¹

It is possible nevertheless that income maintenance programs create more jobs *in some regions* than they destroy there, and destroy more jobs than they create in other regions. Jobs would be created on balance if two conditions held: first, if more money was paid out in a region than it could reasonably be inferred² was collected in taxes for the purpose of paying for the programs; second, if at least some of the extra goods and services bought as a result of the region's higher net income were produced within the region,

¹ If the gainers spend a higher proportion of extra income than the losers, then there is a net increase in aggregate demand, but this is of little quantitative significance.

² This clumsy terminology is required because taxes are not usually earmarked specifically for income maintenance programs.

54 Aggregate Demand Effect of Income Maintenance Programs

generating jobs there. Our estimates indicate that both these conditions hold for the Maritimes, and for each of its provinces individually.

Two reservations to the employment creating argument should be mentioned. One is that if unemployment were very low to begin with, no further jobs would be created; instead, one would get inflation of the general wage and price level. Occasions when unemployment in the Maritime Provinces is this low are regrettably rare. A second, more serious reservation is that the extra need for labour by employers might raise wages as well as create new jobs, by enhancing the relative bargaining power of employees, both unionized and non-unionized. Higher wages might, through a number of mechanisms,³ somewhat reduce the number of extra jobs created. We have ignored this effect in the calculations which follow.

In order to get quantitative estimates of the expenditure-creating effect of income maintenance programs, two numbers are needed for each province. One is the net transfer of income to residents and governments of each Maritime Province from the rest of Canada which is attributable to the programs. By "net" we mean net of taxes implicitly imposed on residents of the province by the very existence of the income maintenance programs. The other number required is the ratio to that income transfer of the spending, induced by it, on provincially produced goods and services, whether final or intermediate. We christen this second number the income maintenance expenditure multiplier.

This latter is a complicated matter: even if a resident of a Maritime Province spends part of his extra income on imports from Ontario, such as automobiles, part of that spending may flow back to the province. For example, the tires needed for the automobile might be produced in Nova Scotia. Conversely, even if residents spend the extra transfer income locally, on baked goods for example, some portion of their spending will find its way outside the region, as in the case of the wheat or flour needed for baked goods.

Net Income Transfers to the Maritime Provinces

The rest of Canada contributes to income maintenance payments in the Maritimes in three ways. Payments are made directly to persons – old age pensions, the guaranteed income supplement, family allowances, and unemployment insurance benefit payments – are the major programs involved. Conditional grants are made to supplement the provincial governments' own social assistance expenditures under the Canada Assistance Plan. Unconditional grants are made to provincial governments, and some of the revenue thus obtained may permit the province's own spending on social assistance to be higher than otherwise.

3 Such as reduced sales by firms because of having to charge higher prices, and switching to less labour-intensive methods to avoid the higher labour costs, etc.

Federal income maintenance payments direct to persons are paid for by federal taxes of various kinds,⁴ and some portion of these taxes is paid by residents of each Maritime Province. Suppose a total amount Z is paid under federal income maintenance programs directly to persons in all Canada. Suppose further that residents of a particular province pay a fraction f of all federal taxes collected. One might argue that the amount of income maintenance programs paid for by that province's inhabitants is fZ. To illustrate, this argument would imply that if \$1 billion was spent on all federal income maintenance programs, and Quebec residents paid 20 per cent of all federal taxes, they would have paid for \$200 million of income maintenance expenditures. If now the residents of the province receive, under the programs, an amount different from fZ, say z, they are receiving a net income transfer equal to the difference between z and fZ, i.e., z - fZ. For some provinces this number will be positive, as in the Maritimes, for others it will be negative. For all provinces together the net income transfers sum to zero.

Applying this reasoning in practice involves much detailed work, but it is fairly straightforward. The results of doing it are shown in the first column of Table 4-1. In 1971-72, for example, persons in Nova Scotia obtained net transfers of \$82 million, in New Brunswick \$72 million, and in Prince Edward Island \$22 million.

Net transfers to the Maritime Provinces under conditional grant programs may be similarly estimated. Suppose that total federal grants under the Canada Assistance Plan to all provinces combined are an amount CG, and that, as before, residents of a particular province pay a fraction f of all federal taxes. Then conditional grants in amount f(CG) have been paid for by the province's inhabitants. If their provincial government actually receives an amount different from this, say cg, then there is a net transfer of the difference, cg - f(CG). These amounts are shown in the second column of Table 4-1. In 1971-72, for example, Nova Scotia received in this way a net transfer of \$10 million, New Brunswick \$12 million, and Prince Edward Island just under \$3 million.

Unconditional grants to provinces permit the provinces' own expenditure on all programs to be higher than otherwise. By the same reasoning as before, and denoting Canada-wide unconditional grants by UG, and those actually received by a province by ug, and by f the fraction of federal taxes paid by the province, we find a net transfer of ug - f(UG). Only a fraction of this net transfer will actually go to increasing the provinces' own expenditure on income maintenance programs. What that fraction is is not known, and cannot be known in principle, but in practice it seems reasonable to assume that the fraction will be the same as the fraction that income maintenance spending of the province is of total expenditure by the province from its own

⁴ For analytical purposes, unemployment insurance contributions are simply another kind of federal tax.

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revenue sources. Accuracy is not in any case critical here, because the amounts involved are very small. Table 4-1 shows that in 1971-72 there was a transfer through this mechanism of less than \$2 million into Nova Scotia, of just under \$4 million into New Brunswick, and of \$1½ million into Prince Edward Island.

