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Historical Estimates of the Canadian Labour Force

BY FRANK T. DENTON AND SYLVIA OSTRY



1961 CENSUS MONOGRAPH
DOMINION BUREAU OF STATISTICS







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of the Canadian Labour Force

by
Frank T. Denton and Sylvia Ostry

ONE OF A SERIES OF LABOUR FORCE STUDIES
in the
1961 CENSUS MONOGRAPH PROGRAMME

DOMINION BUREAU OF STATISTICS
OTTAWA, CANADA
1967

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Foreword

The Canadian Censuses constitute a rich source of information about individuals and their families, extending over many years. The census data are used widely but it has proved to be worthwhile in Canada, as in some other countries, to supplement census statistical reports with analytical monographs on a number of selected topics. The 1931 Census was the basis of several valuable monographs but, for various reasons, it was impossible to follow this precedent with a similar programme until 1961. Moreover, the 1961 Census had two novel features. In the first place, it provided much new and more detailed data, particularly in such fields as income, internal migration and fertility, and secondly, the use of an electronic computer made possible a great variety of tabulations on which more penetrating analytical studies could be based.

The purpose of the 1961 Census Monograph Programme is to provide a broad analysis of social and economic phenomena in Canada. Although the monographs concentrate on the results of the 1961 Census, they are supplemented by data from previous censuses and by statistical material from other sources. The present Study is one in a Series on the Canadian labour force. In addition to these Labour Force Studies, monographs will be published on marketing, agriculture, education, fertility, urban development, income, immigration, and internal migration.

I should like to express my appreciation to the universities that have made it possible for members of their staff to contribute to this Programme, to authors within the Dominion Bureau of Statistics who have put forth extra effort in preparing their studies, and to a number of other members of DBS staff who have given assistance. The Census Monograph Programme is considered desirable not only because the analysis by the authors throws light on particular topics but also because it provides insight into the adequacy of existing data and guidance in planning the content and tabulation programmes of future censuses. Valuable help in designing the Programme was received from a committee of Government officials and university professors. In addition, thanks are extended to the various readers, experts in their fields, whose comments were of considerable assistance to the authors.

Although the monographs have been prepared at the request of and published by the Dominion Bureau of Statistics, responsibility for the analyses and conclusions is that of the individual authors.

Walter G. Sufferet.

DOMINION STATISTICIAN.

Preface

This is the first of a series of studies dealing with selected aspects of the labour force in Canada as revealed, in the main, by the 1961 and earlier Censuses. The present study provides new historical estimates of the labour force on a definitionally consistent basis. These estimates will be used for purposes of analysis in some of the later studies in the series. We wish to thank members of the Census Division of the Dominion Bureau of Statistics, in particular Mrs. A.J. Kempster and Mr. A.H. LeNeveu, for their co-operation and assistance in providing data and constructive criticism. We are most grateful, too, for the helpful comments of Mr. D.J. Bailey, Director, Labour Division, Mr. N.L. McKellar, Director, Central Classification Research and Development Staff, and Mr. W.A. Nesbitt, Assistant Director, Special Surveys Division. The usual observation, with respect to the authors' responsibility for error, of course applies.

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OTTAWA, 1967



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1. Introduction

Prior to November 1945, when the Labour Force Survey commenced, the only comprehensive estimates of the economically active population in Canada were the measures provided by the decennial censuses.¹ The definition of the economically active was, however, based on different criteria in the censuses before 1951 than in those of 1951 and 1961. This study presents a series of census-date estimates of the economically active population adjusted to a consistent definitional base. Before describing the method of estimation and presenting the statistics themselves, it is necessary to discuss the two concepts of the economically active which have been used in the censuses— the gainfully occupied and the labour force.

THE GAINFULLY OCCUPIED

In the 1941 and earlier censuses of Canada, a count of gainful workers (10 years and over prior to 1941; 14 years and over in 1941) was secured in answer to a question on *occupation*. Thus the 1941 Census defined gainful occupation² as "one by which the person who pursues it earns money or in which he assists in the production of goods". Children working at home on general household duties or chores, or at odd times at other work, were not to be reported as having an occupation. Similarly, women doing housework in their own homes without salary or wages were to be reported as "homemaker". The enumerator was instructed to make an entry in the "Occupation" column for every person of 14 years of age and over, the entry being one of the following: (a) the chief occupation of every gainfully occupied person; (b) retired; (c) homemaker; (d) student; (e) none.

