

Notes on labour statistics

1972

Études des statistiques du travail

1972

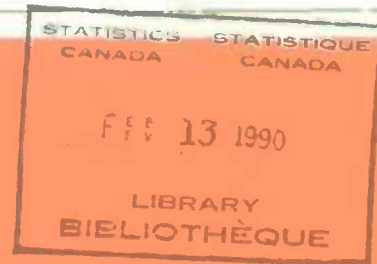


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HOUSEHOLD STATISTICS BRANCH

STATISTICS CANADA — STATISTIQUE CANADA
Labour Division — Division du travail
Manpower Research and Development Section — Section de recherche et de développement en main-d'oeuvre

NOTES ON LABOUR STATISTICS

ÉTUDES DES STATISTIQUES DU TRAVAIL

1972

Published by Authority of
The Minister of Industry, Trade and Commerce

Publication autorisée par
le ministre de l'Industrie et du Commerce

February - 1973 - Février
8005-502

Price—Prix: \$1.00

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Information Canada
Ottawa

PREFACE

Notes on Labour Statistics was designed to meet a need for the reporting of results of analytic studies and developmental projects undertaken by the Labour Division, Statistics Canada.

The main work of the Division is represented in its statistical publications, all well known to users in the labour field. Perhaps not generally recognized is that modern data production involves a substantial research activity — as adaptations are made to changing circumstances, as new technology is brought into play, and as new techniques of analysis give rise to demands for new data series. In our view, some of the research and development work would be of interest to a wider audience and it is the purpose of this publication to make it available.

Articles are published in the language in which they were written. Translation of single articles from French to English or English to French will be provided on request.

The editorial board consists of Helen Buckley, Co-ordinator, Manpower Research and Development (Chairman); D.J. Bailey, Director, Labour Division; and P. Hicks, Assistant Director.

Sylvia Ostry,
Chief Statistician of Canada.

PRÉFACE

Les Études des statistiques du travail ont été conçues pour transmettre les résultats des études analytiques et des travaux de mise au point entrepris par la Division du travail de Statistique Canada.

La Division s'occupe principalement de préparer des publications statistiques, toutes bien connues des utilisateurs dans le domaine du travail. Ce dont on ne se rend peut-être pas compte est que la production des données exige de nos jours beaucoup de recherches vu que des adaptations doivent être faites en fonction des circonstances changeantes, qu'il faut tenir compte de la nouvelle technologie et que les nouvelles techniques d'analyse donnent lieu à des demandes de nouvelles séries statistiques. À notre avis, une certaine partie de la recherche et du développement pourrait intéresser un plus vaste public, et c'est précisément le but de cette publication que de faire connaître les résultats des travaux.

Les articles sont publiés dans la langue dans laquelle ils ont été rédigés. On pourra obtenir sur demande la traduction d'articles, de l'anglais vers le français ou vice versa.

Le comité de rédaction est composé de Mme Helen Buckley, coordonnatrice à la Section de recherche et de développement en main-d'oeuvre (présidente), de M. D.J. Bailey, directeur de la Division du travail et de M. P. Hicks, directeur adjoint de la Division du travail.

Sylvia Ostry,
Le statisticien en chef du Canada.

INTERPRETING THE UNEMPLOYMENT STATISTICS

Helen Buckley*

High levels of unemployment over the past two years have been accompanied by a marked upsurge in interest in the official statistics which measure unemployment. These statistics have a long history (on a monthly basis, back to 1953) and their usefulness as a guide or indicator to the state of the economy is generally recognized. But criticisms have been voiced over the years and one in particular troubles a number of observers at the present time. This is the view that the statistics convey an exaggerated picture of unemployment because they include persons (notably youth and married women) for whom the hardship is minimal or non-existent and/or whose desire to work is not very strong.

What is at issue is not so much the accuracy of the statistics but the appropriateness of the concepts which have been chosen to define, and hence measure, unemployment. This paper examines the rationale behind the present definitions, the question of their continuing usefulness and, finally, the kinds of difficulties to be encountered in refining the statistics. Since the main focus is the treatment of secondary workers this paper should not be taken as a comprehensive critique of the labour force statistics.

The question "how to measure" cannot really be answered without first determining "why". Like most phenomena in the social sciences unemployment could be defined in various ways, so definition must be shaped by purpose. The primary purpose of the Labour Force Survey is to measure: (1) the number of persons with jobs (i.e., employment) which serves as an approximation of the demand for labour at a given point in time; and (2) any excess supply of labour seeking work (i.e., unemployment) which indicates the degree to which demand has fallen short of absorbing all job seekers.

The foregoing statement is to put it in the simplest possible terms. If analysis is to be pursued it is necessary to allow for vacant jobs which form a (small) part of demand and to relate the particular balance to labour's going rates of return at the time in question. But a short statement can capture the essential purpose of the unemployment statistics, namely, to measure the degree of fit between the number of people wanting employment and the ability of the

economy to provide employment. The overall unemployment rate provides a useful and reliable indicator as to the health, or otherwise, of the economy while a wealth of detailed statistics permit in depth examination of the labour market.

For purposes of evaluating the state of the labour market it is the number of seekers that matters, not the state of their finances nor the degree of hardship experienced. Unemployment, therefore, should be broadly defined. The definition which is used in the Canadian Labour Force Survey (as in most other countries which measure unemployment) takes in all persons who were without employment during the whole of a reference week and also seeking work.

This is not the broadest possible definition; for example, a person with four hours work Monday morning is classified to "employed" even if he spent the balance of the week seeking work. From this standpoint, one might argue that the statistics contain an element of understatement. On the other hand, working in the other direction is the problem that the survey has no way to ensure the exclusion of job seekers whose interest in finding work is questionable. The difficulty is: how to determine the strength or weakness of the desire to work? Where a respondent reports "seeking work" further questioning is not likely to yield the information that he (she) is not very serious. Even if it were, the probing of attitudes is considered undesirable because responses which refer to states of mind are subject to different interpretations. Thus, one interviewer might find the job interest weak where a second would not; in consequence, the determination of who is unemployed could vary from one place to another and from one month to the next.

The foregoing are some of the considerations which have gone into the production of "measured" unemployment. Appropriateness of the concepts cannot be judged by the definitions alone but must take account of the feasibility of implementing a given definition, the kind of data it will produce, etc. Given the overriding importance of consistency if the unemployment statistics are to serve as an economic indicator, the criteria for determining unemployment status should be as objective as possible. This requirement is met by the present criterion (without work and seeking) and for the advantages it confers we have accepted the disadvantage of including some weakly-motivated seekers.

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The unemployment definition is not ideal for purposes of measuring "hardship" because the circumstances of unemployed persons may differ rather widely. Nevertheless, the unemployment statistics have often been used as a proxy for measuring hardship and, until recently, the complaint was seldom voiced that they were less than satisfactory for this purpose.

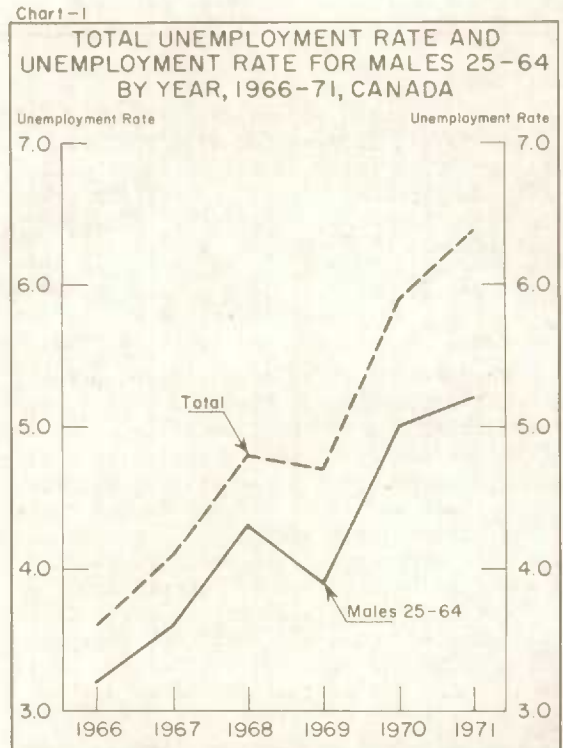
A main reason why the statistics are now being questioned lies in the changes occurring in the composition of the labour force. These include the growing number of married women who work full-time and also a growing number of students and housewives who work a limited number of hours per week (or weeks per year), the latter involving much more movement in and out of the labour market. Changing attitudes towards working for pay and changing family behaviour patterns are partly responsible, as are the altered age distribution of the population and many other factors.

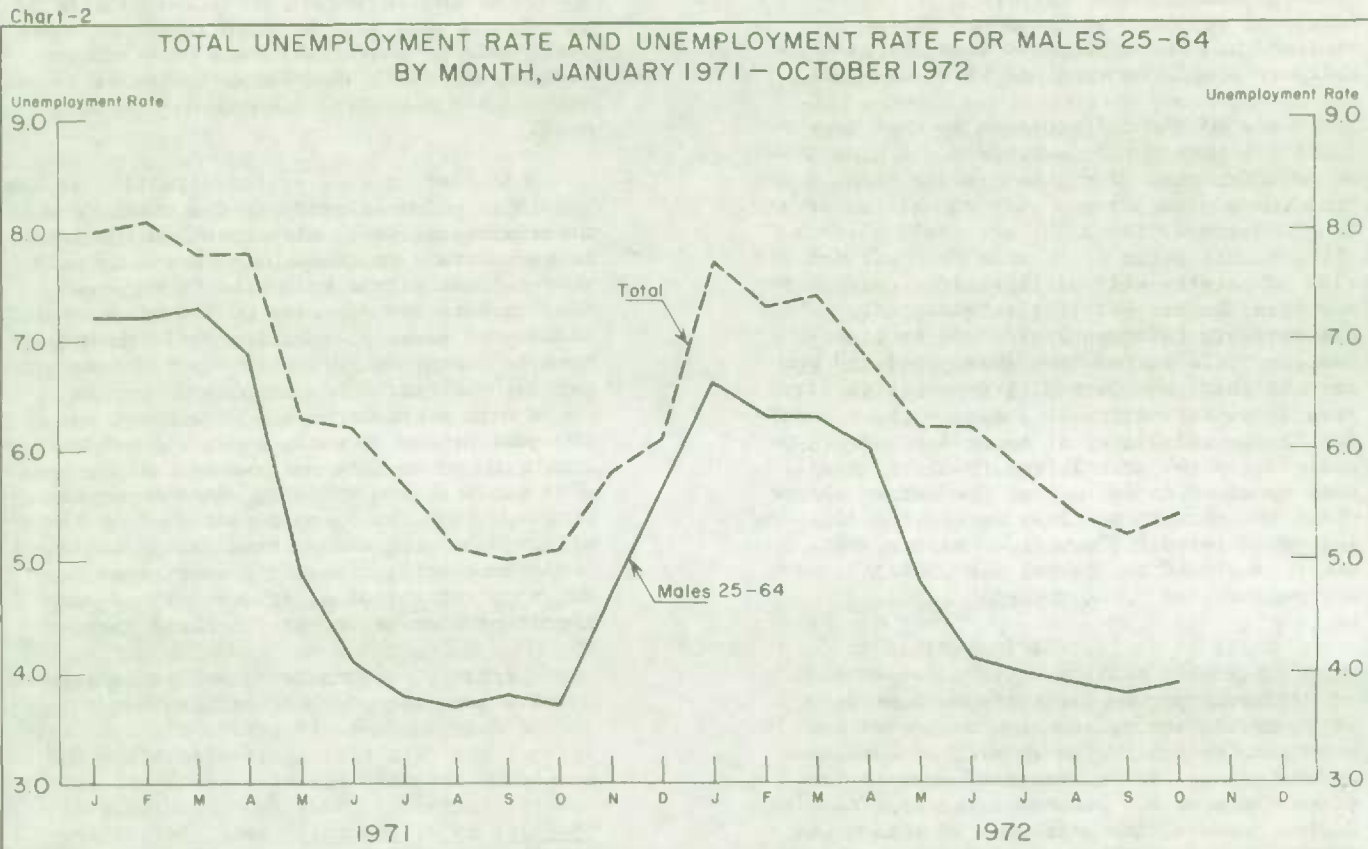
Unemployment of primary workers has always been viewed as more serious than unemployment of such groups as married women and students, in part because they seem to have a greater need for jobs and also from the feeling that unemployment representing secondary workers is inflated by the not-so-anxious seekers. Thus, as the secondary worker share has increased over the years, the statistics of unemployment may seem to convey a somewhat different message than formerly. To interpret them we have more need than formerly to inquire into their composition.

To a certain extent, the statistics do have this capability already. They can be broken down into certain broad categories such as married males, single sons and daughters at home, etc., so that there is no necessity to look exclusively to the overall rate for the state of the economy message. As the overall rate moves from month to month supplementary statistics permit us to identify changing patterns for component sub-groups on the basis of sex, age and marital status. For example, statistics for August 1972 show the overall unemployment rate at 5.4 %, that of married men at 3.3 %, of single men 10.7 %, of married women 3.4 %, etc. (figures unadjusted for seasonality). Further detail providing family status of unemployed persons is published quarterly. Thus, in April 1972 40 % of the unemployed were heads of family units; in July only 29 % fell in this category and "single sons and daughters living at home" rose to 46 % of the total.

How much more detail is needed? The question is best tackled with reference to specific objectives and, since more statistics are always in some sense desirable, a regard for the cost and difficulty of collection.

For purposes of clarifying the state of the economy measure, the total unemployment rate should be studied along with data on prime-age males - not because this group is all important but because it is the least affected by changing work patterns. (Most part-time work and casual labour force attachments fall in the female or younger age groups.) But historical comparisons between the total rate and that of prime-age males show very little difference in the movement of the two series (see charts). While the latter showed a slightly smaller tendency to rise in 1971 and the seasonal pattern included a somewhat larger reduction in summer unemployment, it would seem that the existing data are still providing a good economic indicator. There are also the supplementary statistics for other age and sex groups to refine and supplement the message conveyed by the overall rate.





More detailed information (and, as will be noted later, information of a different character, e.g. income data) would be needed if the unemployment statistics were to be categorized to measure hardship. A frequent suggestion has been the separate calculation of rates for primary and secondary workers, a task of greater difficulty than might appear on the face.

What, in fact, is a secondary worker? The usual definition is based on regularity of the attachment to the labour force, so that the secondary worker is typically a student or a housewife who normally or regularly switches back and forth between labour force and non-labour force activities. In popular usage, the reference to secondary workers often seems to have a broader connotation (possibly confused with secondary earner), taking in all married women who work and, sometimes, young persons who have left school but still live at home. If we take the broad definition as the basis for identifying "non-hardship" unemployment we confront the fact that there are working wives whose husbands cannot support the family unassisted. The usual definition (regularity of attachment) is equally unsatisfactory for if secondary workers are to be excluded on this basis we inevitably

exclude a large number of wives in low-income families who are forced by circumstances - in industry, or in the home - to work sporadically.

The fact is, for purposes of determining hardship, the distinction between primary and secondary worker is a very uncertain guideline. The unemployed male head is an obvious case of hardship but his claim is no more compelling than some of the secondary workers'. Thus, a hardship category based on marital status and stability of attachment would include the unemployed executive but not the fisherman's wife seeking part-time work to supplement his earnings of \$2,500 a year.

Problems of this kind could be resolved by collecting detailed income data. "Poverty lines" would be drawn and those segments of the unemployed which reported less than a specified minimum could be designated as the hardship category. (Asset and debt information would also have to be gathered since loss of current income might be offset by substantial assets.) But these are not simple measures. To collect detailed income and asset information each month (the present basis for collecting these is once a year)

would greatly increase the cost of the monthly survey as well as the inconvenience to respondents, which suggests that the case for doing so should be examined with some care.

One of the difficulties is that poverty lines are necessarily arbitrary. A line drawn at \$3,000 a year (for given family size) means that unemployed persons with annual income of \$3,200 (same family size) are excluded from the hardship category; a more generous definition of poverty will still exclude persons or families who are but little better off. Thus, the hardship category would tend to understate. A second and closely related concern is that unemployment frequently involves very large reductions in income without reaching the poverty line. This will often be the case in the two-earner household. A great many Canadian families want the larger income which two earners can provide and the loss experienced through the wife's unemployment would be viewed as financial hardship by most of the families concerned.⁽¹⁾

While it is clearly impossible to devise a hardship measure which takes account of different income aspirations, a measure which merely segregates the unemployed who meet some definition of poverty appears to have a rather limited range of application. Given the cost and inconvenience of producing such a measure, its relevancy to a range of questions surrounding unemployment should be more thoroughly explored. School-leavers living at home - a large segment of the unemployed - are a case in point. In this case, the amount of financial hardship depends primarily on the income of the parents which could be measured. But, having done so, these data would shed no light on the qualifications and employability of this particular group of unemployed, the problems they

(1) We refer to the situation where the loss of job is followed by job seeking activities. If the wife has voluntarily withdrawn from the labour market she does not appear in the unemployment statistics.

encounter in the job market or the degree of effort expended in job search. All of these are likely to contribute more to an understanding of youth unemployment than is a measure of the financial situation of the moment.

Another area deserving attention is the possibility for identifying the wives (and other workers) whose attachment to the labour force is truly marginal. The hardship category affords little help since many secondary workers are strongly motivated despite absence of poverty. Neither could much reliance be placed on intermittency of attachment per se. The total of unemployed married women with short or broken attachment may include, at one extreme, those with no serious intention of working and, at the other, regular earners from families whose economic strategy is based on part-year work by the wife. For purposes of interpreting the unemployment statistics, to attempt some measures of degrees of attachment may be more important than measuring financial need.

Finally, the concern that is so frequently expressed for determining hardship in the unemployment statistics might be set against the fact that their opposite - the employment statistics - can hardly be said to denote absence of hardship. Unemployment, usually, is a temporary state whereas the incomes of the working poor may be inadequate over a lifetime.

Weighing benefits against the cost, we think there might be some difficulty in justifying the monthly collection of data to denote poverty or hardship. At the same time, the gaps in knowledge concerning the unemployed are real and recognized by Statistics Canada. The problem is to improve and extend the existing statistics in directions that are both feasible from the standpoint of measurement and analytically useful. To this end a broad program of research specifically directed to increasing the amount and quality of the data from the Labour Force Survey has recently been instituted.

RECENT ECONOMIC RECOVERY AND UNEMPLOYMENT

Nand Tandan*

It has been generally agreed that, following a period of sluggish growth, the Canadian economy entered a phase of expansion in the fall of 1970. In the 12 months following the third quarter (i.e., the third quarter of 1970 to the third quarter of 1971) several economic indicators revealed a strong growth pattern: final domestic demand increased by 11 1/2 % in money terms and 7 1/2 % in real terms; output grew at a slightly slower rate - 10 1/2 % in money terms and 6 1/2 % in real terms. However, a widely noted characteristic of the apparent recovery was that it made no significant reduction in the level of unemployment. On a seasonally adjusted basis the unemployment rate remained at or above 6 % throughout the 12-month period.

Continuing high unemployment has led to a series of questions regarding the meaning and measurement of the labour force, employment and unemployment, some of which have been dealt with elsewhere in this issue. The object of this paper is to compare the record of employment and unemployment during the first 12 months of the recent recovery with the same initial period of three earlier

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recoveries in the post-war era. In particular, we wish to find out whether unemployment has been similarly slow to decline in previous recoveries and, if not, to examine the behaviour of other factors in the labour market which may help to explain the present stickiness.

In selecting the study periods we have relied on the dates established by the Bank of Canada to mark the beginning of all four recovery phases. These are: 1954, second quarter; 1958, first quarter; 1961, first quarter; and 1970, third quarter.

Table 1 shows the unemployment rate at the beginning and end of the first 12 months in each recovery period. It will be noted that in each of the first three recoveries the unemployment rate declined. The reduction was rather small (0.3 percentage points) in the 1954 recovery but since the initial unemployment rate was relatively low this reduction might be considered significant. In the 1958 and 1961 recoveries the unemployment rate declined by 0.5 and 1.5 percentage points respectively, whereas in the recent recovery it failed to decline at all. Nor is there any great improvement in the two quarters which followed the initial 12 months.

TABLE 1. Unemployment Rates at the Beginning and End of the First Year of Post-war Economic Recoveries by Sex, Canada

(seasonally adjusted)

Period	Both sexes	Males 25-54 years	Other males	Females
2nd quarter 1954	4.7	4.6	6.9	2.6
2nd " 1955	4.4	4.2	6.4	2.6
1st " 1958	6.7	6.5	9.8	3.5
1st " 1959	6.2	6.1	9.5	3.0
1st " 1961	7.6	7.5	11.6	4.0
1st " 1962	6.1	5.8	9.4	3.3
3rd " 1970	6.5	5.5	10.2	4.9
3rd " 1971	6.5	5.3	10.4	5.0

Source: Seasonally Adjusted Labour Force Statistics, Statistics Canada (Catalogue 71-201 Annual) (Ottawa: Information Canada, 1971).

Labour Force Composition

The stickiness in the unemployment rate in the face of other evidence of growth in the economy has frequently been attributed to changes occurring in the composition of the labour force. The growing proportion of young persons and women (hence, a declining proportion of prime-age males) is assumed to have some bearing on the unemployment rate, particularly as youth is exposed to higher rates of unemployment. The latter is clearly the reason for the widening disparity between the overall rate and that of prime-age males which may be seen in Table 1. However, this widening disparity does not prove that the overall rate has been raised. What the overall rate would have been in the absence of any change in labour force composition since 1961 may be seen in Table 2. Column 1 shows the actual rates (seasonally adjusted) in 1970 and 1971; column 2 shows the rates calculated by using the labour force shares of broad age and sex groups which obtained in 1961.(1)

TABLE 2. "Actual" and Standardized Unemployment Rates in the Third Quarter, 1970 and 1971, Canada

(seasonally adjusted)

Period	Actual rate	Standardized rate
1970 - July	6.5	6.5
August	6.4	6.4
September ..	6.6	6.5
3rd quarter	6.5	6.5
1971 - July	6.2	6.2
August	6.3	6.1
September ..	6.9	6.8
3rd quarter	6.4	6.4

Source: Seasonally Adjusted Labour Force Statistics, Statistics Canada (Catalogue 71-201 Annual) (Ottawa: Information Canada, 1971).

(1) The standardized unemployment rate was calculated by weighting age-sex specific unemployment rates in the respective months by their share of the labour force in 1961. The age-sex groups used were men 14-19, 20-24, 25-54 and 55 and over, and women 14-19, 20-24, 25-44 and 45 and over. The choice of age groupings was dictated by the availability of data.

The negligible change in the unemployment rate due to standardization is the result of the opposing influences exerted by the growing numbers of young workers on the one hand and of female workers on the other. The fact that women have a lower-than-average unemployment rate has largely offset the higher rates experienced by youth. To the issue at hand, this means that the behaviour of the overall rate in 1970-71 is not simply explained by changes in labour force composition.

A similar conclusion is reached if we single out the prime-age males and compare the behaviour of their unemployment rate in the four recovery periods. As may be seen in Table 1, the decline in 1970-71 is appreciably smaller than that of previous recoveries.

The experience of both other groups (younger and older males, all females) has also been atypical. In both groups the unemployment rate increased in 1970-71 and, although the increase might be within the range of sampling variability (particularly in the case of females), the pattern in earlier recoveries was one of a clear-cut decline. The absence of a decline in the unemployment rates of these groups, together with their greater importance in the labour force, has been partly responsible for preventing the overall unemployment rate from declining.

Employment

In Table 3 we turn to consider the increase in employment in 1970-71 as compared with earlier recoveries. For paid workers the Labour Force Survey showed a 12-month increase of just over 3 % in 1970-71, which is the lowest of all four recovery periods and well below the increases registered in 1954-55 and 1961-62. The increase in employment in 1970-71 is marginally raised if agricultural workers are excluded but the comparative picture remains unchanged.

Paid workers in the Labour Force Survey include both full-time and part-time workers. In the last column we find that the 1970-71 increases for full-time workers (employed 35 hours or more) was only 1.8 % as compared to a growth rate of 3 to 4 % in the previous recoveries. This suggests that a larger-than-usual share of employment growth was accounted for by part-time workers so that the total increase in 1970-71 would overstate the amount of employment generated.

TABLE 3. Changes in Employment During the First Year of Upturn in the Four Post-war Economic Recoveries, Canada

Period	Paid workers					
	Including agriculture		Excluding agriculture			
	Total(1)		Total(1)		Employed 35+ hours (2)	
	Number	Percentage changes	Number	Percentage changes	Number	Percentage changes
	'000		'000	'000		
2nd quarter 1954	3,945		3,827		3,528(3)	
2nd " 1955	4,098	3.9	3,979	4.0	3,633(3)	3.0
1st " 1958	4,514		4,416		3,743	
1st " 1959	4,669	3.4	4,569	3.5	3,868	3.3
1st " 1961	4,835		4,729		3,932	
1st " 1962	5,013	3.7	4,905	3.7	4,090	4.0
3rd " 1970	6,849		6,745		5,145	
3rd " 1971	7,064	3.1	6,961	3.2	5,237	1.8

(1) Figures used are seasonally adjusted.

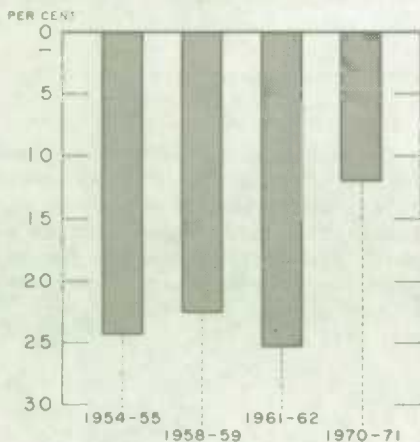
(2) Figures used are not adjusted for seasonality.

(3) These figures represent the average of May and June since Good Friday occurred during the reference week of April of 1954 and greatly affected the increase from one year to the next.

Source: Non-agricultural paid workers working more than 35 hours per week taken from Special Table 3b published by the Labour Force Survey. Other estimates of paid workers from Seasonally Adjusted Labour Force Statistics, Statistics Canada (Catalogue 71-201 Annual) (Ottawa: Information Canada, 1971).

CHART-1

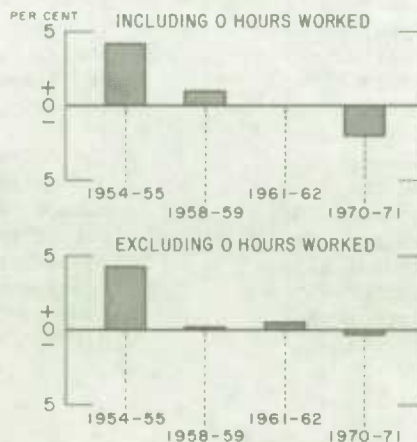
PERCENTAGE CHANGE IN SHORT-TIME AND TURNOVER AT THE BEGINNING AND END OF THE FIRST YEAR OF POST-WAR ECONOMIC RECOVERIES, CANADA



SOURCE: MONTHLY LABOUR FORCE SURVEY, SPECIAL TABLE 3A.

CHART-2

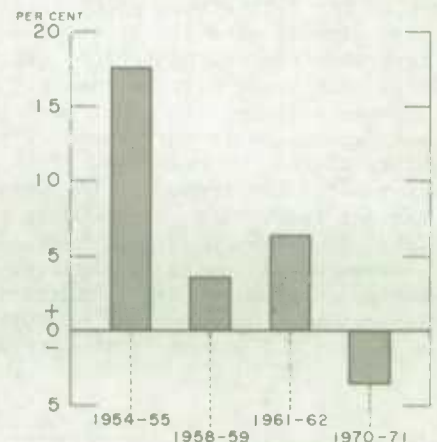
PERCENTAGE CHANGE IN AVERAGE WEEKLY HOURS AT THE BEGINNING AND END OF THE FIRST YEAR OF POST-WAR ECONOMIC RECOVERIES, CANADA



SOURCE: FIGURES FOR 1954, 1955 AND 1958 WERE TAKEN FROM CATALOGUE NO 71-502 (REFERENCE PAPER NO 58); 1959 FIGURES WERE PREPARED BY LFS; REST OF FIGURES TAKEN FROM SPECIAL TABLE 3B.

CHART-3

PERCENTAGE CHANGE IN EMPLOYED 45 HOURS AND OVER AT THE BEGINNING AND END OF THE FIRST YEAR OF POST-WAR ECONOMIC RECOVERIES, CANADA



SOURCE: MONTHLY LABOUR FORCE SURVEY, SPECIAL TABLE 3B - NON-AGRICULTURAL PAID WORKERS.

Employment data from the establishment surveys (based on payroll records) show a similar disparity between 1970-71 and the recovery in the early sixties. (This series lacks full coverage prior to 1961 which prevents comparisons with the other recoveries.)

Short-time and Turnover

There is frequently a considerable time lag between the start of an expansionary cycle and its full impact on the creation of jobs, the initial reaction being a reduction in lay offs and dismissals. Comprehensive data on this aspect of the labour force are not available but Statistics Canada does collect and publish certain data for persons working less than a full week. Specifically, these are persons who usually work 35 hours or more but worked less in the survey week due to short-time, lay off or change of job; the latter includes finding, as well as losing, employment. This information has been charted for the four recoveries under review (Chart 1).

It will be seen that a reduction occurred in the number of people on short-time and turnover during the 1970-71 recovery, but the reduction was of the order of 12 % which is less than half that in the previous recoveries.

Hours of Work

The full effect of cyclical economic expansion is also likely to be delayed because business firms tend to use their existing work force more intensively before hiring new workers. In other words, the increased demand for labour is met with more man-hours instead of more men. This phenomenon is readily confirmed, in the case of the earlier recoveries, by the data presented in Chart 2. These depict percentage changes in average weekly hours of non-agricultural paid workers; the first series charted includes persons with jobs but not at work during the week (i.e., the zero hours category) while

the second series excludes them. Whichever series is used, the latest recovery is unique. Whereas all previous recoveries show the expected increase in average hours worked - with the single exception of 1961-62 in the first series in Chart 2 which showed no change - the recent recovery shows a decline in average hours.

One possible explanation is that the reduction in average weekly hours has been caused by an influx of part-time workers. In this context it is instructive to look at persons working "long" hours, thus excluding part-time workers while incorporating the impact of overtime workers (Chart 3). The strange behaviour of the weekly hours series now appears even stranger. The number of employees who worked 45 hours or more dropped by 1 1/2 % in the 12 months following the third quarter of 1970, which compares with a rise of 3 1/2 to 17 1/2 % in the earlier recoveries.

Conclusion

A puzzling feature of the recent recovery, tentatively defined as beginning in the third quarter of 1970, has been the stickiness in the unemployment rate in the face of an impressive growth in output. Drawing on comparative data series from earlier periods defined as upward turning points, this analysis concludes first that changes in labour force composition are not a major reason why unemployment is declining more slowly. Further examination reveals that employment growth has been somewhat slower than in the earlier recoveries, that employed workers have been used less intensively (rather than more), and that the amount of short-time and turnover has decreased much less than formerly.

These factors seem to suggest changes occurring in the utilization of labour which make demand less sensitive to a rise in output. The frequently encountered reports of companies which are meeting demands for increased production by reorganizing existing manpower, though only an impression, are perhaps worth citing.

APPENDIX

TABLE A1. Short-time and Turnover at the Beginning and End of the First Year of Post-war Economic Recoveries, Canada

Period	Number (1)		Percentage changes
	'000		
2nd quarter 1954	210		
2nd " 1955	159		- 24.3
1st " 1958	284		
1st " 1959	220		- 22.5
1st " 1961	308		
1st " 1962	230		- 25.3
3rd " 1970	233		
3rd " 1971	205		- 12.0

(1) Persons who usually work 35 hours or more but in the survey week worked less due to short-time, lay off or change of job.

Source: Monthly Labour Force Survey, Special Table 3a.

TABLE A2. Average Weekly Hours at the Beginning and End of the First Year of Post-war Economic Recoveries, Canada

Period	Including 0 hours		Excluding 0 hours	
	Actual	Percentage changes	Actual	Percentage changes
2nd quarter 1954	38.5		39.4	
2nd " 1955	40.1	4.2	41.1	4.3
1st " 1958	39.1		40.4	
1st " 1959	39.5	1.0	40.5	0.2
1st " 1961	38.9		39.8	
1st " 1962	38.9	0.0	40.0	0.5
3rd " 1970	34.4		39.2	
3rd " 1971	33.7	- 2.0	39.1	- 0.3

Source: Figures used in the calculations to derive average weekly hours were obtained from the following sources: 1954, 1955 and 1958 from *The Labour Force November 1945 - July 1958*, Statistics Canada (Catalogue 71-502) (Ottawa: Information Canada); rest of figures from Special Table 3b, monthly Labour Force Survey.

TABLE A3. Employed 45 Hours and Over at the Beginning and End of the First Year of Post-war Economic Recoveries, Canada

Period	Number		Percentage changes
	'000		
2nd quarter 1954	2,478		
2nd " 1955	2,914		17.6
1st " 1958	2,777		
1st " 1959	2,875		3.6
1st " 1961	2,779		
1st " 1962	2,956		6.4
3rd " 1970	3,617		
3rd " 1971	3,492		- 3.5

Source: Monthly Labour Force Survey, Special Table 3b, non-agricultural paid workers.

CURRENT PATTERNS IN THE FEMALE LABOUR FORCE

Canada 1972

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The fact that the female labour force continues to grow has been a subject of intermittent concern through the last several years of high unemployment — a concern heightened considerably in the wake of changes in the Unemployment Insurance Act which went into effect in mid-summer 1971. The present study is a response to questions which have arisen regarding new and more generous eligibility requirements. The latter, clearly, have raised the number of women claiming benefits; have they also changed working patterns? Possible effects include more short-term working, more unemployment, and more women drawn into the labour force who formerly would have stayed at home. This examination will be mainly limited to the period immediately before and after the new Act came into effect (mid-summer 1971), though drawing on time series as needed for the delineation of trends.

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Background

The most important trend to be noted is, of course, the long-term upward movement in the number of women working and in the female participation rate. The growth in numbers is attributable partly to demographic factors (the post-war baby boom arriving at labour force age) and partly to changing attitudes to work. Both are reflected in the participation rate which, overall, rose from 28.7 % in 1961 to 36.5 % in 1971. Little, if any, increase occurred in the participation rate of the unmarried women (single, separated, widowed, divorced) but the rate for married women rose from 21.0 % to 33.0 %.

It is perhaps not generally recognized that, although the increases were large, the female participation rate in Canada was much lower than that of other industrial countries at the beginning of the decade and remains lower today (see Table 1). Latest available figures show the Canadian rate for married women a full 10 points below the U.S. and the U.K. and almost 20 points below Sweden.

TABLE 1. Participation Rates for Selected Countries, 1961 and 1969

Country	Total females		Married females	
	1961	1969	1961	1969
Canada	28.7	35.2	21.0	31.2
U.S.A.	36.9	41.1	32.7	39.6
U.K.	40.4	41.8	34.4	39.0
Sweden	43.9	47.4	39.4	48.2
Germany	41.5	38.4	32.9	34.4
Japan	54.3	50.1	50.1	48.8

Source: Figures for Canada from The Labour Force, Statistics Canada (Catalogue 71-001 Annual) (Ottawa: Information Canada); figures for other countries from Labour Force Statistics 1958-1969, Organisation for Economic Co-operation and Development (Paris, 1971).

Nevertheless, the addition of approximately one million women to the labour force during the sixties put continuous pressure on the Canadian labour market which also had to absorb large increases in the number of younger males. So long as employment was also

growing strongly this pressure was not much in evidence; but by the late sixties the demand for labour had begun to fall behind. In 1970 the unemployment rates for both men and women moved sharply upward.

The New Unemployment Insurance Act

Major revisions in the legislation became effective June 27, 1971 with the stated purpose of making the thirty year old system of unemployment insurance more responsive to the needs of the present day labour force.(1) Among these, the new Act was intended to alleviate some of the disabilities confronting women in the labour force. Thus, maternity benefits were introduced, aimed at assisting women to return to work if it was their wish to do so. The expressed concern for persons with a short work history appears to cover not only new entrants but also older women who, on rejoining the labour force after a long absence, are unable to secure more than short spells of employment and hence fail to qualify for the assistance which would encourage them to keep looking.(2)

From the standpoint of this study the most important changes were those affecting eligibility; these may be briefly summarized as follows:

- (1) Coverage was extended to virtually all employees, thus adding salaried personnel earning over \$7,800 per year and previously exempted occupations such as teachers, nurses and government employees (effective January 2, 1972);
- (2) Requisite work experience before benefit entitlement was reduced to eight weeks in the preceding year from 30 weeks in the preceding two years;
- (3) Benefits were given to major attachment claimants(3) temporarily unable to work because of illness;
- (4) Benefits were given to major attachment claimants for maternity absences covering periods before and after confinement;
- (5) Claimants were given extended benefit periods when unemployment rates were high, providing they were willing and able to work.

- (1) Unemployment Insurance in the 70's (Ottawa: Information Canada, 1970), p. 4.
- (2) "Persons with a short work history may have even greater problems than those who have a long-term labour force attachment. Allowing workers to take early advantage of an unemployment insurance program prevents them from falling into unstable work patterns. Instead, they are effectively integrated into the productive mainstream." op. cit., page 5.
- (3) Major attachment claimants must have worked 20 weeks out of the preceding 52 weeks.

The Labour Market After the New Act

U.I.C. claimant data. - It is clear that the new Act has increased the number of UIC claimants(4) for the simple reason that it extended coverage. However, the amount of the increase is difficult to assess because the effects of rising unemployment are also present.

Categories of claimants who would not have been entitled to benefits under the old Act would be chiefly the following:

- (1) persons in salary ranges or occupations previously excluded;
- (2) persons on maternity or illness benefits;
- (3) persons with previous job of limited duration (i.e., employed 2-4 months);
- (4) summer students with summer employment the previous year.

The effect of item (1) is probably not very great since the previous exclusions tended to be in industries and occupations with a low incidence of unemployment. Items (2) and (3) would tend to have a greater application to women than to men and item (4) would also have some effects for women. Not surprisingly, therefore, the increase in the level of female claimants over the past twelve months (Chart 1) is markedly greater than the increase for males (Chart 2). In the male case we cannot even be sure that the Act has had an effect because claimant levels did not begin to rise until May 1972 when unemployment also rose over the preceding year. However, from May onwards the male levels are substantially higher and it seems likely that item (4) bears some of the responsibility.

There are several reasons why the number of UIC claimants will differ from the official estimates of unemployed persons provided by the Labour Force Survey. To be "unemployed" the person must be without a job and seeking work; however, he (she) may not be entitled to UIC benefits, particularly under the old Act. On the other hand, claimants may be either partially employed or not actively seeking work, in which cases they would not be counted in the unemployment statistics.

Under the old Act, the number of unemployed males always exceeded the number of male claimants during the summer months because the ranks of the unemployed were swollen by students and new entrants not entitled to benefits. On the other hand, female

- (4) Data on UIC beneficiaries are not presently available.