	Transfers to Persons	Conditional Grants	Unconditional Grants	Total
	(Millions of dollars)			
Nova Scotia				
1968-69 1969-70 1970-71 1971-72	53.0 58.7 61.5 81.5	6.0 8.3 7.0 10.2	1.7 1.4 1.3 1.4	60.7 68.4 69.8 93.1
New Brunswick				
1968-69 1969-70 1970-71 1971-72	45.9 49.1 52.2 72.2	6.5 7.5 8.4 12.0	2.8 2.6 3.0 3.8	55.2 59.2 63.6 88.0
Prince Edward Island				
1968-69 1969-70 1970-71 1971-72	14.5 15.2 16.5 21.8	2.2 2.5 2.6 2.7	1.2 1.0 1.5 1.5	17.9 18.7 20.6 26.0

Table	4-1	
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Net Transfers Due to Income Maintenance Programs

Source: N. Swan and T. Glynn, "Estimates of the Aggregate Demand Effect of Income Maintenance Programs in the Maritime Provinces", Discussion Paper No. 32, Economic Council of Canada, 1975.

Table 4-1 indicates that total net transfers attributable to income maintenance programs are substantial and have been rising sharply. From the final column of Table 4-1, one may deduce that in Nova Scotia and New Brunswick they amounted in 1971-72 to over \$100 per person per year, men, women, and children, and to considerably more than this in Prince Edward Island. Moreover, they have been growing rapidly, being roughly 50 per cent higher in 1971-72 than in 1968-69 in all three provinces. Transfers of this magnitude might well be expected to have substantial employment-generating effects.

Income Maintenance Expenditure Multipliers

As pointed out above, only part of any extra dollar of income goes to purchases of output produced within the province where that income is paid.

Income Maintenance Expenditure Multipliers 57

By treating the province and the rest of Canada as two "countries" which trade with one another, one can apply the theory of international trade to this problem. Using a particular version of that theory which seems the most appropriate in this case, an algebraic expression for the multiplier can be derived, whose value depends on four basic numbers.⁵ the fraction of the province's Gross National Product that consists of household consumption of goods and services, as contrasted with capital goods, or goods and services used by governments; the same fraction for the rest of Canada; the imports of the province from the rest of Canada as a fraction of the province's GNP; and the imports of the rest of Canada from the province as a fraction of the rest of Canada's GNP. All these numbers can only be estimated quite roughly, and the resulting multiplier estimates therefore have some unknown margin of error. Subject to this reservation, we find that in all three provinces the income maintenance expenditure multiplier is about the same, and is approximately 0.27. The estimate for Prince Edward Island is probably much less reliable than that for New Brunswick and Nova Scotia.

Simply interpreted, this means that every net dollar of income maintenance expenditure transferred annually into a Maritime Province by the rest of Canada generates additional output valued annually at about 27 cents in the particular province to which it is transferred. Simultaneously, of course, there is a 27-cent reduction in output in the rest of Canada for any given level of aggregate demand in Canada as a whole.

On the basis of the net transfers given in the final column of Table 4-1, and the multiplier of 0.27, we can make estimates of what increment to GNP occurs, province by province, as a result of the demand-generating effect of income maintenance programs.

A minor point should be clarified first, concerning the delay before the full aggregate demand effect is felt. Suppose that from 1965 on \$1 per year is transferred net to New Brunswick through some income maintenance program. The full shift of 27 cents of aggregate demand, from the rest of Canada to New Brunswick, will not occur right away, but will take a length of time depending on the lags in the circular flow of expenditures. It may be two years before most of the effect is felt. Consequently, if we examine the level reached by net transfers in the current year, and apply the multiplier to them, the resulting estimate of the increase in aggregate demand will be correct only if net transfers have been steady at that level for two or more years. If they are higher than two years ago, the true aggregate demand effect will be rather lower. A better estimate may be obtained by using the average of a number of years, and that is what we have done.

The aggregate demand effects were calculated in this way for the year 1971-72, and were \$20.8 million in Nova Scotia, \$19.0 million in New Brunswick, and \$5.9 million in Prince Edward Island.

5 For details see N. Swan and T. Glynn, op. cit.

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We may draw out the employment implications of these results by first considering Nova Scotia. GNP in Nova Scotia in 1971-72 has been estimated at \$2.6 billion (Table 4-2). Using this figure, the increment to aggregate demand would be 0.8 per cent of GNP in the province. This increase in aggregate demand will increase employment, and assuming that in the long run the increase in jobs is at least proportional to the increase in GNP, jobs would increase by 0.8 per cent.⁶ Based on employment in Nova Scotia in 1971-72 (see Table 4-2), this represents about 1,900 jobs. If we assume that the creation of more jobs will not bring more people into the labour force, we can translate these results into their effect on the unemployment rate. They mean that the unemployment rate in Nova Scotia is reduced, as a result of the aggregate demand effect of income maintenance programs, by about three-quarters of a percentage point.

The effects in New Brunswick and Prince Edward Island can be calculated similarly. In New Brunswick, aggregate demand is increased by 1 per cent, representing about 2,000 jobs. Unemployment in New Brunswick is correspondingly almost a full percentage point lower than it would be without income maintenance programs. In Prince Edward Island, the relative effect is apparently stronger, about 800 jobs, corresponding to an increase in output of about 2 per cent and a reduction in the unemployment rate of about 2 percentage points. For Prince Edward Island, however, there is more uncertainty about the size of the multiplier, which may well not be as large as 27 cents. Even so, the proportionate employment-creating effect is not likely to be any less than in New Brunswick and Nova Scotia.

It should be reiterated that these aggregate demand effects represent only the effect of income maintenance programs in shifting aggregate demand from other regions to the Maritime Region. However, whenever the federal

	Nova Scotia	New Brunswick	Prince Edward Island
		(Millions of dollars)
Gross Provincial Product	2,600	2,000	290
		(Thousands of person	ns)
Employment	240	200	36

Tab	le 4	1-2
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Estimates of Gross Provincial Product and Employment by Province, 1971-72

Source: Gross Provincial Product are estimates from the Atlantic Provinces Economic Council (Annual Reviews). Employment totals were calculated from a working paper by the Labour Force Survey Division of Statistics Canada.