Further, the enumeration instructions went on to explain each of the entries (b) to (e). Thus "retired" was defined to include "persons who on account of old age, permanent physical disability or otherwise are no

¹However, it should be noted that during the Second World War the Department of Labour, in co-operation with other government agencies, developed estimates of the total economically active population and its main components which were published at least annually by the Wartime Information Board in its bulletins, *Canada at War*. Cf. "Recapitulation Issue", No. 45, Wartime Information Board, Ottawa, 1945.

²The description in the text of the gainful worker concept as used in the 1941 Census is taken from Dominion Bureau of Statistics, *Instructions to Commissioners and Enumerators*, Eighth Census of Canada, 1941, pp. 47-50.

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longer following a gainful occupation. Only persons who at some time had a gainful occupation and are no longer employed nor seeking employment shall be reported as 'retired'."

"Homemaker" referred to "a woman doing housework in her own home, without wages or salary, and having no other employment but being responsible for the domestic management of the home". But if a woman, in addition to doing housework in her own home, "*regularly* earns money at some other occupation, whether carried on at home or outside, then that occupation (should) be entered...and not 'homemaker' ". (Emphasis added.) Moreover, in the case of a farm woman, the entry should be "farm labourer" only if she were working *regularly* and most of the time at outdoor farm work, such as caring for livestock or poultry on a farm operated by someone else.

"Student" was defined as "every person, 14 years of age and over, regularly attending school or college or receiving private tuition. Even if earning small sums of money after school or on Saturdays as messenger, newsboy, etc., he or she shall be enumerated as a student. Only when the person is not attending school and is employed *most of the day* at some occupation, or is *wholly* assisting his or her parents or any other person on a farm, in a store, etc., will he or she be reported as having a gainful occupation." (Emphasis added.)

An entry of "none" or "no occupation" was possible in three cases: (1) for adult dependants such as invalids at home or in institutions, persons with private means, etc., the entry should be "none"; (2) young persons 14 to 24 years who have never had a gainful occupation and were not then attending school were to be asked if they were seeking employment—if the answer were in the affirmative, the entry was to be "none (yes)"; (3) if the response to the foregoing question were negative, the entry was to be "none (no)".

In earlier censuses, the definition of a gainful occupation was very similar to that of 1941. The count referred to persons 10 years of age and over, instead of 14. Both the 1931 and 1921 enumerator instruction manuals warned that a person who was temporarily unemployed might state that he had no occupation but the enumerator should record the occupation followed when the individual was regularly employed.

It is clear from the foregoing exposition of the instructions provided to the census enumerators that the definition of the gainfully occupied centred on occupation and, moreover, that occupation was viewed as a

"characteristic" of an individual, a characteristic akin to, say, language, years of schooling or immigrant status. Quite logically, no period of reference was specified since a time reference would have implied an activity orientation. Nevertheless, since occupation is clearly not simply a population characteristic (in the same sense as are age and sex or even language, education or immigrant status), some notion of activity had to be introduced as a secondary consideration and the gainfully occupied concept implied (though it did not specify) customary or habitual activity.¹ The reference period was thus open-ended but it was some period considerably longer than, for instance, the week preceding the date of enumeration.²

Given these two criteria for distinguishing the gainfully occupied—occupation as a population characteristic and customary or habitual activity—certain groups will be excluded from the total count of gainful workers. Thus, persons seeking jobs for the first time have no occupation and hence would not be considered gainful workers. (See above, for specific reference to young persons, 14 to 24.) Further, some individuals whose work is part-time, intermittent or casual might not be included since they would not satisfy the customary or habitual activity criterion. On the other hand, a person not currently engaged in gainful employment (or in seeking such employment) might well be included among the gainfully occupied on the basis of a prior occupational attachment of long duration. (Cf. footnote¹: the special reference to the unemployed in the 1931 and 1941 Censuses.) What is important to note here is that the concept of the gainfully occupied is not sufficiently precise to ensure that certain "marginal" groups will necessarily be consistently enumerated, either

¹Although, as has been pointed out, the definition of the gainfully occupied did not include any explicit reference to activity, there seems little doubt that those in charge of the 1931 and 1941 Census operations in DBS were aware of the relevance of activity and, to some extent, of the distinction between customary and current activity. This has been made clear to us in discussions with Mr. A.H. LeNeveu (formerly Chief of the Current Population Estimates, Analysis and Citizenship Section of the Census Division) who has kindly permitted us to read some of his correspondence with the staff of the Works Progress Administration in Washington during the 1930s. See also *1936 Census of the Prairie Provinces*, Table 14, which distinguishes between usual occupation and occupation followed on the census date. None the less, the core of the gainfully occupied concept was *occupational attachment* and even the distinction between "current" and "customary" was couched in terms of *occupation* and not *activity*.