CHART-1

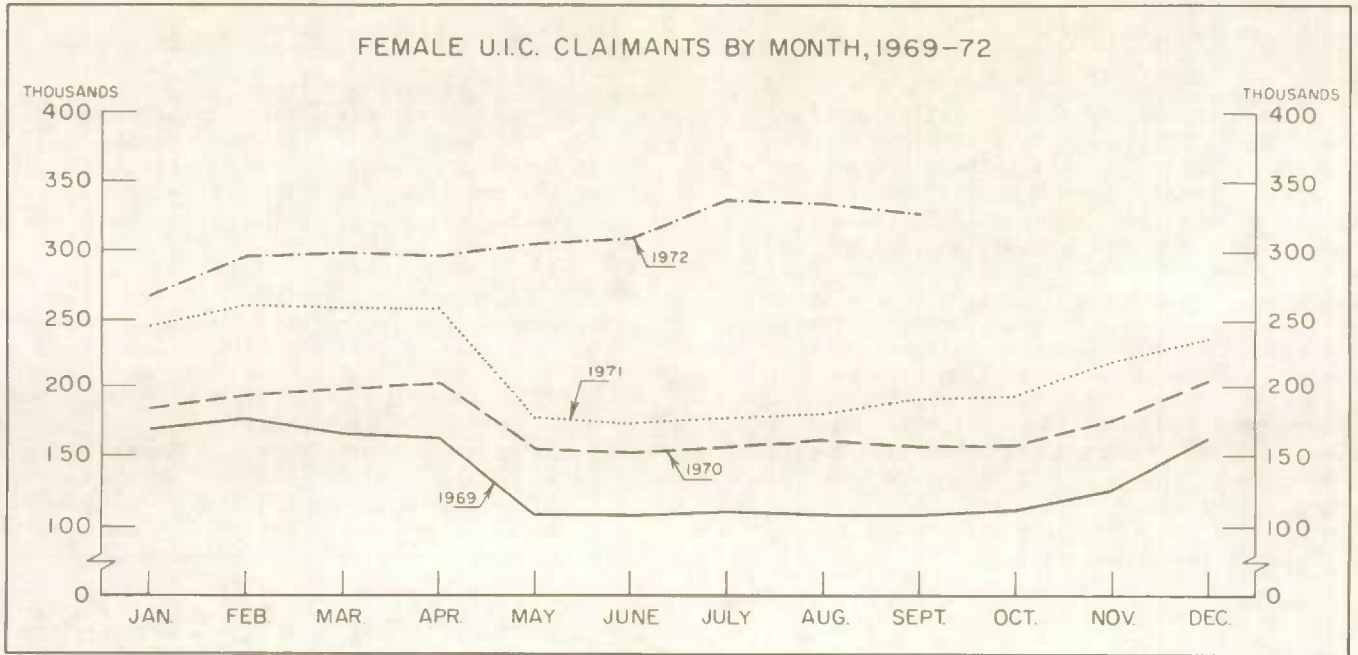


CHART-2

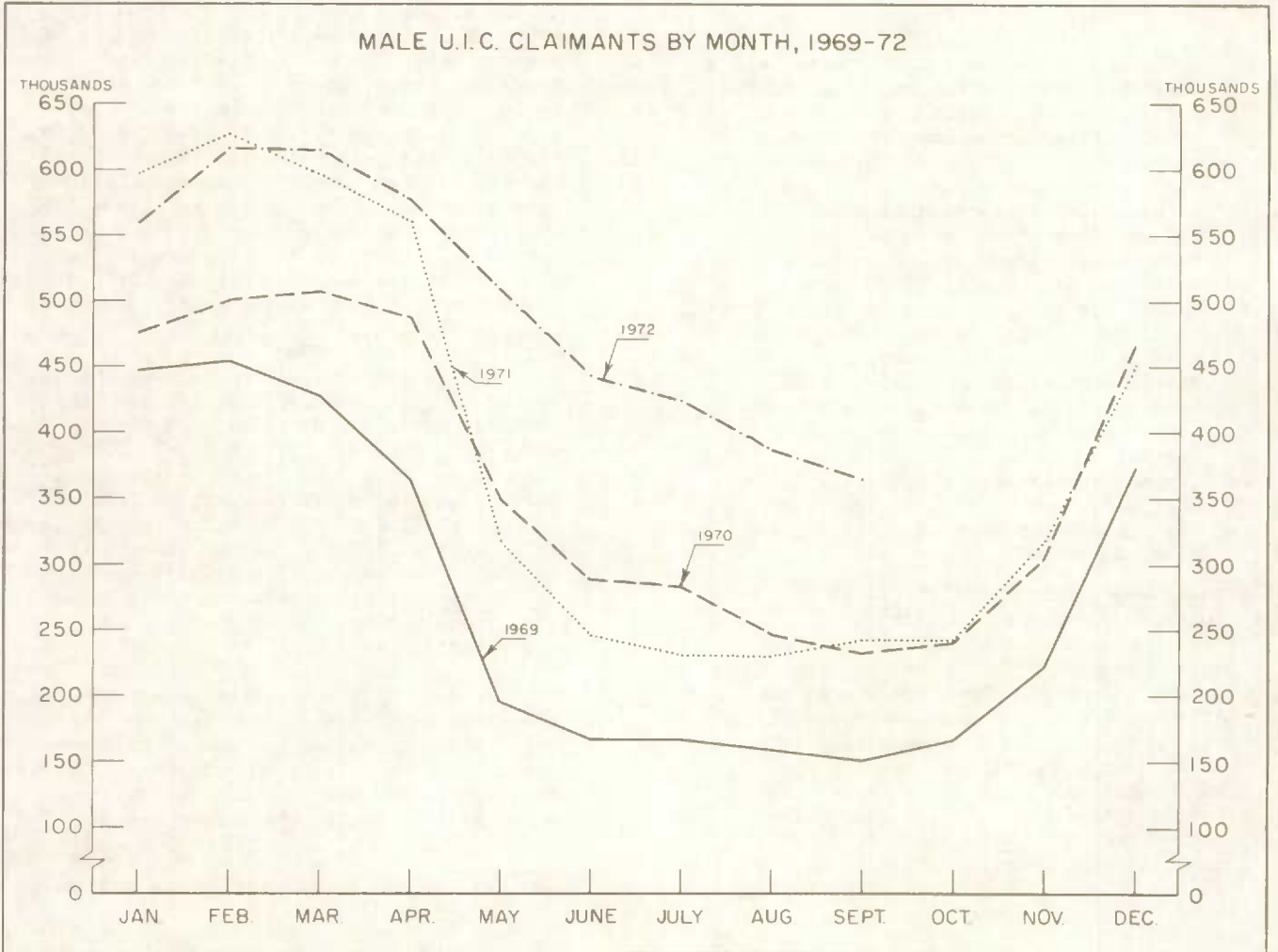


CHART - 3

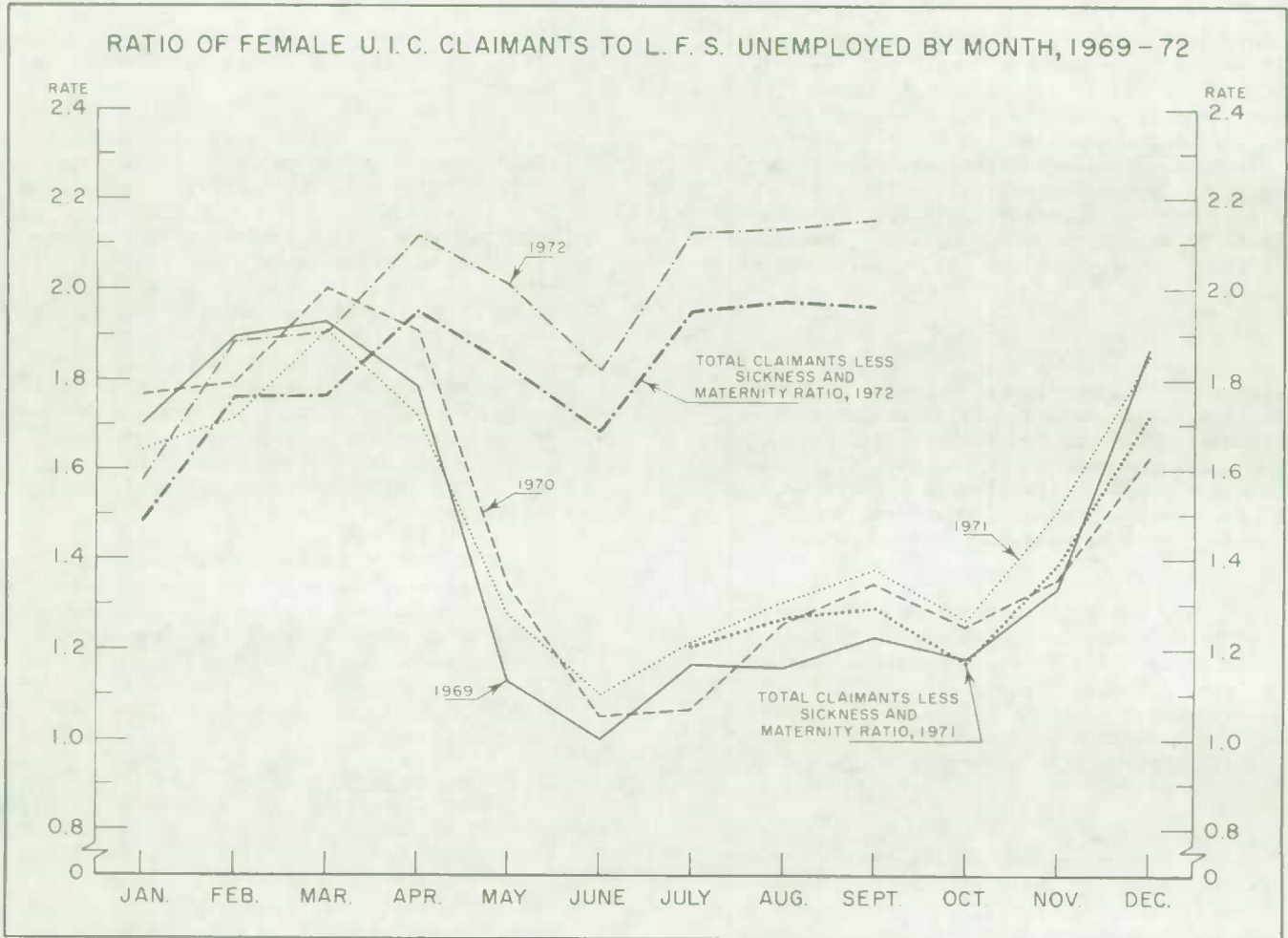
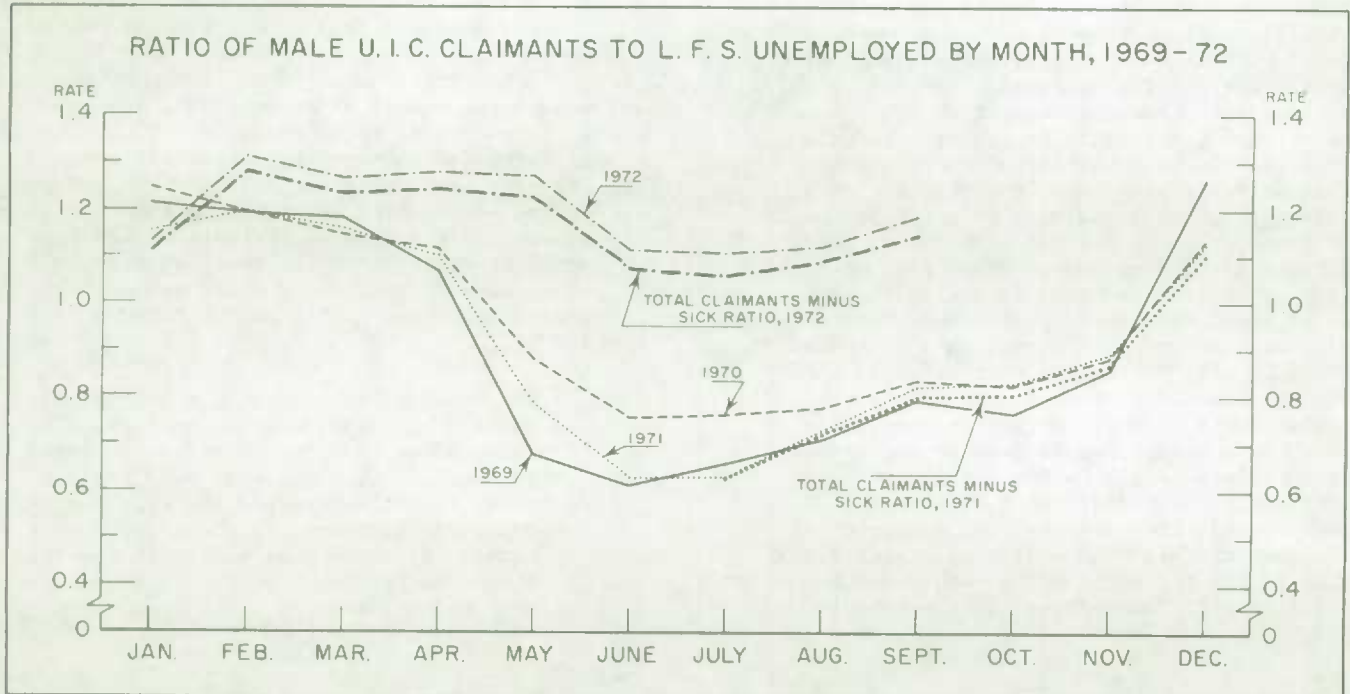


CHART - 4



claimants remained higher even in the summer. It is not known why the female pattern differed; one theory is that enough women claimed benefits without actually seeking work to offset the students and other unemployed women not entitled to benefits. The theory cannot be proved but certainly there have always been segments of the population who felt entitled to draw unemployment insurance on the grounds that they had no option about paying for it.

Charts 3 and 4 show the ratio of UIC claimants to the official unemployment statistics for males and females respectively. Again the 1972 pattern is quite different. The usual summer drop in the male ratio has been much reduced; the female pattern includes a brief decline but it is very small compared to earlier years and not sustained.

This shows that the higher claimant levels in 1972 are not attributable to radical changes occurring in the amount and seasonal patterns of unemployment. The traditional relationships with the unemployment series have been altered by changes in the claimant pattern, presumably related to the new Act.

Since the new Act substantially affected the ratio of female claimants to unemployed - from 1971 to 1972 it went from 1.1 to 1.8 for June and from 1.3 to 2.1 for August - a large number of women must have begun to claim benefit after limited employment periods (item 3 above). Some of this group would always have looked for work on completion of short-term jobs and, hence, would be officially classified as unemployed. However, since the ratio of claimants to unemployed was always greater than unity some additional groups must be claiming benefit in 1972. It is possible that more women than formerly have been "cashing in". But the question of legitimacy is a complex one. As noted, the new Act was intended to assist persons (including women) whose lack of training or experience makes it difficult both to keep and find employment. Some claimants of this kind may have picked up a few hours of work, e.g. baby-sitting; they would not then be classified to "unemployed" by the Labour Force Survey. Or perhaps the job search was weak. The marginally employable tend to lack skills in the job search and, frequently, self-confidence so that the search activities are weak and sporadic. A claimant of this kind - with no search activity in the reference week - could not be classified to "unemployed" in the Labour

Force Survey because the definition requires active seeking; they appear as "not in the labour force". (5)

Maternity claimants are a relatively small group - in the early months running around 11,000 and with further increases in 1972 to a peak of 17,000 (see Chart 5). Illness benefits grew rapidly for both males and females to a peak of about 27,000 (Chart 6). This was similar to the illness level estimated by the Labour Force Survey for 1970. If the winter months are excluded (when the number of male claimants is very high) the female component of illness claimants is similar to that of regular claimants. If the new Act is adding illness claimants whose labour force attachment is marginal, the number is not large enough to be reflected in the data.

To see the effect of maternity and illness claims on the level of female claimants, Chart 3 contains a separate line to show the total after these special claimants have been excluded. This reduced the difference between claimants and the unemployed but not greatly and the new seasonal pattern was unaltered.

Labour force effects. - Since the new Act makes it possible to claim benefits after a short period of employment, it is sometimes argued that more women will enter the labour force to work a short stretch and then collect unemployment insurance. (Of course, such a practice was also possible under the old Act with the difference that the qualifying period was longer.) An effect of this kind, if it is more than minimal, should be discernible in Labour Force Survey data in the form of a higher female participation rate.

Turning to Chart 7 we find that although the number of women in the labour force continued to increase through 1971 and 1972 the increase in the participation rate was very much as it had been for the ten preceding years. The latest figures - third quarter 1972 - show an increase of 0.9 percentage points since the third quarter 1971 which is precisely the average annual increase in female participation between 1961 and 1971.

(5) UIC benefits are based on a very similar concept of employment; in most cases it is required that the recipient is seeking work. But the status of UIC claimants is not determined by their particular circumstances in the Labour Force Survey reference week and it is possible that a higher count of the diffident job seekers results.

CHART-5

SPECIAL BENEFIT CLAIMANTS BY TYPE OF BENEFIT, JULY 1971 - SEPTEMBER 1972

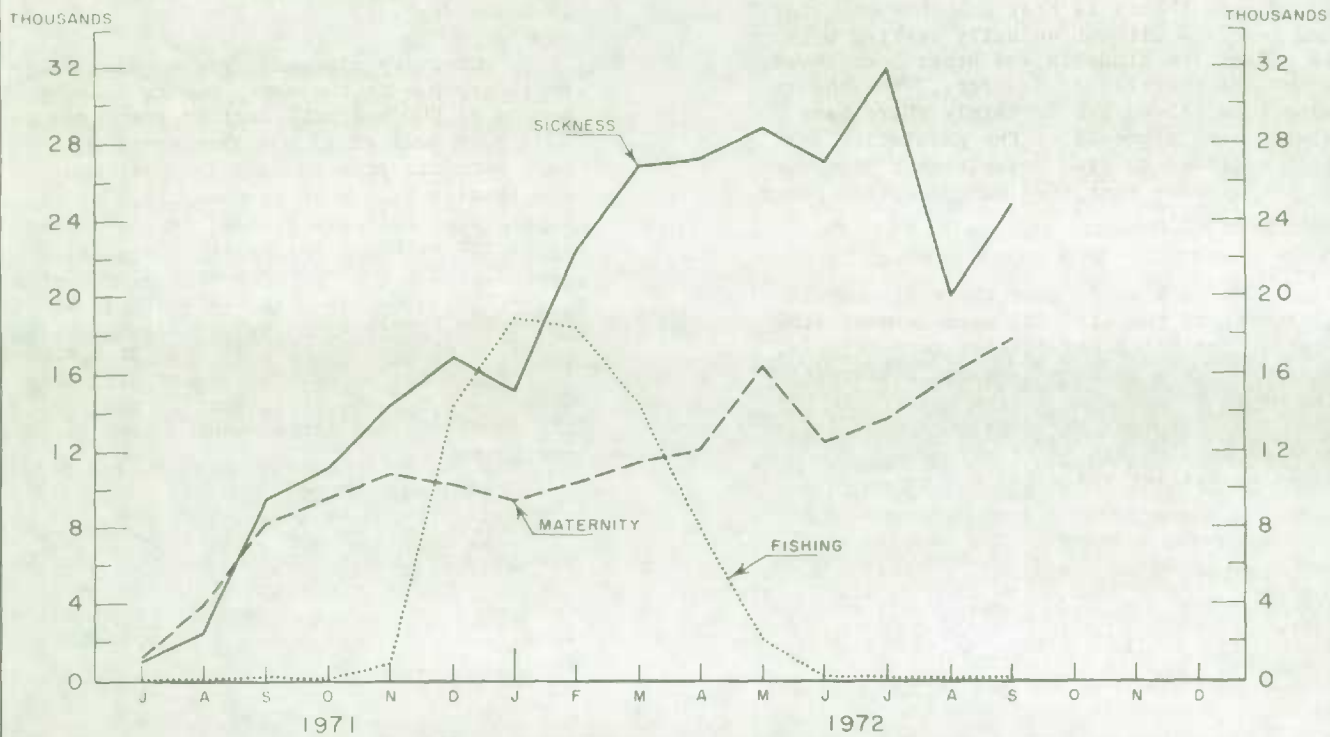
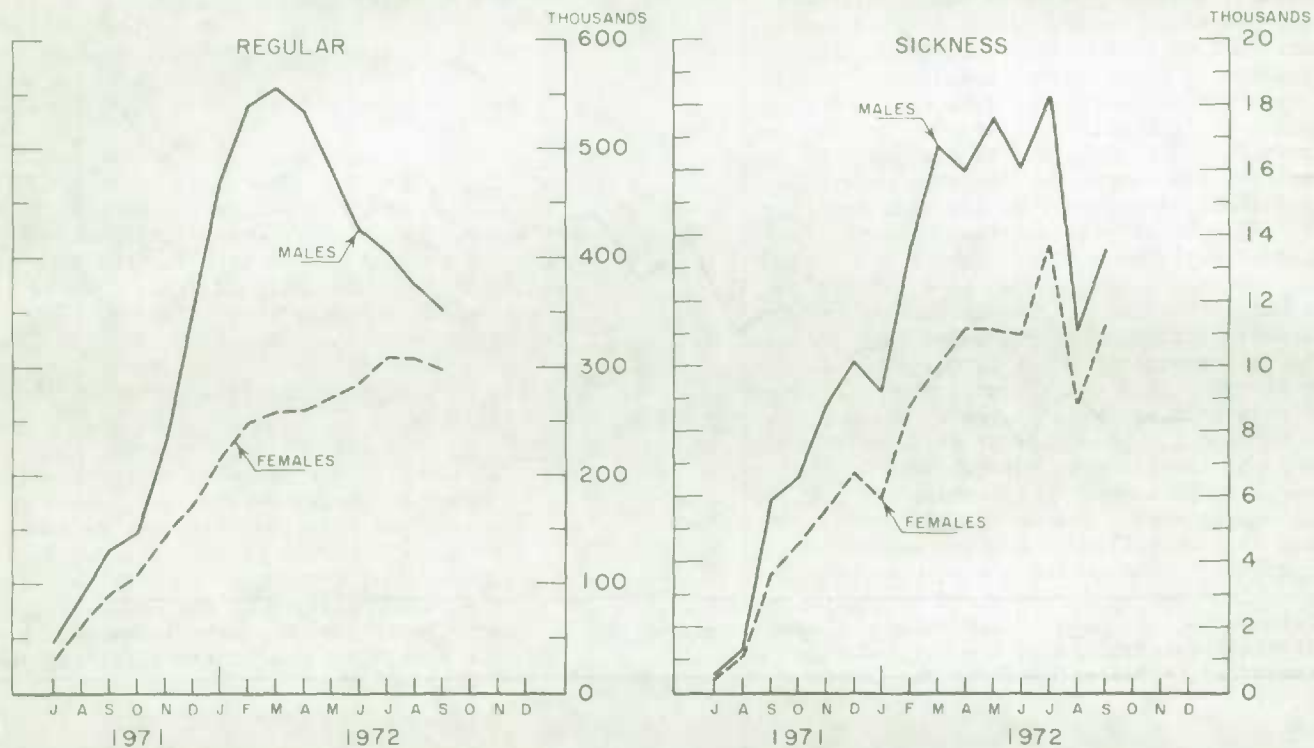


CHART-6

REGULAR AND SICKNESS CLAIMANTS BY SEX, JULY 1971 - SEPTEMBER 1972



Plotted on a monthly basis (Charts 8 and 9) the same data do reveal a higher-than-normal increase in the participation rates of certain sub-groups in the latter half of 1971. This upsurge, which is noted chiefly in the rates for married women and for women in the 25-34 and 35-44 age groups, received considerable attention at the time. While it is impossible to say whether or not the UIC changes had some responsibility, the more important point would seem to be that the rates in question have since resumed the earlier pattern.

Unpublished data which relate current month labour force status to that of the previous month also failed to provide evidence of an increase in short-term working. Through a period of 34 months beginning in January 1970 there is no increase to be detected in the number of women keeping house who move to the labour force sector. The reverse movement also showed a consistent picture. These findings are not conclusive because the statistics have certain quality limitations (hence, not published) but the fact that a three-year time series reveals no change

would seem to indicate that no very large alterations in work patterns are occurring.

There may be some evidence of an increase in short-term working in the data on claim duration.(6) As is shown in Table 2 the increase in the proportion of female claimants is pretty much confined to the short-term categories. If the weeks on claim are in fact a close reflection of the weeks worked to establish the claim, one might conclude that the Act is having some effect on female work patterns. On the other hand, the disproportionate increase in short-term claims could be explained by women withdrawing from the labour force after a short job search, thus going off claim without exhausting all benefits established when working.

(6) Data on the number of weeks worked prior to claim is not yet available for 1972 claimants; we have used the number of weeks on claim as a proxy. It is perhaps worth noting that preliminary tabulations for the last half of 1971 show a higher proportion of females in the major attachment group (20 or more weeks work experience) than in the minor.

CHART-7

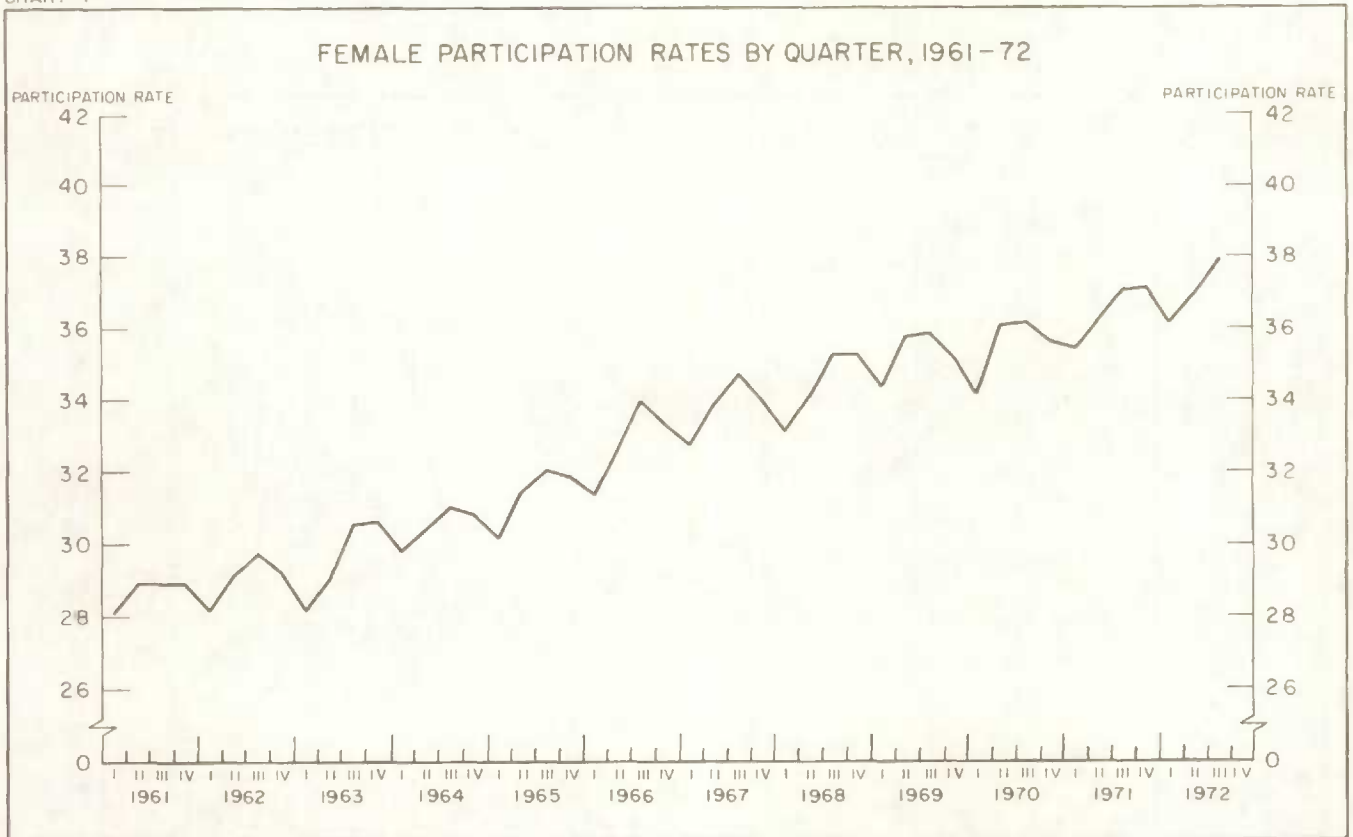


CHART - 8

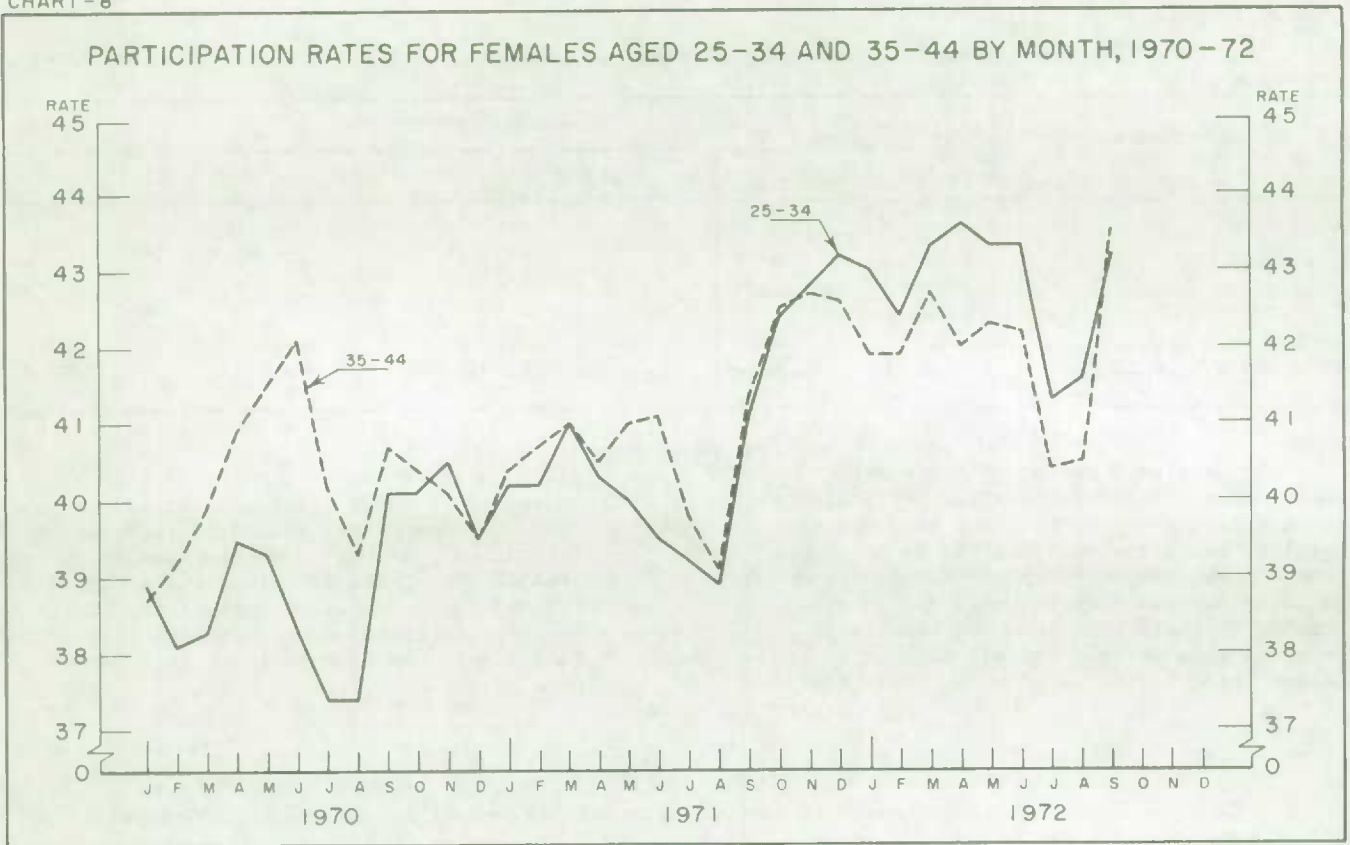


CHART - 9

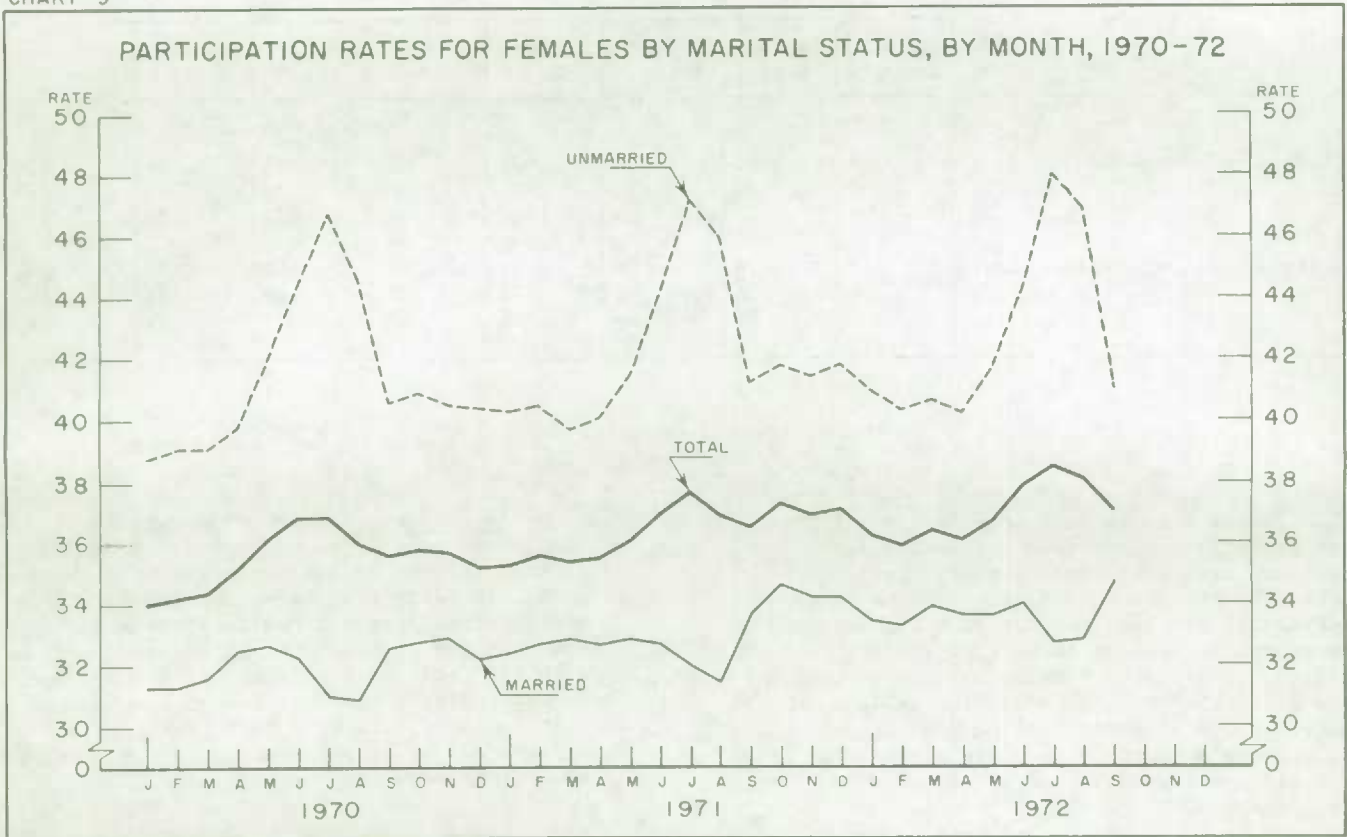


TABLE 2. Proportion of Females in Claimant File

Number of weeks on claim	Month of September			
	1969	1970	1971	1972
1-4 weeks	35.5	33.6	37.8	44.7
5-13 weeks	42.4	40.5	45.0	47.8
14-26 weeks	49.5	44.1	50.4	47.1
27 weeks	48.5	46.3	50.6	49.8

It is also a matter of speculation whether the greater availability of benefits is encouraging employees (both male and female) to leave low-pay jobs and to be reluctant to take new ones. Since females tend to be in low-pay jobs it would not be surprising if their behaviour had been influenced in this way and certain changes in the Labour Force Survey data in the third quarter

are at least consistent with the theory. According to Table 3, employment of persons over 20 years of age failed to increase as it had the year before whereas teenagers increased both their flow into the labour market and their amount of employment. This could be interpreted to mean that more of the poorer jobs had been left for the teenage population.

TABLE 3. Year to Year Increases in Labour Force and Employment for Selected Age Groups

Year to year increases	Age group							
	14-19		20-24		25-44		45-64	
	Labour force	Employment	Labour force	Employment	Labour force	Employment	Labour force	Employment
	'000							
1970-71 - 1st quarter	50	23	62	23	120	71	86	54
2nd "	9	- 10	53	36	85	73	47	40
3rd "	50	40	69	62	96	102	52	52
1971-72 - 1st quarter	30	28	76	78	137	140	26	40
2nd "	64	76	61	76	152	148	23	16
3rd "	76	80	46	39	130	107	30	26

Table 4 shows that more females in the age group 25-44 came into the labour force and were reasonably successful in getting jobs. On the other hand, there was a definite withdrawal of older females from the labour force and decreasing numbers of younger adults (20-24) both looking for and accepting (or finding) jobs. However, the table also shows an even greater lack of jobs or job acceptance evident in the male population for all adult groups.

Labour demand. - Monthly employment statistics contain no evidence of a higher growth rate for female workers within the past year. In fact, statistics for the first nine months of 1972 show a smaller-than-usual female share of the total employment increase with the ratio of female to total employment increasing by a bare 0.1 percentage points. This compares with 0.7 percentage points in 1971 and an annual average of 0.5 percentage points between 1961 and 1971.

TABLE 4. Year to Year Increases in Labour Force and Employment by Sex for Selected Age Groups

Year to year increases	Age group					
	20-24		25-44		45-64	
	Labour force	Employment	Labour force	Employment	Labour force	Employment
	'000					
<u>Females</u>						
1970-71 - 1st quarter	28	18	68	54	38	29
2nd "	25	17	27	22	25	21
3rd "	35	30	42	40	33	34
1971-72 - 1st quarter	27	26	77	70	15	12
2nd "	25	21	91	82	- 5	- 18
3rd "	22	17	75	64	9	7
<u>Males</u>						
1970-71 - 1st quarter	34	5	52	17	48	26
2nd "	28	19	58	51	22	19
3rd "	34	32	58	62	19	18
1971-72 - 1st quarter	49	52	60	70	11	28
2nd "	36	35	61	66	28	34
3rd "	24	12	55	43	21	19

TABLE 5. Annual Increases in Female Employment and Female Share of Employment

Year	Female employment	Annual increase in female employment	Female share of total employment
	'000		%
1968	2391		31.7
1969	2508	117	32.2
1970	2569	61	32.6
1971	2687	118	33.3
First 9 months 1972 seasonally adjusted	2779	92	33.4

The industry breakdown also suggests some weakening. To see this we look at Table 6 which shows the ratio of female to total employment for the various industry groups through the period of rapid expansion in the sixties. The fact that the ratios change but little means that the expansion was to a con-

siderable extent absorbed by growth in the service industries where female employment was already concentrated. However, it is in the service industries - and, more particularly, in the "non-commercial" sectors (e.g. education, hospitals) - that employment growth has had a definite setback within the

past year. This is partially seen in Table 7 which shows an increase of only 27,000 persons in 1971-72 for all service industries as compared to 135,000 in the previous year. The picture is, in fact, much worse because from other sources it is known that the "commercial" sector (hotels, business services, etc.), where males predominate, is still growing. If these latest trends persist it is evident that growth in female employment will be more difficult to achieve with weaker demand in the traditional stronghold.

According to Table 6, the one area where female employment has been becoming more important over the last two years is the finance, insurance and real estate group. (The table also shows some increase in trade but the trend is less clearly established; the September figure may be an irregular movement.) The gain in the finance group is somewhat offset by the fact that the industry is a relatively small one.

TABLE 6. Ratio of Female to Total Employment by Industry

Industry	Annual 1961	Month of September		
		1970	1971	1972
		per cent		
Forestry	1.8	1.7	1.7	2.2
Mining	3.9	5.0	4.8	5.2
Manufacturing	22.9	24.0	23.1	23.6
Construction	3.1	3.4	3.1	3.1
Transportation and utilities	15.3	15.1	14.8	15.2
Trade	36.1	37.7	37.1	39.5(1)
Finance	49.3	53.6	53.2	55.1
Service (commercial)	43.5	40.7	39.4	36.6
Service (commercial and non-commercial)	63.3	62.6	61.2	60.2
Public administration	22.5	24.0	24.9	26.6

(1) May have been an irregular month; in August the ratio was 37.5.

Source: Service (commercial and non-commercial) and public administration figures derived from figures in The Labour Force, Statistics Canada (Catalogue 71-001 Monthly) (Ottawa: Information Canada). Figures for other industry groupings taken from Employment, Earnings and Hours, Statistics Canada (Catalogue 72-002 Monthly) (Ottawa: Information Canada).

TABLE 7. Total Employment by Industry

Industry	Month of September				
	1970	1971	1971 less 1970	1972	1972 less 1971
	'000				
Forestry	82	84	2	72	12
Mining	126	130	4	117	13
Manufacturing	1,803	1,825	22	1,845	20
Construction	520	552	32	551	1
Transportation and utilities	703	701	2	740	39
Trade	1,330	1,300	30	1,412	112
Finance	363	375	12	386	11
Service (commercial and non-commercial)	1,999	2,134	135	2,161	27
Public administration	480	498	18	534	36

Source: The Labour Force, Statistics Canada (Catalogue 71-001 Monthly) (Ottawa: Information Canada).