6 Jobs would rise by less than this if wages rose, so that the results may slightly exaggerate the employment effects.

Income Maintenance Expenditure Multipliers 59

contribution to the programs becomes more generous, aggregate demand in Canada as a whole will increase if no offsetting fiscal strategies are adopted. Such an increase would be additional to the shifting effect we have allowed for, because we have assumed in our work that whenever an income maintenance program, such as the unemployment insurance system, was changed, offsetting fiscal strategies were in fact adopted for Canada as a whole.⁷ Under this assumption, only the *shifting* effects remain as a stimulus in the Maritimes. If the assumption is not correct, then the aggregate demand effect in the Maritimes is understated.

One could go even further and argue that government might have compensated for the aggregate demand shifting effect of federally supported income maintenance programs by deliberately adopting a regionally differentiated fiscal strategy intended to offset the shifting, i.e., one which transferred aggregate demand back from the Maritimes to the rest of the country. We have not found any evidence that such an offsetting strategy was adopted, so that our calculations of the aggregate demand effect seem likely to be correct as minimal estimates of the impact in the Maritimes. It is clear, however, that one does not have to use income maintenance expenditures in particular in order to shift aggregate demand in favour of particular regions, whether the Maritimes or elsewhere. Many other fiscal policies have a regional dimension, and could be used, if a decision to do so were made, in order to achieve different geographical distributions of any given level of aggregate demand.

One further minor point should be mentioned. Among income maintenance programs the unemployment insurance system, and to a lesser degree the provincial welfare system and programs like LIP, not only increase aggregate demand but also stabilize it. In the process of permanently raising the level of aggregate demand, they raise it more in periods of recession than in other periods, creating a rather smoother path of employment around the new higher level. In downswings this makes falls in employment less than previously; on the other hand, subsequent recoveries are weaker than previously. Unless one approaches truly full employment on the upswing, a rare event in the Maritimes, there is very little advantage to the greater stability in the employment path, beyond the benefits of having the whole path at a higher level, which have already been accounted for in the analysis above.

⁷ This is equivalent to assuming that, nationally, the government intended to achieve the surplus or deficit which it actually achieved. Further discussion of the necessity to make some kind of assumption about government behaviour and intentions in these matters can be found in "Economic Impact of Selected Government Programs Directed Toward the Labour Market", by Peter A. Cook, Cyril D. Hodgins, Gregory V. Jump and Charles J. Szabo, Economic Council of Canada (forthcoming), see Chapter 8.

5 Conclusions

In this paper we have focused on the effects on work effort of two of the major income maintenance programs, unemployment insurance and provincial welfare. The effects of all income maintenance programs on aggregate demand and on the level of employment have also been investigated.

Unemployment insurance provides an incentive for those who otherwise would not have worked at all to work at least some of the time each year, and for some who would otherwise have worked full-time full year no longer to work all of the time. The strength of the incentive was dramatically increased in 1971. The effect on participation in the labour force, and thereby on employment and output, could in principle be positive, negative, or zero. In practice, the effect appears to be strongly positive in New Brunswick and Prince Edward Island, and may be positive also in Nova Scotia, but could be zero there. It seems that increases in participation by groups such as married women and young people offset or more than offset any decreases among prime-age males and older single females. Although the effect on employment and output is positive, or not negative, one might wonder whether the system is fully equitable among all workers, and whether it is an efficient way of achieving an encouragement to labour force participation.

Provincial welfare caseloads in the Maritimes have roughly doubled in the last 10 years. The bulk of the caseload, and of its growth, is accounted for by the sick and disabled. Most of the rest is spouseless mothers with children. The prospects of future caseload growth depend on whether the population that can fit into these categories is going to grow or not. In both Nova Scotia and New Brunswick, only a small proportion of the caseload consists of unemployed people, and in New Brunswick a correspondingly small proportion of the caseload growth did occur within the unemployed category. In Nova Scotia the number of unemployed on welfare has risen very little.

The majority of the welfare caseload in both New Brunswick and Nova Scotia is unemployable by reason of disability or sickness, even when maximum allowance is made for the possibility that some of those *classified* as sick or disabled might actually be fit enough to work. Leaving out of account mothers with children to care for, at the most conservative reckoning 62 Conclusions

only 37 per cent of the New Brunswick caseload is physically capable of working, and 16 per cent of the Nova Scotia caseload. Most of these people are actually classified as unemployed, not as sick or disabled.

The number of persons that have chosen welfare rather than work is certainly very small. It probably lies between 2 per cent and 10 per cent of the caseload in New Brunswick. In Nova Scotia none of the unemployed on welfare, all of whom are a municipal responsibility, appear to be there by choice, and no more than a minuscule percentage of those on provincial welfare.

Those on welfare presently classified as unemployed face stiff, almost impossibly difficult, competition for a very limited number of vacancies from the large number of better qualified unemployed people on unemployment insurance benefits. Unfilled vacancies are few and far between.

Income maintenance programs as a whole result, as of any given level of aggregate demand nationally, in a substantial shift of spending power towards the Maritime Provinces.¹ This spending power creates a demand for workers and a supply of jobs that would not otherwise exist, despite the fact that it also causes extra imports of goods and services from outside the area. The additional spending may reduce the unemployment rate by as much as one percentage point in the Maritime Provinces.

Considering the major income maintenance programs as a group, their combined effect is economically beneficial. This is true independently of whatever value one places on distributing income to those in need. The programs increase output and employment, and reduce the unemployment rate. The minuscule reduction in employment that is generated by welfare is swamped by the large increase in employment generated by the combined effects of unemployment insurance and the aggregate demand impact of the programs as a whole.

¹ Unless the federal government chooses deliberately to offset the effect by other regionally differentiated fiscal policies, a course which they appear not to have taken in the past.