²In order to provide more comprehensive information on unemployment, in both the 1931 and 1941 Censuses, a question on activity on the census day was included. It is evident that the gainfully occupied concept *per se* is not appropriate to the measurement of unemployment. The question on unemployment was directed to wage earners only: "If a wage earner (employee), were you at work on Monday, June 1(2), 1931(1941)?" It was followed up: "If not, why not?". But possible answers to "why not?", such as 'no job', 'layoff', 'holiday', 'illness', 'accident', 'strike or lockout' and 'other', made it clear that unemployment was viewed in the same way as occupation, i.e., as a *characteristic* of the person. The view that unemployment might be considered an activity—the act of testing the job market by looking for work—nowhere entered the conceptual framework.

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from census to census, or by different enumerators in any given census. Because occupation is not simply a population characteristic and because customary activity is based on an unspecified and open-ended reference period, the boundary separating the gainfully occupied from the remainder of the adult population cannot be clearly drawn.

Finally, the gainfully occupied concept tends to be associated with a particular view of labour supply. In this view the total labour supply of the economy is more a stable pool or stock of individuals growing *pari passu* with the adult population rather than expanding or contracting in response to changes in the economic and social environment.¹ The notion of a changing labour supply comes to mind more naturally in the context of a current and continuing measure of the economically active population and it is not surprising that it evolved in a more explicit form as a consequence of the adoption of recurring labour force surveys. If the economically active population is measured only once every ten years and the measure is derived in conjunction with a total population count and by means of a classification criterion based primarily on a population characteristic—one among many other characteristics of the adult population—then the emphasis on a stable pool or stock of labour is a likely one. But the limitations of the “fixed-stock” viewpoint are sharply exposed in a period of rapid social or economic transformation, for example during a war or a severe economic crisis. The need for manpower statistics to provide economic intelligence for government policy purposes stimulated the

¹If the economically active population is regarded as a stable pool of labour, then employment and unemployment must always move in opposite directions. It is of interest to note in this regard that the 1931 Census *Monograph on Unemployment* (contained in Census Vol. XIII) was a remarkably perceptive document. Thus, the authors observe that in Canada, during the 1920s, immigration and emigration movements affected the unemployment total and remark further: “This, of course, introduces a widely different concept of unemployment from that generally accepted, viz., that unemployment is merely the opposite of employment. Unemployment only partly declined with increasing employment. [As noticed], it also increased with increasing numbers of wage earners and decreased with decreasing numbers of wage earners. Immigration was no doubt accompanied by other inward movements into the ranks of wage earners—from farms, small owned establishments and from school; emigration was accompanied by return to these sources, so total immigration and emigration were only symptoms of more general movements.” (p.15) Compare this statement, with its insight into the changing supply of labour related to changing economic conditions, with the following view expressed by the National Industrial Conference Board in 1938: “The labor force [sic], viewed as a reservoir of potential workers having gainful occupations, must of necessity have an inertia with respect to its size and growth. That is to say, the number of available persons on call plus the number engaged in remunerative pursuits does not fluctuate with business swings. Each year there is an outflow of workers from the force through emigration, death, retirement, physical disability and the like; but there is also an inflow through immigration, increased age of young people, termination of education, increasing remunerative occupations for women and so forth. Underlying these flows in and out of the labor force are such basic factors as a changed standard of living, increased mechanization, population, age composition and growth”. (Leonard Kuvin, Conference Board Bulletin, Vol. XII, No.8, July 30, 1938: cited in Gertrude Bancroft, *The American Labor Force*, Census Monograph Series, 1958, p. 185.)

adoption of the continuing sample survey technique and the labour force concept in the United States during the Great Depression of the 1930s. In Canada, the Labour Force Survey was initiated in 1945, the last year of the Second World War.

THE LABOUR FORCE

The chief (though not only) classification criterion of the labour force concept is *current activity*. Unlike the occupation question in the gainful worker scheme, the focus of the labour force schedule is not a population characteristic but an activity—the individual's activity with respect to the labour market during a specific reference period, namely the week preceding the week of enumeration. In order to point up the differences between the gainful worker and the labour force concepts, it is useful to review here the definition of the labour force used in the 1951 *Census of Canada* (Vol. IV).