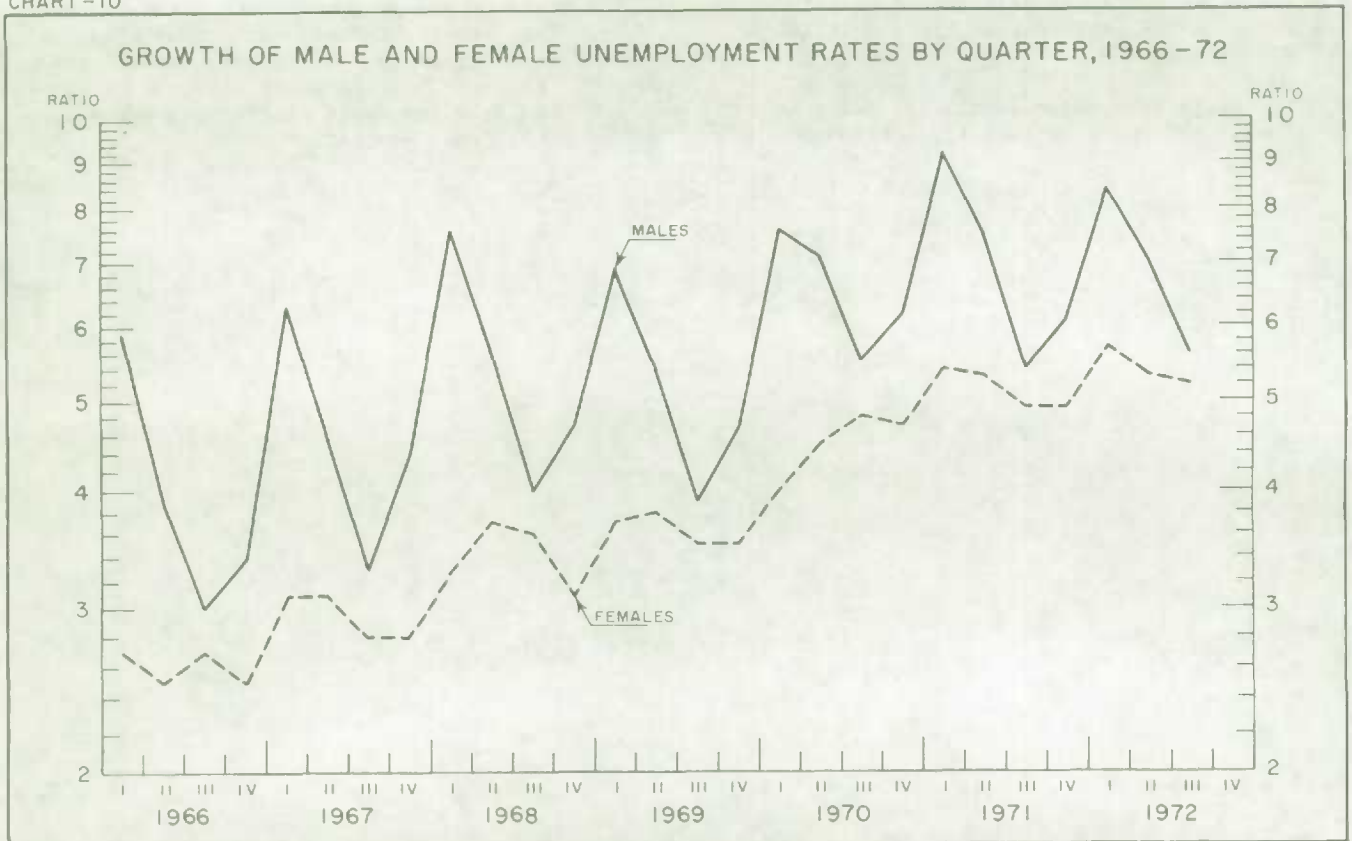
The current period is in several ways a critical one for women. Female participation has still some growth ahead if Canada is to catch up with other countries. The younger age groups are another large source of growth. Meanwhile, women born in the early post-war years are just beginning to move into the 25-34 year age group where male labour force attachments become very strong; this suggests the outlook is for increasing competition for employment. Thus, an attempt should be made to look ahead as well as back in assessing changing labour market conditions affecting women.

Unemployment. - Unemployment rates for females began edging up in the late sixties, rose quite sharply in 1970 and continued into 1971 and 1972 at rates generally above 5%. This is a level never previously recorded for

females in Canada; 4.7% was the peak in the depression year of 1961, and even then the rate was below 4% through much of the year. Through the mid-sixties, when the female labour force grew more rapidly than now, the unemployment rate held steady at 2 1/2 to 3%.

It is still true that women in Canada have lower unemployment rates than men, especially in winter when there are few jobs for outdoor workers (predominantly male). However, the difference between the male and female rates has been declining in recent years. The seasonality variance in male unemployment is being reduced; female unemployment has been steadily rising since 1966 while the upward movement in male unemployment has been less regular. In the first half of 1972 female unemployment rates rose slightly while male rates dropped slightly below the level of the previous year (see Chart 10).

CHART - 10



There are several reasons why female unemployment has been increasing. For one, the increase in the numbers of young women, including summer students, brings in a group which is likely to be quite determined in their search for work, hence certain to be counted in the unemployment statistics. This is not necessarily the case with certain traditional types of female workers who, on losing a job, have often returned to housekeeping,

thus having no effect on the statistics. Probably, too, this latter phenomenon is fading in importance as, over the longer run, the working wife has won greater acceptance and her labour force attachment is strengthened; the stronger attachment means less tendency to withdraw from the labour market when a job is terminated. The tighter job market has also been a factor in raising female unemployment over the past several years.

The influence of the new UIC Act could be one factor which explains why the female rate continued to rise in 1972 when the male rate was temporarily halted. The shortening of the work period required for eligibility might increase the incentive to look for work and could be expected to apply chiefly to women since most men are already either working or looking for work. On the other hand, the employment statistics examined above show some slippage in the competitive position of females and it is quite possible that this has been the major factor.

Summary and Conclusions

1. The number of female claimants has increased since the new Act came into effect. Maternity and illness provisions have been used and also the provisions which allow claims after relatively short work periods. But there is little evidence of an alteration in the behaviour of the female labour force.
 2. The ratio of regular female claimants to unemployed was substantially increased
 3. Female participation rates continued to increase in the period under review in keeping with the 1965-70 trend line (which was somewhat below the trend for the 1962-65 period). The growth was mainly for married females whose participation rate is still below that of other countries.
 4. Employment opportunities appear to be becoming somewhat more restricted for women and little headway has been made in the traditionally male fields. Female unemployment has increased as would be expected from increased participation and a tightened job market.
- with the new Act thus indicating that there were more claimants outside of the official unemployed definition in 1972. However, there is no measure of the number in this group nor of its composition, i.e., how many sincerely wanted jobs but did not know how to seek them and how many remained marginally available in order to collect benefits. After the new Act the number of regular male claimants also exceeded the number of unemployed.

APPENDIX

TABLE A1. U.I.C. Claimants and LFS Unemployed by Sex, by Month, 1969-72

Year and month	U.I.C. claimants		LFS unemployed		Ratio	
	Male	Female	Male	Female	Male	Female
			'000			
1969 - January	447,589	168,371	368	99	1.216	1.701
February	454,638	176,384	380	93	1.196	1.897
March	428,262	165,886	362	86	1.183	1.929
April	364,088	162,434	341	91	1.068	1.785
May	195,578	109,404	289	97	.677	1.128
June	167,770	109,116	274	109	.612	1.001
July	167,755	110,864	254	95	.660	1.167
August	158,725	109,024	224	94	.709	1.160
September	150,416	109,142	190	89	.792	1.226
October	166,734	113,301	218	96	.765	1.180
November	222,341	126,857	259	95	.858	1.335
December	374,411	162,286	296	87	1.265	1.865
1970 - January	475,819	183,640	381	104	1.249	1.766
February	500,789	193,627	418	108	1.198	1.793
March	507,069	198,076	443	99	1.145	2.001
April	488,252	202,471	438	106	1.115	1.910
May	349,776	155,635	397	116	.881	1.342
June	289,643	152,248	384	145	.754	1.050
July	282,834	156,534	371	147	.762	1.065
August	247,609	161,093	320	128	.774	1.259
September	233,745	157,383	281	117	.832	1.345
October	240,766	157,931	293	126	.822	1.253
November	305,524	174,951	347	129	.880	1.356
December	466,691	205,072	412	126	1.133	1.628
1971 - January	597,514	246,564	518	150	1.154	1.644
February	627,113	260,559	523	152	1.199	1.714
March	597,032	259,470	514	136	1.162	1.908
April	560,857	258,095	509	150	1.102	1.721
May	318,539	177,770	404	139	.788	1.279
June	247,302	172,640	394	157	.628	1.100
July	231,197	177,745	368	146	.628	1.217
August	230,331	180,188	317	138	.727	1.306
September	242,380	190,368	296	138	.819	1.379
October	242,160	193,739	294	153	.824	1.266
November	318,451	219,844	357	146	.892	1.506
December	452,238	236,944	402	128	1.125	1.851
1972 - January	559,494	267,502	495	170	1.130	1.574
February	615,955	295,988	470	157	1.311	1.885
March	614,911	298,646	485	157	1.268	1.902
April	577,532	296,360	452	140	1.278	2.117
May	508,217	305,519	400	152	1.271	2.010
June	442,930	309,698	398	170	1.113	1.822
July	424,541	337,492	384	159	1.106	2.123
August	387,094	334,665	346	157	1.119	2.132
September	364,775	327,437	307	152	1.188	2.154

Source: U.I.C. figures taken from Statistical Report on the Operation of the Unemployment Insurance Act, Statistics Canada (Catalogue 73-001 Monthly) (Ottawa: Information Canada); LFS figures taken from Special Table 1 for 1969 and 1970 and for 1971 and 1972 from The Labour Force, Statistics Canada (Catalogue 71-001 Monthly) (Ottawa: Information Canada).

TABLE A2. U.I.C. Claimants by Type of Benefit, by Sex, by Month, July 1971 - September 1972

Year and month	Total				Males			Females			
	Regular	Sickness	Maternity	Fishing	Regular	Sickness	Fishing	Regular	Sickness	Maternity	Fishing
1971 - July	77,964	998	1,181	8	46,182	548	8	31,782	450	1,181	-
August	149,990	2,436	3,976	42	88,940	1,301	41	61,050	1,135	3,976	1
September	223,396	9,557	8,188	161	131,758	5,932	156	91,638	3,625	8,188	5
October	255,475	11,150	9,595	104	147,730	6,591	104	107,745	4,559	9,595	-
November	375,168	14,443	10,890	838	230,218	8,817	831	144,950	5,626	10,890	7
December	525,347	16,885	10,250	14,356	352,853	10,164	13,998	172,494	6,721	10,250	358
1972 - January	685,142	15,165	9,431	18,909	470,020	9,203	18,575	215,122	5,962	9,431	334
February	790,061	22,465	10,326	18,396	540,307	13,710	18,127	249,754	8,755	10,326	269
March	815,459	26,804	11,450	14,493	556,432	16,781	14,360	259,027	10,023	11,450	133
April	797,341	27,139	12,099	7,851	536,316	15,958	7,796	261,025	11,181	12,099	55
May	754,254	28,776	16,328	2,066	481,360	17,622	2,026	272,894	11,156	16,328	40
June	711,355	26,987	12,486	160	425,642	16,034	160	285,713	10,953	12,486	-
July	715,848	31,905	13,697	101	405,891	18,205	100	309,957	13,700	13,697	1
August	685,742	19,966	15,953	98	375,911	11,089	94	309,831	8,877	15,953	4
September	649,463	24,828	17,821	100	351,100	13,582	93	298,363	11,246	17,821	7

Source: Statistical Report on the Operation of the Unemployment Insurance Act, Statistics Canada (Catalogue 73-001 Monthly) (Ottawa: Information Canada).

TABLE A3. Female Ratio of Claimants by Weeks on Claim, by Month, 1969-72

Year and month	Number of weeks on claim			
	1-4	5-13	14-26	27+
1969 - January	22.3	24.6	46.5	48.4
February	25.8	22.8	38.7	51.5
March	25.9	24.8	28.0	50.1
April	26.8	29.8	30.5	49.9
May	31.4	33.2	38.0	51.1
June	34.9	37.5	44.4	47.5
July	33.9	40.2	46.2	46.2
August	31.5	43.2	45.4	49.8
September	35.5	42.4	49.5	48.5
October	32.5	44.0	48.5	50.2
November	28.2	41.4	47.6	48.3
December	23.3	32.1	48.1	50.1
1970 - January	23.5	24.6	42.6	48.7
February	25.5	22.9	36.3	47.0
March	24.6	25.0	27.8	46.4
April	26.3	27.5	26.3	43.9
May	27.5	27.5	30.9	43.1
June	29.7	31.4	35.8	44.4
July	29.3	35.8	37.1	42.5
August	33.8	40.4	39.5	44.1
September	33.6	40.5	44.1	46.3
October	32.7	40.5	45.4	46.0
November	27.7	39.2	46.7	47.1
December	22.6	32.1	46.5	48.0
1971 - January	24.4	25.4	43.6	47.4
February	27.1	23.8	37.6	47.9
March	27.6	26.9	28.8	48.2
April	27.2	30.3	28.2	48.3
May	33.4	33.7	34.5	47.2
June	36.7	39.7	43.7	46.8
July	37.6	44.6	47.6	48.0
August	38.1	44.3	49.2	49.6
September	37.8	45.0	50.4	50.6
October	37.2	45.3	52.9	51.0
November	31.2	41.1	51.5	52.5
December	23.8	32.7	44.3	53.5
1972 - January	25.8	28.6	39.9	52.7
February	31.4	26.1	36.6	50.3
March	34.7	28.6	29.9	47.4
April	39.4	32.3	27.5	44.1
May	38.7	34.5	33.8	47.6
June	45.9	44.6	34.2	30.2
July	47.4	44.8	42.6	32.2
August	42.5	47.7	45.2	49.3
September	44.7	47.8	47.1	49.8

Source: Derived from data published in Statistical Report on the Operation of the Unemployment Insurance Act, Statistics Canada (Catalogue 73-001 Monthly) (Ottawa: Information Canada).

TABLE A4. Labour Force Participation Rates by Sex with Female Marital Status, by Quarter, 1961-72

Year and quarter	Males	Females		
		Total	Married	Unmarried
1961 - 1st quarter	78.7	28.1	19.9	43.6
2nd "	80.0	28.9	20.9	44.0
3rd "	81.7	28.9	20.8	44.9
4th "	78.8	28.9	21.6	43.3
1962 - 1st "	77.7	28.2	20.8	42.6
2nd "	79.3	29.1	21.7	43.0
3rd "	81.2	29.7	21.7	44.9
4th "	78.0	29.2	22.2	42.5
1963 - 1st "	76.9	28.2	21.2	41.4
2nd "	78.6	29.0	22.3	41.3
3rd "	80.7	30.5	23.1	44.4
4th "	77.7	30.6	23.9	43.1
1964 - 1st "	76.4	29.8	23.3	41.6
2nd "	78.2	30.4	24.2	41.9
3rd "	80.7	31.0	24.2	44.1
4th "	77.2	30.8	24.9	41.5
1965 - 1st "	76.0	30.2	24.4	40.7
2nd "	78.0	31.4	25.6	41.5
3rd "	80.5	32.0	24.9	44.6
4th "	76.9	31.8	25.9	42.3
1966 - 1st "	76.0	31.3	25.6	41.5
2nd "	77.8	32.6	26.5	43.3
3rd "	80.4	33.9	27.0	46.1
4th "	76.8	33.2	28.1	42.2
1967 - 1st "	75.7	32.7	27.6	41.6
2nd "	77.8	33.8	28.2	43.4
3rd "	80.4	34.7	28.3	45.8
4th "	76.0	34.0	29.2	43.9
1968 - 1st "	74.7	33.1	28.4	41.3
2nd "	77.6	34.1	29.5	42.2
3rd "	79.6	35.2	29.6	45.0
4th "	76.0	35.2	31.2	42.2
1969 - 1st "	75.0	34.4	30.8	40.7
2nd "	77.6	35.7	31.3	43.2
3rd "	78.8	35.8	30.7	44.4
4th "	75.1	35.1	32.0	40.4
1970 - 1st "	74.1	34.2	31.4	39.0
2nd "	77.1	36.1	32.5	42.1
3rd "	78.9	36.2	31.5	44.0
4th "	75.4	35.6	32.6	40.6
1971 - 1st "	74.3	35.4	32.7	40.2
2nd "	76.7	36.2	32.8	41.9
3rd "	78.5	37.0	32.3	44.8
4th "	75.0	37.1	34.3	41.7
1972 - 1st "	74.4	36.2	33.5	40.6
2nd "	77.0	36.9	33.7	42.1
3rd "	78.5	37.9	33.4	45.3

Source: Derived from figures published by the Labour Force Survey.

TABLE A5. Female Participation Rates for Selected Age Groups by Month, 1970-72

Year and month	14-19	20-24	25-34	35-44	25-44	45-64
1970 - January	25.8	56.8	38.9	38.7	38.8	35.2
February	26.1	56.9	38.1	39.2	38.6	35.6
March	26.2	57.3	38.3	39.9	39.1	35.4
April	26.8	57.1	39.5	40.9	40.2	36.8
May	29.7	60.6	39.3	41.5	40.4	36.6
June	35.0	61.0	38.3	42.1	40.1	36.5
July	41.5	60.0	37.4	40.2	38.7	35.1
August	37.8	59.2	37.4	39.3	38.3	34.7
September	28.3	58.6	40.1	40.7	40.4	36.5
October	30.0	57.9	40.1	40.4	40.2	36.7
November	28.7	58.0	40.5	40.1	40.3	36.9
December	28.4	58.3	39.5	39.5	39.5	36.2
1971 - January	28.0	58.1	40.2	40.4	40.3	36.2
February	28.1	58.3	40.2	40.7	40.4	36.6
March	26.7	57.2	41.0	41.0	41.0	36.4
April	27.6	57.4	40.3	40.5	40.4	37.0
May	28.4	61.3	40.0	41.0	40.5	36.9
June	33.6	61.6	39.5	41.1	40.3	37.0
July	42.0	61.4	39.2	39.8	39.5	36.0
August	39.5	61.4	38.9	39.1	39.0	35.3
September	29.5	60.4	41.1	41.3	41.2	37.4
October	30.1	61.1	42.4	42.5	42.4	38.0
November	29.1	60.6	42.8	42.7	42.8	36.9
December	30.0	60.0	43.2	42.6	43.0	37.0
1972 - January	28.1	58.9	43.0	41.9	42.5	36.3
February	27.4	58.6	42.4	41.9	42.2	36.2
March	27.4	59.5	43.3	42.7	43.1	36.4
April	28.1	57.8	43.6	42.0	42.9	36.1
May	29.8	61.4	43.3	42.3	42.9	35.5
June	35.1	63.8	43.3	42.2	42.8	36.0
July	44.2	63.4	41.3	40.4	40.9	35.3
August	42.6	62.2	41.6	40.5	41.1	35.1
September	29.6	59.5	43.2	43.5	43.4	36.9

APERÇU SUR LES STATISTIQUES FAMILIALES DES CHÔMEURS

Jean-Marc Lévesque*

Introduction

Depuis le début des années 60, la section de l'enquête sur la population active amasse à tous les trois mois des données sur l'unité familiale des chômeurs.

Cet article se divise en deux parties. La première décrit brièvement les concepts utilisés dans les statistiques familiales et informe le lecteur de l'éventail de renseignements publiés à ce sujet dans le bulletin intitulé "La main-d'oeuvre", (n° de catalogue 71-001). On y trouve aussi une analyse sommaire des données. La deuxième partie montre comment les facteurs saisonniers du chômage affectent les divers membres de la famille.

Statistiques familiales

Concepts. - Les concepts utilisés pour les statistiques mensuelles tirées de l'enquête sur la population active s'appliquent également aux statistiques familiales. Par exemple, la définition du chômeur est la même. Il y a cependant trois concepts qui s'appliquent plus particulièrement aux statistiques familiales. Il s'agit des concepts de famille, de non-membre de famille et de chef de famille qui ne sont utilisés que dans le contexte des statistiques familiales.

Le terme famille réfère à un groupe de deux personnes ou plus qui vivent ensemble dans le même logement et qui sont apparentées par le sang, le mariage ou l'adoption.

La catégorie "non-membre de famille" comprend les individus qui ne sont pas apparentés à aucun autre individu dans l'unité de logement sélectionnée. Les individus vivant seuls font partie de cette catégorie. Ces personnes sont exclues des tableaux portant sur les unités familiales.

Le troisième concept, celui de chef de famille, tient un rôle clef dans les statistiques familiales puisque les liens parentaux sont définis en fonction de cette personne. En théorie, le chef de famille est la personne qui a la responsabilité financière du foyer. En pratique, cette personne est toujours l'époux sauf si celui-ci ne réside pas avec sa famille ou est dans les Forces armées. (En fait, 5.4 % des chefs de ménage étaient des femmes en 1971.)

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Éventail des renseignements publiés. -

La nouvelle version du bulletin intitulé "La main-d'oeuvre" (n° de catalogue 71-001) contient cinq tableaux sur la situation familiale du chômeur. Le premier de ces tableaux donne le lien parental du chômeur alors que les quatre autres réfèrent aux unités familiales (les "non-membres" sont exclus de ces tableaux).

Le premier tableau fait la distribution (en milliers et en pourcentages) des chômeurs selon les catégories parentales suivantes: "chefs de famille", "fils ou filles célibataires", "autres parents" (cette catégorie comprend: épouses, fils ou filles mariés, cousins, etc.) et "non-membres de famille". Les autres tableaux identifient la famille des chômeurs selon que cette famille compte ou ne compte pas de personnes occupées, selon que le chef de famille est chômeur ou non, selon la taille de la famille et selon le nombre d'enfants âgés de 24 ans ou moins ne participant pas à la population active. Le cinquième tableau donne la distribution des familles où le chef est chômeur au niveau des cinq grandes régions.

Analyse des données. - Pour décrire brièvement l'évolution des caractéristiques familiales des chômeurs durant la période 1961-71, nous avons pris les moyennes annuelles de trois années (1961, 1966 et 1971 lorsque ceci était possible). La distribution des chômeurs selon le lien parental a quelque peu variée au cours des dix dernières années (voir Tableau 1). Ainsi, alors que 46.3 % des chômeurs étaient chefs de famille en 1961, ceux-ci n'étaient plus que 37.0 % du total en 1971. Ce sont les groupes "fils et filles célibataires" (+ 3.5 %) et "autres parents" (+ 4.6 %) qui ont enregistré les hausses les plus élevées au cours de ces dix années.

Le phénomène de la baisse de la proportion des chefs de famille chômeurs et de la hausse du groupe "autres parents", est dû à l'augmentation du groupe "épouse de chef de famille" inclus sous le titre "autres parents". En effet, la proportion des épouses dans le groupe de chômeurs est passée de 4.5 % à 9.4 % entre 1963(1) à 1971, alors que

(1) La distinction des épouses dans le groupe autres parents n'était pas faite en 1961 et 1962.

la proportion des autres parents (sans les épouses) a diminué de 8.5 % à 6.5 % au cours de la même période. Cette augmentation des épouses dans le rang des chômeurs s'est produite au cours de la période où le taux d'activité des femmes mariées passait de 24.1 % (1964)(2) à 33.0 % (1971), et que leur taux de chômage augmentait de 2.0 (1964) à 3.5 (1971).

Cette augmentation dans la proportion des épouses-chômeuses correspond donc à un changement dans la structure de la population active.

(2) La moyenne annuelle de 1963 du taux d'activité chez les femmes mariées n'est pas disponible.

TABLEAU 1. Proportions annuelles des catégories parentales des chômeurs

Année	Total	Chefs de famille	Fils et filles célibataires	Autres parents			Non-membres de famille
				Total	Épouses	Autres qu'épouses	
pourcentage							
1971	100.0	37.0	37.2	15.9	9.4	6.5	9.9
1966	100.0	41.4	36.8	13.6	6.1	7.5	8.2
1963	100.0	44.6	33.8	13.0	4.5	8.5	8.6
1961	100.0	46.3(1)	33.7(1)	11.3(1)	..(2)	..(2)	8.7(1)

(1) Pourcentage calculé à partir des chiffres arrondis.

(2) La distinction des épouses dans le groupe autres parents n'était pas faite en 1961 et 1962.

La hausse dans la proportion des fils et filles célibataires parmi les chômeurs correspond à une augmentation du groupe 14-24 dans la pyramide d'âge entre 1961 et 1971 (voir Tableau 2). De plus, ce groupe (14-24) a connu une augmentation de son taux d'activité (d'une moyenne annuelle de 49.2 en 1961 il est passé à 50.7 en 1971) et de son taux de chômage (il passait de 10.9 en 1961 à 11.4 en 1971) alors que le taux de chômage de l'ensemble de la population diminuait (de 7.1 à 6.4). On retrouve donc ici l'effet prépondérant des hauts taux de natalité de l'après-guerre, mais aussi l'effet du changement dans l'activité économique de ce groupe et de l'augmentation du taux de chômage.

La répartition des familles comptant un chômeur ou plus selon le nombre de personnes occupées a aussi varié au cours des dix dernières années (voir Tableau 3). La proportion des familles de chômeurs ne comptant aucune personne occupée a diminué, passant de 45 % à 36 %, alors que la proportion des familles comptant au moins une personne occupée a augmenté de 55 % à 64 %. Ce sont les familles comptant une personne occupée qui ont augmenté le plus (de 33 % en 1961 à 39 % en 1971).

TABLEAU 2. Pourcentage de la population 14-24

Année	14-19	20-24	14-24
	pourcentage		
1971	11.9	8.8	20.7
1966	11.1	7.3	18.4
1961	9.7	6.5	16.2

Source: Pourcentage calculé à partir des recensements de 1961, 1966 et 1971.

La taille des familles de chômeurs a diminué (voir Tableau 4). Alors qu'en 1961 34 % des familles comptant au moins un chômeur n'étaient composées que de deux ou trois membres, cette proportion a augmenté, en 1971, à 38 %. Les familles de huit membres ou plus suivaient un mouvement opposé, passant d'une proportion de 14 % en 1961 à 10 % en 1971. Ces mêmes mouvements se retrouvaient chez les catégories intermédiaires: les familles de quatre ou cinq personnes augmentaient de 2 % alors que celles de six ou sept personnes diminuaient de 2 %.

La proportion des familles comptant un enfant(3) et affectées par le chômage a augmenté (voir Tableau 5); elle est passée de

(3) Personne de 24 ans ou moins ne faisant pas partie de la population active.

TABLEAU 3. Proportions des familles comptant un chômeur ou plus selon le nombre de personnes occupées dans la famille, Canada

Année	Familles de chômeurs sans personne occupée	Familles comptant une personne occupée ou plus			
		Total	1 personne occupée	2 personnes occupées	3 personnes occupées et plus
pourcentage					
1971	36	64	39	16	8
1966	38	62	36	17	8
1961	45	55	33	15	7

TABLEAU 4. Proportions des familles comptant un chômeur ou plus selon la taille de la famille, Canada, 1961, 1966 et 1971

Année	Selon la taille de la famille			
	2-3 membres	4-5 membres	6-7 membres	8 membres et plus
pourcentage				
1971	38	36	16	10
1966	34	34	19	13
1961	34	34	18	14

19 % en 1961 à 24 % en 1971. Cependant cette proportion est restée la même entre 1961 et 1966(4). On observe un mouvement similaire pour les familles plus nombreuses mais dans le sens contraire. Ainsi, la proportion des familles comptant cinq enfants ou plus est passée de 11 % en 1961 à 7 % en 1971. De 1961 à 1966, la proportion est demeurée à 11 %.

enfant, un enfant ou deux enfants. Cependant, la définition n'est pas la même car dans l'enquête sur la population active, on entend par enfant, les individus âgés de 24 ans ou moins, célibataires (ce qui correspond à la définition du recensement) mais qui de plus ne sont pas dans la population active (ce qui n'est pas le cas du recensement). Cette distinction est faite dans l'enquête sur la population active afin de mieux mesurer le nombre de personnes entièrement à la charge du soutien de la famille.

TABLEAU 5. Proportions des familles comptant un chômeur ou plus selon le nombre d'enfants(4), Canada, 1961, 1966 et 1971

Année	Aucun enfant	1 enfant	2 enfants	3-4 enfants	5 enfants ou plus
pourcentage					
1971	34	24	18	17	7
1966	36	19	16	19	11
1961	35	19	16	18	11

(4) Les chiffres des recensements de 1961 et de 1966 montrent qu'il y a eu une légère baisse au cours de cette période dans la proportion des familles comptant aucun enfant, un enfant ou deux enfants. Cependant, la définition n'est pas la même car dans l'enquête sur la population active, on entend par enfant, les individus âgés de 24 ans ou moins, célibataires (ce qui correspond à la définition du recensement) mais qui de plus ne sont pas dans la population active (ce qui n'est pas le cas du recensement). Cette distinction est faite dans l'enquête sur la population active afin de mieux mesurer le nombre de personnes entièrement à la charge du soutien de la famille.

Facteurs saisonniers

La saisonnalité du chômage affecte différemment les individus selon leur lien parental. Cette partie décrit les facteurs saisonniers. Premièrement, il sera démontré que ces facteurs saisonniers sont différents d'une catégorie à l'autre et que deuxièmement, ils ont varié de façon différente au cours des dix années.

Les facteurs saisonniers qui apparaissent dans les graphiques ont été calculés à partir d'un programme d'ordinateur(5) qui divise une série chronologique en trois composantes: la tendance sous-jacente, les mouvements irréguliers et les mouvements saisonniers. Ce sont ces mouvements saisonniers, exprimés en pourcentage de la sommation des mouvements saisonniers de l'année qui apparaissent sur les graphiques.

Prenons le mois de janvier 1971 afin d'illustrer de façon concrète ce que représente le facteur saisonnier. L'ordinateur a évalué le niveau de chômage à 567,000 (la composante tendancielle), le rapport (ou effets) des mouvements irréguliers à .99 et le facteur saisonnier à 1.19. Si nous multiplions la composante tendancielle par ces deux facteurs, nous retrouvons le chiffre réel des chômeurs ($567,000 \times 1.19 \times .99 = 668,000$).

Le graphique 1 montre l'évolution de l'influence des saisons sur les différents

(5) Version X-11 utilisée par le bureau du recensement américain. Il faut noter ici qu'on utilise la version de désaisonnalisation de données trimestrielles, la collecte de données familiales se faisant à tous les trois mois.

groupes de chômeurs durant la période 1963-71. Pour l'ensemble des chômeurs, le facteur saisonnier pour 1963 était évalué à 138.12 et celui de 1971 à 122.62. Dans cette même série (chômage total), le facteur attribué au mois d'octobre est passé de 75.26 en 1963 à 77.97 en 1971. Nous remarquons donc que la marge entre les facteurs saisonniers a diminué au cours de cette période. Les graphiques 2 et 3 nous font mieux apprécier le changement dans l'écart entre le mois où la saisonnalité est la plus élevée et celui où elle est le moins élevée. Ainsi, si nous poursuivons avec la même série, l'écart entre janvier et octobre 1963 était de 62.86 et entre les mêmes mois de 1971 de 44.65 (voir graphique 2). La différence entre les écarts saisonniers a donc diminué au cours de cette période de 18.21 (voir graphique 3).

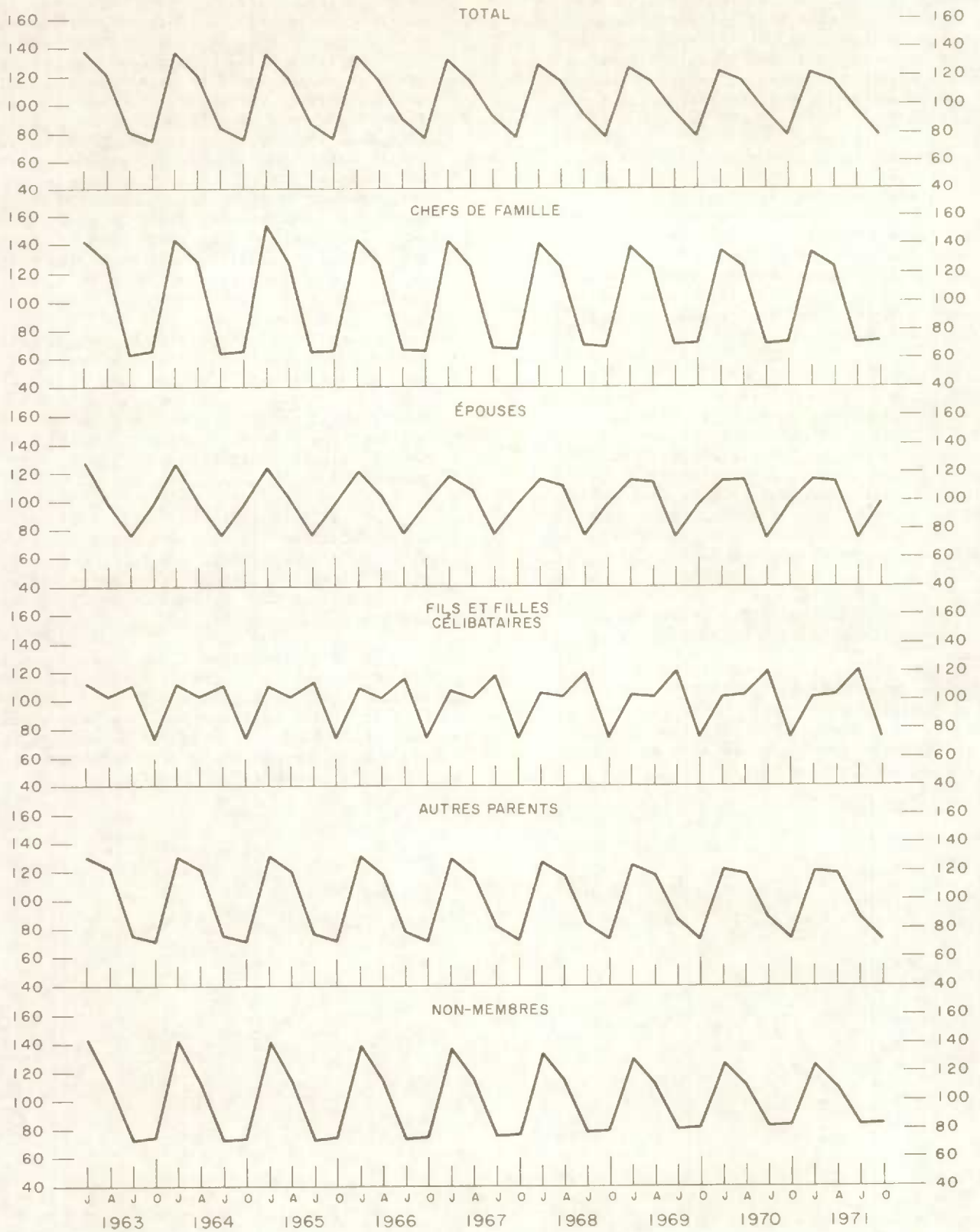
Dans le graphique 1 nous pouvons voir que le facteur saisonnier pour tous les groupes est le plus élevé au mois de janvier sauf dans le cas des fils et filles célibataires où il est plus élevé au mois de juillet. Le phénomène scolaire explique ce manque de synchronisation avec les autres groupes.

En 1963 et 1971, les variations saisonnières affectent le plus les chefs de famille alors que ce sont les fils et filles célibataires qui le sont le moins en 1963, et les épouses de chef de famille en 1971 (voir graphique 2).

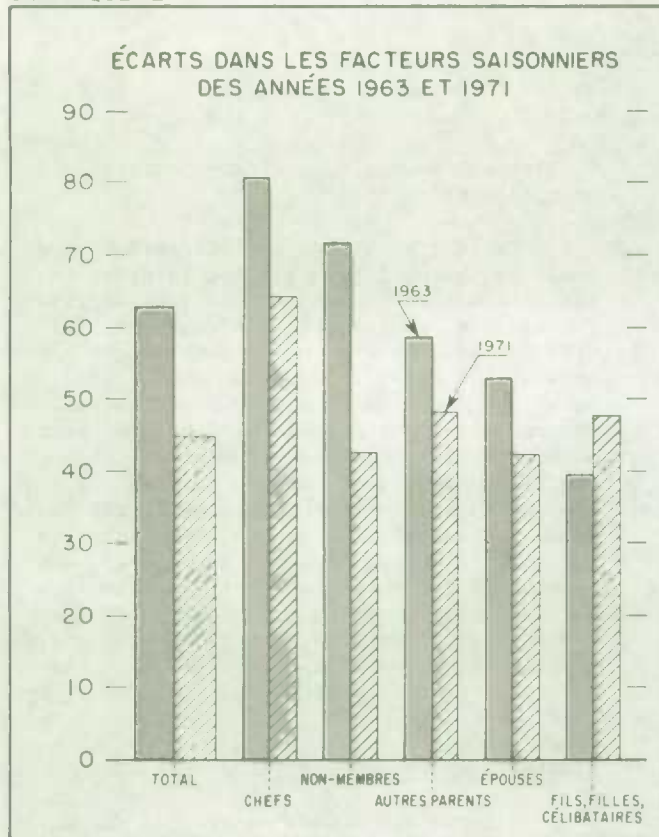
Dans le graphique 3, nous pouvons voir que le facteur saisonnier a diminué au cours de la période pour tous les groupes sauf les fils et filles célibataires. La plus grande diminution de la saisonnalité du chômage au cours de cette période s'est produite pour le groupe "non-membres" de famille.

GRAPHIQUE -- 1

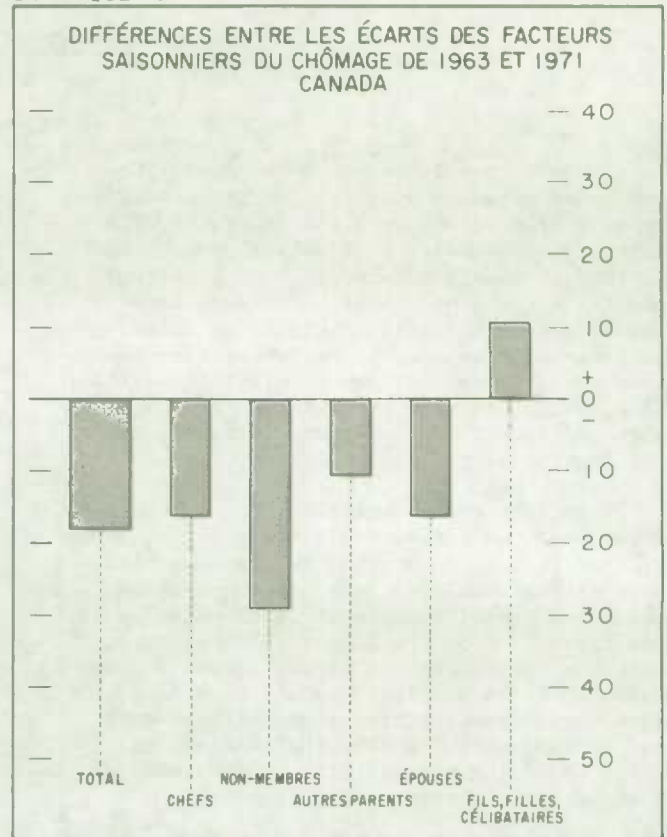
FACTEURS SAISONNIERS, MOYENNES MOBILES 3 x 5, CHÔMAGE, CANADA, 1963 À 1971



GRAPHIQUE - 2



GRAPHIQUE - 3



REASONS FOR LEAVING LAST JOB

Bruce MacDonald*

How do people become unemployed? Common sense suggests a variety of circumstances ranging from voluntary quits in search of a better job to wholly involuntary separations as the job itself disappears. Or a person may leave the job to begin or resume some non-labour market activity (such as school or housework) to show up as "unemployed" only when re-entering the labour market in search of a job. This note reports the results of a recent survey which gathered data on reasons for leaving last job.(1)

Because the interest centres on the unemployed the survey did not attempt to cover all job-leavers in a given reference period. Such a total would include persons leaving for a new job with no interval of unemployment and those leaving the labour force as they left the job. Coverage is restricted to the segment of the population which experienced some unemployment (defined as "without jobs and seeking work") during the calendar year 1971, excluding persons with no previous job. What were their reasons for leaving?

The Survey Population

Estimates provided by this survey show a total of 2,018,000 Canadians "without jobs and seeking work" at some time in 1971. Deducting approximately 300,000 seeking first jobs, the survey population is 1,734,000.

Before turning to the analysis it should be noted that the statistics are much influenced by the nature of the survey population. For example, almost half the total (46 %) were under 25 years of age. This is not unexpected since young people account for a disproportionate share of unemployment (annual averages derived from the 12 monthly surveys yield the same 46 % for youth); this means that the job-leavers under examination are heavily weighted by persons with no great length of attachment to their jobs or even to the labour market. Allowance for seasonal workers and the chronically unemployed adds further weight to short duration jobs. Thus, as a later table shows, over 70 % of the survey population had been in the job they left for less than one year.

Another feature of the job separations under study is that they occurred mainly in 1970 and 1971. This also follows from the

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(1) From special questions attached to the Labour Force Survey in January 1972 (see Appendix). "Last job" refers to the job held before becoming unemployed.

requirement that the job-leaver experienced unemployment in 1971.