APPENDICES
A Demand for Welfare Regressions

New Brunswick

In New Brunswick a time-series regression was performed on quarterly data from 1964-73. The definitions of variables were as follows.

Dependent Variable

The social assistance caseload was divided by the working-age population to get the dependent variable. Caseload, rather than the total number being supported directly or indirectly by welfare, is the appropriate variable in considering work-incentive effects, which clearly are not relevant for dependent children. The data for the caseload are in Tables A-1 and A-2. Data on working-age population were from the Labour Force Survey via CANSIM. The computer name chosen for the dependent variable was SAC/WAP.

Independent Variables

MOSAH/WS	= Average social assistance payment each quarter, including
	items of special need and nearth care, in donars per month
	(MOSAH) divided by industrial composite wages and
	salaries per employed person (WS). Social assistance
	expenditures were the sum of the final columns of Tables
	A-1 and A-3, and were divided by the caseload to get the
	variable MOSAH.

- URCDA = The Canadian unemployment rate, from the Labour Force Survey via CANSIM, not seasonally adjusted, used as one measure of general economic conditions.
- RECCPI = Reciprocal of the St. John consumer price index multiplied by 100, entered as a measure of general economic conditions, from "Prices and Price Indexes", via CANSIM.
- *CPP* = Total dollar payments, to widows, widowers and for disability, under the Canada Pension Plan, for the particular months in each quarter for which data were available.

THETA = Same variable as in the unemployment insurance regressions, used as a measure of the ease with which weeks of entitlement to unemployment insurance benefits can be obtained. It took on only two values over the 1964-73 period, 0.569 from 1964 to 1971 II and 0.568 thereafter.

- UICCOV = In January 1972, coverage of the unemployment insurance system was made virtually universal. A dummy variable, with value unity from the second quarter of 1972, and zero before then, was used to capture this improved access to benefits. The dummy was not set at unity until 1972 II in order to allow for the lag in newly covered people being able to build up benefit entitlement.
- DUMMY 67 = A variable zero before 1967, unity afterwards, intended to capture any effect of the major legislative changes occurring in that year.
- TIME = A time-trend.
- SEASDMY1 = First-quarter seasonal dummy.
- SEASDMY2 = Second-quarter seasonal dummy.
- SEASDMY3 = Third-quarter seasonal dummy.

The regression result was as follows (OLS):

Independent Variables	Regression Coefficients	Students T
MOSAH/WS	2.065	2.8
URCDA	0.368	12.3
RECCPI	0.147	3.8
CPP	0.157D-02	1.6
THETA	-1.351D 02	-1.2
UICCOV	-0.338	-3.3
DUMMY 67	-0.848D-01	-0.9
CONSTANT	0.681D 02	1.0
TIME	0.108	8.0
SEASDMY1	-0.612	-7.9
SEASDMY2	-0.153	-2.8
SEASDMY3	0.103D-01	0.2
$\overline{R}^2 = 0.991$	D.W. = 1.77	

Note: The symbol D followed by two digits, as in D 02, means that the number preceding must be multiplied by 10 raised to the power implied by the digits, e.g., .681D 02 = .681 x 100 = 68.7, and .157D-02 = .157 x (1/100) = .00157.

The actual values of the data used for the dependent and first four independent variables are in Table A-4. Other variable values can be inferred from the definitions given above.

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Demand for Welfare Regressions, Calculations of Quarterly Data on Caseload and Expenditure, New Brunswick

			Ü	aseload			Expend	litureț	
		Municipal Assistance S.A. Part II	Mothers' Allowance S.A. Part I	Nursing Home	Net Social Assistance (SAI + SAII - NH)	Municipal or SAII	Mothers' Allowance SAI	Nursing Home	Net S.A. Expenditure
		(1)	(2)	(3)	(4)	(5)	(9)	(2)	(8)**
							(\$ thou	Isands)	
1964	I	4,458	2,253	476	6,235	217	174*	27	364
	II	4,125	2,290	505*	5,910	196	177*	29*	344
	III	3,604	2,248	534*	5,318	173	174*	31*	316
	IV	3,883	2,251	562*	5,572	192	174*	32*	334
1965	I	4,100	2,269	591	5,778	207	175*	34*	348
	II	4,050	2,295	579*	5,766	207	176	36*	347
	III	3,677	2,213	568*	5,322	195	169	35*	329
	IV	4,179	2,189	556*	5,812	250	168	34*	384
1966	I	4,830	2,211	544	6,497	275	169	34*	410
	II	6,649		570*	6,079	414		35*	379
	III	6,332		596*	5,736	398		37*	361
	IV	7,078		622*	6,456	455		39*	416
1967	I	7,338		648*	6,690	493		40*	453
	II				7,873	558			559
	III				7,309	556			558
	IV				9,087	759			766
1968	I				11,226	918			930
	II				11,068	873			897
	III				9,914	856			889
	11				11,29/	948			989

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			Ċ	aseload			Expend	iture †	
		Municipal Assistance S.A. Part II	Mothers' Allowance S.A. Part I	Nursing Home	Net Social Assistance (SAI + SAII - NH)	Municipal or SAII	Mothers' Allowance SAI	Nursing Home	Net S.A. Expenditure
		(1)	(2)	(3)	(4)	(5)	(9)	(2)	(8)**
1969	I II IV				12,026 11,343 10,699 12,075	1,372 1,038 1,016 1,193			1,416 1,072 1,055 1,239
1970	I II IV				13,277 13,990 14,279 16,411	1,336 1,400 1,486 1,818			$1,398 \\ 1,470 \\ 1,573 \\ 1,931$
1971					18,034 18,277 17,362 18,718	2,017 2,041 2,019 2,292			2,108 2,169 2,167 2,445
1972	I III IV				19,364 18,328 18,036 19,390	2,361 2,507 2,652 2,910			2,509 2,507 2,652 2,910
1973					19,115 18,568 18,028 18,090	2,877 2,884 2,843 3,146			2,877 2,884 2,843 3,146

Table A-1 (concluded)

†All at monthly rates. *Estimated. See Table A-2 for details on nursing home caseload. **Includes Items of Special Need. Source: Quarterly data based on unpublished monthly data from New Brunswick's Department of Social Services files, and annual data from Annual Reports are used for some estimates.