According to the 1951 Census, the civilian labour force is composed of that portion of the civilian non-institutional population 14 years of age and over who, during the week ending June 2, 1951, worked for pay or profit; had jobs but did not work; or did not have jobs and were seeking work. Each category was thus defined:—

- (a) **Persons with jobs and at work:** Those who did any work (during the reference week) for pay or profit or who did unpaid work which contributed to the running of a family farm or business operated by a member of the household.
- (b) **Persons with jobs but not at work:** Those who had jobs but did not work because of illness, bad weather, vacation, industrial dispute or temporary layoff with instructions to return within 30 days of the time of being laid off.
- (c) **Persons without jobs and looking for work:** Those who, during the reference week, were without jobs and seeking work. This category also includes those who would have looked for work except that they were temporarily ill, were on indefinite or prolonged layoff, or believed that no work was available.

The merit of the labour force concept is that one may reasonably assume it is possible to record an individual's activity, precisely defined, in an objective, consistent and accurate fashion. The main object of the labour force enumeration is to classify the adult population into three groups: the employed [categories (a) and (b) above], the unemployed [category (c)], and the non-labour force (the remainder of the adult population). It should be noted that the labour force itself is defined as the sum of the employed and the unemployed; the remainder of the adult

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population is not in the labour force. Thus the economically active are distinguished within the total population and the chief distinguishing criterion is current activity, specifically defined.

Although current activity is the focus of the labour force concept, it is not the only classification criterion utilized nor is it consistently applied. The labour force definition and measurement technique were first developed in the United States within the framework of a national policy directed toward providing work-relief for the mass unemployment of the Great Depression. A count of the number of jobs required for the employable unemployed was the chief requirement of the labour force measure. Job attachment was, therefore, another and important criterion for classifying the adult population. In cases in which job attachment (or lack of it) and activity clearly coincide, few problems of definition or measurement arise. Thus persons working during the week clearly are "with jobs", i.e., job attachment is unequivocal and so is activity. Moreover, persons who did not work but were actively seeking work during the week are assumed to have no job attachment and to be engaged in the activity of seeking work. There remain two other groups of persons to be classified:¹ (a) those who have no activity but have a "firm" job attachment and (b) those who have no activity and no "firm" job attachment.

The original labour force definition (developed in the United States for use in the 1940 Census of Population and in the recurring sample surveys of the population begun in March 1940) classed persons as *employed* if they had worked for one hour or more for pay or profit² during the week or if they had not worked because of vacation, illness, bad weather, industrial dispute or temporary layoff. Thus group (a) above, those who had no activity, were classed as employed on the basis of a presumed "firm" job attachment. The decision, made later,³ to revise the definition of the employed to exclude those on temporary layoff clearly implied that the "degree" of job attachment of such individuals was considered less firm than that of the others in the group. It is evident that

¹The possibility of an individual fitting into several work-status categories of the labour force necessitated the establishment of a chain of priorities so that mutually exclusive groups might be delineated. (In the monthly surveys, questions on the individual's primary and secondary activity during the reference week are asked.) The chain decided upon was: with job and at work; seeking; with job but not at work; non-labour force. Thus, for example, an individual who was employed but absent from work all week and looking for work would be classified as unemployed. See Appendix B for a change in this priority under the new (January 1967) United States definition.

²The only exception was the unpaid family worker: a person who did unpaid work which contributed to the running of a farm or a business operated by a related member of the household.

³Effective in February 1957 in the United States, and in September 1960 in Canada.

job attachment is a less precise, i.e., more "equivocal" criterion than is activity.