These limitations are stressed because there is, naturally, a greater interest in the job-leavers whose jobs had some duration. For example, what is the incidence of lay offs and plant shutdowns as they affect persons with 5 or 10 or 20 years on the job? Data from the present survey are unsuitable for an assessment of this kind because part of this population would be missed. Those who found other jobs with no interval of unemployment or who left the labour force would be missed altogether; others, who worked in another job before becoming unemployed, would show up in the survey as short duration job-holders. The positive contribution of the survey lies in relating the recent unemployment experience of 1.7 million Canadians to the terms of separation from the "last job" they held.

Reasons for Job Separation

All responses were coded into the basic list of 12 reasons plus one residual category for "other" used in the questionnaire.(2) It will be borne in mind that information of this kind is impossible to obtain or to categorize with perfect accuracy. The respondent may choose not to reveal his true reason or, if the decision was made by the employer, he may simply lack the knowledge of events surrounding termination which would permit him to report the company's reason. Particular difficulty is experienced when two reasons are very closely related. For example, the respondent who clearly perceived that his job ended due to automation could have stated this reason, but another respondent in precisely the same situation may have simply replied "laid off" or "discharged". The category "discharged" was intended to cover the employee dismissed due to unsatisfactory performance but it is entirely possible that job-leavers of this type have also used the "laid off" category.

A rough grouping has been employed to separate "work-related" reasons from personal circumstances such as going back to school, poor health or a return to the housekeeping sector (see Table 1). Within these broad categories hard and fast lines are difficult to draw and the finer distinctions must be treated with some caution. However, if the limitations of the data are kept firmly in mind certain broad patterns emerge.

(2) For a list of the questions asked and a fuller explanation of the reasons for job separation see Appendix.

TABLE 1. Reasons for Job Separation for Persons Experiencing Some Unemployment in 1971 by Sex

Reason for job separation	Male		Female		Total	
	Number	%	Number	%	Number	%
	'000		'000		'000	
Work related reasons:						
Seasonal or temporary job ended	302	26.5	101	17.0	403	23.2
Laid off	283	24.8	79	13.3	362	20.9
Job eliminated(1)	87	7.6	42	7.1	129	7.4
Job unsatisfactory (bad hours, poor pay, etc.)	150	13.2	87	14.6	237	13.7
Discharged	27(2)	2.4	12(2)	2.0	40	2.3
Personal reasons:						
Went back to school	133	11.7	63	10.6	196	11.3
Person moved	27(2)	2.4	58	9.7	85	4.9
Health (illness, injury, etc.)	59	5.2	57	9.6	116	6.7
Age	13(2)	1.1	--	--	15(2)	0.9
Could not arrange child care, etc.	--	--	12(2)	2.0	12(2)	0.7
Preferred to stay home	--	--	36	6.1	40	2.3
Other	54	4.7	45	7.6	99	5.7
Total	1,139	100.0	595	100.0	1,734	100.0

Note: Table excludes 7,000 who did not specify a reason for job separation.

(1) Combines two categories: (1) business shut down or moved and (2) job eliminated because of new management, automation, etc.

(2) Estimates based on smaller samples; therefore should be used with caution because of high sampling variability.

Table 1 offers clear evidence that for persons who experienced some unemployment during 1971 work-related reasons greatly outweighed the personal. The former accounts for 68 % of all respondents whereas only 27 % gave personal reasons and almost half of these were students returning to school. Excluding the students the number of men giving personal reasons was extremely small. Women were more likely to leave jobs due to a family move or health reasons (approximately 10 % in each category). A very small proportion, 2 %, cited inability to make child care arrangements and 6 % cited a preference for staying home as their reason for job separation.

Most work-related reasons reflected jobs ending - either permanently or temporarily - on the initiative of the employer. The first three categories in Table 1 are of this type: "seasonal or temporary job ended"; "laid off"; and "job eliminated" due to such reasons as automation or business shutdown. Together they accounted for 51.5 % of all respondents (58.9 % of male respondents). Another 13.7 % left jobs citing poor pay or working conditions.

Short-duration jobs - the first category - appear to be a major source of unemployment, a total of 400,000 persons reporting these. The total may be slightly exaggerated because, as a later table shows, there were some respondents in this category who also reported tenure in the last job of a year or more (Table 6). The extent of the reporting error is unknown (perhaps the intended meaning was a broken employment experience with the same employer) but in any event the numbers involved (33,000) are not large enough to affect the total of 400,000 to an appreciable degree. It is not possible to separate the seasonal from other temporary workers but it would be reasonable to infer that they are a large component element.

The next two categories ("laid off" and "job eliminated") are the ones most closely related to economic conditions and are best dealt with together in view of the probable overlapping in the choices made by respondents. Together the two categories accounted for 491,000 persons experiencing unemployment in 1971 of whom 370,000 were male. A finer

breakdown suggests that relatively small numbers (129,000) were involved in final separations arising through plant shutdowns, etc., but of course some part of the larger "laid off" category may also have involved permanent separation.

With some re-arrangement of the categories Table 1 may also be used to obtain a rough indication of "voluntary" as opposed to "involuntary" separations. The distinction presents the usual difficulties. Separations due to illness, for example, are seldom voluntary in the sense that they represent the wish of the individual and some of them may be imposed by the employer. Nevertheless, like other personal reasons, they are conventionally treated as "voluntary". With these reservations in mind, the numbers leaving for personal reasons are added to those who found the job unsatisfactory to yield a total of "voluntary" separations which is about 38 % of the total. The percentage for males is somewhat lower and that of females is higher.

To what extent do these overall patterns reflect the dominant numbers of youthful job-leavers? Table 2 (Section A) provides a distribution by age which shows that, for most

categories, the percentage recorded by the 14-24 year age group is very close to the overall average in Table 1. The youth group is largely responsible for the entry "went back to school" and has also lowered the average for health and age reasons.

Table 2 (Section B) excludes students returning to school and its distributions should be more representative of persons with a firmer attachment to the labour market. Some interesting differences emerge. For example, in the category "temporary job ended" the age group 25-44 years remains close to the overall average but both the youth group and the group 45 years and over record markedly higher percentages. Loss of job due to lay off showed little variation by age but when this category is combined with "job eliminated" the older workers are more heavily represented. The 28.7 % in these two categories for the youth group compares with 34.1 % and 33.9 % in the next two age groups. The opposite tendency applied in the case of persons leaving an unsatisfactory job; 19.0 % of the youth group reported this reason while for workers 45 and over the percentage had dropped to 9.3 %.

TABLE 2. Reasons for Job Separation for Persons Experiencing Some Unemployment in 1971 by Age

Reason for job separation	A. Including students						B. Excluding students(3)		
	14-24 years		25-44 years		45+ years		14-24 years	25-44 years	45+ years
	Number	%	Number	%	Number	%			
	'000		'000		'000		%		
Work related reasons:									
Seasonal or temporary job ended	172	21.6	135	22.0	95	29.1	27.7	22.7	29.3
Laid off	143	18.0	147	23.9	72	22.1	23.1	24.7	22.2
Job eliminated(1)	35	4.4	56	9.1	38	11.7	5.6	9.4	11.7
Job unsatisfactory (bad hours, poor pay, etc.)	118	14.8	90	14.7	30	9.2	19.0	15.1	9.3
Discharged	18	2.3	15(2)	2.4	--	--	2.9	2.5	--
Personal reasons:									
Went back to school	175	22.0	19(2)	3.1	--	--	...	...	...
Person moved	39	4.9	36	5.9	--	--	6.3	6.1	--
Health (illness, injury, etc.) or age	36	4.5	43	7.0	51	15.6	5.8	7.2	15.7
Could not arrange child care, etc., or preferred to stay at home	14(2)	1.8	31	5.0	--	--	2.3	5.2	--
Other	45	5.7	42	6.8	12(2)	3.7	7.3	7.1	3.7
Total	795	100.0	614	100.0	326	100.0	100.0	100.0	100.0

Note: Table excludes 7,000 who did not specify a reason for job separation.

(1) See footnote 1 on Table 1.

(2) See footnote 2 on Table 1.

(3) Total excludes all persons who reported "went back to school" as reason for job separation.

... Figures not appropriate or not applicable.

The most striking feature of the regional distribution (Table 3) is the 33 % in the Atlantic Region reporting a seasonal or temporary job ending, the national average being only 23 % and in Ontario less than 20 %. While this particular group is not confined to seasonal workers, there is at least a

strong suggestion that a greater dependence on industries which offer only part-year employment is an important reason for higher unemployment rates in the Atlantic Region. The 64,000 persons in this group represent just under 10 % of the annual average labour force in the Atlantic Region in 1971.

TABLE 3. Reasons for Job Separation for Persons Experiencing Some Unemployment in 1971 by Region

Reason for job separation	Region									
	Atlantic		Quebec		Ontario		Prairies		British Columbia	
	Number	%	Number	%	Number	%	Number	%	Number	%
	'000		'000	'000		'000		'000	'000	
Work related reasons:										
Seasonal or temporary job ended	64	33.0	124	24.2	107	19.6	62	23.5	46	21.0
Laid off	42	21.6	107	20.9	118	21.7	49	18.6	47	21.5
Job eliminated(1)	--	--	51	9.9	44	8.1	14(2)	5.3	12(2)	5.5
Job unsatisfactory (bad hours, poor pay, etc.)	20	10.3	72	14.0	75	13.8	38	14.4	33	15.1
Discharged	--	--	19(2)	3.7	--	--	--	--	--	--
Personal reasons:										
Went back to school	24	12.4	50	9.7	63	11.6	38	14.4	20(2)	9.1
Person moved	--	--	--	--	32	5.9	16(2)	6.1	18(2)	8.2
Health (illness, injury, etc.) or age	12(2)	6.2	44	8.6	44	8.1	18(2)	6.8	14(2)	6.4
Could not arrange child care or preferred to stay home	--	--	--	--	18(2)	3.3	--	--	--	--
Other	--	--	23(2)	4.5	35	6.4	16(2)	6.1	18(2)	8.2
Total	194	100.0	513	100.0	545	100.0	264	100.0	219	100.0

Note: Table excludes 7,000 who did not specify a reason for job separation.

(1) See footnote 1 on Table 1.

(2) See footnote 2 on Table 1.

The "laid offs" tend to a uniform pattern across the country but the "plant shutdown" and "job eliminated" have had their greatest impact in Ontario and Quebec.

Job Separations and Previous Work History

As noted, most of the job separations reported occurred in 1971. Of the 1.7 mil-

lion persons who experienced unemployment in 1971 (excluding the never worked) 1.4 million (80 %) had been employed in that year (Table 4). However, a substantial minority (219,000) reported last job in 1970 and just under 100,000 placed their last job in the years 1965-69. The latter category included as many men as women. Persons whose last job was even more distant, predominantly female, constituted a very small group.

TABLE 4. When Last Worked for Persons Experiencing Some Unemployment in 1971 by Sex

When last worked(1)	Male		Female		Total	
	Number	%	Number	%	Number	%
	'000		'000		'000	
In 1971	955	84.1	435	73.4	1,390	80.4
In 1970	127	11.2	92	15.5	219	12.7
1965-69	48	4.2	45	7.6	93	5.4
Before 1965	--	--	21(2)	3.5	27(2)	1.6
Total	1,136	100.0	593	100.0	1,729	100.0

Note: Table excludes 12,000 who did not specify when they last worked.

(1) Excludes never worked.

(2) See footnote 2 on Table 1.

The main interest in knowing when the last job was held stems from the assumption that persons who have not worked for some time are likely to differ from those with a more or less continuous association with employment. If, as seems likely, their reasons for job separation show a different pattern one would like to distinguish the group without recent job experience for separate examination. But, unfortunately, the

data set limits; the numbers with "last job" before 1970 are too small to permit a breakdown by reasons for leaving. As a partial solution all persons reporting last job previous to 1971 have been combined. This submerges the group with a more prolonged absence from employment but the data do reveal some differences between those who worked in 1971 and those who did not have employment (Table 5).

TABLE 5. Reasons for Job Separation for Persons Experiencing Some Unemployment in 1971 by When Last Worked

Reason for job separation	When last worked(1)					
	In 1971		Before 1971		Total	
	Number	%	Number	%	Number	%
	'000		'000		'000	
Work related reasons:						
Seasonal or temporary job ended	356	25.7	42	12.5	399	23.2
Laid off	310	22.4	49	14.5	358	20.8
Job eliminated(2)	91	6.6	37	11.0	128	7.4
Job unsatisfactory (bad hours, poor pay, etc.)	205	14.8	32	9.5	237	13.8
Discharged	33	2.4	--	--	39	2.3
Personal reasons:						
Went back to school	154	11.1	40	11.9	194	11.3
Person moved	60	4.3	25(3)	7.4	85	4.9
Health (illness, injury, etc.) or age ..	80	5.8	50	14.8	130	7.5
Could not arrange child care, etc. or preferred to stay home	22	1.6	30	8.9	52	3.0
Other	76	5.5	23(3)	6.8	99	5.7
Total	1,387	100.0	337	100.0	1,723	100.0

Note: Table excludes 19,000 who did not specify a reason for job separation or when they last worked.

(1) Excludes never worked.

(2) See footnote 1 on Table 1.

(3) See footnote 2 on Table 1.

Persons who left their last job previous to 1971 were much more likely to have left for personal reasons. Health, staying home, and moving are all more important, together accounting for 31 % of the total as compared to approximately 12 % for those leaving jobs in 1971. The decreased importance of laid off and ending of a seasonal job is not unexpected, the lapse of time having permitted some of a larger number in these categories to be taken back on staff or to have found new jobs. On the other hand, the percentage that reported job eliminated or plant shut-down is higher for those who last worked before 1971. It would appear that the lapse of time has been less useful to this group perhaps because they are older, on the average, or used to steady work and less able or willing to take temporary jobs. The number of persons (37,000) is relatively small, yet the fact that these jobs were lost at least a year before the survey shows that some plant

shutdowns and reorganizations have serious consequences for displaced workers. It is also worth noting the sum of the first three categories under the heading "last worked before 1971" - a total of 120,000 persons who had not found work by the date of the survey, January 1972.

Table 6 reports on the duration of the last job held with the preponderance of short duration jobs its most noteworthy feature. More than half the respondents fell in the category "under six months" and almost three quarters had worked no longer than a year. This distribution is partly explained by the students and other persons who reported temporary jobs but, since these two groups accounted for only 34 % of all job separations in Table 1, it is evident that some of the reporting of other reasons referred to jobs that were held rather briefly.

TABLE 6. Duration of Employment in Last Job for Persons Experiencing Some Unemployment in 1971 by Sex and Age

Duration of last job	Total	Sex		Age		
		Male	Female	14-24 years	25 + years	
		%				
Under 6 months	53.8	55.4	50.8	69.3	40.6	
6 months-1 year	19.1	19.4	18.7	17.0	21.0	
1 year-2 years	10.2	9.1	12.3	8.4	11.8	
2 years-5 years	9.0	7.7	11.4	4.8	12.6	
5 years-10 years	3.9	3.5	4.5(1)	--	6.7	
Over 10 years	4.0	4.9	2.4(1)	--	7.4	
Total	100.0	100.0	100.0	100.0	100.0	
Total number ('000)	1,735	1,140	595	795	940	

Note: Table excludes 7,000 who did not specify either duration of last job, sex or age.

(1) See footnote 2 on Table 1.

There is also the fact that the question was phrased in terms of "last" job. As a result, a person whose "last" job was seasonal or temporary would be recorded as such even if there was a 20-year history in a previous job. To some unknown extent, therefore, the data are biased in favour of short duration jobs.

For persons aged 25 years and over a somewhat higher percentage reported last jobs of longer duration (12 % for two to five years and 14 % for five years and more). Nevertheless, it is a relatively small group - 70,000 - reporting tenure in last job of 10

or more years. Interestingly, no great difference emerges between male and female patterns of tenure.

To relate duration of last job and reasons for leaving it is necessary to group all tenure categories of five years or more (Table 7). The main differences in the pattern of the longer duration jobholders lie in the higher percentage in the health and age and in the job eliminated, business shutdown categories. The latter, accounting for a mere 5 % of the short duration job-leavers, rose to 19 % for those who held their last job for five years or more.

TABLE 7. Reasons for Job Separation for Persons Experiencing Some Unemployment in 1971 by Duration of Employment in Last Job

Reason for job separation	Duration of employment in last job			Total
	1 year and under	1 year - 5 years	Over 5 years	
			%	
Work related reasons:				
Seasonal or temporary job ended	29.1	6.9(2)	--	23.2
Laid off	20.9	20.5	22.6	20.9
Job eliminated(1)	4.8	12.5	19.1(2)	7.4
Job unsatisfactory (bad hours, poor pay, etc.)	12.9	18.1	10.1(2)	13.7
Discharged	2.0(2)	--	--	2.3
Personal reasons:				
Went back to school	14.6	--	--	11.3
Person moved	3.3	10.6	--	4.9
Health (illness, injury, etc.) or age	5.6	10.4	18.6(2)	7.5
Could not arrange child care, etc. or preferred to stay home	2.3	5.4(2)	--	3.0
Other	4.6	9.7	--	5.7
Total	100.0	100.0	100.0	100.0
Total number ('000)	1,260	332	137	1,729

Note: Table excludes 7,000 who did not specify a reason for job separation

(1) See footnote 1 on Table 1.

(2) See footnote 2 on Table 1.

APPENDIX

The January 1972 supplementary questions were as follows:

A. Was this person without work and looking for work at anytime in 1971?

No Yes
END

B. Other than a present job, when did this person last work?

In 1971 In 1970 1965-69
Before 1965 Never worked END

C. How long did this person work at that job?

Less than 6 months 1 to 2
6 months to 1 year years
2 to 5 years 5 to 10 years More than
years 10 years

D. Why did this person leave that job?
MARK ONE REASON ONLY

- a. ---- Job eliminated because of new management, automation, elimination of products, etc.
- b. ---- Seasonal or temporary job ended.
- c. ---- Because of lay off.
- d. ---- Business shut down or moved.
- e. ---- Job unsatisfactory (bad hours, poor pay, etc.).
- f. ---- This person moved.
- g. ---- Health (illness, injury, etc.).
- h. ---- Age.

- i. ---- Could not arrange for child care, etc.
- j. ---- Preferred to stay home.
- k. ---- Went back to school.
- l. ---- Discharged.
- m. ---- Other. Specify in 28

Explanation of categories as given in the enumerator's manual:

- a. Job eliminated because of new management, automation, elimination of products, etc.

This applies whenever the loss of the job was caused by some change in the company for whom the person worked, but where the business continued to operate after the person lost his or her job.

- b. Seasonal or temporary job ended.

This applies to those jobs where continuous employment for a long period of time is not possible - e.g. jobs such as trapping, fishing, and even some types of construction are seasonal.

Some jobs are temporary by their nature such as extra help employed by the Post Office around Christmas, canning operations while the crop is in season, or construction jobs when the project is completed.

- c. Because of lay off.

This applies where the person lost his job either permanently or temporarily, because the firm of business for whom he worked reduced its production (but did not close down) and required fewer workers.

- d. Business shut down or moved.

Example - Because of the rerouting of a highway a service station was forced to close down. The manager and his helper were left without employment

- e. Job unsatisfactory (bad hours, poor pay, etc.)

This applies where the person left the job because he considered the working conditions to be too poor to continue working. This is a voluntary loss of a job, that is, the person could have continued to work. (Ref. example 3 in question B.)

- f. This person moved.

E.g. Mrs. Bell worked as sales clerk in a city department store. Her husband is a member of the Canadian Armed Forces and was transferred to an army camp in another province. The family moved and Mrs. Bell had to resign her position.

- g. Health (illness, injury, etc.)

This refers to any health problem of the person in question which forced him to leave his last job.

- h. Age.

This refers to either:

- (a) The person's age made him physically or mentally incapable of continuing to work at his last job (e.g. ref. example 1 in question B);
- (b) The person reached the compulsory company retirement age in his last job.

- i. Could not arrange for child care, etc.

This refers to those situations where the person would have preferred to continue to work but had to leave last job in order to care for children since no satisfactory child care arrangements were available.

This also refers to situations where care arrangements could not be made for other members of the household such as sick or invalid parents, spouse, etc.

- j. Preferred to stay home.

(Self-explanatory)

- k. Went back to school.

(Self-explanatory)

- l. Discharged.

This refers only to those cases where the person lost his job because he failed to perform his duties adequately. That is, he was fired.

- m. Other (specify in Item 28).

If the reason given for leaving the last job does not fit into any of the mentioned categories.

THE TIME-LOST INDEX: A TECHNICAL NOTE

Ed Wong*

Statistical measures of labour underutilization are difficult to devise. In addition to the unemployed (without work and seeking) the concept of underutilization covers persons who, though working, are not utilizing their full potential. According to the I.L.O. definition visible underemployment refers to "persons involuntarily working part-time or for shorter than normal periods of work".(1) This study attempts a partial measure of what is sometimes called "visible" underemployment.

If involuntary part-time employment could be identified it would be possible to calculate the hours "lost" to the economy at any particular point in time. Time lost to the economy expressed as a percentage ratio of total hours worked plus total hours lost generates a "time-lost index"(2) which serves as a composite indicator reflecting unemployment as well as a portion of underemployment. Such an index is published monthly by the U.S. Bureau of Labor Statistics.(3) Similar, although more limited, time-lost information has been compiled in two Canadian studies(4) but the time-lost index does not form part of the regularly published statistics.

Labour Time Lost: Measurement Techniques and Results

The calculation of a time-lost index

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- (1) See International Labour Organisation, "Measurement of Underemployment: Concepts and Methods", Eleventh International Conference of Labour Statisticians, International Labour Office (Geneva, Switzerland: 1966), p. 16.
- (2) Gertrude Bancroft, "Some Alternate Indexes of Employment and Unemployment", Monthly Labor Review, LXXXV, No. 2, U.S. Department of Labor (February 1962), pp. 167-74.
- (3) See any recent issue of Employment and Earnings, U.S. Department of Labor, Chart 2 and Table A-33.
- (4) Sylvia Ostry, "Unemployment in Canada", 1961 Census Monograph Program, Statistics Canada (Ottawa: Information Canada, 1968), Chapt. 3.
Nand K. Tandan, "Underutilization of Manpower in Canada", Special Labour Force Studies, Series A, No. 8, Statistics Canada (Catalogue 71-513 Occasional) (Ottawa: Information Canada, 1969), pp. 9-10.

involves the imputation of hours that were worked, lost and "could have been worked" through several categories of employed and unemployed. The exact method of derivation of the index(5) is

$$\frac{\text{man-hours lost}}{\text{man-hours worked} + \text{man-hours lost}} \times 100 \%$$

where the man-hours lost rate is derived from the conversion of the number of workers and hours dimensions

$$\text{or } \frac{\sum U_j}{\sum E_i + \sum U_j} \times 100 \%$$

where U = man-hours not worked
E = man-hours worked
i = 1, 2, ..., 5 are the categories of employed (see Table 2)
j = 6, 7, ..., 10 are the categories of underutilization (see Table 2)

The Labour Force Survey (the source of all data in this article) obtains information on actual hours worked in the reference week and, for those who worked less than 35 hours, whether that person usually works full-time (defined as 35 hours or more), the reason for working part-time, and whether full-time work would be preferred. Reasons for working part-time are classified into two main categories - "economic" and "non-economic". A summary of the information available is presented in Table 1.

A main problem in the construction of the time-lost index lies in the assignment of certain types of absences and short-time work. Clearly, the hours foregone because firms cut back production or because a person cannot get a full-time job (i.e., due to economic reasons) belong in the "man-hours lost" component. Equally clear, the time workers spend at their jobs belongs in the "man-hours worked" component. But differences of interpretation are possible in the case of persons who had jobs but were not at work due to bad weather, illness, public holidays and other "non-economic" reasons. Should they be considered to have lost or provided time?

- (5) Note the symmetry with the unemployment rate, where

$$\frac{U}{E + U} \times 100 \%$$

$$\frac{\text{unemployed persons}}{\text{employed persons} + \text{unemployed persons}} \times 100 \%$$

TABLE 1. "Economic" and "Non-economic" Part-time Workers and Job Seekers by Usual Hours Worked

Employed	Working part-time due to:	
	"Economic reasons"	"Non-economic reasons"
Usually full-time		
● worked part-week	short-time and turn-over	illness, bad weather, vacation, industrial dispute, miscellaneous
● not at work	unemployed	"
Usually part-time		
● prefer to work full-time	no (more) work	household responsibility, age or physical disability, going to school, other
● not at work	unemployed	illness, bad weather, vacation, industrial dispute, miscellaneous

In the construction of the U.S. time-lost index persons with jobs who were absent the full week for non-economic reasons are treated as having contributed hours. The reasoning is that they had jobs (unlike persons who worked less than the full week due to inability to find work) and, in many cases, were paid in their absence. Thus, hours are imputed to this group which appear in the calculation of "hours worked". The fact that such persons are also counted as "employed" in the routine classification of labour force status means a "man-hours worked" concept which is symmetrical with the calculation of the unemployment rate.

Persons with jobs who were absent part-week for non-economic reasons have not been included in "man-hours worked" although, like the full-week absentees, they are counted as "employed". This appears to be an element of inconsistency in the U.S. time-lost index. On the other hand, the position might be argued that neither of these groups is properly included in the calculation of hours worked. The absentees have not, in fact, provided hours of work. Many of them, in addition, were not available for work and, while a certain amount of work absence takes place without further repercussions, in many cases replacement workers are hired (summer students, office overload, etc.). Such replacements might be a substantial fraction of absences due to vacations, though less so for other causes, and to include both the substitutes and the absentees in the estimation of hours worked involves some double counting. For

this reason and to avoid the logical inconsistency of counting hours as "worked" when they were not, the author inclines to the view that absentees for non-economic reasons should be excluded from the time-lost index, their hours being treated as neither worked nor lost.

These several possibilities have been used to produce three variants of a time-lost index. Details of the calculations are set forth in Table 2 which should be used as a reference in what follows.

Variant I - This is essentially the Bancroft method(6) which imputes hours to persons absent from jobs all week for non-economic reasons (items 2 and 3 in Table 2), including them in "man-hours worked". Thus,

$$\begin{aligned} \text{Variant I} &= \frac{\sum U_j}{\sum E_i + \sum U_j} \times 100 \% \\ &= \frac{(6+...+10)}{(1+2+3) + (6+...+10)} \times 100 \% \end{aligned}$$

Variant II - As above, with the addition of persons with jobs who worked only part of the reference week for non-economic reasons (items 4 and 5 in Table 2). Thus,

$$\begin{aligned} \text{Variant II} &= \frac{\sum U_j}{\sum E_i + \sum U_j} \times 100 \% \\ &= \frac{(6+...+10)}{(1+2+3+4+5) + (6+...+10)} \times 100 \% \end{aligned}$$

(6) Bancroft, op. cit., p. 171.

TABLE 2. Worksheet for Estimating Per Cent of Labour Force Time Lost Using Alternative Hours Standard and Approaches, Seasonally Adjusted, December 1971

(Note: Seasonal adjustment done by summation based on a six-year period)

Details of calculation	Variable standard 39.3	Constant standard		
		35.0	37.5	40.0
man-hours in thousands				
1. Actual man-hours worked	305,227	305,227	305,227	305,227
2. Man-hours imputed to persons with a job, usually full-time, but were not at work for "non-economic" reasons (454,000 persons x standard)	17,842	15,890	17,025	18,160
3. Man-hours imputed to persons with a job, usually part-time, but were not at work for "non-economic" reasons (29,000 persons x 20 hours)	580	580	580	580
4. Man-hours imputed to persons with a job, usually full-time, working part-time for "non-economic" reasons (680,000 persons x 20 hours)	13,600	13,600	13,600	13,600
5. Man-hours imputed to persons with a job, usually part-time, but working part-time for "non-economic" reasons (16,000 persons x 20 hours)	320	320	320	320
6. Man-hours imputed to unemployed persons seeking full-time work (493,000 persons x standard)	19,374	17,255	18,487	19,720
7. Man-hours imputed to unemployed persons seeking part-time work (35,000 persons x standard)	700	700	700	700
8. Man-hours imputed to unemployed persons, temporarily laid off (31,000 x standard)	1,218	1,085	1,162	1,240
9. Man-hours imputed to persons with a job, usually full-time, working part-time for "economic reasons"	1,440	1,440	1,440	1,440
10. Man-hours imputed to persons with a job, usually part-time, working part-time for "economic reasons"	1,640	1,640	1,640	1,640
11. Man-hours worked:				
Variant I: (1+2+3)	323,649	321,697	322,832	323,967
Variant II: (1+2+3+4+5)	337,569	335,617	336,752	337,887
Variant III: (1)	305,227	305,227	305,227	305,227
12. Man-hours lost: (6+7+8+9+10)	24,372	22,120	23,429	24,740
13. Total available time:				
Variant I: (1+2+3+12)	348,021	343,817	346,261	348,707
Variant II: (1+2+3+4+5+12)	361,941	357,737	360,181	362,627
Variant III: (1+12)	329,599	327,347	328,656	329,967
14. Time-lost index:				
Variant I: ([12] ÷ [1+2+3+12])	7.0	6.4	6.8	7.1
Variant II: ([12] ÷ [1+2+3+4+5+12])	6.7	6.2	6.5	6.8
Variant III: ([12] ÷ [1+12])	7.4	6.8	7.1	7.5
15. Unemployment rate	6.3	6.3	6.3	6.3

Variant III - Excludes all persons absent from jobs full-or part-week for non-economic reasons. Thus,

$$\text{Variant III} = \frac{\sum U_j}{\sum E_i + \sum U_j} \times 100 \%$$

$$= \frac{(6+...+10)}{(1) + (6+...+10)} \times 100 \%$$

The assumptions which underlie the hours calculations are as follows:

- (1) Full-time work was given four separate definitions: 35.0 hours, 37.5 hours, 40.0 hours and the average hours worked for a particular month (in our illustrated example of December 1971, the average was 39.3 hours). These may be seen in the four columns of Table 2. None of the definitions are completely satisfactory because each category for which hours are imputed must be assumed to have the same pattern of hours representing full-time work. However, certain simplifying assumptions are necessary to make the calculations manageable;
- (2) Persons usually (or incidentally) working part-time were assumed to have lost (or wanted) 20 hours per man (more). Again, while a more refined proxy might have been calculated from the data an order of magnitude was deemed sufficient for the purpose at hand;
- (3) Unemployed persons were divided into three groups to better approximate their hours lost. The groups consist of: (a) those seeking full-time work; (b) those seeking part-time work; and (c) those on temporary lay off (TLO's). The full-time seekers were assumed to be looking for the same hours as those attributed to full-time workers above (35.0, ...), while those seeking part-time work were assumed to be looking for 20.0 hours of work in every case. The TLO's were assumed to have lost the designated full-time hours (i.e., 35.0, ...). This TLO estimate should be viewed as an upper limit since, undoubtedly, there would be some members on part-time schedules.

Variants I and III are presented in Chart 1. Variant II has also been calculated but the results differ so little that visual clarity is better served by omitting it from the chart. (The complete set of results for each variant is presented in the Appendix.) Both time-lost indices in the chart have been seasonally adjusted using

the X-11 variant of the U.S. Census II Program and may be compared with unemployment rates for the same period, 1966-71.

It is at once evident that despite the somewhat higher level of the time-lost indices their movements over time are essentially similar to those of the unemployment rate. The gaps between them have also remained quite stable over the years.

Another way of presenting the same information is to show the per cent of available labour force time which was being utilized each month. In Chart 2 the "employment rate" is simply 100 % minus the unemployment rate; the other indicator is the variable standard Variant I time-lost index subtracted from 100 %.

Is the time-lost index better than the unemployment rate?

For some purposes, the answer seems to be "yes". For one thing, the time-lost index is more comprehensive, encompassing not only the unemployed but also part-time workers who wish but cannot find full-time work. The person working 10 hours and wishing more is simply missing from the "state of the economy" message conveyed by the unemployment rate whereas the time-lost index counts him as underemployed and makes a rough estimate for the extra hours of work he wished to obtain. Another advantage to the time-lost index is the greater precision it gives to the measurement of employment. Expressed in terms of actual man-hours worked total employment takes account of the fact that some employed persons have worked as little as one hour in the reference week while others have worked 40 hours or more. Calculations for producing the unemployment rate, by contrast, count the number of individuals with employment regardless of the number of hours worked.

On the other hand, the time-lost index offers no improvement in the cyclical sensitivity of the unemployment rate. Since it involves additional calculations and is probably more difficult for the public to understand, the time-lost index is seen as supplementary to, not a replacement for, the unemployment rate. As a source of supplementary information its usefulness could be extended by special purpose tabulations: for example, absences due to illness could be separated to yield an index of time lost due to illness.

CHART-1

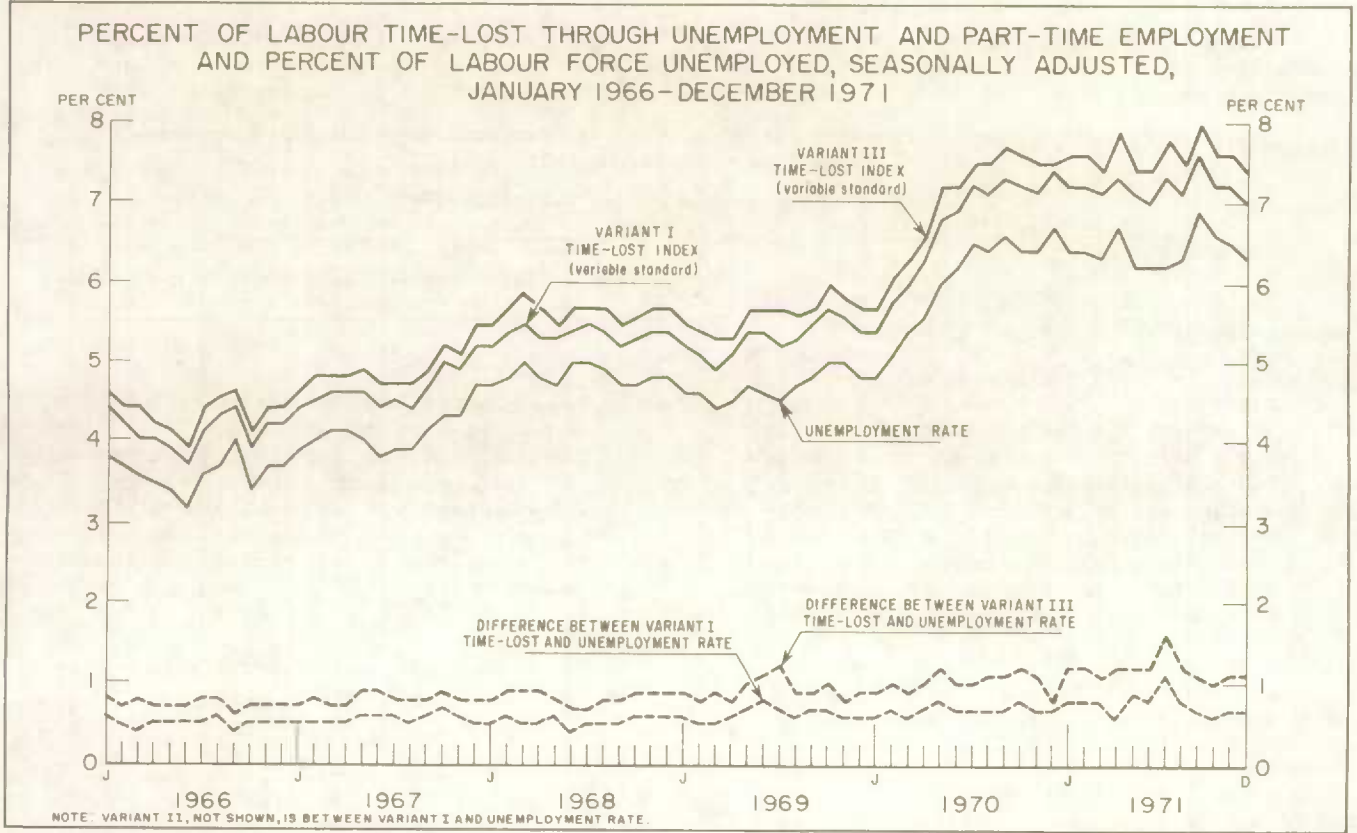


CHART-2



APPENDIX

The Data

TABLES: Time-lost Indexes, Alternate Variants and Hour Standards, and Unemployment Rates, Seasonally Adjusted, Canada, Monthly, 1966-71.