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Table A-2

		Caseload	Annual Expenditure 1	Monthly Expenditure	Monthly Expenditure Caseload	Estimated Monthly Expenditure
1964	I II III IV	476 ^(a) 505 534 562	326,760 ^(a)	27,230	57.21 57.21 57.21 57.21 57.21	27,232 28,891 30,550 32,152
1965	I II III IV	591 ^(b) 579 568 556			57.21 61.90 61.90 61.90	33,811 35,840 35,159 34,416
1966	I II III IV	544 ^(c) 570 596 622	417,450(c)	34,788	61.90* 61.90 61.90 61.90	33,674 35,283 36,892 38,502
1967 1968	Ι	648 751			61.90	40,111

Calculation of Nursing Home Caseload, New Brunswick

* $(579 + 568 + 556 + 544) \div 4 = 562$ \$34,788 $\div 562 = 61.90

(a) From 1964 Annual Report, 12 per cent of Municipal Assistance went to Homes for Special Care or 12 per cent × 3,967 cases and 12 per cent × \$2,723,000.

(b) In 1965 Annual Report, 36 per cent of the 1,642 persons in Homes for Special Care were receiving Municipal Assistance (591 cases).

(c) In 1966 Annual Report, 13 per cent of municipal cases were in Nursing Homes or 13 per cent x 4,184 and 15 per cent of Assistance went to these people or 15 per cent x \$2,783,000.

		Expenditure	es*
		Items of Special Need	Health Care
		(1)	(2)
		(\$ thousa	nds)
1967	I		
	II	1	59
	III	2	124
	IV	7	148
1968	I	12	159
	H	24	133
	III	33	314
	IV	41	190
1969	I	44	435
	II	34	198
	III	39	209
	IV	46	146
970	I	62	208
	II	70	134
	III	87	184
	IV	113	246
971	I	91	269
	II	128	101
	III	148	112
	IV	153	112
1972	I	148	194
	II	+	109
	III	+	169
	IV	+	111
973	I	+	209
	II	÷	141
	III	+	123
	IV	Ť	166

Table A-3 Expenditures on Items of Special Need

and Health Care, New Brunswick

*At monthly rates, Items of Special Need are included under Net Social Assistance Expenditure, Column (8) of Table A-1.

[†]Included under regular social assistance payments from 1972 II. Source: New Brunswick Department of Social Services.

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Table /	4-4
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			I tow Didits	WICK		
		SAC WAP	MOSAH WS	URCDA	RECCPI	CPP
1964	I II III IV	1.58 1.51 1.35 1.42	.189 .193 .194 .191	6.9 4.7 3.4 3.8	97.0 96.8 96.1 96.5	-
1965	I II III IV	1.46 1.46 1.32 1.44	.182 .188 .193 .202	5.8 4.2 2.9 3.0	96.0 95.2 94.5 94.6	
1966	I II III IV	1.61 1.50 1.40 1.59	.182 .180 .188 .184	5.0 3.5 2.9 3.1	94.1 92.9 92.0 91.9	1 1 1
1967	I II III IV	1.64 1.92 1.76 2.19	.182 .193 .208 .226	5.3 4.2 3.1 3.9	90.9 90.3 89.5 89.2	
1968	I II III IV	2.67 2.64 2.34 2.66	.210 .212 .234 .222	6.3 5.0 3.9 4.2	88.0 87.2 86.2 86.1	
1969	I II III IV	2.81 2.63 2.48 2.80	.280 .231 .235 .240	5.9 4.9 3.7 4.3	85.7 83.5 82.4 82.3	30 32 47 47
1970	I II III IV	3.07 3.21 3.28 3.74	.235 .236 .246 .254	6.4 6.3 5.2 5.7	81.4 80.8 80.7 81.1	62 58 86 97
971	I II III IV	4.10 4.15 3.92 4.19	.240 .245 .259 .255	8.0 6.8 5.3 5.7	81.3 79.9 79.2 79.2	103 140 170 177
1972	I II III IV	4.33 4.06 3.97 4.25	.240 .257 .273 .270	7.5 6.4 5.5 5.9	77.9 77.0 75.8 75.2	203 223 232 263
1973	I II III IV	4.16 4.03 3.87 3.87	.262 .274 .273 .289	7.3 5.6 4.6 5.0	74.0 72.0 70.2 68.8	330 292 316 335

Values of the Dependent and Certain Independent Variables, New Brunswick

Source: See pp. 65-66.

Nova Scotia

For Nova Scotia only cross-sectional data were available, as noted in the text. Elsewhere we have described a general supply/demand model for assistance which seemed most relevant to cross-section work. For Nova Scotia a pure supply version of this model was the only one which provided any explanatory power. The model contained the following variables.

Dependent Variable

Cases/WAP = The number of welfare cases classified as employed part-time,unemployed housewives, expressed as a fraction of theworking-age population of each unit chosen. In arriving at 31units, several small units were combined and the simple sumsof cases and working-age populations were used to calculatethe appropriate variable. The actual units used along with thecaseloads and the working-age populations are reproduced inTable A-5.

Independent Variables

P

The average payment for Form 1 cases was used. Since the number of Form 1 cases in 1971 and 1972 were not known, they had to be estimated using the number in 1973 relative to the total caseload in 1973. These estimates of Form 1 cases were then divided into the known total payments for Form 1 assistance for 1971 and 1972 to arrive at estimates of the average payment per case for Form 1 cases. The total payments for the joint units were the simple sums of the components, while the sum of Form 1 cases relative to the sum of all cases in 1973 gave the 1973 ratio for these joint units.

URate = The unemployment rate for each unit was calculated from the 1971 Census data on the unemployed and the labour force of each unit. These rates are consequently census unemployment rates and would differ from the Labour Force Survey rates (if such were available) due to differences in the definitions of the labour force.

Again the rates for the joint units were estimated using a weighted average of the component rates with the working-age population as to weight.

TAXR/CAP = This variable measures the tax revenue per capita obtained in each unit from its own sources, that is, the revenue obtained by the unit through property tax, occupancy tax and poll tax. As before a weighted average was used for those units made up of several small units, and again the working-age population was used as the weight.

%Pop = This is a measure of the percentage share of the total population of the province in each unit. In arriving at a share for combined units, a simple sum of each unit's population was used.

The regression results were as follows:

Independent Variables	Regression Coefficients	Students T
1971		
Р	-0.181D-05	-1.00
URate	0.234D-03	0.95
TA XR/CAP	0-296D-04	1.63
%Pop	0.341D-03	1.05
CONSTANT	0.334D-02	0.94
$\bar{R}^2 = 0.16$		

Source: Computer Printout D745704R, 3.10.74.

Independent Variables	Regression Coefficients	Students T
1972		
Р	-0.389D-06	-0.61
URate	0.215D-03	1.20
TAXR/CAP	0.252D-04	2.18
%Pop	0.250D-03	1.20
CONSTANT	0.187D-02	0.84
$\overline{R}^2 = 0.25$		

Source: Computer Printout D745704R, 3.10.74.

							Pa	urt I
		Case	load ¹	Total C	Caseload	WAD	1973 Appl	Ratio ³ lied to
_	Unit	1971	1972	1971	1972	1971	1971	1972
1	Dartmouth	475	399	780	763	42,550	0.8197	0.8197
2	Halifax	1,507	1.437	2,207	2.217	91.755	0.7391	0.7391
3	Sydney	236	227	401	403	23,710	0.8037	0.8037
4	Amherst	71	76	168	174	7.255	0.7097	0.7097
5	Antigonish ⁴	37	44	78	106	13.125	0.4894	0.4894
6	Bridgewater ⁵	41	42	129	143	29.745	0.4305	0.4305
7	Glace Bay	83	87	159	168	15.445	0.8600	0.8600
8	Kentville ⁶	140	145	352	314	29,460	0.5645	0.5645
9	Lockeport ⁷	16	21	79	79	5,965	0.5852	0.5852
10	New Glasgow	70	66	152	224	7.940	0.6685	0.6685
11	New Waterford	53	46	78	75	6.325	0.8696	0.8696
12	North Sydney ⁸	24	27	74	56	7.675	0.7212	0.7212
13	Pictou	31	28	66	65	2,970	0.4828	0.4828
14	Springhill	69	37	125	76	3.935	0.6805	0.6805
15	Sydney Mines	61	57	104	87	5.860	0.9223	0.9223
16	Trenton	26	32	89	87	5.125	0.6347	0.6347
17	Truro	51	42	95	83	9,675	0.9000	0.9000
18	Annapolis	35	42	64	90	12,855	0.4881	0.4881
19	Barrington ¹⁰	50	36	141	123	12,435	0.5488	0.5158
20	Cape Breton	83	84	131	129	26,570	0.6518	0.6518
21	Colchester	150	133	183	172	15,970	0.7961	0.7961
22	Cumberland	76	55	136	122	11,760	0.6688	0.6688
23	Digby (Mun.)	66	45	91	74	6,235	0.8116	0.8116
24	Guysborough	30	40	57	67	4,910	0.5614	0.5971
25	Halifax Co.	475	429	839	802	48,140	0.7118	0.7118
26	Hants East	68	43	103	79	8,040	0.6000	0.6000
27	Hants West ¹¹	82	67	169	135	10,340	0.6994	0.6994
28	Inverness	43	73	144	207	11,425	0.4249	0.4249
29	Pictou (Mun.)	77	89	165	129	12,525	0.6607	0.6607
30	Queens	35	21	117	97	6,755	0.3400	0.3400
31	Richmond	30	34	50	63	8,280	0.6000	0.6826

Table A-5

Municipal Social Assistance Data for Nova Scotia

1 Those cases classified as employed part-time, unemployed, housewives.

2 Total payments from Form 1 Assistance.

3 Of Form 1 cases to total cases. In applying the 1973 ratio to the total caseload for the units of Digby Town (which is part of Barrington), Guysborough and Richmond, it was found that adjustments had to be made to maintain consistency with the known total caseload. These adjustments were necessary for both 1971 and 1972 and are reflected in two sets of ratios with different observations for 1971 and 1972 only for Barrington.

- 4 Also includes Antigonish County and St. Mary's for which separate data were not available.
- 5 Also includes the units of Liverpool, Lunenburg town and municipality, and Chester. These units were combined to form one unit because the observations for each unit were so small that they were unreliable. The particular grouping was chosen on the ground of geographical proximity.
- 6 Also includes the units of Wolfville and Kings for which separate data were not available.
- 7 Also includes the units of Shelburne town and municipality. See (5) above.
- 8 Also includes the unit of Dominion. The same reasoning applies as in (5) above.
- 9 Also includes the unit of Westville. See (5) above.
- 10 Also includes the units of Digby Town and Argyle. See (5) above.
- 11 · Also includes the unit of Windsor. See (5) above.