TABLE A1. Time-lost Index - Variant I

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
35.0 hours standard:												
1966	3.9	3.7	3.6	3.5	3.4	3.3	3.6	3.8	3.9	3.4	3.8	3.7
1967	3.9	4.0	4.1	4.0	4.1	4.0	4.0	4.0	4.2	4.4	4.2	4.6
1968	4.7	4.8	4.9	4.8	4.6	4.9	5.0	4.9	4.7	4.8	4.9	4.9
1969	4.7	4.6	4.5	4.6	5.1	4.8	4.7	4.8	5.0	5.2	5.0	4.9
1970	4.9	5.3	5.5	5.7	6.5	6.3	6.6	6.5	6.6	6.6	6.5	6.8
1971	6.6	6.6	6.5	6.8	6.3	6.4	6.7	6.5	7.0	6.6	6.6	6.4
37.5 hours standard:												
1966	4.1	3.9	3.7	3.7	3.6	3.4	3.8	4.0	4.1	3.6	3.9	3.9
1967	4.1	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.4	4.6	4.4	4.9
1968	4.9	5.1	5.2	5.1	4.9	5.1	5.2	5.2	5.0	5.1	5.2	5.2
1969	4.9	4.9	4.7	4.8	5.3	5.1	4.9	5.1	5.2	5.4	5.3	5.2
1970	5.2	5.5	5.8	6.0	6.8	6.6	6.9	6.8	7.0	6.9	6.8	7.1
1971	6.9	6.9	6.8	7.2	6.6	6.8	7.0	6.8	7.3	6.9	7.0	6.8
Variable standard:												
1966	4.4	4.2	4.0	4.0	3.9	3.7	4.1	4.3	4.4	3.9	4.2	4.2
1967	4.4	4.5	4.6	4.6	4.6	4.4	4.5	4.4	4.7	5.0	4.9	5.2
1968	5.2	5.4	5.5	5.3	5.3	5.4	5.5	5.4	5.2	5.3	5.4	5.4
1969	5.2	5.1	4.9	5.1	5.4	5.4	5.2	5.3	5.5	5.7	5.6	5.4
1970	5.4	5.8	6.0	6.3	6.8	6.9	7.2	7.1	7.3	7.2	7.1	7.4
1971	7.2	7.2	7.1	7.3	7.1	7.0	7.3	7.1	7.6	7.2	7.2	7.0
40.0 hours standard:												
1966	4.3	4.1	3.9	3.9	3.8	3.6	4.0	4.2	4.3	3.8	4.1	4.1
1967	4.3	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.6	4.9	4.7	5.1
1968	5.2	5.3	5.4	5.3	5.1	5.4	5.5	5.4	5.2	5.3	5.4	5.4
1969	5.2	5.1	4.9	5.0	5.6	5.3	5.2	5.3	5.5	5.7	5.6	5.4
1970	5.4	5.8	6.0	6.3	7.1	6.9	7.2	7.1	7.3	7.2	7.2	7.5
1971	7.3	7.2	7.1	7.5	7.0	7.1	7.3	7.2	7.7	7.3	7.3	7.1

TABLE A2. Time-lost Index - Variant II

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
35.0 hours standard:												
1966	3.7	3.6	3.4	3.4	3.4	3.2	3.5	3.7	3.8	3.3	3.6	3.6
1967	3.8	3.9	4.0	4.0	4.0	3.8	3.9	3.8	4.0	4.3	4.2	4.3
1968	4.5	4.7	4.7	4.5	4.6	4.7	4.8	4.7	4.6	4.7	4.8	4.7
1969	4.5	4.9	4.3	4.5	4.5	4.7	4.5	4.7	4.8	5.0	4.9	4.8
1970	4.8	5.1	5.3	5.6	5.8	6.0	6.2	6.2	6.4	6.3	6.3	6.5
1971	6.4	6.3	6.2	6.2	6.3	6.2	6.4	6.3	6.7	6.3	6.4	6.2
37.5 hours standard:												
1966	3.9	3.7	3.6	3.6	3.6	3.3	3.7	3.8	4.0	3.5	3.8	3.8
1967	4.0	4.1	4.2	4.2	4.2	4.0	4.1	4.0	4.2	4.5	4.4	4.7
1968	4.5	4.9	5.0	4.8	4.8	4.9	5.1	5.0	4.8	4.9	5.0	5.0
1969	4.8	4.7	4.5	4.7	4.8	4.9	4.8	4.9	5.0	5.3	5.1	5.0
1970	5.0	5.4	5.6	5.9	6.2	6.4	6.5	6.6	6.7	6.7	6.6	6.9
1971	6.7	6.6	6.6	6.5	6.6	6.5	6.8	6.6	7.1	6.7	6.7	6.5
Variable standard:												
1966	4.2	4.0	3.9	3.9	3.9	3.6	4.0	4.1	4.3	3.8	4.1	4.0
1967	4.3	4.4	4.4	4.5	4.6	4.3	4.4	4.3	4.5	4.8	4.8	5.0
1968	5.0	5.2	5.5	5.0	5.2	5.2	5.3	5.2	5.0	5.2	5.3	5.2
1969	5.0	5.0	4.8	5.0	4.8	5.1	5.0	5.2	5.3	5.5	5.3	5.3
1970	5.2	5.6	5.8	5.8	6.1	6.6	6.8	6.8	7.0	6.9	6.9	7.1
1971	7.0	6.9	6.8	6.7	7.0	6.8	7.0	6.8	7.3	6.9	6.9	6.7
40.0 hours standard:												
1966	4.1	3.9	3.8	3.8	3.7	3.5	3.9	4.0	4.2	3.7	4.0	4.0
1967	4.2	4.3	4.4	4.4	4.4	4.2	4.3	4.2	4.4	4.7	4.6	5.0
1968	5.0	5.1	5.2	5.0	5.1	5.2	5.3	5.2	5.0	5.2	5.3	5.2
1969	5.0	4.9	4.7	4.9	5.0	5.1	5.0	5.1	5.3	5.5	5.4	5.3
1970	5.2	5.6	5.8	5.8	6.4	6.7	6.8	6.9	7.0	7.2	6.9	7.2
1971	7.0	7.0	6.9	6.8	6.9	6.9	7.1	6.9	7.4	7.0	7.0	6.8

TABLE A3. Time-lost Index - Variant III

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
35.0 hours standard:												
1966	4.0	3.8	3.7	3.6	3.6	3.4	3.8	3.9	4.1	3.6	4.1	3.9
1967	4.1	4.2	4.3	4.2	4.2	4.1	4.2	4.1	4.4	4.6	4.4	4.9
1968	4.9	5.0	5.2	5.1	4.8	5.1	5.2	5.1	4.9	5.0	5.1	5.1
1969	4.9	4.9	4.7	4.8	5.3	5.1	4.9	5.1	5.2	5.5	5.3	5.2
1970	5.2	5.5	5.7	5.9	6.9	6.6	6.9	6.8	6.9	6.9	6.8	7.1
1971	6.9	6.9	6.8	7.3	6.6	6.7	7.1	6.8	7.3	6.9	6.9	6.8
37.5 hours standard:												
1966	4.2	4.0	3.9	3.8	3.7	3.6	4.0	4.2	4.3	3.8	4.1	4.1
1967	4.3	4.4	4.5	4.5	4.5	4.4	4.4	4.3	4.6	4.9	4.6	5.1
1968	5.2	5.3	5.5	5.4	5.1	5.4	5.5	5.4	5.2	5.3	5.4	5.4
1969	5.2	5.1	5.0	5.0	5.6	5.4	5.2	5.3	5.5	5.8	5.6	5.4
1970	5.5	5.8	6.0	6.3	7.2	6.9	7.2	7.2	7.3	7.3	7.2	7.5
1971	7.3	7.2	7.1	7.7	7.0	7.1	7.5	7.2	7.7	7.3	7.3	7.1
Variable standard:												
1966	4.6	4.4	5.4	4.2	4.1	3.9	4.4	4.5	4.6	4.1	4.4	4.4
1967	4.6	4.8	4.8	4.8	4.9	4.7	4.7	4.7	4.9	5.2	5.1	5.5
1968	5.5	5.7	5.9	5.7	5.5	5.7	5.7	5.7	5.5	5.6	5.7	5.7
1969	5.5	5.4	5.3	5.3	5.7	5.7	5.7	5.6	5.7	6.0	5.8	5.7
1970	5.7	6.1	6.3	6.6	7.2	7.2	7.5	7.5	7.7	7.6	7.5	7.5
1971	7.6	7.6	7.4	7.9	7.4	7.4	7.8	7.5	8.0	7.6	7.6	7.5
40.0 hours standard:												
1966	4.4	4.2	4.1	4.0	3.9	3.8	4.2	4.4	4.5	4.0	4.3	4.3
1967	4.5	4.7	4.7	4.7	4.7	4.6	4.7	4.6	4.8	5.1	4.9	5.4
1968	5.5	5.6	5.8	5.7	5.4	5.6	5.8	5.7	5.5	5.6	5.7	5.7
1969	5.5	5.4	5.2	5.3	5.9	5.6	5.4	5.6	5.7	6.0	5.9	5.7
1970	5.7	6.1	6.3	6.6	7.6	7.3	7.6	7.5	7.7	7.6	7.6	7.9
1971	7.6	7.6	7.5	8.1	7.3	7.5	7.9	7.6	8.1	7.7	7.7	7.5

TABLE A4. Unemployment Rates

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1966	3.8	3.7	3.6	3.5	3.4	3.2	3.6	3.7	4.0	3.4	3.7	3.7
1967	3.9	4.0	4.1	4.1	4.0	3.8	3.9	3.9	4.1	4.3	4.3	4.7
1968	4.7	4.8	5.0	4.8	4.7	5.0	5.0	4.9	4.7	4.7	4.8	4.8
1969	4.6	4.6	4.4	4.5	4.7	4.6	4.5	4.7	4.8	5.0	5.0	4.8
1970	4.8	5.1	5.4	5.6	6.0	6.2	6.5	6.4	6.6	6.4	6.4	6.7
1971	6.4	6.4	6.3	6.7	6.2	6.2	6.2	6.3	6.9	6.6	6.5	6.3

Note: All indexes and rates were seasonally adjusted by summation based on a six-year span. The six-year period seasonally adjusted unemployment rates here do not agree completely with the official 19-year span seasonally adjusted rates as published in Statistics Canada's The Labour Force (Catalogue 71-001 Monthly) and Seasonally Adjusted Labour Force Statistics (Catalogue 71-201 Annual). Of two seasonally adjusted time series using the identical program, the one with the longer time span will usually have the more reliable results. Nevertheless, most of the rates between 1966-71 were identical to the official rates.

A COMPARISON OF UNEMPLOYMENT IN SELECTED INDUSTRIAL COUNTRIES

Nand Tandan*

Continuing high rates of unemployment encourage Canadians to look around to see how this country is doing in comparison with others. The first comparison is obviously with our southern neighbour and the generally reassuring observation is that the unemployment picture there does not look much brighter. Then we look overseas - and the comparisons are less comforting. The published unemployment rates in most industrial nations are well below our own.

The reaction to this comparison can best be described in the words of the U.S. President's Committee ten years ago, namely, "Are they real?". This note pursues the question. Do these low rates in other countries reflect less unemployment - or simply a different way of defining or measuring it? Investigation supplies scant reassurance on this point, which leads to an examination of other reasons for lower unemployment rates abroad. Since the focus is on popular explanations and the examination is essentially confined to data series which permit comparisons among countries, the analysis does not lead to any firm conclusions. However, it may help to clear away certain misconceptions and to stimulate further research.

The countries selected for the comparison are all members of the OECD organization: five in Europe, the United States and Japan. All would be characterized as "industrial" nations, some more highly industrialized than

Canada, others less so. In addition, with the single exception of Japan, all share a European heritage which confers a similarity in cultural and ethical values underlying the several economies.

The Comparison

Table 1 conveys the standings of seven countries(1) in terms of unemployment rates in 1971 and in two earlier years. The rates themselves are not shown because they have not been adjusted for differences in concepts and measurement techniques but the historical background provides a good introduction. Notice that not much change occurred in the rankings over the decade of the sixties, with the two North American countries at the bottom of the list in both 1961 and 1971. But a decade earlier, the standings had been quite different. Through the fifties West Germany moved from near the bottom to the top position; Sweden and Italy also improved their standing while that of Canada, the United States and Great Britain declined. Japan has remained at or near the top throughout.

(1) Official French statistics simply give the number of unemployed persons and do not provide a measure of the rate of unemployment. The U.S. Bureau of Labor Statistics has estimated the rate for the sixties, but we could not get any rate for France for 1951 and it is, therefore, excluded from this table.

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TABLE 1. Selected Industrialized Countries Ranked in Ascending Order of Unemployment Rates (Unadjusted) in 1951, 1961 and 1971

Rank	1951	1961	1971
1	Japan	West Germany	West Germany
2	U.K.	Japan	Japan
3	Sweden	Sweden	Sweden
4	Canada	U.K.	Italy
5	U.S.A.	Italy	U.K.
6	West Germany	U.S.A.	U.S.A.
7	Italy(1)	Canada	Canada

(1) Based on 1953 rankings.

Source: Bulletin of Labour Statistics and supplement of International Labour Review, International Labour Office, Geneva, Switzerland.

How comparable are the statistics? Because different countries use different methods to measure unemployment it is commonly supposed that differences in concepts, definitions and measurement techniques are largely responsible for the differences in the results. But this popular view is misleading. In fact, while many countries in this comparison make some use of administrative statistics (employment exchanges, and the like) it is only the U.K. that continues to rely on administrative sources exclusively. With the exception of France (which does not publish an unemployment rate), all other countries in this comparison measure unemployment using sample surveys which are very similar to Canada's labour force survey and the U.S. current population survey. France also conducts a similar survey from time to time from which unemployment rates can be calculated. In all countries the definition of the unemployed tends to be much the

same (in general, "without work and looking for work") although the criteria for determining precise labour force status vary somewhat from one country to another.

For some years now the U.S. Bureau of Labor Statistics has published for a number of countries unemployment rates adjusted to conform with U.S. concepts(2). Obviously, it is not possible to align the statistics with absolute precision but the BLS claims to make adjustment for "all known major definitional differences" and its procedures are believed adequate to bring the statistics to a relatively uniform basis. Table 2 shows that in most countries the changes effected are quite minor.

(2) These figures are published periodically in the Monthly Labor Review, U.S. Department of Labor.

TABLE 2. Published and Adjusted Unemployment Rates in Selected Industrialized Countries, 1971

Country	Published rate	Rate adjusted to the U.S. concepts
Canada	6.4	6.4
France(1)	2.1	2.7
Great Britain(1)	3.5	5.3
Italy	3.1	3.4
Japan	1.2	1.3
Sweden	2.5	2.6
United States	5.9	5.9
West Germany(1)	0.9	0.7

(1) Based on preliminary estimate.

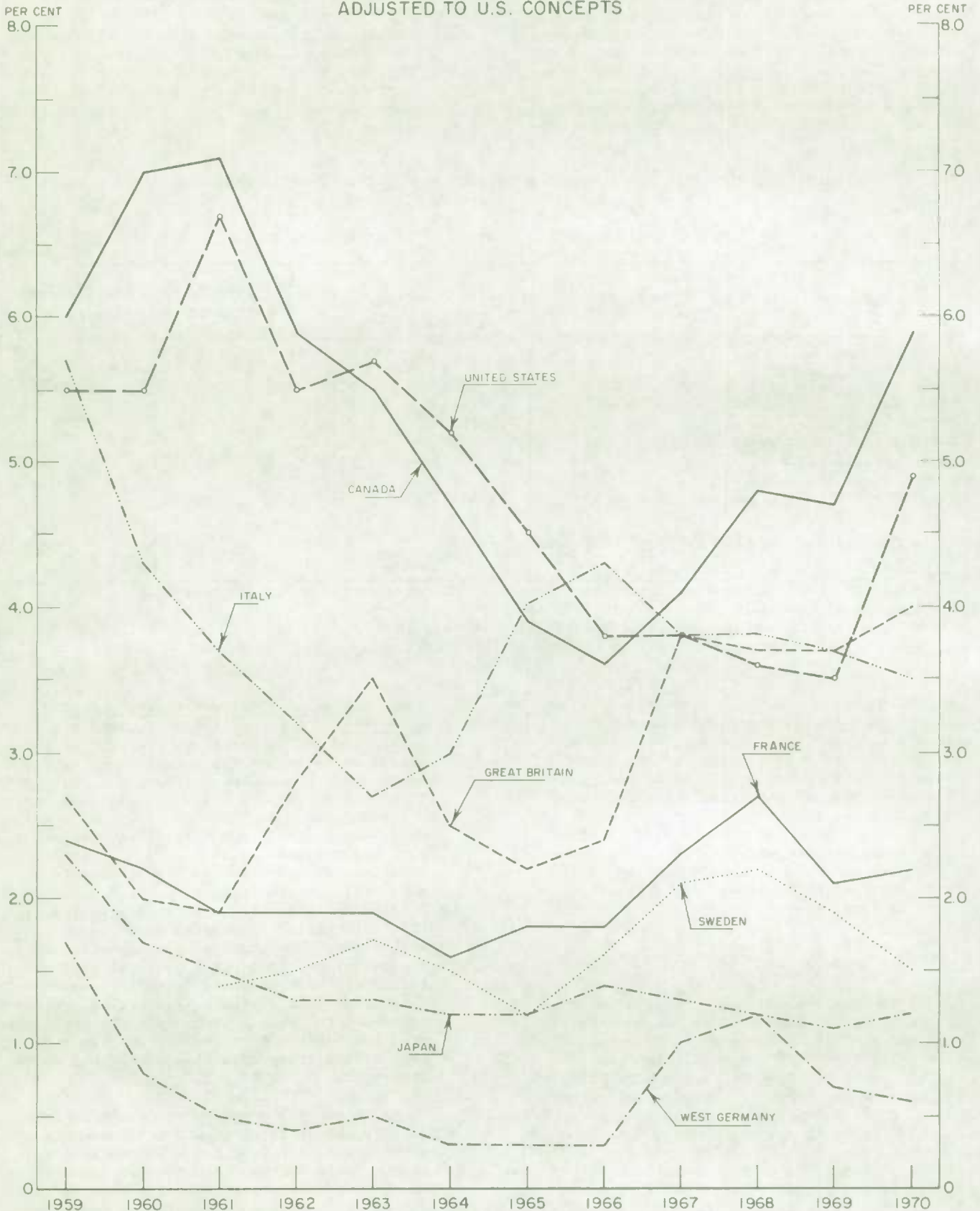
Source: Constance Sorrentino, "Unemployment in Nine Industrialized Countries", Monthly Labour Review, XCV, No. 6, U.S. Department of Labor (June 1972), p. 30.

Using the BLS data, the adjusted unemployment rates in the eight countries are traced in Chart 1, beginning in 1959. Notice that in West Germany the unemployment rate has generally been below 1 %, exceeding that limit in two years only. In Japan, Sweden and France the rate has tended to be below or near 2 %. Intermediate between these rates and the North American lies the mixed experience of the U.K. and Italy. The former, at

the beginning of the period, had low rates similar to France, but unemployment edged upward during the decade and is now reaching the lower limits of the North American experience. Italy reveals the opposite trend. The unemployment rate was at the North American level in 1959, then declined substantially; subsequent increases have brought it very close to the U.K. rate in recent years.

CHART-1

UNEMPLOYMENT RATES IN SELECTED INDUSTRIAL COUNTRIES ADJUSTED TO U.S. CONCEPTS



SOURCE: BASED ON DATA PROVIDED BY THE U.S. BUREAU OF LABOR STATISTICS.

A second way of looking at the unemployment experience is by examining the average rate and range of rates of unemployment over the period 1959-70 as shown in Table 3. Thus the mean rate in Canada (5.3 %) was slightly higher than in the United States (4.9 %) and substantially higher than in any of the other countries included in the

comparison. Canada's high and low (7.1 % and 3.6 % respectively) as well as the standard deviation were also the highest with the U.S., once again, close behind. At the other end of the scale the country with the lowest unemployment rate, West Germany, had a mean rate of .7 % reflecting a range of rates between 1.7 % and .3 %.

TABLE 3. Mean, Range and Standard Deviation of Adjusted Unemployment Rates in Selected Industrialized Countries, 1959-70

(as adjusted by the U.S. Bureau of Labor Statistics)

Country	Mean	Highest(1)	Lowest(1)	Standard deviation	Coefficient of variance
Canada	5.3	7.1(1961)	3.6(1966)	1.10	.21
France	2.1	2.7(1968)	1.6(1964)	.30	.14
Great Britain	2.9	4.0(1970)	1.9(1961)	.73	.25
Italy	3.8	5.7(1959)	2.7(1963)	.73	.19
Japan	1.4	2.3(1959)	1.1(1969)	.32	.23
Sweden(2)	1.7	2.2(1968)	1.2(1965)	.30	.18
United States	4.9	6.7(1961)	3.5(1969)	.97	.20
West Germany(3) .....	.7	1.7(1959)	.3(1965) (1966)	.41	.59

(1) The years of the highest and the lowest unemployment rates are shown in parentheses.

(2) Figures not available for Sweden for 1959 and 1960.

(3) Preliminary figures used for West Germany for 1969 and 1970.

Source: From data made available by the Bureau of Labor Statistics, U.S. Department of Labor.

Both Canada and the United States reveal high standard deviations showing larger absolute fluctuations. However, when these fluctuations are standardized for the higher levels of unemployment, which is done through the coefficients of variation, they fall in line with other countries. What this means is that even though our unemployment rates appear to experience wider swings in response to economic changes, our basic problem is the higher level of unemployment rather than larger fluctuations.

Sources of Differences

To pursue the question of higher unemployment rates in Canada it is not necessary to accept the BLS adjustments as removing all differences which are statistical in origin. Doubtless some differences of this kind remain. But even if the adjusted rates should err by as much as 25 % there would still be reason to inquire why the Canadian rates have been so much higher. In the remainder of this note certain popular hypotheses are tested against the evidence of available statistical data.

Regional variations in the unemployment rate. - A point that is perhaps best introduced at the outset is the fact of regional variation in the unemployment rate in Canada. Because Ontario and the Prairie Provinces are always below the national rate and sometimes well below (in 1971 5.2 % in Ontario and 4.5 % on the Prairies compared with the national average of 6.4 %) it is sometimes argued that the higher Canadian rate reflects the regional problem. The difficulty in dealing with this argument is the fact that all countries have regions with higher-than-average unemployment, but the extent to which other national rates are influenced by regional disparities cannot be determined from available statistics. With reference to Table 2 it may also be noted that even the Ontario rate was higher than the rate of all other countries except the United States.

Labour force growth. - Canada's higher rate of labour force growth is frequently mentioned as a reason for higher unemployment. Table 4 shows that the Canadian labour force did, in fact, grow faster than that of any other country included in the comparison.

The U.S. is the only country whose rate of growth approached Canada's and both these countries have had notably higher levels of unemployment. But closer examination of Table 4 raises doubts concerning the causality of the relationship between labour force growth and unemployment. For one thing, the

Canadian labour force grew much more rapidly in the years 1963-67 than in the years before (1959-63) or after (1967-70), yet unemployment rates in the mid-sixties were the lowest. Also, the British labour force actually declined during the last three years when unemployment rose substantially.

TABLE 4. Percentage Change (Simple Annual Rate) in Labour Force in Selected Industrialized Countries Between Certain Years

(adjusted to U.S. concepts)

Country	1959-63	1963-67	1967-70	1959-70
Canada	2.0	3.5	2.9	34.2
France	0.2	1.1	1.1(1)	8.7
Great Britain	1.3	0.4	- 0.4	5.4
Italy	- 1.0	- 0.2	- 0.4	- 5.8
Japan	1.2	1.9	1.3	17.1
Sweden .....	..	0.1	1.3	..
United States	1.3	1.9	2.3	21.0
West Germany	0.6	- 0.3	0.6(1)	3.0

(1) Percentages calculated using a preliminary estimate based on incomplete data.
Source: U.S. Bureau of Labor Statistics.

A comparison of Table 4 with Chart 1 reveals no systematic relationship between a high rate of labour force growth and unemployment. For example, the Japanese labour force also grew at a higher rate than the European countries but that did not prevent Japan from keeping unemployment at a very low level.

This is not to deny that rapid labour force growth has placed a considerable onus on the Canadian economy in terms of job creation. The foregoing has suggested merely that there is no necessary connection between rapid growth in the supply of labour and the unemployment rate. After examining other factors on the supply side we shall return to the subject of employment growth later.

Labour force composition - The demographic structure of the labour force has an important bearing upon the overall unemployment rate because some age and sex groups are more prone to unemployment than others - notably, young workers and, in most countries, females. Hence, if one country has a higher proportion of its labour force in such groups its overall unemployment should tend to be higher.

The demographic composition of the labour force in 1970 could be obtained for only three countries besides Canada, namely the U.S.A., Japan and Italy (Table 5). French data are for 1968 while those for the U.K. and Sweden are for 1966 and 1965 respectively.

The extreme data case is that of Germany where the latest available information relates to 1961.

Of the four countries for which 1970 data are available only Italy had a higher proportion than Canada for males 25 years and over - a group which generally experiences lower unemployment. Sweden also had a higher proportion of adult males but its data relate to 1965 and the situation might have changed somewhat since then. Both Japan and the United States had a lower proportion of adult males while France and Great Britain were close to the Canadian proportion.

With the exception of Italy, Canada had the lowest proportion of females aged 25 and over. It is hard to assess the effect of this relatively low proportion on the overall unemployment rate for, unlike the other countries, the Canadian female unemployment rate is lower than that of the male. This suggests that a higher proportion of female workers would result in lower overall unemployment. On the other hand, there are reasons to suspect that the reported female unemployment rate under-represents the real loss of female manpower in Canada because of the presence of the "discouraged-worker" effect. Moreover, while the proportion of the female labour force in Canada has been rising fast the (female) unemployment rate has also been rising and the overall impact on the unemployment rate of a higher female labour force is, therefore, uncertain.

TABLE 5. Percentage of Labour Force for Selected Age Groups in Selected Industrialized Countries

(figures for latest available year)

Age and sex	Canada (1970)	France (1968)	Great Britain (1966)	Italy (1970)	Japan(1) (1970)	Sweden (1965)	United States(2) (1970)	West Germany (1961)
Total labour force	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Males 25 and over	53.3	53.3	52.3	62.0	49.3	56.1	49.6	48.6
Females 25 and over	21.6	25.8	26.2	19.3	29.1	25.2	27.3	24.7
Teen-age workers 15-19 ..	9.7	7.6	11.3	7.4	6.1	7.7	8.9	11.0
Young workers 20-24	15.4	13.3	10.2(3)	11.2	15.5	11.0	14.3	14.6

(1) Japanese distribution excludes unemployed.

(2) U.S. data relate to 16 years of age and over.

(3) Distribution of 20-24 for Great Britain estimated by the author.

- Sources: 1. For Canada see Seasonally Adjusted Labour Force Statistics, Statistics Canada (Catalogue 71-201 Monthly) (Ottawa: Information Canada, 1971).
 2. For U.S. see Handbook of Labour Statistics, U.S. Department of Labour (1971).
 3. For Italy see Annuario di Statistiche Del Lavoro, Vol. XII, Istituto Centrale di Statistichs (1971).
 4. For all other countries see Yearbook of Labour Statistics, 1971, International Labour Office, Geneva, Switzerland.

Canada had a higher proportion of workers in the 15-24 years of age group. This does exert an upward pressure on our overall unemployment. The impact of a larger proportion of young workers is greater because Canadian youth experiences an exceptionally high unemployment rate.

On balance, the overall effect of the demographic composition of the Canadian labour force might be to marginally increase its aggregate unemployment rate. The proportion of adult males in Canada's labour force is not very different from most other countries and the effect of the lower proportion of females is uncertain. The slight upward pressure on unemployment is exerted by the higher proportion of young people in our labour force.

Another aspect of labour force composition that affects the unemployment rate is the division between paid workers on the one hand, and self-employed and unpaid family workers

on the other. Individuals in the latter two categories are less exposed to economic fluctuations - or, rather, are more likely to feel the effects of an economic slowdown in the form of underemployment, as distinct from no employment. This is especially true of the self-employed in agriculture. In consequence, since workers of this type are less likely to be unemployed, a high percentage of them in the labour force should tend to lower the unemployment rate while a high percentage of paid workers should have the opposite effect.

It can be seen in Table 6 that the percentage of paid workers in Canada is among the highest, though not so high as in the U.S. and the U.K., and not much higher than in Sweden or West Germany. This factor may have some explanatory value for the differences in unemployment rates vis-à-vis France, Italy and Japan where the proportion of paid workers is very much lower. However, it is worth noting that Japan experienced a very rapid growth in this sector during the sixties.

TABLE 6. Percentage Distribution of Work Status of Employed Persons in Eight Selected Countries

Country	Salaried employees and wage-earners	Employers and workers on own accounts	Family workers	Wage and salary workers in 1960
Canada(1970)	86.3	10.5	2.5	82
France(1970)	75.7	21.2(1)	..	66
Great Britain(1966)	90.1	6.4	0.7	90
Italy(1970)	67.8	22.7	7.8	62
Japan(1970)	63.6	19.0	16.0	45
Sweden(1965)	85.1	11.2	3.8	77
United States(1970)	90.3	8.3	1.2	84
West Germany(1970)	82.9	10.4	7.0	77

(1) In France employers and workers on own accounts include family workers.

Note: Total of workers with the three statuses may not add to 100 because of a very small fraction whose status is unknown.

Source: See Yearbook of Labour Statistics, 1971, International Labour Organization, Geneva, Switzerland. For data for wage and salary workers in 1960 see Measuring Employment and Unemployment, U.S. President's Committee to Appraise Employment and Unemployment, p. 262.

Industrial structure. - A high percentage of the labour force in agriculture, like other forms of self-employment, tends to lower the overall unemployment rate. Although the statistics in Table 7 do not distinguish agriculture from other primary industries, one might infer that Italy and Japan derive the most "benefit" in this respect; Canada,

with a relatively low percentage, would derive very little. It may also be noted, however, that both Japan and Italy experienced a high rate of displacement from the agricultural sector in the period under review and have therefore had the added strain of providing other jobs for displaced farm workers.

TABLE 7. Percentage Distribution of Labour Force in Eight Selected Countries by Industrial Sector

Country	Agriculture, forestry, hunting and fishing	Mining, manufacturing and construction	Service sector (includes utilities)
Canada (1971)(1)	7.4	28.0	58.3
France (1970)(1)	13.4	36.5	48.4
Great Britain (1966)	3.1	44.9	51.3
Italy (1970)(1)	19.0	41.6	37.6
Japan (1970)(1)	19.1	33.5	46.0
Sweden (1965)	11.8	42.1	45.7
U.S.A. (1970)(2)	4.3	32.2	62.9
West Germany (1970)	8.9	48.4	42.5

(1) Excludes persons seeking work for the first time and unemployed.

(2) Excludes persons seeking work for the first time.

Source: See Yearbook of Labour Statistics, 1971, International Labour Organization, Geneva, Switzerland.

The other noteworthy feature of the table is that Canada and the U.S. have the highest proportion in the service industries and the lowest proportion in mining and secondary industry; but it is difficult to relate this difference to higher unemployment. There seems no reason to believe that the service sector, as a whole, is more vulnerable to unemployment than manufacturing and it is probably less vulnerable than construction.

Seasonality. - Seasonality plays an important role in Canadian unemployment. Employment in a number of industries is affected by the unusually long and severe winter thereby causing higher levels of unemployment. It is not known to what extent seasonal factors are important in the other countries. It might be presumed, however, that they are less significant than

in Canada with the probable exception of Sweden.

Growth in employment and production. - Turning now to the record on employment, Table 8 repeats the labour force changes to facilitate ready comparisons. In all countries the two tend to move rather closely for the obvious reason that employed persons form the bulk of the labour force. In Canada the high rate of labour force growth is matched by a rate of employment growth which exceeds that of any other country in the comparison. This is true even for the later years (1967-69) when the rate of growth in employment had slackened - on an annual average basis from 3.4 % in the period 1963-67 to 2.6 % in 1967-69. What is also noteworthy about these latter years is that Canadian employment grew less rapidly than the labour force. In all other countries with a growing labour force employment increased at the same or a higher rate during this period.

TABLE 8. Percentage Change in Labour Force(1) and Employment in Selected Industrialized Countries Between 1959-63, 1963-67 and 1967-69

Country	1959-63		1963-67		1967-69	
	Labour force	Employment	Labour force	Employment	Labour force	Employment
Canada	8.1	8.6	13.5	15.7	5.9	5.4
France	1.7	2.4	3.1	3.4	0.9	0.9
Great Britain	3.9	4.3	1.0	1.1	- 0.7	- 0.6
Italy	- 5.4	- 2.6	- 1.8	- 2.8	- 1.1	- 1.3
Japan	5.0	6.0	7.1	7.1	2.4	2.4
Sweden	6.2	6.2	.1	- .4	2.0	2.3
United States	5.2	4.8	8.3	9.8	4.3	4.7
West Germany	2.7	3.5	- 1.2	- 2.5	1.0	2.1

(1) The labour force statistics here are from a different source than in Table 4. These are unadjusted (to U.S. concepts) but have been used here to retain comparability with the employment figures.

Source: See Labour Force Statistics 1958-69, Organisation for Economic Co-operation and Development (Paris, 1971).

Changes in gross national product for the same three time periods may be examined in Table 9. For Canada we find the same upsurge in the mid-sixties and subsequent falling off that marked the employment statistics, but not the same commanding lead over other countries. In the early sixties GNP in Canada grew at a slower rate than in the other countries excluding only the United

States and Great Britain. This was a time of high unemployment in Canada. In the mid-sixties the Canadian position improved dramatically, the rate of increase in these four years being second only to that of Japan, but the rate declined after 1967 so that in ranking the eight countries for the last two years of the decade Canada placed 5th.

TABLE 9. Growth Rate of Gross National Product, Industrial Production and Productivity in Selected Countries

Country	G.N.P. (per cent increase)			Annual growth rate of		
	1959-63	1963-67	1967-69	G.N.P. 1960-70	Industrial production 1960-70	Manufacturing productivity(1) 1961-70
Canada	17.6	25	9.6	5.0	6.1	3.5
France	28.2	23	13.8	5.8	5.8	6.3(2)
Great Britain	13.6	13	3.5	2.8	2.8	3.4
Italy	28.7	21	10.7	5.6	7.0	6.5
Japan	56.3	47	28.6	11.0	13.9	11.1
Sweden	19.0	19	9.2	4.6	6.5	6.3(3)
United States	16.3	23	7.3	4.0	4.8	3.1
West Germany	23.5	16	15.5	4.8	5.7	5.1

(1) Productivity relates to compound rate of growth in net product per employed person in manufacturing except for France and Sweden.

(2) Net product per man-hour in industrial sector during 1962-70.

(3) Net product per employed person in industrial sector during 1961-69.

Sources: 1. For G.N.P. see National Accounts of OECD Countries 1953-69.

2. For annual growth rate of G.N.P. and industrial production see Main Economic Indicators, OECD Historical Series 1959-69 and March 1972.

3. For productivity see Yearbook of Labour Statistics 1971, International Labour Organization, Geneva, Switzerland, Tables 17B and 17C.

Taking the decade as a whole the performance of the Canadian economy appears to compare favourably with most of the seven other countries. While it did not approach the spectacular growth rates of Japan, only two other countries had larger increases in GNP (France and Italy) and in the index of industrial production (Sweden and Italy). Thus, the relatively strong performance of production indicators is somewhat at variance with the higher rates of unemployment which characterize Chart 1.

Production indicators have been particularly sluggish in the U.K. yet unemployment, though rising, has remained well below the Canadian average. The American production indicators have lagged the Canadian ones but the unemployment experience has been marginally more favourable. The factor which seems to differentiate the Canadian experience is the higher rate of labour force growth.

The latter, examined earlier, appeared to have but little explanatory value when considered in isolation. But when the high rate of labour force growth is set against what might be termed an average rate of increase in production, the combination is one which could be expected to produce some tendency towards higher unemployment.

Technological change. - Until recently, at least, technological advancement has been

considered synonymous with progress. Massive changes in technology, however, are frequently accompanied by massive relocations of manpower, so that a country that is experiencing a higher rate of technological change may pay a price in terms of higher frictional unemployment. It follows that if, *ceteris paribus*, the rate of technical advancement was higher in North America during the sixties some upward pressure on the frictional unemployment rates would be likely. This possibility cannot be explored in any depth because statistical series which would provide a satisfactory measure of the rate of technological change are not available. Probably the best available statistics, though admittedly partial, are the changes in productivity (defined as output per employed person) in manufacturing presented in Table 9 (last column). These reveal that both North American countries placed, along with the U.K., at the bottom of the list. Insofar as productivity gains in manufacturing may be taken as an index of technological change there is, in fact, a negative correlation with unemployment rates. This might suggest that direct and indirect stimulation of demand through gains in productivity more than compensates for the frictional unemployment caused through changes in technology.

Institutional factors. - It is probably safe to conclude that varying standards of economic performance account for some part of

the differences in the unemployment experience, though how and to what extent remains unclear. But there are other differences - these reflecting the socio-economic and legal frameworks within which national economies operate. Differences of this kind are particularly noteworthy between the two North American countries and all others. Japan offers an extreme example where a high proportion of workers have a life time tenure with their employers which means that the Japanese employer is forced to absorb the wage bill for workers during a cut-back in production. The European worker, too, is said to have a greater attachment to his firm than is the case in North America and the employer's obligation to his workers is more rigorously conceived. Most of these countries have legal restrictions on lay offs requiring employers to give advance notice before taking such action(3).

It is sometimes argued that the factor of attachment to the employer also reduces turnover and mobility. Because turnover and mobility are thought to be important to economic growth this is usually viewed as a negative factor. Yet during the sixties several of the countries examined underwent substantial structural shifts which could only be achieved through high labour mobility.

The role of apprenticeship in channeling new workers into regular employment is of much greater importance in Europe than in North America. This is a partial but important explanation for the latter's higher unemployment rates among labour force entrants in general and of young workers in particular. Both Canada and the U.S. place greater emphasis on formal education than do European countries where vocational and on-the-job training are more important. European job training programs also involve a closer involvement with and co-operation from firms. Vocational training has recently assumed a larger role in Canada, though still with a heavy classroom emphasis. Meanwhile, our youth unemployment rate continues to be very high and exerts an upward influence on the overall rate.

A comparative study of monetary and fiscal policies lies well beyond the scope of the present inquiry but indirect evidence of their influence should at least be noted. For

(3) For a discussion of this and other points relating to institutional differences see David Bauer, "Low Unemployment Rates Abroad", Conference Board Record, August 1969, pp. 51-56.

example, the rate of price increase experienced in Japan suggests that a lower priority was given to controlling inflation which, presumably, has helped to keep unemployment low.

Conclusions

Having compared the unemployment rates in eight countries and scrutinized some popular reasons for the differences, the main points to emerge might be summarized as follows:

- (1) Canada had the highest unemployment rate in 1971 and its rate has been the highest for some time. Very little of the disparity could be explained by differences in methods of measuring unemployment;
- (2) Canada's labour supply grew faster than that of any other country. While the international comparison failed to reveal a clear positive correlation between growth in the labour force and higher unemployment, the combination of rapid labour force growth and a merely average rate of increase in gross output appeared to have more explanatory power;
- (3) Canada has a higher proportion of its labour force in the 15-24 years of age group which exerts a small upward pressure on our overall unemployment rate;
- (4) Canada, like the U.S., has some disadvantage in the low proportion of self-employed but this affected the comparison with only a few countries. The industrial structure offered few clues per se;
- (5) Seasonality is an important factor contributing to the relatively higher average annual unemployment in this country. However, information is not available regarding the relative importance of this factor in other countries;
- (6) No evidence was found to suggest undue stress arising from technological change;
- (7) Differences in the socio-economic and legal institutions appeared to be an important source of the inter-country variations in the amount of unemployment.

ABSENTEES - OFF WORK FOR HEALTH REASONS - CANADA 1970

May Nickson*

Statistical methodology for measuring national health and welfare has generally lagged behind that of the economic indicators.(1) A large portion of the nation's resources is allotted to the promotion of health and environmental control; yet data development has been largely confined to specific policy interests (e.g. physical fitness tests, hospital diagnosis, accident fatalities, traffic accidents, etc.). Little is available for judging overall health.

In the case of illness certain yardsticks are obtained by coupling measures of specific illness - provided by the hospital morbidity statistics - with related population data. But even here, as the Department of National Health and Welfare points out, we fail to find a true measure of illness trends because there are no complementary data on illness treated at home, in the doctor's office or the out-patient clinic.(2) Data on work-related accidents and illnesses are also partial. Produced by provincial workmen's compensation boards, the coverage of illness is quite restricted, composite national data have not been developed, and provincial tabulations are unrelated to appropriate population measures.

This paper reports on a 1971 survey which represents a first collection of data on persons absent from work for health reasons: accidents, illness or pregnancy. As a general measure of health in Canada the data are somewhat restrictive but, given the paucity of data in the field, they should provide a useful point of departure.

Methodology

The source data are supplementary questions added to the regular Labour Force Survey conducted monthly by Statistics Canada. Household respondents were asked to recall:

(1) Which members of the household had

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(1) See Eighth Annual Review: Design for Decision-Making - An Application to Human Resources Policies, Economic Council of Canada (Ottawa: Information Canada, 1971), pp. 21-26.

(2) See Hospital Morbidity Statistics Jan. 1 - Dec. 31, 1968, Department of National Health and Welfare (Ottawa: Information Canada).

worked for pay at any time during the calendar year 1970;

- (2) Which of these persons had had absences lasting two consecutive weeks or more in that calendar year.

In order to reduce potential recall errors the survey was carried out early the following year (i.e., mid-February 1971). The minimum of two weeks absence was required in the belief that shorter periods would be more easily forgotten. Thus, while missing shorter absences altogether, the data should benefit by having more complete coverage of the particular phenomenon selected.

Basic Populations Used for Tabulations

Due to the nature of the survey - mixing recall information with responses to a current questionnaire - it was necessary to alter the employment coverage depending on the characteristics being studied. In general the largest appropriate base was selected from the following:

- (1) Total annual employment 1970 - the population who could have had work absences - is used for comparisons with labour force status in February 1971. The total annual employment was 9.5 % above the average annual employment in 1970. Tabulations using this base give equal weight to persons with full-year and part-year labour force participation (part-year includes students, new entrants, seasonal workers, etc.);
 - (2) Average annual employment compiled from 12 monthly labour force surveys reduces the weight given part-year workers and approximates man-years;
 - (3) Employed in February 1971 is used as a base for analysis by industry and occupation, this being the universe for which this information was available;
 - (4) Persons returning from absence provide the base for duration of absence, since the duration of illness was not available for those who did not return to
- (3) See notes on reliability of data in the monthly publication The Labour Force, Statistics Canada (Catalogue 71-001 Monthly) (Ottawa: Information Canada).

work or who were still off in February 1971. The group accounted for about 86 % of the total absences recorded for this report.

Reliability

The survey is subject to the variability of estimates outlined in the Labour Force Survey. (3) The possibility of error may be further increased by a memory bias since the questions required respondents to recall incidents which happened in the previous year. Studies in the recall field lead us to expect that household respondents would quite accurately recall their members who had had lengthy illnesses, but that information on

duration, number of absence periods and earnings might not be so well remembered and could have some inherent bias. For this reason most of the detailed tabulations and analysis in the report are given for persons with absences, not the total number of absences.

Absentee Rates

The term 'absentee rate' is used to indicate the number of persons who had absence periods, not the total number of absences. The total number of persons who had absences (one or more) lasting a fortnight or longer was 881,000. Expressed as a percentage of average annual employment in 1970 this supplies an absentee rate of 11.2 % (Table 1),

TABLE 1. Persons Absent From Work by Type of Absence, by Sex and Rate Per Man-year Employment, Canada, 1970

Sex and type of absence	Number of persons absent	Average annual employment	Absentee rate per man-year
		'000	%
Males:			
Absence due to accident	176		3.3
Absence due to illness	355		6.7
Total	531	5,310	10.0
Females:			
Absence due to accident	35		1.4
Absence due to illness	219		8.5
Absence due to pregnancy	95		3.7
Total	349	2,569	13.6
Both sexes:			
Absence due to accident	211		2.7
Absence due to illness	575		7.3
Absence due to pregnancy	95		1.2
Total	881	7,879	11.2

The overall rate was higher for females than for males but this was because of the uniquely female childbearing function. Omitting the 3.7 % absentee rate related to pregnancy, females had about the same absentee rate as males, roughly 10 %. However, the distribution by type of absence - whether resulting from accidents or other illness - was quite different. Males, with a 3.3 % accident rate, appeared to be more accident prone than females with 1.4 %. Some of this difference may denote special female characteristics such as cautiousness or orderliness, but doubtless the main factor would be that the jobs with the most accidents are normally

filled by males, e.g. forestry, construction, mining. On the other hand, the fact that women had more absences related to illness than men (8.5 % against 6.7 %) does not mean that they are the weaker sex. The primary reasons may well be economic. For example, many women carry heavy home responsibilities in addition to those at work, thus placing greater demands on their health; many women function as secondary family earners more able to take breaks in their earnings; and many female jobs have been traditionally related to typing, bookkeeping, etc., which are easier to postpone than jobs relating to production processes.