Total Payments ²				Tax Rev./Capita		
1971	1972	Monthly Wage	URate 1971	1971	1972	% Pop. 1971
(\$)	(\$)	(\$)	(%)	(\$)	(\$)	
1,210,275.2	3,196,302.10	353,42	6.6	194.00	220,90	8.21
2,945,474.3	1,441,747,20	233.22	7.2	238.60	262.90	15.47
363,521.4	322,085,40	251.16	11.6	140.50	151.20	4.21
101.021.4	107,161,80	233,22	8.7	124.10	133.60	1.26
64.573.5	75,284,10	233.22	8.7	77.60	88.90	2.52
76.691.9	93,131,90	247.57	6.2	85.06	92.58	5.16
119.829.6	115,680.10	251.16	12.6	60.60	57.60	2.84
153.682.8	157.013.00	215.28	6.0	75.80	78.30	5.52
31.309.0	43,772.60	215.28	8.4	68.30	73.96	1.09
77.649.7	110.290.80	233.22	10.0	147.10	163.70	1.38
58,851.6	60,108.70	251.16	14.0	49.20	50.90	1.21
63,708.8	59,281,90	251.16	12.5	69.38	79.56	1.45
19,459.0	23,763.40	233.22	10,8	74.00	84.00	0.54
60,280.8	56,589.60	233.22	15.1	69.60	76.20	0.67
89,019.8	77,419.70	251.16	12.9	53.80	55.80	1.14
25,381.8	31,399.70	233.22	13.5	107.87	122.08	0.91
63,405.2	55,319.70	233.22	7.3	151.50	180.50	1.65
75,026,2	93,954.10	215.28	5.9	55.20	57.70	2.30
59,250.9	55,233.30	231.43	6.5	48.07	49.83	2.26
131,470.2	137,852.80	251.16	12.8	45.20	53.40	5.29
102,997.3	115,903.00	233.22	5.7	64.90	73.00	3.00
73,770.2	52,730.30	233.22	9.0	52.10	53.10	2.11
63,089.0	66,187.10	215.28	5.8	47.50	50.50	1.14
42,344.6	71,600.00	215.28	7.0	37.80	38,70	0.94
1,085,922.3	1,208,573.60	233.22	6.7	87.50	103.20	9.46
72,852.3	54,688.60	215.28	7.5	45.50	55.10	1.58
85,121.6	89,682.70	215.28	7.9	93.86	94.84	1.90
68,647.4	99,821.2	215.28	9.5	52.30	62.80	2.16
69,213.6	80,283.0	215.28	10.8	58.80	69.20	2.33
42,746.8	32,848.8	215.28	8.4	87.10	92.20	1.18
20,024.9	31,841.1	215.28	13.6	53.30	54.60	1.61

Table A-5 (concluded)

Source: Data on caseloads were obtained from the Nova Scotia Department of Social Service from currently unpublished files. Total payments figures and the data used to calculate the 1973 ratios and the percentage share of the population in each unit came from "Welfare Services in Nova Scotia", which is published annually by the Nova Scotia Department of Social Services. The working-age population (WAP) of each unit and the unemployment rate in each unit were calculated from the 1971 Census data. The monthly wage in each unit was calculated from the hourly rates of pay for general labour available for July 1973 from "Site Selection Profile" published by the Nova Scotia Department of Development, May 1974. The lower limits of these hourly rates of pay were closely tied to the prevailing minimum wage and by applying these 1973 relationships to the March 1971 and 1972 minimum wages (which were the same) the lower limits for these years were estimated. These hourly rates were then inflated to represent monthly totals. The tax revenue per capita data were obtained from the Annual Reports of the Nova Scotia Department of Municipal Affairs.

B Some Theoretical Considerations on the Link Between Labour Supply and the Unemployment Rate in the Presence of Persistent Unemployment

Problem

Does a huge excess of unemployed people over vacancies mean that if persons outside the labour force seek work they will either fail to find it, or, if they succeed, will just displace others from potential or actual employment? In short, if more people seek work, are more jobs created as a result, whether or not substantial unemployment exists to begin with?

Why the Problem Is Important

Suppose a large number of welfare recipients are currently withdrawn from the labour force, but are actually capable of work, and perhaps often anxious to work. If there are no vacancies, or very few compared to the existing work seekers, is it pointless to have them actively seek work? Or, is it possible that adding to the number of job seekers will actually add to the number of available vacancies? If the latter, one cannot argue from an absence of adequate vacancies to the conclusion that dropouts from the labour force, including welfare dropouts, cause no loss of employment and output.

Discussion

Suppose we adopt the theory that the demand for labour in the Maritimes in the long run is negatively affected by the ratio of Maritime wages to wages elsewhere in Canada (W/\overline{W}) , that the supply of labour in the Maritimes is positively influenced by this ratio, and finally that the ratio itself is negatively influenced by the Maritime unemployment rate. The first two elements of this theory are standard. The third is an attempt to capture the effects of three possible processes:

a The supply schedule of labour becomes horizontal as soon as wages fall to some fraction of wages elsewhere. The existence of income maintenance programs may permit this. People without jobs at this wage can certainly be legitimately seeking work in the sense used by the Unemployment

Insurance Commission since, unless it is a *very* high wage (which it is not), most people will land one of the limited supply of jobs available at this wage during at least some of their working life, and so will be able to claim to the UIC or to the welfare authorities that they are indeed qualified for work at this wage. Thus we have:



The height of the intercept OA is essentially a reservation wage, and it seems reasonable to argue that it will be sensitive to the unemployment rate, falling if jobs are really hard to get, but not necessarily falling enough to achieve what would be conventionally defined as full employment.

- b A minimum wage is socially imposed. Such a wage is likely to be related to Canadian wage levels, so that using W/\overline{W} makes sense, and also to local employment opportunities. Heavy local unemployment probably keeps legislated minimum wages below what they would otherwise be, which is tantamount to saying that W/\overline{W} is negatively related to the unemployment rate.
- c A minimum wage is imposed by trade-unions. Parity with the rest of Canada will be important here, making W/\overline{W} the correct variable to consider, and unions will presumably tailor their demands, or be forced to tailor their demands, to the level of job availability, making the unemployment rate a negative influence on W/\overline{W} .

There is of course nothing to prevent (a), (b) and (c) from operating together.

Expressing our initial assumptions mathematically, and using L for labour supply, E for labour demand, and u for the rate of unemployment, and primes for derivatives, we have

(1)
$$L = S(W/\overline{W}) + L^*$$
 $S' > O$

The L^* is inserted to allow us to shift labour supply so as to study later the effects on employment of insisting that certain people outside the labour force, e.g., welfare recipients, seek work.

(2) $E = D(W/\overline{W})$ D' < O

$$(3) \quad W/\overline{W} = f(u) \qquad \qquad f' < O$$

Our interest lies in dE/dL^* . Is it zero? If so, increasing the labour supply leaves employment and jobs unaffected. Is it unity? If so, jobs are created to match exactly any labour force increase. Or is it in between?

Differentiate (1), (2) and (3) totally, writing $W/\overline{W} = w$ for short. We obtain:

- $(4) \quad dL = S' \, dw + dL^*$
- (5) dE = D' dw
- $(6) \quad dw = f' \, du$

Since u = 1 - E/L

$$du = -\frac{E}{L} \left(\frac{dE}{E} - \frac{dL}{L} \right)$$

or

(7)
$$du = (1 - u) \left(\frac{dL}{L} - \frac{dE}{E} \right)$$

Using (4) and (5) on the right of this and (6) on the left of it we have:

(8)
$$\frac{dw}{f'} = (1-u)\left(\frac{S'dw}{L} + \frac{dL^*}{L} - \frac{D'dw}{E}\right)$$

Solving for dw, we get:

$$dw = \frac{f'(1-u)\frac{dL^*}{L}}{1-f'(1-u)\left(\frac{S'}{L} - \frac{D'}{E}\right)}$$

Substituting into (5) and noting from (6) that dw = f'du, we have:

(9)
$$\frac{dE}{dL^*} = \frac{(1-u)\frac{D'}{L}f'}{1-f'(1-u)\left(\frac{S'}{L}-\frac{D'}{E}\right)}$$

It will be helpful to convert this into an expression containing elasticities. Call e_D the elasticity of labour demand and e_S the elasticity of labour supply, and we have:

$$e_D = D' \frac{w}{E};$$
 $e_S = S' \frac{w}{L}$

Putting these in (9) we have:

$$\frac{dE}{dL^*} = \frac{(1-u) e_D \frac{E}{w} \frac{1}{L} f'}{1 - f'(1-u) \left(\frac{e_S}{w} - \frac{e_D}{w}\right)}$$
$$= \frac{(1-u)^2 e_D f'}{w - f'(1-u) (e_S - e_D)}$$

Putting $e = \frac{\partial w}{\partial u} \frac{u}{w} = \frac{f'u}{w}$

so that $\frac{f'}{w} = e/u$, we obtain:

$$\frac{dE}{dL^*} = \frac{(1-u)^2 e_D e/u}{1 - \frac{e}{u}(1-u) (e_S - e_D)}$$

Finally, we obtain:

(10)
$$\frac{dE}{dL^*} = \frac{(1-u)^2 e_D e}{u - e(1-u) (e_S - e_D)}$$

It is clear that $\frac{dE}{dL^*}$ is in general neither zero nor unity. It will be zero if e_D is zero, if e_S is infinite, or if e is zero. Only the last is plausible, and it does not seem very likely. $\frac{dE}{dL^*}$ is less than unity, however, as can be seen by writing it as

$$\frac{dE}{dL^*} = (1 - u) \left(\frac{1}{1 + \frac{u - ee_S(1 - u)}{(1 - u)e_D e}} \right)$$

Since e < 0 $e_S > 0$ $e_D < 0$, in the general case, the second term in the denominator is positive, so the curly bracketed term is less than unity, as is 1-u, so that the whole expression is less than unity. It is clear that its maximum value is 1-u.

Although *e* is unlikely to be zero, it may be rather small. Nevertheless $\frac{dE}{dL*}$ remains sizable. The value of *e* is the percentage change in the *ratio* of Maritime to Canadian wages in response to a 1 per cent change in the rate of Maritime employment. To illustrate, a rise in the Maritime unemployment rate from 8 per cent to 10 per cent is a 25 per cent change. One would be surprised if this, even in the long run, lowered relative wages as much as 5 per cent. This gives an elasticity of -0.2. Suppose now that $e_S = 0$ and e_D is -1 and u = 0.1 we find that

$$\frac{dE}{dL^*} = 0.6$$

This means that employment rises by 60 persons for every 100 who join the labour force. Absolute values of zero and unity for supply and demand elasticities in a small area like the Maritimes appear rather low, and if we had chosen larger values we would have obtained a larger value than 0.6. On the other hand, the absolute value of e may be very much lower than 0.2.

Conclusions

Transferring persons onto welfare from the ranks of the employed and unemployed will decrease *employment* even in the presence of substantial unemployment at the time of the transfer. For every 100 who are so transferred employment will fall by less than 100(1-u) persons, where u is the unemployment rate. It is possible, but unlikely, that employment will not fall at all. Consequently, having people on welfare who could work probably does decrease employment and output, but not in proportion to their numbers.

One could argue that a nonzero value of e based on the reasoning in (a) above will imply greater-than-average vacancies in the worst and lowest paying jobs, for it is here that "fussiness" made possible by the availability of

income maintenance will manifest itself most clearly. Since there is no evidence of significantly greater-than-average vacancies in such jobs, this strengthens the case for arguing that e is very small, and thereby the case for arguing that if those on welfare sought jobs, hardly any new job creation would actually be achieved. Hardly any output would then be lost by their not being forced to seek work.

HC/117/.M35/.I52/1976 MacRae, P Income maintenance programs : their digk c.1 tor mai