Characteristics of Absentees

Age. - Age appears not to be a very important factor in a person's ability to have or prevent accidents (see Table 2). The fact that persons 20-24 years of age had slightly more than average accidents per employee while those over 65 had somewhat less

than average could readily be explained by the type of jobs they do. There is a widespread view that young people have more accidents than older workers, but the small variance in accident rates found in this study indicate that they might be less subject to serious injuries as well as more able to recuperate within two weeks.

TABLE 2. Persons Absent From Work Due to Accident or Illness, Average Annual Employment and Absentee Rates by Age and Region, Canada, 1970

Age and region	Number of absentees		Average annual employment	Absentee rate	
	Absence due to accident	Absence due to illness		Absence due to accident	Absence due to illness
	'000			per cent	
Age:					
14-19 years	15(1)	20(1)	744	2.0(1)	2.7(1)
20-24 "	37	62	1,179	3.1	5.3
25-44 "	93	230	3,402	2.7	6.8
45-64 "	64	244	2,356	2.7	10.4
65 years and over	--	19(1)	198	--	9.6(1)
Total	211	575	7,879	2.7	7.3
Region:					
Atlantic	18	48	609	3.0	7.9
Quebec	60	175	2,144	2.8	8.2
Ontario.....	78	233	2,996	2.6	7.7
Prairies	27	65	1,320	2.0	4.9
British Columbia	28(1)	54	810	3.5(1)	6.7
Total	211	575	7,879	2.7	7.3

(1) These data are based on smaller samples and may be useful for some purposes but are not reliable enough to be used without caution and qualification. Hence, in subsequent use, these qualified data should be accompanied by specific reference cautioning high sampling variability.

With illness age does seem to be an important factor. The older the person, the more apt he is to be absent for a lengthy period. Persons in the 14-19 age group had an illness rate of 2.7 % while those aged 45-64 years had a rate of 10.4 %. The fact that the rate dropped slightly (to 9.6 %) for those over 65 may be entirely due to the inadequacy of the sample for this group or it may reflect a genuine change occurring at this point. Perhaps retirements have removed the least healthy from the labour force. Or it

may be that part of the reason why illnesses increase with age is due to an accrual of sick leave benefits, sometimes lost after age 65. However, the size of the total age variation suggests that the susceptibility to illness definitely increases with age.

Absences due to pregnancy were of course a function of age. If the sample surveyed had been large enough to permit more age groups this, without doubt, would have been indicated more clearly.

TABLE 3. Females Absent From Work Due to Pregnancy by Age and Region, Canada, 1970

Age and region	Number of absentees absent due to pregnancy	Average annual female employment	Absentee rate (absences due to pregnancy)
		'000	%
Age:			
14-19 years	--	327	--
20-24 "	41	499	8.2
25-44 "	46	1,006	4.6
45-64 "	--	696	--
65 years and over	-	42	-
Total	95	2,569	3.7
Region:			
Atlantic	11(1)	193	5.7(1)
Quebec	25(1)	678	3.7(1)
Ontario	39(1)	1,002	3.9(1)
Prairies	13(1)	426	3.1(1)
British Columbia	--	270	--
Total	95	2,569	3.7

(1) See footnote 1, Table 2.

Regions. - Regional variance could be caused by many factors such as industry mix, age distribution, amount of female employment, sickness benefits available, climate, or economic conditions. Thus the higher-than-average rates in the Atlantic Region, both for accidents and illnesses, may to some extent reflect its fishing and mining industries. On the Prairies, where much of the employment is in agriculture and in small businesses, there might be a greater tendency for a partial return to work thus lowering the absentee rates for this region. The fact, too, that certain western provinces were early in the field of prepaid health care raises the question whether the lower illness rates in the west may to some extent reflect the success of government health plans in raising the general level of health and well-being.

Absences due to pregnancy were highest in the Atlantic Provinces and lowest in British Columbia, generally following the current regional birth rates.

Industry. - Distribution of accidents by industry (Table 4) spreads the sample somewhat thinly so that some of the rates shown may have a wide margin of error. However, the results are generally consistent with those being found in preliminary tabulations

of accidents reported to workmen's compensation boards with standard industry codes assigned by Statistics Canada. The primary industries had the highest accident rate followed by construction and manufacturing. The rate was somewhat lower in the transportation industry and much lower in the other service industries. The range was from over 6 % in the primary industries to 1 % in service.

Illness rates tended to be much the same among industries. The goods-producing industries had slightly higher rates than the service industries, except for public administration which was also above-average. It is likely that the number of absences due to illness extending two weeks or more will reflect both the physical demands of the job and the contractual provisions for paid sick leave.

Occupation. - Managerial and professional groups had the lowest absentee rates for both accidents and illnesses. Such persons are likely to have both greater responsibility and interest in their jobs which makes them more apt to reduce the duration of absences, possibly with a part-time return to work. Clerical, sales and services personnel also had lower-than-average absentee rates,

TABLE 4. Persons Absent From Work in 1970 Due to Accidents or Illness by Industry and Occupation of Persons in February 1971, Canada

Industry and occupation	Proportions with absences in 1970		
	Due to accidents	Due to illnesses	Due to accidents and illnesses
	per cent		
Industry:			
Agriculture	--	--	--
Other primary	6.3(1)	9.4	15.7
Manufacturing	4.2	9.0	13.2
Construction	6.3(1)	6.3(1)	12.6
Transportation, etc.	3.4(1)	8.0	11.4
Trade	1.6(1)	5.4	7.0
Finance	--	6.0(1)	6.8(1)
Service	1.1(1)	5.5	6.7
Public administration	--	8.2	10.4
Total	2.5	6.6	9.1
Occupation:			
Managerial	--	4.7	5.3
Professional	--	4.6	5.6
Clerical	1.1(1)	6.6	7.7
Sales	--	6.3	7.9
Service	2.1(1)	6.7	8.8
Transportation, communication	4.0(1)	8.4	12.4
Logging	--	--	25.0(1)
Mining	--	--	21.6(1)
Crafts	4.8	9.1	13.9
Labourer	6.7(1)	8.1(1)	14.8
Farming	--	--	--
Total	2.5	6.6	9.1

(1) See footnote 1, Table 2.

no doubt aided by the less rigorous requirements for physical fitness compared to the blue collar jobs. The highest rates were for logging and mining trades. The occupation "labourer" also recorded absentee rates well above average both for accidents and illnesses. This group would be lacking in job training and may also have somewhat lower standards of health due to lack of income and/or nutritional knowledge.

Work-related Absences

The accidents reported to this survey were not necessarily work-related. Our knowledge is limited to the fact that the accident, however it occurred, involved a two-week absence from work. To test whether accidents were more likely to have occurred at work

absentees were divided between those receiving workmen's compensation and all others.(4) Table 5 shows more than half the male accidents which were serious enough to involve a two-week absence to be thus work-related. Since this exceeds the percentage of time normally spent on the job (a work-week of 45 hours would be about 40 % of the total hours in the week after allowing for 8 hours sleep per night) it would appear that male workers are somewhat more likely to have accidents at work than in other areas of daily living.

(4) Virtually all work accidents would be selected by this method since workmen's compensation boards insure about 85 % of the total employees in Canada, cover most of the more dangerous occupations, and compensate for nearly all work-related injuries.

TABLE 5. Proportion of Absentees by Type of Absence and Sex Receiving Workmen's Compensation, Canada, 1970

Type of absence and sex	Absentees receiving workmen's compensation	Total absentees	Per cent receiving workmen's compensation
		'000	%
Accident:			
Males	95	176	54.0
Females	11(1)	35	31.4(1)
Total	106	211	50.2
Illness:			
Males	10(1)	355	2.8(1)
Females	--	219	--
Total	12(1)	574	2.1(1)
Total	118	786	15.0

(1) See footnote 1, Table 2.

In the case of females, less than one third of the accidents happened at the work area according to this test. Contributing to this lower rate would be the fact that women average less work hours per year and tend to have less active types of work. Employed females also had a lower accident rate than males outside the work environment (non-workmen's compensation board absentees yield a rate of 0.9 % for females, 1.5 % for males).

Few illnesses were compensated through workmen's compensation boards which, traditionally, have tended to insure only illnesses which are shown to be directly caused by the work environment, e.g. silicosis, dermatitis, etc. While the boards do compensate other illnesses such as heart attacks or traumas, on occasion it is generally difficult to pin-point the environment as the major culprit in the case of illness. The American Occupational Safety and Health Act of 1970 emphasizes the need for analysis of work-related illnesses and it is possible that more illnesses will show up as work-related following the implementation of this Act.

Economic After-effects

An attempt has been made to obtain some indication of the economic after-effects of accidents and illness by comparing the labour force status of the absentees at the time of the survey with that of all other persons who

worked in 1970 (Table 6). The measure can only be taken as a rough indication as the follow-up interval is short for absences which occurred late in the year and because February is a low employment month.

Males who had accidents in 1970 were more likely to be unemployed at the time of the survey than those with absences due to illness or with no absence at all. To what extent this might reflect the seriousness of the accidents is difficult to say. Clearly, injuries do occur which prevent the worker from holding his former job and, once separated, new employment is often difficult to find. But there are other factors. The job itself is one; the risk of accident and the risk of unemployment may be closely related. It is also possible that some accidents are associated with personality traits that make it difficult to obtain and keep employment - carelessness, tension, absent-mindedness, etc.

In addition to higher unemployment the men with accidents were found to have a lower rate of withdrawal from the labour force in February of the following year. It may be that expenses stemming from the accident increased the need to earn, or perhaps a relationship exists between economic need and the likeliness to have accidents.

Illness did not appear to alter the ability to maintain, or find, employment.

TABLE 6. Labour Force Status in February 1971 of Persons Ever Working in 1970 by Sex and by Type of Absence in 1970, Canada

Sex and type of absence	Labour force status in February 1971			
	Total	Employed	Unemployed	Non-labour force
	per cent			
Males:				
Absence due to accident	100.0	82.4	12.1(1)	5.6(1)
Absence due to illness	100.0	85.4	7.5(1)	7.0(1)
Total absentees	100.0	84.4	9.0	6.6
Without absence	100.0	81.9	8.0	10.2
Total ever worked	100.0	82.1	8.1	9.8
Females:				
Absence due to accident	100.0	77.9(1)	3.7(1)	18.5
Absence due to illness	100.0	76.6	5.0(1)	18.3
Total absentees	100.0	76.8	4.8(1)	18.4
Absence due to pregnancy	100.0	31.3	4.0(1)	64.7
Total absentees	100.0	64.4	4.6(1)	31.0
Without absence	100.0	75.5	3.6	20.9
Total ever worked	100.0	74.3	3.7	22.0

(1) See footnote 1, Table 2.

The unemployment rate was no higher for males with work absences due to illness than for those with no absences at all. However, the proportion leaving the labour force was less. In view of the relationship between aging and illness the latter result is somewhat puzzling and may reflect a data problem. Specifically, since the total covers all persons who worked in 1970 it may be that the non-labour force total is inflated by young summer employees who had no absences and were back at school in February. On the other hand, this distortion might be minimal, in which case the lower rate of exodus from the labour force suggests some effects stemming from the additional expenses and/or lost income associated with illness.

Accidents did not have the same after-effects for women. Those who had accidents record the same proportion unemployed as those with no absences at all, perhaps because female injuries tend to be less severe, causing shorter absences from work and not seriously impairing ability to perform their former jobs.

The effect of illnesses on female employees again differs from the male experience, in this case raising the proportion unemployed above those without sick leave. There is not the same social pressure on employers to keep jobs open when the absent employee is female nor are females likely to have unique skills or the same unionized protection as males.

Pregnancy absences are of course quite different from other types. In Table 6 two thirds of the women who were absent from jobs for this reason in 1970 were outside the labour force in February 1971. The survey cannot say, of course, how long such women stayed home but there are clearly a high percentage of women in the home when the babies are small.

Number of Periods Absent

Replies to the question on number of absence periods are tabulated in Table 7. Over 80 % of absentees reported only one such period during the year and another 11 %

reported two. The other 9 % of the replies were spread over three, four or five periods, with the highest number in five. Since five periods of two consecutive weeks absence during a year seems an unusual number to recall it is probable that the question was

confused with a later question on duration of absence. Taking the replies at face value would indicate 1.38 absences per absentee. For rough calculations on time lost (see Table 7) the fifth time period was reduced leaving 1.20 absences per absentee.

TABLE 7. Persons Absent by Number of Absence Periods, Total Absences and Rates of Absences Per Absentee for Selected Groups, Canada, 1970

Characteristic	Total absentees	Selected groups		
		Male absentees	Female absentees	Absentees receiving workmen's compensation
'000				
Number of absence periods:				
1 period	709	425	284	98
2 periods	96	61	35	--
3 "	22(1)	14(1)	--	--
4 "	13(1)	--	--	--
5 "	40	23(1)	17(1)	--
Total absentees	881	531	349	118
per cent				
1 period	80	80	81	83
2 periods	11	11	10	--
3 "	2(1)	3(1)	--	--
4 "	1(1)	--	--	--
5 "	5	4(1)	5(1)	--
Total absentees	100	100	100	100
'000				
Total absences:				
As reported(2)	1,220	739	480	160
Adjusted for reporting bias(2)	1,060	647	412	140
Rates of absences per absentee:				
As reported(2)	1.38	1.39	1.38	1.36
Adjusted for reporting bias(2)	1.20	1.22	1.18	1.19

(1) See footnote 1, Table 2.

(2) Adjustment assumes all persons reporting 5 or more absence periods actually had 1 period of long duration; no adjustment was made to those reporting 4 periods although there may have been misreporting here also.

Duration of Absences

Information on duration was gathered for the last absence only. It was thought that this would reduce the memory bias and produce a representative distribution. Tabulations on duration were also limited to those who had returned to work since this information was not yet established for those still

absent in February 1971. Table 8 reveals different patterns of duration for different types of absences. The longest absences were of course associated with pregnancy; over half the women who did return to work had taken leave for a period of two months or more. However, when pregnancies are excluded, women tended to have shorter absences than men for both accidents and illnesses. With

both sexes absences following accidental injury tended to be longer than those due to illness. The duration of absences due to accidents appeared to be somewhat shorter when the injuries were covered by workmen's compensation. Since it seems unlikely that work injuries would be less serious than others, one might infer the shortened absence

reflects first aid facilities at places of work and rehabilitation services provided by the workmen's compensation boards.

Overall, over half the absentees returned to work within a month but the mean average time off is estimated at 7.2 weeks.

TABLE 8. Absentees Who Returned to Work by Duration and Type of Absence, by Sex, Canada, 1970

Sex and type of absence	Duration of absence							
	Total	2 weeks	3 weeks	4 weeks	6 weeks	2 months	3 months or more	5 months or more(1)
	'000							
Males:								
Absence due to accident	167	32	25(2)	25(2)	21(2)	19(2)	43	18(2)
Absence due to illness	333	87	57	51	37	37	59	29
Females:								
Absence due to accident	29	--	--	--	--	--	--	--
Absence due to illness	196	58	32	34	24(2)	16(2)	32	12(2)
Absence due to pregnancy	37	--	--	--	--	--	21(2)	--
Workmen's compensation absentees	111	23(2)	17(2)	18(2)	15(2)	14(2)	25	--
	per cent							
Males:								
Absence due to accident	100	19	15(2)	15(2)	13(2)	12(2)	27	11(2)
Absence due to illness	100	26	17	15	11	11	19	9
Females:								
Absence due to accident	100	--	--	--	--	--	23(2)	--
Absence due to illness	100	30	16	17	12(2)	8(2)	16	6(2)
Absence due to pregnancy	100	--	--	--	--	--	59(2)	--
Workmen's compensation absentees	100	21(2)	15(2)	16(2)	14(2)	13(2)	22	--

(1) Also included in column "3 months or more".
 (2) See footnote 1, Table 2.

Total Time Lost

Estimates were made of the total time lost in absences - again excluding absentees who had not returned at the time of the survey. Assuming that each man-year worked is equal to 50 weeks, the absences of two weeks or more due to accident, illness and pregnancy accounted for 1 2/3 % of the total employment time in 1970. From data regularly reported to the Labour Force Survey it is estimated that the average number of persons on sick leave per week was 2.6 % of the employment in 1970, with 1.7 % absent a full survey

week.(5) The rate has shown a gradual annual increase since 1961 (when it totalled 1.7 %). Males have continuously had a slightly greater illness rate than females and their pattern of seasonal fluctuations has been less extreme.(6)

(5) Calculated from special tables in The Labour Force, op. cit.
 (6) See Peter Hicks "Persons at Work Less Than a Full Week: Seasonal Patterns", Notes on Labour Statistics 1971, Statistics Canada (Catalogue 72-207 Annual) (Ottawa: Information Canada).

TABLE 9. Average Duration of Absences by Sex and Type of Absence for Persons Returning to Work, Canada, 1970

Sex and type of absence	Number of returning absentees	Total weeks absent	Average duration of absences
		'000	
Males:			
Absence due to accident	167	1,278	7.6
Absence due to illness	333	2,303	6.9
Total	500	3,581	7.2
Females:			
Absence due to accident	29	218	7.4
Absence due to illness	196	1,174	6.0
Total(1)	262	1,880	7.2
Workmen's compensation absentees	111	817	7.4

(1) Female total excludes absences due to pregnancy.

TABLE 10. Weeks Lost Through Absences as a Proportion of Weeks Worked by Sex, Canada, 1970

Sex	Weeks worked(1)	Weeks lost(2)	Proportion lost
		'000	%
Males	265,500	4,333	1.63
Females	128,450	2,218	1.73
Total	393,950	6,551	1.66

(1) Average annual employment times 50 weeks.

(2) Returning absentees times average weeks lost times average periods absent per absentees, excluding 5 times period (see Tables 7 and 9).

Remuneration

Information on this topic may be rather quickly outdated as federal legislation passed subsequent to the survey will greatly alter the pattern of remuneration paid in future years. Nevertheless, it is worth recording the survey's findings. As shown in Table 11, about one quarter of those absent received full pay, one half got either partial pay or

workmen's compensation, while a final quarter received no remuneration at all. When the absence was of short duration (under one month) a higher proportion got full pay and when the absence lasted over three months very few got full pay and more than one third had no remuneration at all. For short absences a larger proportion of women than men got full pay, but when the absence was over three months more than half the females had no remuneration.

TABLE 11. Distribution of Absentees by Duration of Absence, Type of Remuneration and Sex, Canada, 1970

Type of remuneration	Duration of absence								
	Total returning	2 weeks	3 weeks	4 weeks	6 weeks	2 months	3 months	4 months	5 months or more
per cent									
Both sexes:									
Full pay full-time	27	41	37	25	24(1)	20(1)	--	--	--
Full pay part-time	5	--	--	--	--	--	--	--	--
Part pay	23	17	19(1)	25	31(1)	27(1)	28(1)	--	27(1)
Workmen's compensation ...	14	12(1)	14(1)	15(1)	16(1)	17(1)	--	--	--
No pay	27	26	23	28	20(1)	26(1)	36(1)	--	36(1)
Combinations and unknown	3(1)	--	--	--	--	--	--	--	--
Total	100	100	100	100	100	100	100	100	100
Males:									
Full pay full-time	26	37	35	23(1)	23(1)	--	--	--	--
Full pay part-time	3(1)	--	--	--	--	--	--	--	--
Part pay	27	19(1)	23(1)	28(1)	37(1)	32(1)	32(1)	--	31(1)
Workmen's compensation ...	19	17(1)	18(1)	20(1)	23(1)	23(1)	--	--	--
No pay	20	24	19(1)	21(1)	--	--	--	--	--
Combinations and unknown	3(1)	--	--	--	--	--	--	--	--
Total	100	100	100	100	100	100	100	100	100
Females:									
Full pay full-time	29	47	43	29(1)	--	--	--	--	--
Full pay part-time	7(1)	--	--	--	--	--	--	--	--
Part pay	17	--	--	--	--	--	--	--	--
Workmen's compensation ...	4(1)	--	--	--	--	--	--	--	--
No pay	41	29(1)	32(1)	41(1)	--	--	60(1)	--	61(1)
Combinations and unknown	--	--	--	--	--	--	--	--	--
Total	100	100	100	100	100	100	100	100	100

(1) See footnote 1, Table 2.

Summary of Findings

The total number of persons who had absences (one or more) lasting a fortnight or longer was 881,000. The absentee rate expressed as a percentage of the average annual employment for 1970 was 11.2 %. The average employer then, if the pattern holds, might expect that over 11 % of his work force would be absent on sick leave, or the equivalent, at least one fortnight each year.

If total absences including repeats had

been included the number would have been increased by about one fifth to something over 13 %.

Over half the accident and illness cases covered by this report returned to work within a month, but the mean average time off was estimated at 7.4 weeks.

About one quarter of those absent received full pay, one half got either partial pay or workmen's compensation while a final quarter received no remuneration at all.

CONTRIBUTIONS DE LA POPULATION ET DU TAUX D'ACTIVITÉ À LA POPULATION ACTIVE, 1953-71

Nicole Gendreau*

Cet article traite de l'influence de l'accroissement démographique et des variations du taux d'activité sur l'effectif de la population active canadienne au cours des vingt dernières années. L'évolution de ces séries y est exposée. Les contributions distinctes de la population et des taux d'activité aux changements dans les effectifs de la population active sont analysées de même que sont indiquées les causes sous-jacentes à la croissance des divers secteurs de la population active.

Définition de la population active

La population active canadienne est une mesure statistique de l'offre de main-d'oeuvre contribuant à la production nationale des biens et services. Elle est définie comme cette partie de la population civile non-institutionnelle âgée de 14 ans et plus qui, au cours de la semaine de référence, détenait un emploi ou cherchait du travail. Les concepts utilisés afin de mesurer ces deux groupes sont définis d'une façon précise et la population active est la somme de ces deux ensembles.

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Les personnes dont les activités ne sont pas pertinentes à la population active forment le groupe des "inactifs". Le système de priorités intégrés à la classification des activités fait des "inactifs", un groupe résiduel. Ainsi, les maîtresses de maison et les étudiants (ou autres personnes) travaillant à temps partiel sont considérés comme employés. Un tel système de priorités assure que la population active soit calculée dans sa totalité puisque toute activité sur le marché du travail, sans considération du temps ou de l'importance du travail pour la personne qui l'accomplit, fait considérer l'individu comme membre de la population active.

Population, population active et taux d'activité, 1953-71

Entre 1953 et 1971, la population canadienne non-institutionnelle âgée de 14 ans et plus(1) passait d'environ 10 millions à 15 millions et demi, et la population active, de 5 millions et demi à 8 millions et demi (voir le Tableau 1).

(1) Dans cet article, à moins d'indication contraire, le terme "population" signifie toujours la population non-institutionnelle âgée de 14 ans et plus.

TABLEAU 1. Moyennes annuelles, variations annuelles et taux annuel de croissance de la population, de la population active et du taux d'activité, Canada, 1953-71

Années	Moyennes annuelles			Variation annuelle des moyennes annuelles			Taux annuel de croissance	
	Popula- tion	Population active	Taux d'activité	Popula- tion	Population active	Taux d'activité	Popula- tion	Population active
	'000		%	'000		%	pourcentage par année	
1953	10,164	5,397	53.1					
1954	10,391	5,493	52.9	227	96	-.2	2.2	1.8
1955	10,597	5,610	52.9	206	117	.0	2.0	2.1
1956	10,807	5,782	53.5	210	172	.6	2.0	3.1
1957	11,123	6,008	54.0	316	226	.5	2.9	3.9
1958	11,388	6,137	53.9	265	129	-.1	2.4	2.1
1959	11,605	6,242	53.8	217	105	-.1	1.9	1.7
1960	11,831	6,411	54.2	226	169	.4	1.9	2.7
1961	12,053	6,521	54.1	222	110	-.1	1.9	1.7
1962	12,280	6,615	53.9	227	94	-.2	1.9	1.4
1963	12,536	6,748	53.8	256	133	-.1	2.1	2.0
1964	12,817	6,933	54.1	281	185	.3	2.2	2.7
1965	13,128	7,141	54.4	311	208	.3	2.4	3.0
1966	13,475	7,420	55.1	347	279	.7	2.6	3.9
1967	13,874	7,694	55.5	399	274	.4	3.0	3.7
1968	14,264	7,919	55.5	390	225	.0	2.8	2.9
1969	14,638	8,162	55.8	374	243	.3	2.6	3.1
1970	15,016	8,374	55.8	378	212	.0	2.6	2.6
1971	15,388	8,631	56.1	372	257	.3	2.5	3.1

La population et la population active ont toutes les deux connu une tendance continue à la hausse; cependant, le taux de croissance n'était pas constant, tel que les variations des pentes et les mouvements ondulatoires de ces séries le montrent dans la partie (a) du graphique 1.

Pour certains problèmes analytiques, les variations elles-mêmes, à la fois en chiffres réels et en pourcentages, sont plus révélatrices que l'ensemble; elles sont donc présentées dans les parties b et c du graphique 1. L'étroite relation entre les deux séries, à la fois dans les changements réels annuels et dans les taux de croissance, indique qu'une grande partie de la croissance de la population active a été causée par la croissance de la population elle-même. Cependant, la concordance entre les deux séries n'est pas toujours parfaite. Certaines années, la croissance de la population active ne correspond pas à celle de la population — l'année 1960 est un cas frappant. Bien que les taux de croissance aient généralement obéi à la même tendance, la population active augmentait presque à chaque année à un rythme plus rapide que la population; le contraire ne s'est produit que très rarement — plus particulièrement entre 1958 et 1963. La croissance de la population n'était donc pas la seule responsable des variations de la population active.

Pour obtenir une relation exacte entre la population active et la population, il faut se référer au taux d'activité, soit la population active exprimée en pourcentage de la population. Bien que la population active ne constitue pas un groupe fixe de personnes — le nombre mensuel d'entrées et de sorties dans la population active étant considérable — le rapport entre celle-ci et la population peut être stable, en quel cas le taux d'activité demeure relativement constant. Au cours de la période 1953-71, le taux d'activité est passé de 53.1% à 56.1%, un changement de 3% sur une période de 18 ans (voir le Tableau 1). Parallèlement aux variations enregistrées dans les taux de changement de la population et de la population active, les variations du taux d'activité étaient principalement positives au début et à la fin de la période, mais négatives entre 1958 et 1963, toujours à l'exception de l'année 1960.

Pour étayer davantage, l'augmentation moyenne annuelle de la population était de 290,000 au cours de toute la période et de 375,000 au cours des six dernières années. Un sommet a été atteint en 1967, lorsqu'une addition de presque 400,000 personnes représentait un accroissement de 3%. Par la suite, l'augmentation annuelle s'est ralentie et en 1971 la population canadienne s'élargissait au rythme de 2.5%.

Cette augmentation de la population n'était pas répartie également entre les différents groupes d'âge-sexe ni entre les années (voir les graphiques 2 à 7). L'influence des nombreuses naissances de la période d'après-guerre est facilement repérable dans les données. Cette explosion démographique a été ressentie lorsque ces enfants devinrent en âge de travailler. Le groupe des 14 à 19 ans augmenta de 401,000 entre 1961 et 1965. Les répercussions sur le groupe d'âge suivant se fit au cours des années 1965-69; les 20 à 24 ans connurent leur taux de croissance maximum (7.2 %) en 1967.

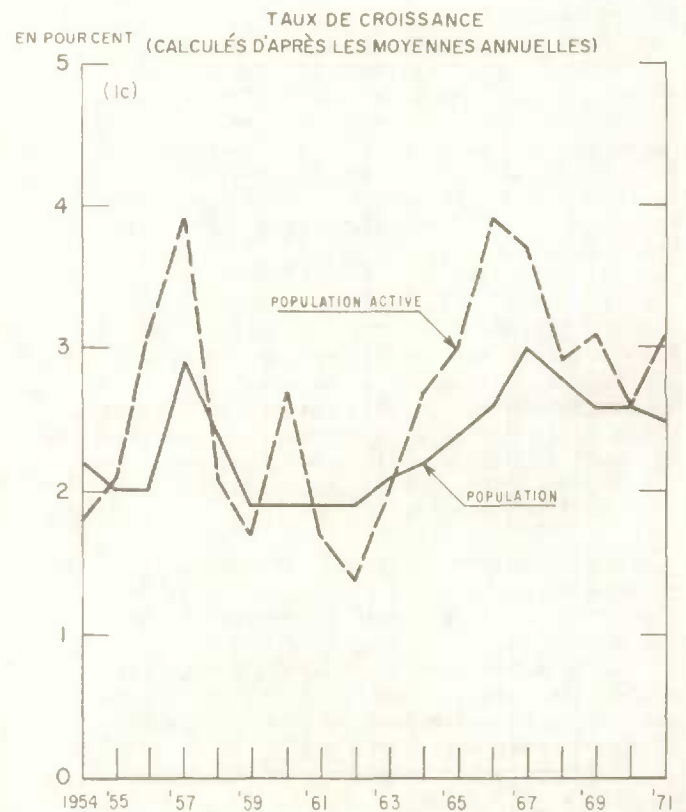
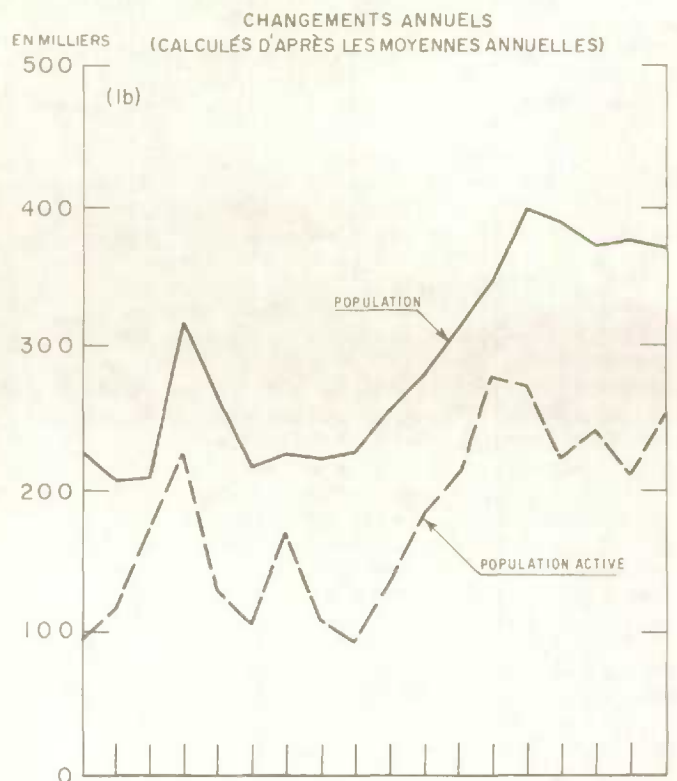
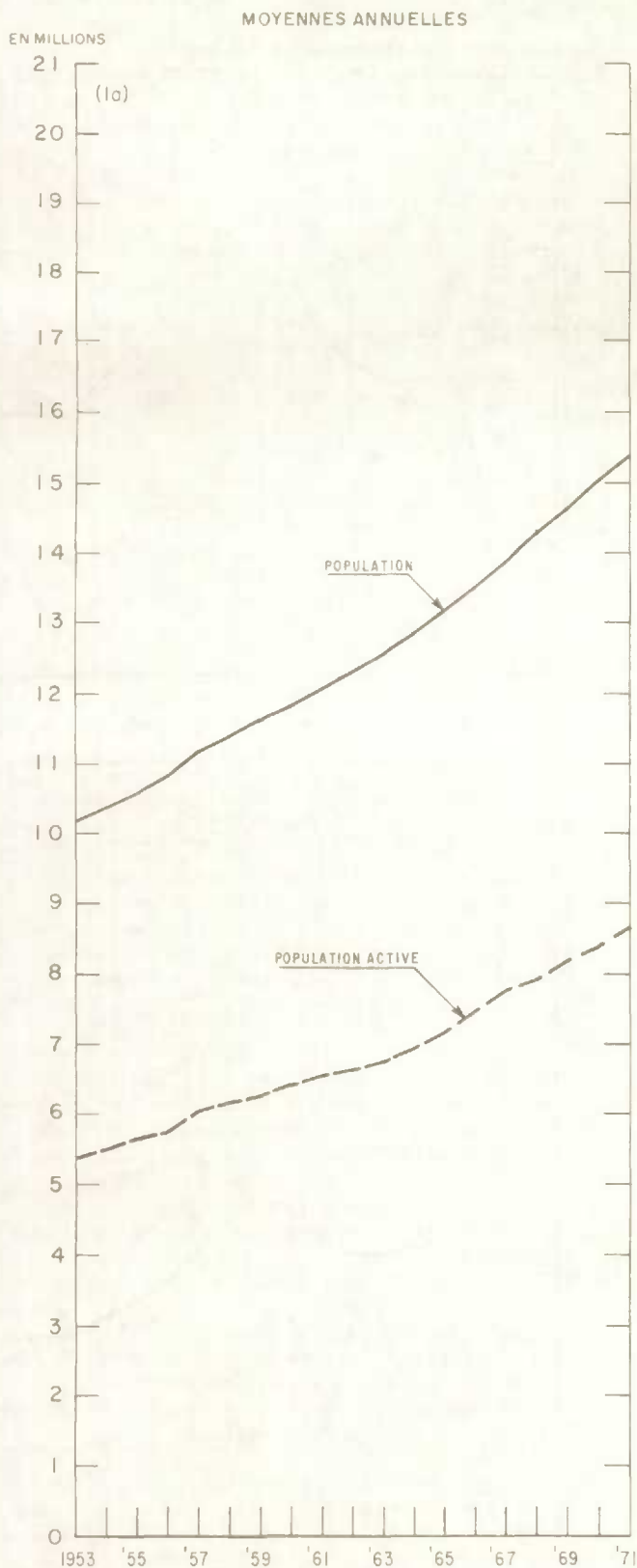
Une seconde influence importante fut l'arrivée massive d'immigrants au cours des années 1956-57 et 1965-67. Ces vagues d'immigration étaient constituées surtout d'hommes âgés de 20 à 44 ans. Ainsi si le groupe des hommes âgés de 25 à 44 ans a effectivement diminué de 2,000 personnes entre 1961 et 1962, il a augmenté de 152,000 entre 1966 et 1968. Au moment où l'augmentation due à l'immigration s'est ralentie, les enfants de la période d'après-guerre atteignaient l'âge de ce groupe (25 à 44 ans) qui augmentait de 58,000 personnes en 1971.

La façon dont cette distribution inégale de la croissance de la population est absorbée dans la population active dépend grandement de la propension des différents groupes d'âge-sexe à participer à la population active (voir le graphique 8). Les hommes de 25 à 44 ans ont un taux d'activité très élevé (au-dessus de 96 %); un changement dans l'effectif de ce groupe se répercute donc dans sa presque totalité sur la population active. Cependant, l'augmentation dans la population des hommes âgés de 45 ans et plus amène une augmentation correspondante de seulement 75 % du nombre des actifs de ce groupe en 1953.

Le taux d'activité des hommes a légèrement diminué entre 1953 et 1971, mais le taux d'activité des femmes a considérablement augmenté. Aussi, des augmentations similaires de la population féminine se sont intégrées dans la population active à des degrés sensiblement différents suivant l'époque où sont survenues ces augmentations. En 1953, chaque augmentation d'un millier du groupe des femmes âgées de 25 à 44 ans apportait 241 femmes de plus à la population active, alors que la même augmentation en 1971 en donnait 409. Une même augmentation de la population, mais cette fois, des femmes âgées de 45 ans et plus, a entraîné un changement de 131 dans la population active de 1953, et de 271 dans celle de 1971.

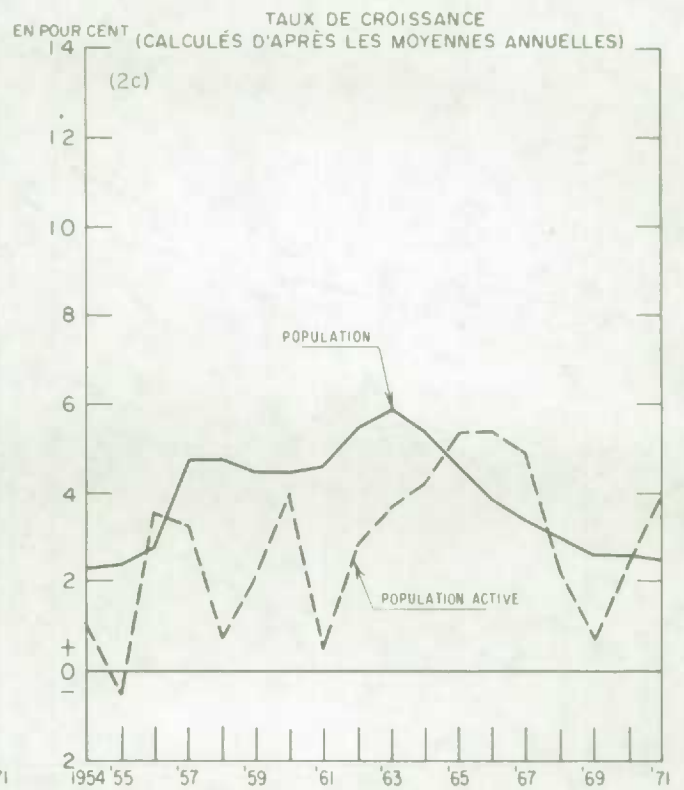
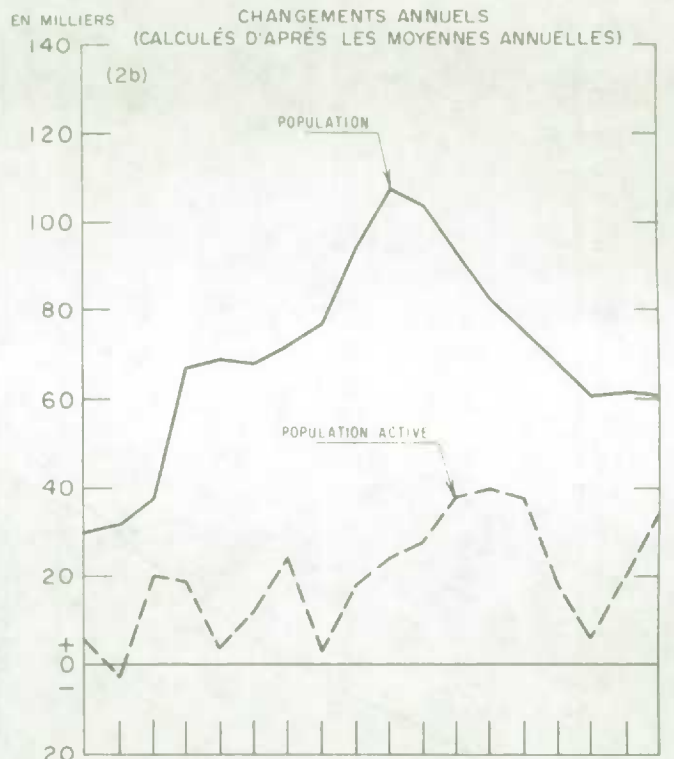
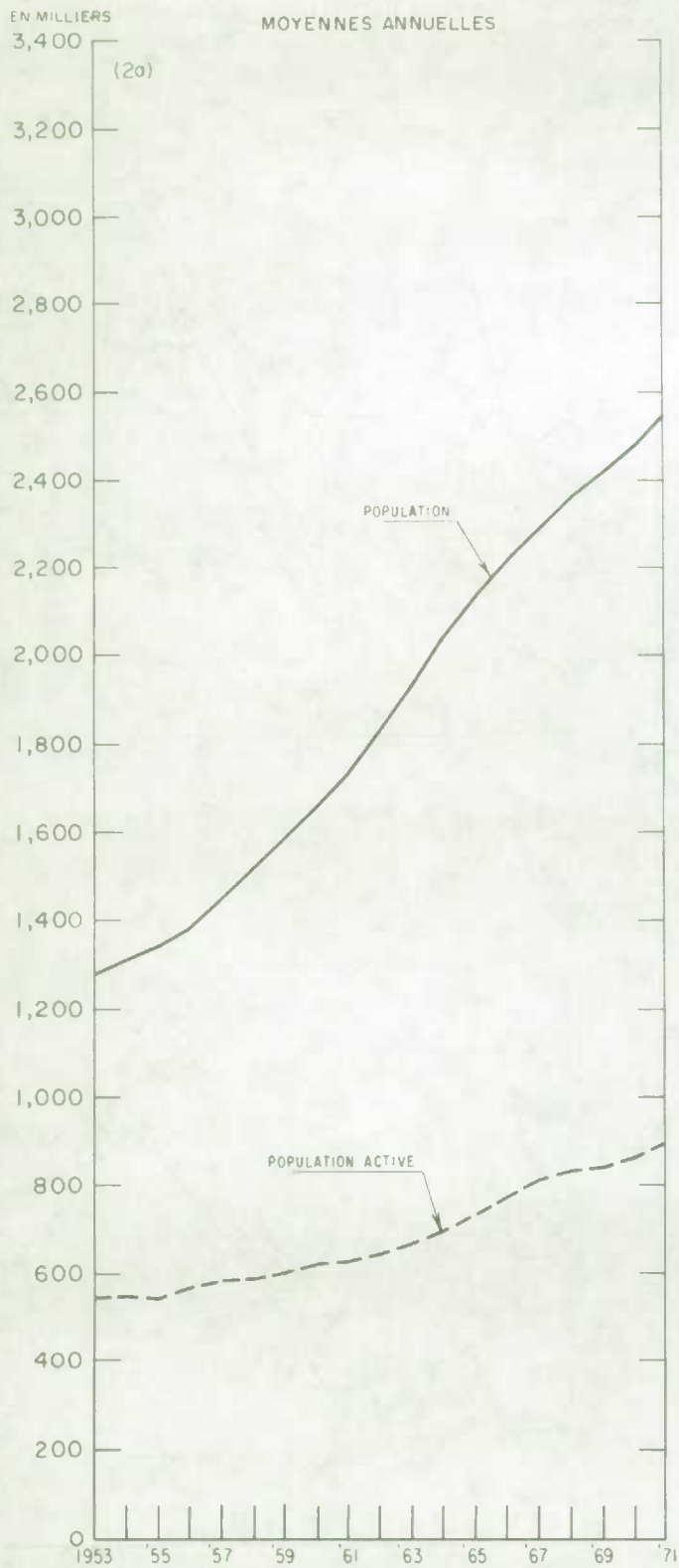
Dans certains groupes, le taux d'activité est en régression. C'est particulièrement le cas des jeunes de 14 à 19 ans. L'énorme augmentation des inscriptions scolaires des

POPULATION ET POPULATION ACTIVE AU CANADA, 1953-1971



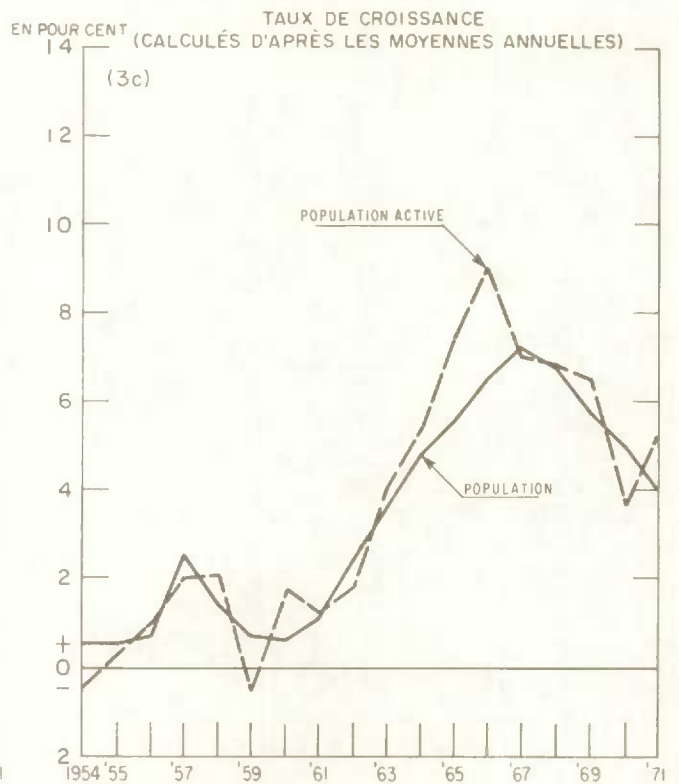
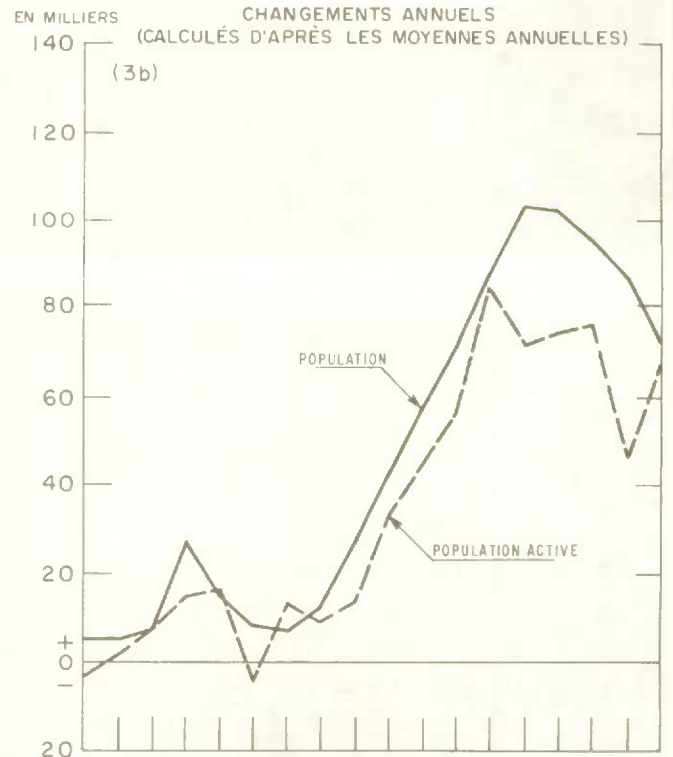
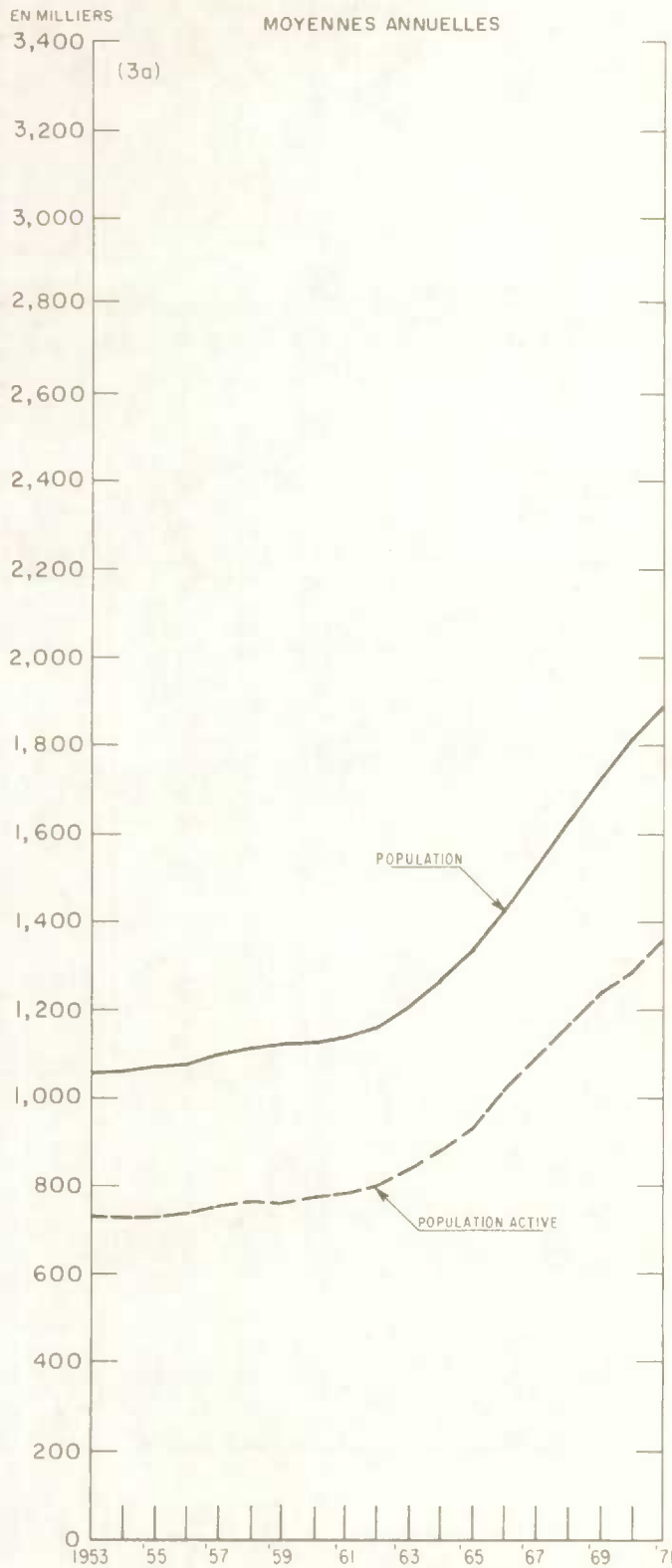
SOURCE: TABLEAUX SPÉCIAUX, SECTION DES ENQUÊTES SUR LA MAIN-D'ŒUVRE.

POPULATION ET POPULATION ACTIVE DES HOMMES ET FEMMES
DE 14 À 19 ANS, CANADA, 1953-1971



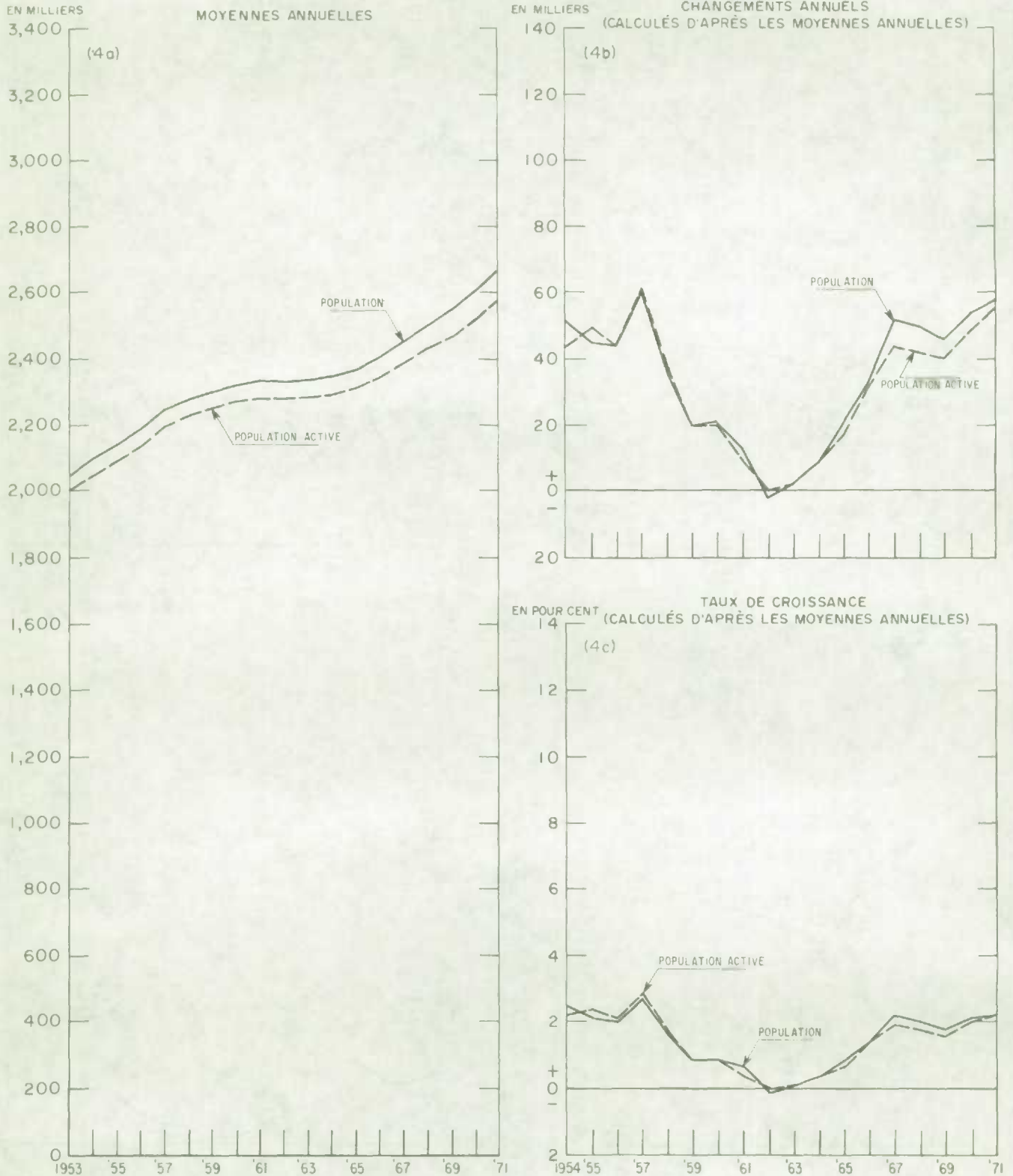
SOURCE: TABLEAUX SPÉCIAUX, SECTION DES ENQUÊTES SUR LA MAIN-D'ŒUVRE.

POPULATION ET POPULATION ACTIVE DES HOMMES ET FEMMES
DE 20 À 24 ANS, CANADA, 1953-1971



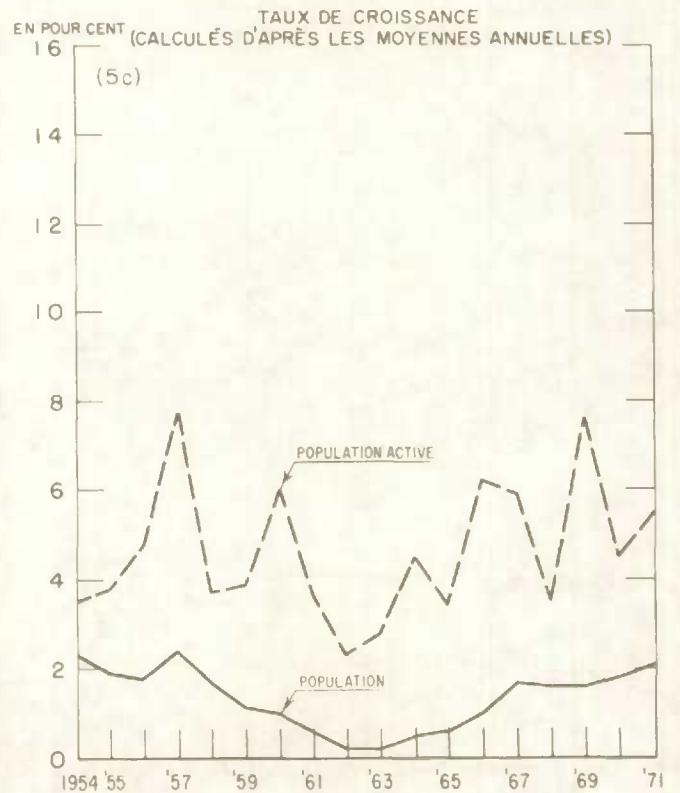
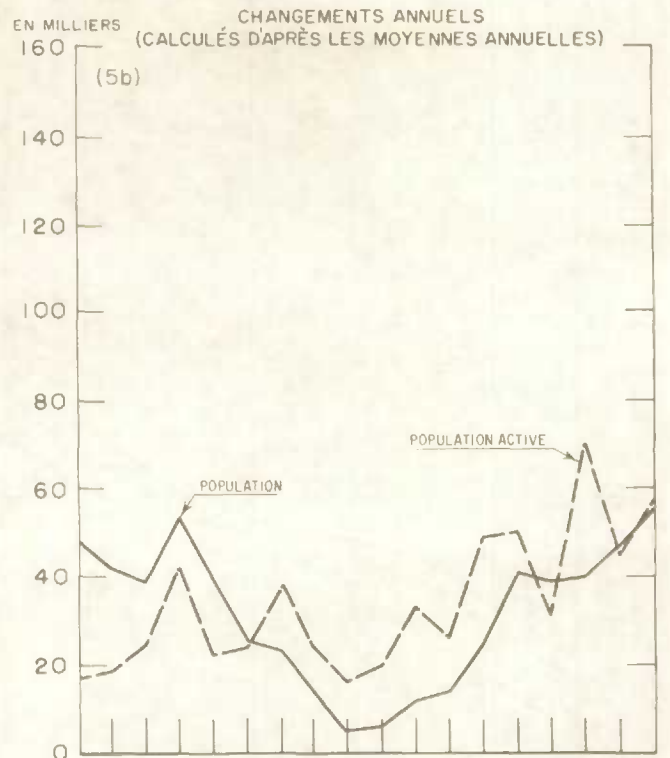
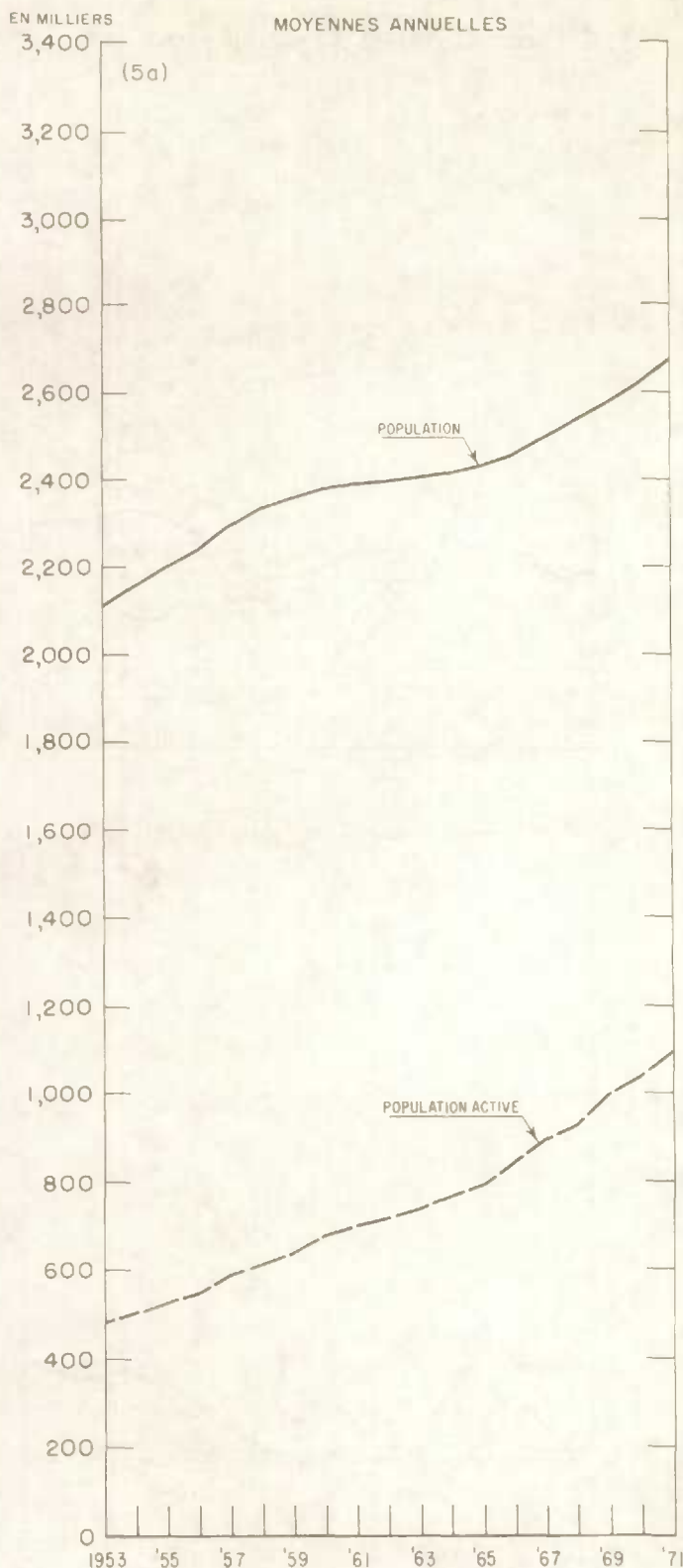
SOURCE: TABLEAUX SPÉCIAUX, SECTION DES ENQUÊTES SUR LA MAIN-D'ŒUVRE.

POPULATION ET POPULATION ACTIVE DES HOMMES
DE 25 À 44 ANS, CANADA, 1953-1971



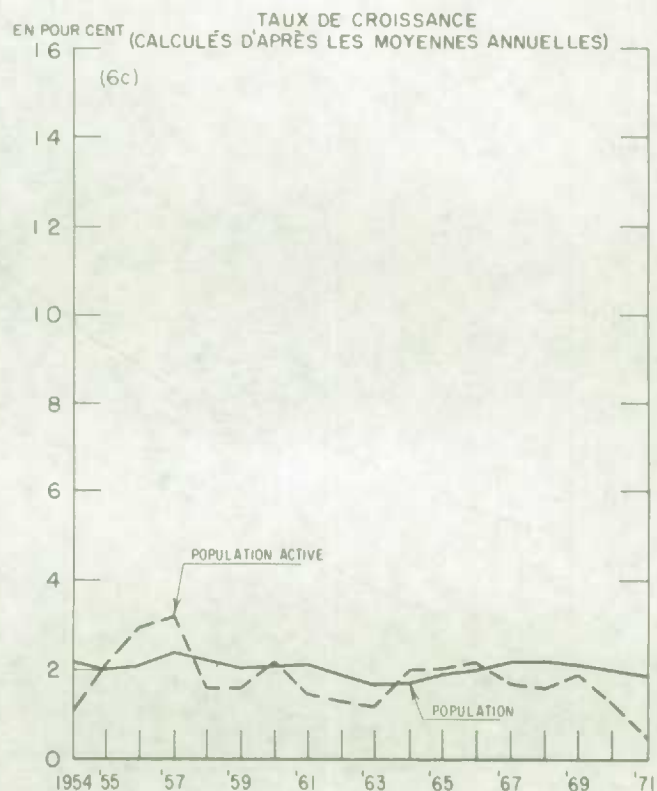
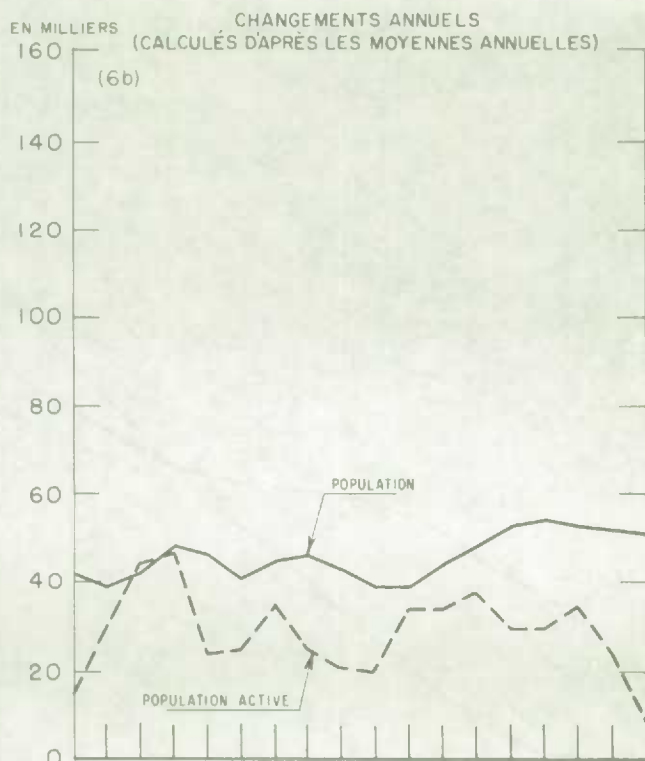
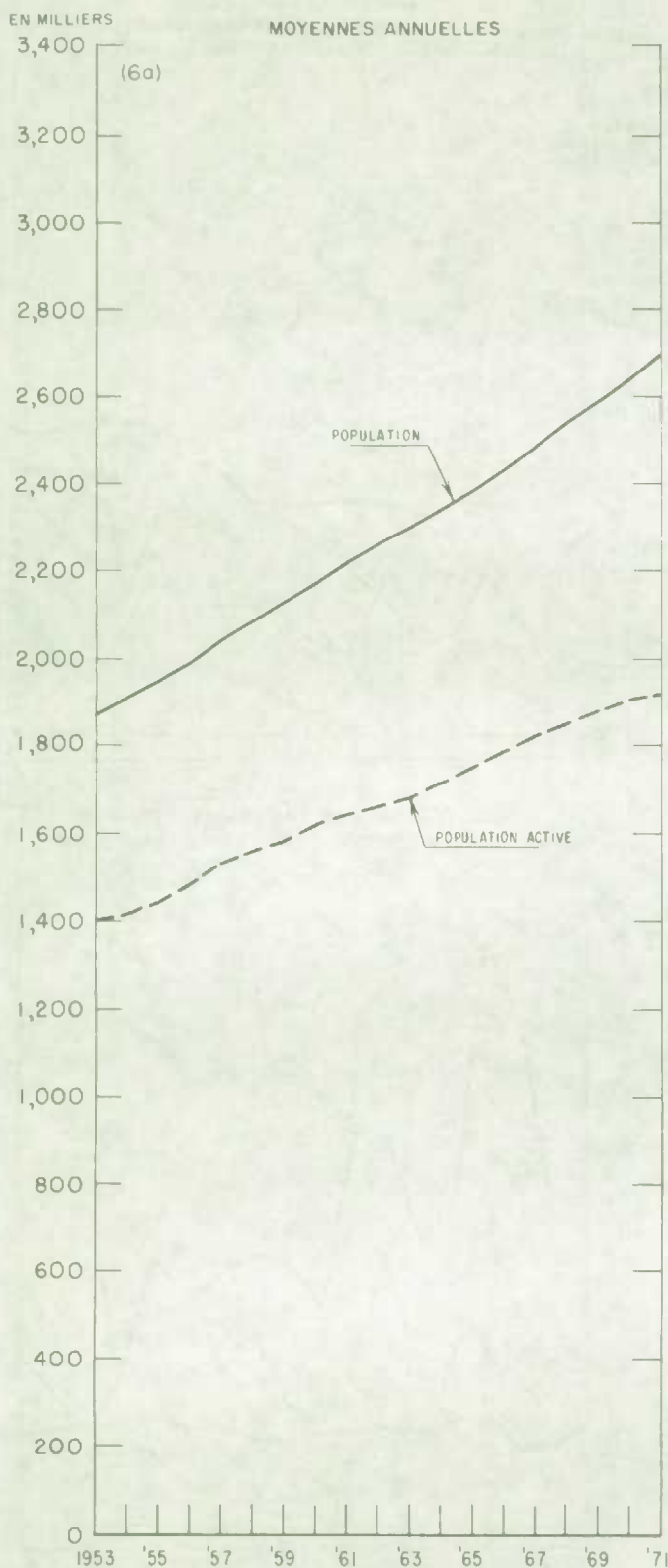
SOURCE: TABLEAUX SPÉCIAUX, SECTION DES ENQUÊTES SUR LA MAIN-D'ŒUVRE.

POPULATION ET POPULATION ACTIVE DES FEMMES
DE 25 À 44 ANS, CANADA, 1953-1971



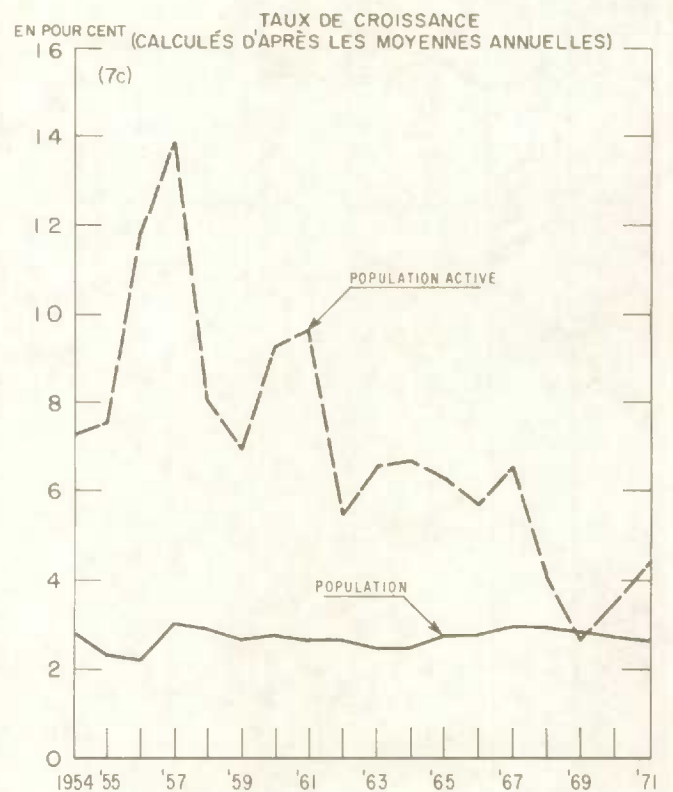
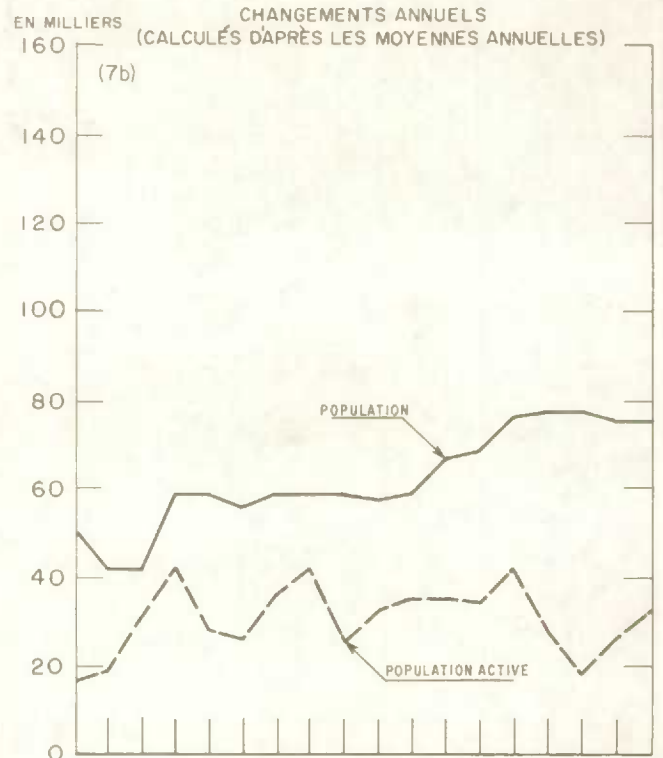
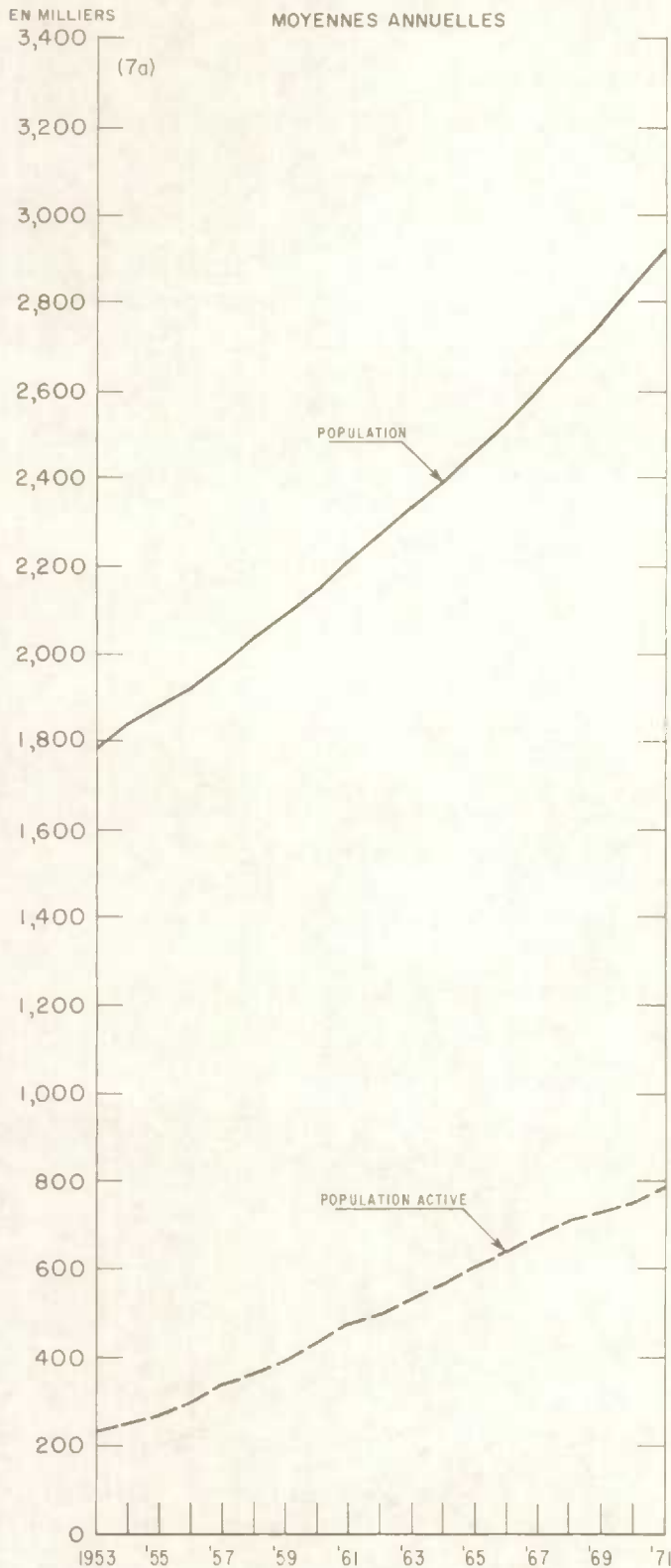
SOURCE: TABLEAUX SPÉCIAUX, SECTION DES ENQUÊTES SUR LA MAIN-D'ŒUVRE

POPULATION ET POPULATION ACTIVE DES HOMMES
DE 45 ANS ET PLUS, CANADA, 1953-1971



SOURCE : TABLEAUX SPÉCIAUX, SECTION DES ENQUÊTES SUR LA MAIN-D'ŒUVRE

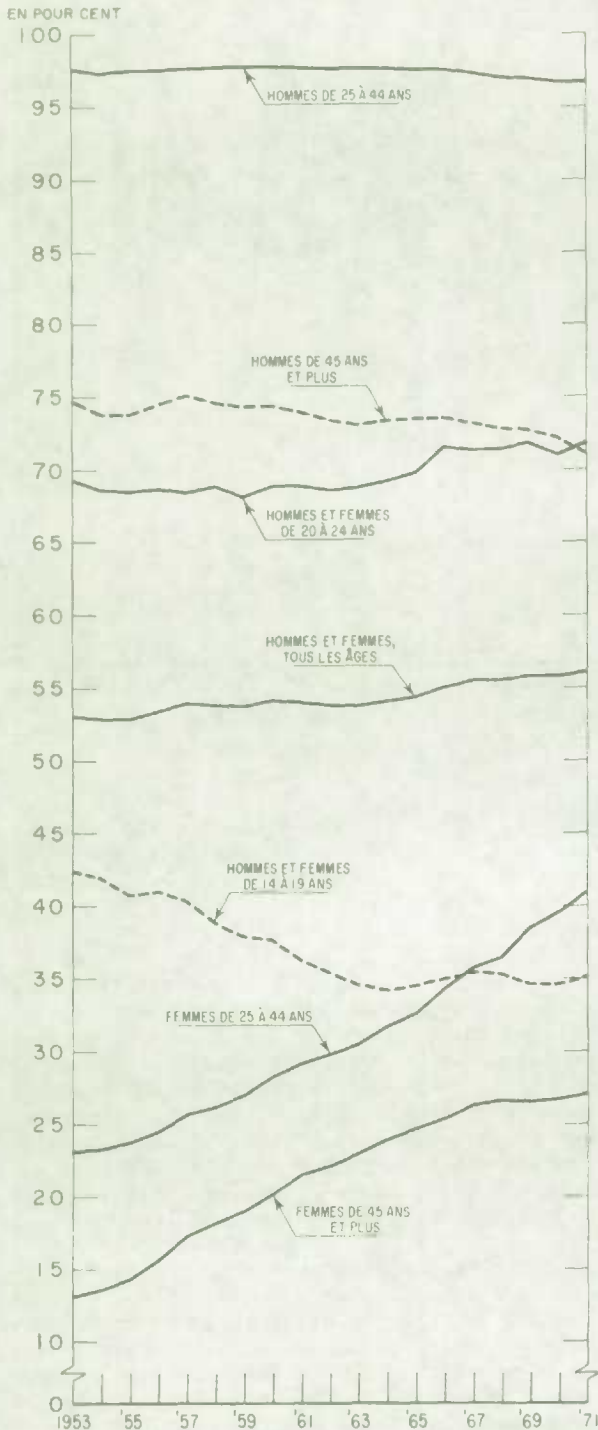
POPULATION ET POPULATION ACTIVE DES FEMMES
DE 45 ANS ET PLUS, CANADA, 1953-1971



SOURCE: TABLEAUX SPÉCIAUX, SECTION DES ENQUÊTES SUR LA MAIN-D'ŒUVRE

GRAPHIQUE-8

TAUX D'ACTIVITÉ SELON L'ÂGE
ET LE SEXE, CANADA,
1953-1971
(MOYENNES ANNUELLES)



SOURCE: TABLEAUX SPÉCIAUX, SECTION DES ENQUÊTES
SUR LA MAIN-D'ŒUVRE.

garçons et des filles de ce groupe d'âge a eu un effet direct sur leur taux d'activité. En 1953, seulement 42 % de l'accroissement de la population de ce groupe passait à la population active, et en 1971, 35 %.

Contributions distinctes de la population et des taux d'activité à la population active au niveau global

Dans le graphique 9, les changements annuels de la population active ont été séparés pour montrer la partie de ces changements entraînée par l'accroissement de la population et celle due aux variations du taux d'activité.(2)

Le premier facteur - l'accroissement de la population - a amené environ 100,000 personnes par an à la population active dans les années 50 et au début des années 60; en 1957 et au cours du premier semestre de 1958 toutefois, l'immigration multiplia par un et demi l'impact du facteur population. Depuis 1967, l'accroissement de la population a apporté environ 200,000 personnes par an à la population active. L'effet du taux d'activité a été plus spasmodique. Il a quelquefois renforcé l'impact de la population (e.g., 1956-57, 1960 et 1963-68) et en d'autres occasions, il a agi en sens inverse (1954, fin 1958 et début 1959, la plupart du temps entre 1961-63). Au cours des quatre dernières années, bien que l'effet a varié entre le positif et le négatif, l'aspect positif a été plus en évidence.

Cette plus grande instabilité de l'impact du taux d'activité est remarquable. Une des principales raisons est que le mouvement global n'enregistre que le résultat net de changements dans différentes directions pour

(2) Les résultats sont dérivés des équations suivantes:

$$PA_0 = Pop_0 \cdot TA_0$$

$$PA_1 = Pop_1 \cdot TA_1$$

$$\text{et } PA_1 = PA_0 + \Delta PA$$

où: PA = Population active

Pop = Population

TA = Taux d'activité

$$\text{donc } Pop_1 \cdot TA_1 = PA_0 + \Delta PA,$$

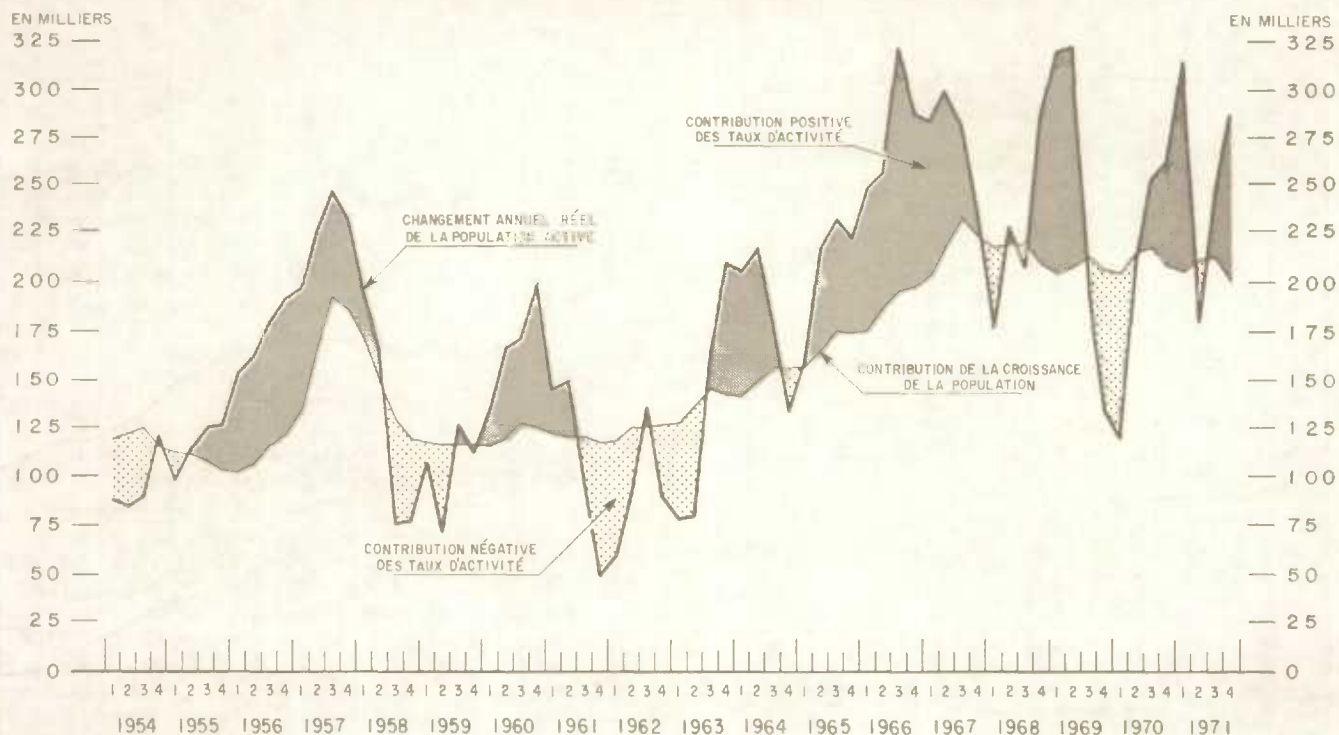
$$(Pop_0 + \Delta Pop) (TA_0 + \Delta TA) = PA_0 + \Delta PA,$$

dans l'hypothèse où le terme du second degré est petit,

$$\Delta PA = Pop_0 (\Delta TA) + TA_0 (\Delta Pop)$$

GRAPHIQUE-9

CONTRIBUTIONS DE LA CROISSANCE DE LA POPULATION ET DE L'ÉVOLUTION DES TAUX D'ACTIVITÉ AU CHANGEMENT ANNUEL DE LA POPULATION ACTIVE, DONNÉES TRIMESTRIELLES, CANADA, 1954-1971



les divers groupes d'âge-sexe. Ces changements ont en outre considérablement modifié la structure de la population active. Cette transformation de la composition de la population active, dont nous allons maintenant traiter, est elle-même responsable en partie de la différence enregistrée au niveau global.

Évolution de la structure de la population active

Premièrement, le rapport de féminité dans la population active a fortement changé dans tous les groupes d'âge. La proportion de femmes par rapport aux hommes dans la population active totale est passée de 0.28 en 1953 à 0.49 en 1971, soit une augmentation de 0.21 (voir le graphique 10). Cette augmentation était inégalement répartie entre les groupes d'âge, en partie parce que dans certains groupes le déséquilibre entre les hommes et les femmes était moins marqué au début de la période. Ainsi, dans le groupe d'âge 14-19, l'augmentation (de 0.64 à 0.76) était relativement modeste. Le rapport de féminité dans le groupe d'âge 20-24 est passé de 0.54 à 0.70, soit une augmentation de 0.16. La

progression la plus importante a été constatée dans le groupe des femmes de 45 ans et plus - soit une augmentation de 0.25 point, suivie de près par celle du groupe d'âge 25-44, une augmentation de 0.18 point.

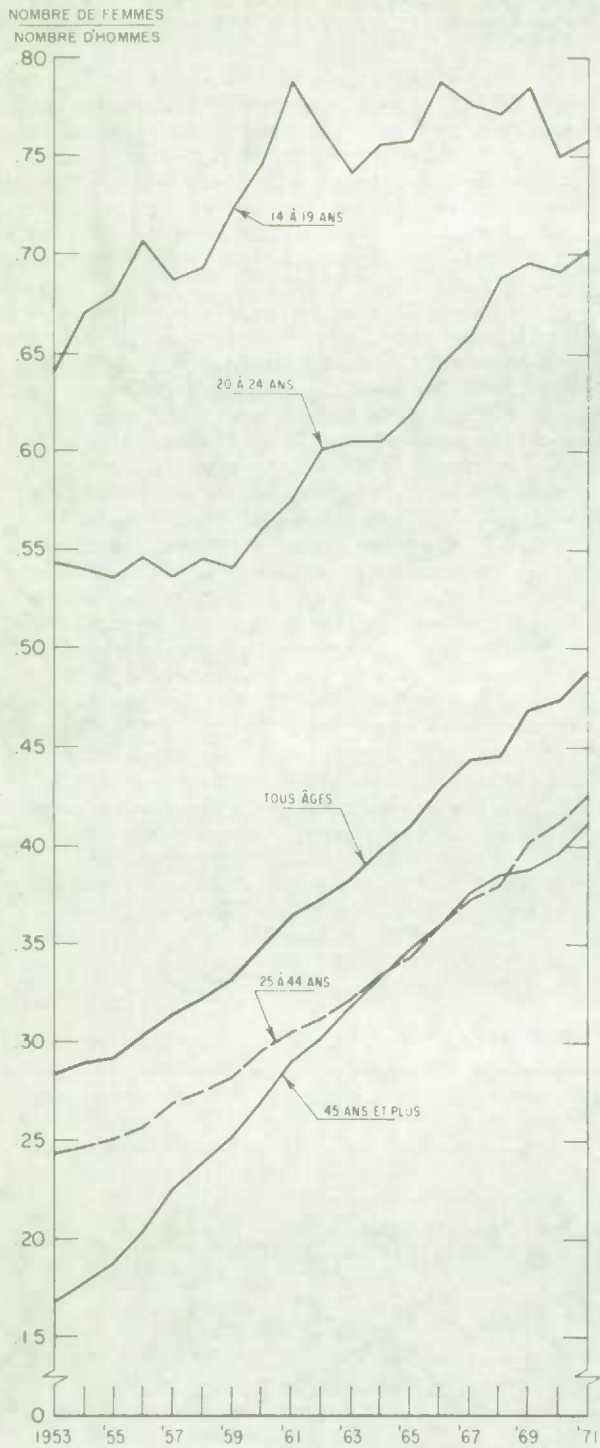
Pour l'ensemble de la période, le rapport de féminité de la population active totale a changé en faveur des femmes au rythme annuel moyen de 0.11, soit 0.06 pour le groupe 14-19, 0.09 pour le groupe 20-24, 0.10 pour le groupe 25-44 et 0.14 pour les personnes âgées de 45 ans et plus. C'est donc dire que les gains du rapport de féminité sont reliés à l'âge moyen du groupe: plus le groupe est âgé, plus les gains sont prononcés.

La structure d'âge de la population active s'est également considérablement transformée (voir le graphique 11). La cause peut être une modification dans la structure d'âge de la population sur laquelle la population active repose ou une modification dans la structure d'activité des groupes d'âge, ou une combinaison de ces deux phénomènes.

La courbe de l'âge médian de la population active masculine suit le tracé établi

GRAPHIQUE - 10

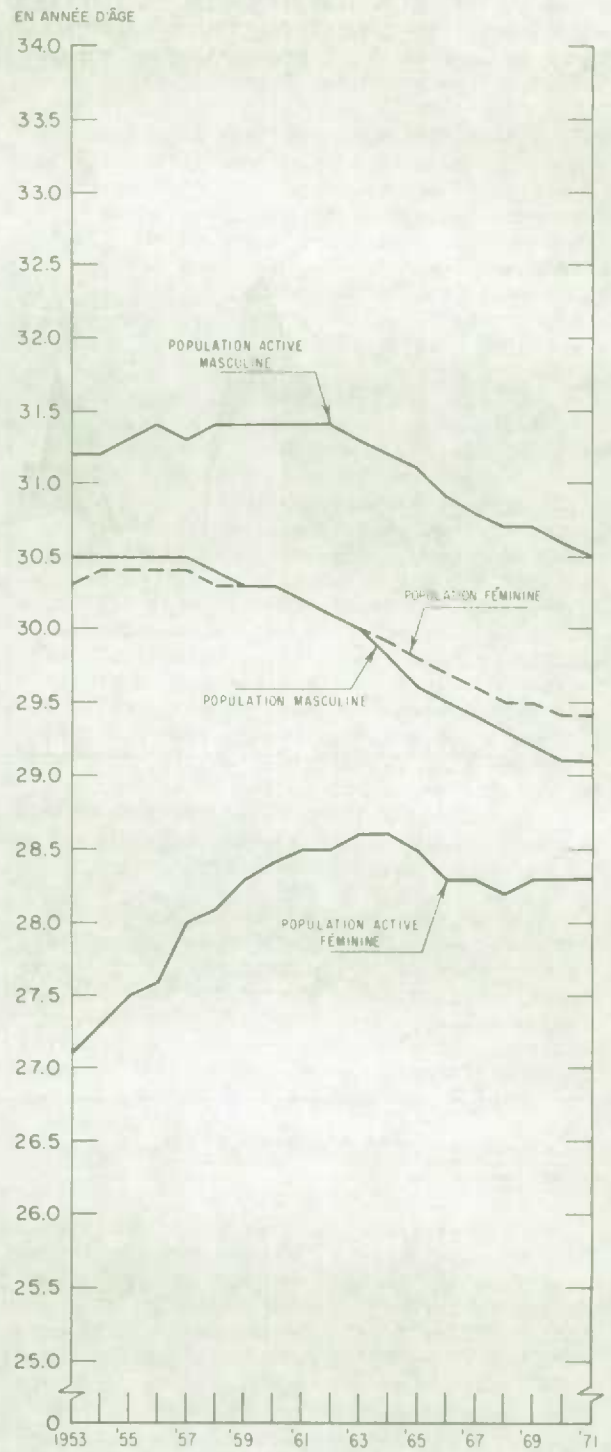
RAPPORTS DE FÉMINITÉ DE LA POPULATION ACTIVE SELON LES GROUPES D'ÂGE, CANADA, 1953-1971



SOURCE: DONNÉES CALCULÉES À PARTIR DES TABLEAUX SPÉCIAUX, SECTION DES ENQUÊTES SUR LA MAIN-D'ŒUVRE

GRAPHIQUE - 11

ÂGE MÉDIAN DE LA POPULATION ET DE LA POPULATION ACTIVE SELON LE SEXE, CANADA, 1953-1971



SOURCE: DONNÉES CALCULÉES À PARTIR DES TABLEAUX SPÉCIAUX, SECTION DES ENQUÊTES SUR LA MAIN-D'ŒUVRE

par l'âge médian de la population masculine. La population active masculine est plus âgée que la population correspondante en raison du grand nombre de jeunes qui fréquentent l'école. Les inscriptions scolaires ayant augmentées au cours de la période, l'âge médian de la population active masculine fut plus stable que l'âge médian de la population masculine qui, lui, a plus fortement subi les effets du grand nombre de naissances enregistrées dans la période d'après-guerre. En 1953, cette population active était plus vieille de 0.7 année que la population, alors qu'en 1971 la différence était de 1.4. Dans un laps de temps de 20 ans, l'âge médian de la population active a baissé de 0.7 année, celui de la population de 1.4.

La courbe de l'âge médian de la population féminine est à peu près identique à celle de la population masculine; cependant, leur courbe respective de population active est différente en plusieurs points. Tout d'abord, la population active féminine est beaucoup plus jeune que la population féminine, tout particulièrement durant les premières années de la période. Deuxièmement, le profil de la courbe de la population active féminine n'a guère de points communs avec celle de la population féminine. Cette dissemblance était prévisible puisque le rapport de féminité de la population active a augmenté avec l'âge, alors que l'on connaît la stabilité du rapport de féminité de la population. Les deux courbes ont suivi des directions différentes dans le temps. La population s'est rajeunie de 0.9 an, tandis que la population active a

vieilli de 1.2 an. L'écart considérable entre les deux médianes a donc été fortement réduit; alors qu'en 1953 la population active était de 3.2 années plus jeune que la population, en 1971 la différence n'était plus que de 0.9 année.

En bref, la structure d'âge de la population active des hommes a été principalement modifiée par des changements dans la population, le plus grand nombre d'inscriptions scolaires se faisant toutefois sentir, tandis que dans le cas des femmes, des changements dans les propensions à entrer dans la population active ont joué un rôle primordial.

La différence entre les structures d'âge de la population active masculine et féminine est plus détaillée au Tableau 2. En 1971, 33.3 % de la population active féminine faisait partie du groupe d'âge 14-24 ans (22.5 % pour les hommes), et 27.9 % de celui des personnes âgées de 45 ans et plus (33.1 % pour les hommes). Au cours de l'ensemble de la période, le pourcentage de femmes dans le groupe d'âge plus jeune a baissé, tandis que celui des hommes a augmenté (-6.2 % et +3.4 % respectivement). Le pourcentage de femmes dans le groupe des plus âgées a augmenté (+8.3 % tandis que dans le même groupe chez les hommes, il est resté stable (-0.2 %). Il y a donc eu une modification dans la répartition de la population active entre les femmes plus jeunes et plus âgées; cependant, la population active féminine dans son ensemble est restée beaucoup plus jeune que la population active masculine.

TABLEAU 2. Répartition de la population active en pourcentage selon l'âge, hommes et femmes, certaines années, Canada

(basée sur les moyennes annuelles)

Sexe et âge	1953	1958	1963	1968	1970	1971
Hommes:						
14 ans et plus	100.0	100.0	100.0	100.0	100.0	100.0
14-24	19.1	18.2	18.5	21.3	22.0	22.5
25-44	47.6	48.2	46.9	44.7	44.4	44.4
45 ans et plus	33.3	33.6	34.6	34.0	33.6	33.1
Femmes:						
14 ans et plus	100.0	100.0	100.0	100.0	100.0	100.0
14-24	39.5	34.3	32.1	33.8	33.3	33.3
25-44	40.9	40.9	39.3	37.3	38.6	38.7
45 ans et plus	19.6	24.9	28.7	28.8	28.2	27.9

Changements dans les taux d'activité et leurs causes

Les taux d'activité sont fonction de l'âge et du sexe; certains taux d'activité ont toutefois subi d'importantes transformations (voir le graphique 12). Ces transformations se différencient à la fois quant à la direction et à l'importance de leur mouvement. Le niveau supérieur et positif de variation des taux d'activité des femmes plus âgées est une preuve que surtout ces groupes sont responsables de la contribution des taux d'activité à l'accroissement de la population active au cours des 20 dernières années. Il est également intéressant de noter les changements négatifs aux extrémités des courbes du taux d'activité des jeunes et des hommes. Ce sont là des facteurs qui compensent l'accroissement de la population active féminine.

Quelles explications ont ces nombreux changements contradictoires dans les taux d'activité? Et pourquoi le taux d'activité général était-il plus haut en 1971 qu'au début des années 50? Au niveau des individus, la réponse met en jeu une gamme fort étendue de variables modifiant les décisions d'entrer, de ne pas entrer, ou de rester dans la population active - ce genre de recherche se situe bien au-delà de l'objectif de cet article. Cependant, une revue des causes principales peut être réalisée au niveau global, ou il existe deux classes principales de variables altérant le degré d'activité dans la population active.

La première classe de variables regroupe ce que l'on peut qualifier de variables démographiques. La répartition de la population par âge et par sexe appartient à cette classe, ainsi que la répartition urbaine et rurale, le taux de natalité de la cohorte féminine, les tables de nuptialité, etc. La baisse du taux de natalité qui réduit les responsabilités des femmes comme maîtresses de maison en est une illustration évidente; ce phénomène augmente à court terme la tendance à entrer dans la population active, mais un autre effet peut se faire sentir à long terme, puisqu'une réduction de la jeune population et une augmentation de la proportion de personnes plus âgées peut se produire. Une diminution de la proportion de la population agricole dans la population totale entraîne une augmentation du pourcentage de femmes dans la population active. Le second groupe de variables agissant sur les taux d'activité provient de l'environnement institutionnel, des coutumes et des échelles de valeurs de la société, etc. Sont inclus dans cette classe: la durée des études, l'attitude concernant l'âge de la retraite

et l'emploi des femmes, et les autres phénomènes connexes. En général, les coutumes changent lentement et tendent à avoir un effet stabilisateur.

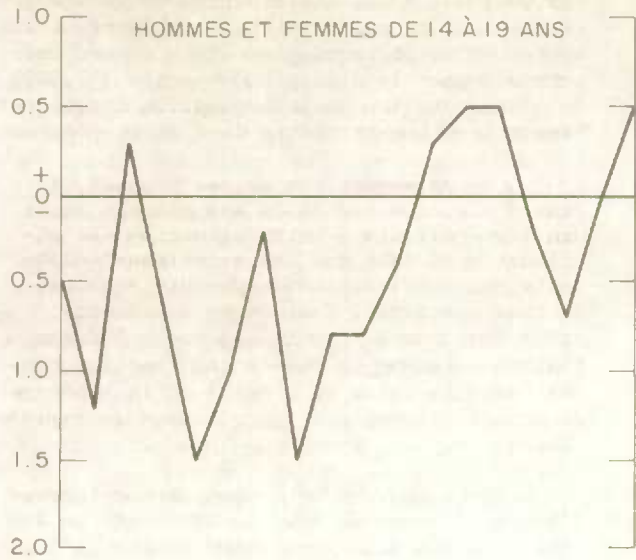
Il existe encore un autre type d'influence sur le niveau d'activité. La population active constitue le point de contact par excellence entre les secteurs économique et démographique et, bien que le but de cet article ne soit pas l'étude de l'effet des conditions économiques sur la population active(3), il faut souligner qu'il semble y avoir là un certain rapport. Deux grandes théories ont vu jour à cet effet. La première connue sous le nom "effet du travailleur d'appoint" se présente comme suit: à mesure que les conditions économiques se détériorent et que de plus en plus de chefs de famille deviennent chômeurs, des travailleurs secondaires entrent dans la population active afin de maintenir le revenu familial. La seconde hypothèse appelée "hypothèse du retrait cyclique" soutient que, considérées les mêmes circonstances, les travailleurs se découragent et se retirent de la population active ou n'y entrent pas.

La sensibilité de divers groupes de la population aux pressions du marché a changé au cours des années. Le groupe des femmes y est maintenant beaucoup plus sensible en raison de divers facteurs dont la baisse de la natalité, la semaine de travail plus courte qui permet plus facilement aux femmes mariées de travailler, une formation maintenant plus poussée, le mouvement vers les régions urbaines qui offrent de plus grandes possibilités d'emplois, et l'augmentation relative des emplois dans le domaine des services par rapport aux emplois pour cols bleus. Bien que l'augmentation du revenu des époux ait probablement agi comme un effet préventif à l'entrée des femmes sur le marché, il est également probable que l'augmentation des aspirations de la famille ait été plus importante. Pour les jeunes, le prolongement des années d'études a eu tendance à diminuer leur activité dans la population active. D'autre part, chez les plus âgés, la généralisation des régimes de pensions de retraite et l'amélioration de la sécurité sociale, ainsi que le glissement des emplois agricoles, où prédominent des travailleurs indépendants, vers les secteurs non agricoles où la dépendance envers les autres pour un emploi est plus forte, ont renforcé la tendance à une retraite anticipée.

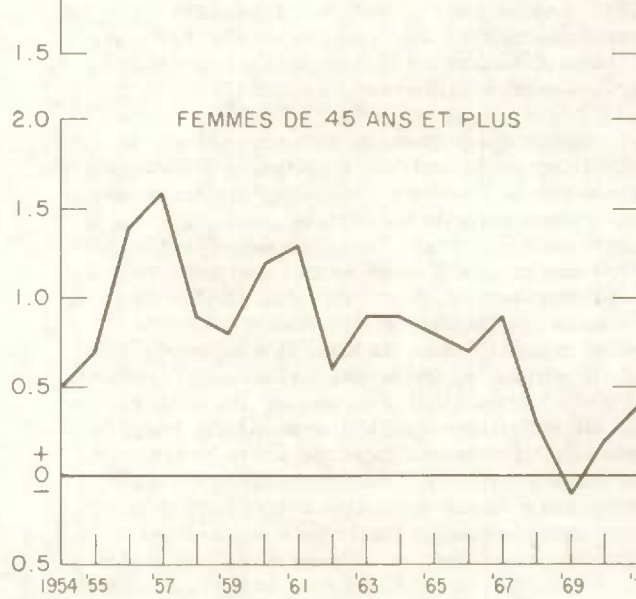
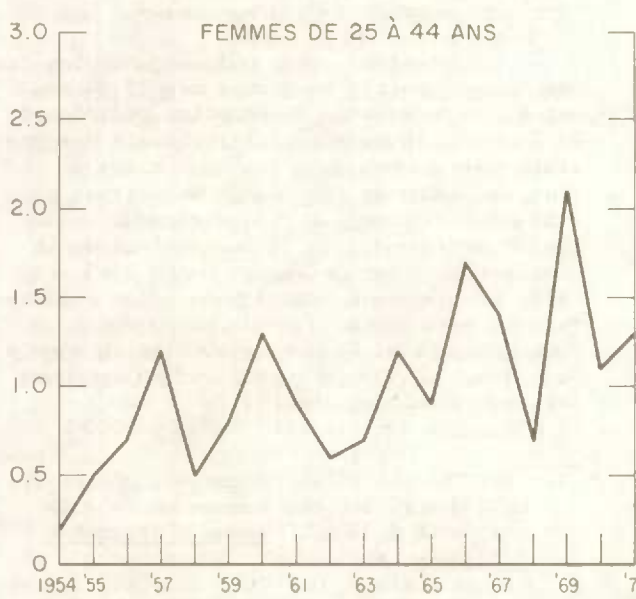
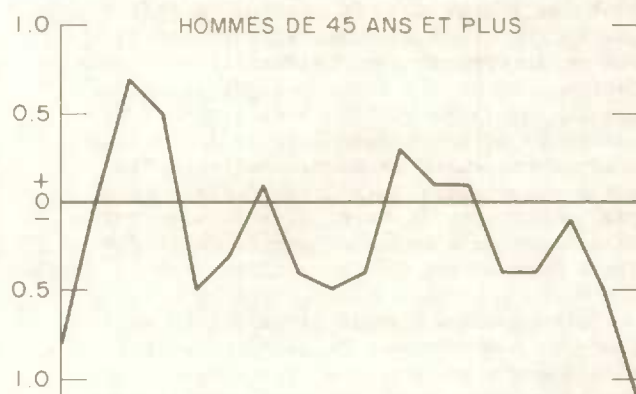
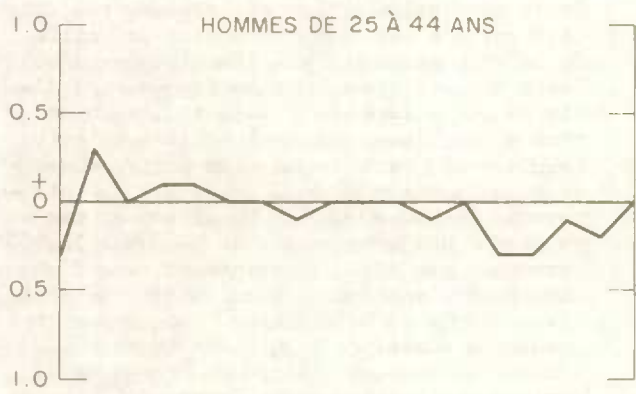
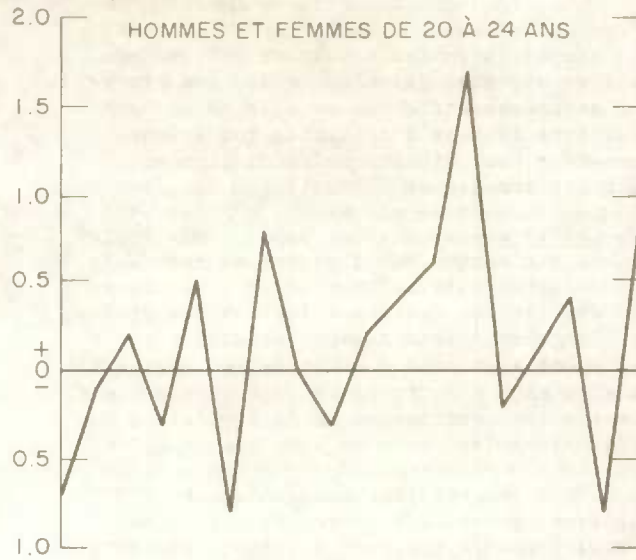
(3) Voir: "Youth Participation in the Labour Force: 1953-70", Notes on Labour Statistics, 1971, Statistique Canada (Catalogue 72-207 Annuel) (Ottawa: Information Canada).

VARIATION ANNUELLE DES TAUX D'ACTIVITÉ SELON LES GROUPES D'ÂGE ET LE SEXE, CANADA, 1954-1971

VARIATION ANNUELLE DES TAUX D'ACTIVITÉ



VARIATION ANNUELLE DES TAUX D'ACTIVITÉ



SOURCE: DONNÉES CALCULÉES À PARTIR DES TABLEAUX SPÉCIAUX, SECTION DES ENQUÊTES SUR LA MAIN-D'ŒUVRE.

Contributions distinctes de la population et du taux d'activité à la population active au niveau des divers groupes d'âge-sexe

La dernière partie de cet article consiste en une étude plus détaillée des effets de l'accroissement de la population et des variations du taux d'activité; les groupes âge-sexe y sont étudiés individuellement (voir les graphiques 13 et 14).

14-19 ans. - Sur une base trimestrielle, les variations de ce groupe au sein de la population active ont été les plus instables de tous les groupes d'âge. Bien que les changements dans la population active aient généralement été positifs, les variations du taux d'activité ont été si fortement négatives en certaines occasions qu'elles ont entraîné une baisse de la population active (zone sombre en-dessous de la ligne zéro). Les taux d'activité ont baissé durant la meilleure partie de la période, mais plus particulièrement avant 1963 lorsque l'inscription scolaire augmentait rapidement. De 1965 à 1968, et à nouveau en 1970 et 1971, le taux d'activité s'est allié à l'impact de la population pour faire augmenter la population active.

20-24 ans. - L'augmentation de la population active était légèrement négative au début de la période, mais a gonflé à plus de 90,000 en 1966 et en 1969. Comme le montre le graphique, une importante partie de la vague d'immigration de 1957 et 1958 était composée de personnes de ce groupe d'âge. La comparaison des données trimestrielles permet de constater que l'immigration ajouta annuellement à cette partie de la population active un minimum de 10,000 et un maximum de 25,000 personnes. L'impact du grand nombre de naissances de la période d'après-guerre sur la croissance de la population active est également clairement illustré.

Excepté au cours des années de forte immigration, la contribution de la population (zone sous la courbe intitulée: contribution de la croissance de la population) à la population active était bien en-dessous de 10,000 avant 1960. En 1967 toutefois, la population aurait fourni 70,000 personnes à la population active si ce n'avait été de l'effet neutralisant du taux d'activité. En 1968, l'impact du boom des naissances de la période d'après-guerre commença à s'atténuer. Ainsi, pour ce groupe, presque toute l'augmentation au sein de la population active peut être attribuée à la croissance de la population, bien que le taux d'activité ait eu un impact positif certaines années. En 1966, les changements du taux d'activité ont ajouté 25,000 personnes à une progression déjà imposante (au-dessus de 60,000) due à la

croissance de la population; la situation se répéta en 1969. Le dernier trimestre de 1970 a enregistré la plus grande augmentation (39,000) due à une modification du taux d'activité pour ce groupe d'âge; cependant, l'augmentation de la population était encore responsable pour la plus grande partie (49,000) de l'augmentation de la population active par rapport au même trimestre de l'année précédente.

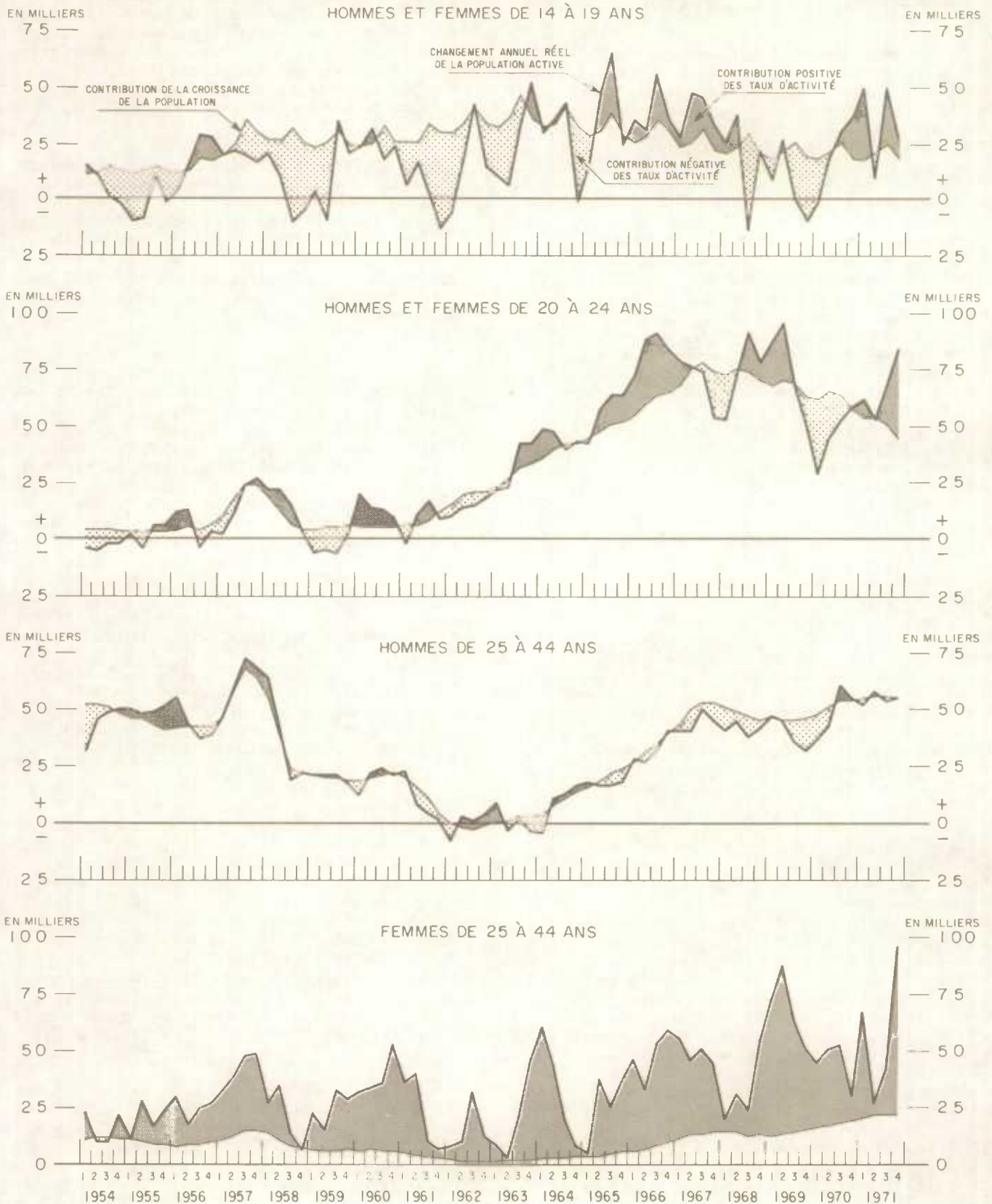
Contrairement aux autres groupes, le taux d'activité des 20-24 ans n'a pas suivi une ligne définie. Cette situation est attribuable au fait que les principaux composants ont suivi des tendances différentes: le taux d'activité des femmes a augmenté; celui des hommes travaillant toute l'année a diminué (comme ce fut le cas chez les hommes "dans la force de l'âge") et la tendance du groupe fréquentant l'école demeure imprécise(4).

25-44 ans. - Les hommes dans ce groupe d'âge sont reconnus pour la stabilité de leur participation à la population active. Il s'ensuit que les changements dans la taille de la population active ont presque toujours fait suite à des variations dans la taille de la population; il y a toutefois eu une lente et persistante diminution du taux d'activité qui a légèrement ralenti l'augmentation due à l'accroissement de la population. Depuis 1967, cette population active augmenta à un taux annuel de 1.6 % à 2.2 %, soit en moyenne, de 40,000 à 55,000 personnes par an au lieu d'une progression de 46,000 à 58,000 personnes par an si la baisse du taux d'activité ne s'était produite. C'est une répétition de ce qui s'est passé dans les toutes premières années de la période étudiée. L'accroissement enregistré au milieu de la période était très faible et en une occasion (1962), l'augmentation était nulle.

La situation en ce qui concerne les femmes faisant partie du groupe des 25-44 ans est à l'opposé de la description précédente. En 1956-57, le taux d'activité était responsable pour un peu plus des deux tiers de l'augmentation de la population active; en 1959 et 1960 pour les cinq sixièmes; et de 1961 à 1964 pour presque la totalité de la progression. Par la suite, entre 1965 et 1971, le rôle joué par la population augmenta. Il ressort de la comparaison des données trimestrielles que la population ajouta de 4,000 à 10,000 personnes par an au cours des deux premières années; de 11,000 à 15,000 entre 1967 et 1969 et de 20,000 à

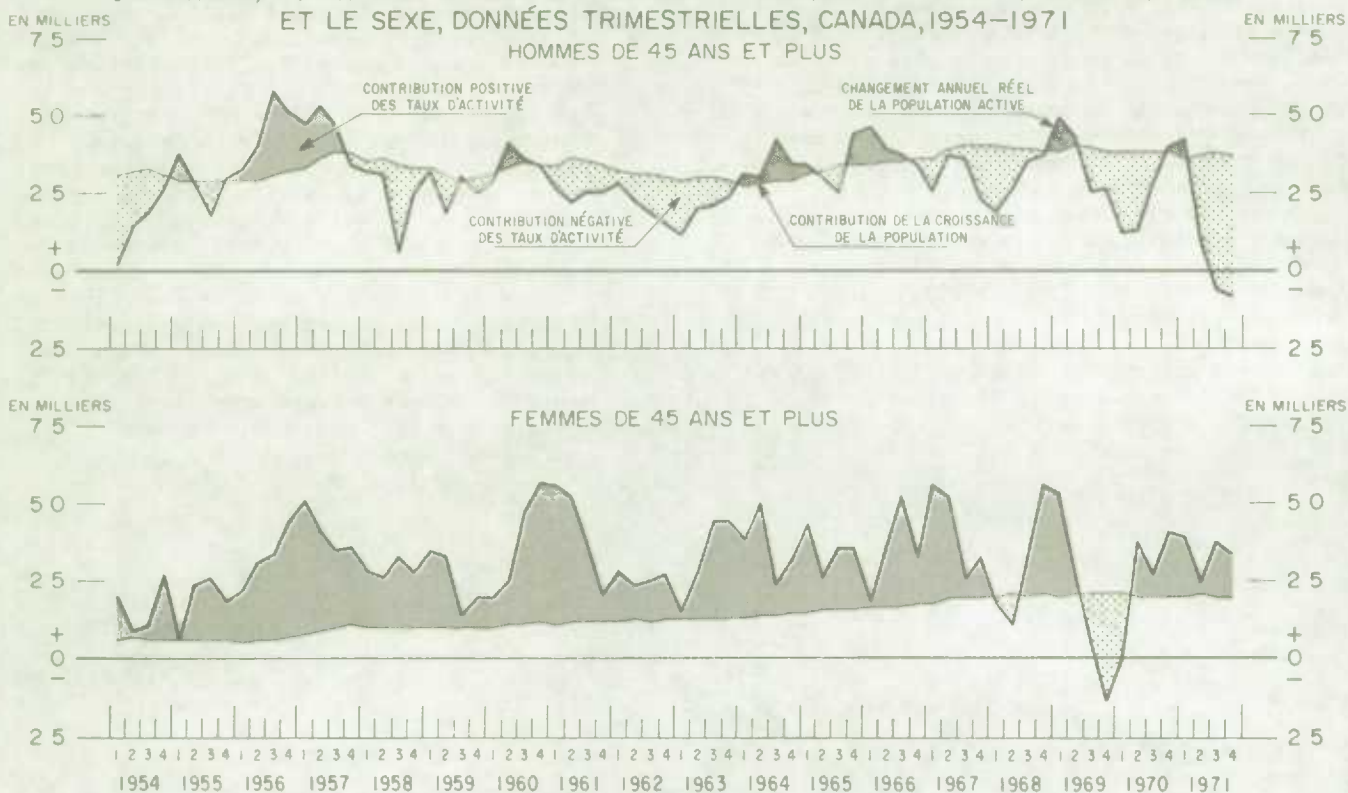
(4) Voir "Effets de la scolarisation sur les taux d'activité des hommes de 20 à 24 ans, 1966 à 1971". Revue statistique du Canada, avril 1972, Statistique Canada (Catalogue 11-003 mensuel) (Ottawa: Information Canada).

CONTRIBUTIONS DE LA CROISSANCE DE LA POPULATION ET DE L'ÉVOLUTION DES TAUX D'ACTIVITÉ
 AU CHANGEMENT ANNUEL DE LA POPULATION ACTIVE SELON CERTAINS GROUPES D'ÂGE
 ET LE SEXE, DONNÉES TRIMESTRIELLES, CANADA, 1954-1971



GRAPHIQUE -14

CONTRIBUTIONS DE LA CROISSANCE DE LA POPULATION ET DE L'ÉVOLUTION DES TAUX D'ACTIVITÉ AU CHANGEMENT ANNUEL DE LA POPULATION ACTIVE SELON CERTAINS GROUPES D'ÂGE ET LE SEXE, DONNÉES TRIMESTRIELLES, CANADA, 1954-1971



22,000 personnes en 1971. Cependant, bien que la population contribua davantage à la population active, les augmentations du taux d'activité demeurèrent responsables pour la majeure partie de l'accroissement de la population active. En 1966-67, la progression du taux d'activité représentait une entrée de 24,000 à 48,000 personnes par an dans la population active, et, au cours des deux premiers trimestres de 1969, 61,000 et 73,000 personnes de plus entraient dans la population active par rapport aux trimestres correspondants de 1968. En 1970, un changement du taux d'activité ajouta un minimum de 10,000 et un maximum de 34,000 personnes alors qu'en 1971 il contribua un minimum de 5,000 et un maximum de 71,000 personnes, ce qui signifie une contribution trimestrielle moyenne des variations du taux d'activité de 27,000 et de 37,000 personnes en 1970 et 1971 respectivement.

45 ans et plus. - Pour les hommes, les changements du taux d'activité contribuèrent d'une façon négative à la croissance de la population active au cours de la majeure partie de la période étudiée. Les deux exceptions les plus importantes furent les années 1956-57 et 1964-66. Le premier cas

coïncide avec les effets d'une forte immigration à haut taux d'activité et d'un rythme exceptionnel d'accroissement de la population active (58,000 et 51,000 personnes en 1956 et 1957 respectivement). En 1971, pour la première fois, les effets négatifs du taux d'activité furent tellement importants (une baisse de 1.6 au cours de chacun des deux derniers trimestres) qu'ils entraînèrent des baisses réelles de la population active. Si l'augmentation de la population n'avait pas opposé cette tendance, la baisse enregistrée aurait atteint environ 42,000 personnes dans chacun des deux derniers trimestres.

Les tendances observées chez les femmes de ce groupe d'âge étaient similaires à celles des femmes plus jeunes; en effet, la croissance de cette population active était en grande partie due à la plus grande activité des femmes. Les plus importantes augmentations de la population active ont été enregistrées en 1957, 1960-61, 1966-67 et en 1968-69 (elles atteignaient alors environ 50,000 personnes). Les changements dus à la croissance de la population ont peu varié durant la période, comme c'était le cas chez

Les hommes de 45 ans et plus. Ils ont augmenté graduellement pour s'établir à un maximum d'environ 20,000 personnes depuis 1966. Au cours du dernier trimestre de l'année 1969 et au cours du premier trimestre de 1970, la taille de la population active n'a pas augmenté pour la première fois; il y a eu respectivement baisse et maintien au même niveau à la suite d'une baisse du taux d'activité (de 1.3% et de 0.7% respectivement). Au cours des dernières années, les variations du taux d'activité ont été moins nettement positives et furent même négatives en quelques occasions (1968-70). Bien que leur rôle sur une base trimestrielle ait grandement varié, dans l'ensemble, l'importance des taux d'activité en tant que facteur d'explication des changements de la taille de la population active a baissé.

Conclusion

Au cours des 20 dernières années, les changements dans la taille et la structure de la population canadienne ont constitué les principales causes des variations survenues dans la population active. Cependant, les variations dans les taux d'activité ont également agi sur la population active. Ces variations furent à tendances opposées pour divers groupes d'âge-sexe et connurent des hauts et des bas qui amenèrent des réactions spasmodiques dans le mouvement autrement régulier de la population active. Ces mouvements désordonnés sont nettement présents tout au long de la période, en particulier pour les groupes âge-sexe où il existe une vaste réserve de main-d'oeuvre, c'est-à-dire, pour les groupes qui ont une élasticité d'offre de main-d'oeuvre plus grande.

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