Further, as described above, the labour force definition used in Canada classes as *unemployed* persons who had not worked an hour or more during the week and who had actively¹ sought work—thus satisfying the activity criterion—plus those who had *neither worked nor sought work* but would have sought work except that they were temporarily ill, on temporary or indefinite layoff, or believed no work was available in their line or their community. This latter group, sometimes called the "inactive seekers", do not satisfy the activity criterion and, moreover, have varying degrees of job attachment, as was evidenced by the reclassification of the temporary layoffs from the employed to the unemployed category. Herein lies one of the major conceptual difficulties in the labour force measure. Once the activity criterion is abandoned, *job attachment* must bear the entire weight of classification as between the two main labour force categories, the employed and the unemployed. But job attachment is not an objectively precise criterion; the exact degree of job attachment may be a matter of debate. Moreover, once the activity criterion is no longer applicable and job attachment is nebulous or non-existent, there remains no objective means of distinguishing the unemployed from the remainder of the adult population. Group (b) referred to above—those who have no activity and no firm job attachment—may be either non-labour force or inactive seekers. The lack of job attachment, when it coincides with a lack of activity, provides no guide for distinguishing the boundary between the economically active and the remainder of the adult population. Inclusion or exclusion of the inactive seeker thus rests, *au fond*, on the respondent's subjective evaluation of labour market conditions. Thus with the labour force definition used today in Canada (and until very recently in the United States: see Appendix B) if the respondent *volunteers* the information that he would have sought work except for certain conditions, he is classed as unemployed and in the labour force.² Because in such cases the labour

¹The meaning of the word "actively" was not explained in the definition of the labour force. In the Canadian Labour Force Survey Enumeration Manual, however, it is described as "making efforts to obtain a job or establish a business or professional practice, such efforts as registering at a government employment office, meeting with prospective employers, placing or answering advertisements, writing letters of application or working without pay to gain experience". In the 1951 Census the enumeration instructions were identical; in the 1961 Census "working without pay to gain experience" was omitted.

²Prior to July 1945 in the United States, the labour force schedule obtained the unemployment count by asking those who were not actively seeking work, "why not?". When this question was eliminated, the enumerator was instructed to class a person as unemployed only if he volunteered the information that he would have looked for work except for illness, prolonged layoff or the belief that none was available. The numbers of inactive seekers picked up with the new schedule were much fewer than with the previous schedule which asked "why not?". The Canadian survey, initiated in November 1945, has never included the question "why not?".

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force survey involves a reporting of attitudes and not of objective phenomena, a count which is consistent as among different surveys, different areas or different groups of individuals is much more difficult to achieve.¹

While the labour force concept as described above does not provide a completely satisfactory means of clearly and unequivocally defining the economically active population (and, in practice, of distinguishing it, as defined, from the remainder of the adult population), it is preferable to the gainful worker concept because *current activity* (its chief criterion for definition) is more susceptible to objective enumeration than is habitual occupation viewed as a *characteristic* of an individual. The historical series presented below were estimated, insofar as was possible, on the basis of the labour force definition of the economically active.

¹ Thus, for example, the very large difference between the 1961 Census unemployment count and that of the monthly Labour Force Surveys closest to the census date (the Census rate was 3.9%: the average May-June Survey estimate, 6.2%) illustrates how sensitive the labour force concept is to variation in the quality and specific practices of enumeration.

2. *Estimates of the Labour Force by Age and Sex, 1921-1961*¹

Although the application of the gainfully occupied and labour force definitions will produce different counts of the economically active population, it is evident from the foregoing discussion that these differences will be much more marked for some groups in the population—for example, younger workers and women—than for others, in particular, prime-age males. For this reason it is desirable, wherever possible, to adjust separately the gainful worker counts for specific age groups of males and females. This method of adjustment, however, is ruled out for data prior to 1921 because of inadequate age detail in the 1901 and 1911 Census gainful worker statistics and more stringent deficiencies in the pre-1901 data. The present Section, then, deals with the derivation of the decennial labour force estimates, by age and sex, for the period from 1921 to 1961. The next Section describes the conversion of the gainful worker totals, by sex, for 1901 and 1911 and the final Section discusses the estimates of total labour force for 1851 to 1891.

In securing a series of comparable decennial labour force statistics for the period 1921 to 1961, the problem is not simply one of adjusting the gainful worker counts of the 1921, 1931 and 1941 Censuses. In 1951 and 1961 the censuses undertook to measure the labour force but the two censuses were not identical in their approach; the labour force questions differed sufficiently in wording and sequence² that the resulting measures were not entirely comparable.³ Strictly speaking, then, two adjustments are required if a consistent series is to be produced for this period: (1) the 1951 and 1961 Census labour force measures must be adjusted to secure

¹Cf. Dominion Bureau of Statistics, *Canadian Labour Force Estimates, 1931-1945*, Reference Paper No. 23 (revised), Ottawa, 1957. This Reference Paper presents annual estimates of the labour force by sex, from 1931 to 1945, and for both sexes combined from 1921 to 1930. The method of adjusting the gainfully occupied census data was somewhat different from that used here. It should be noted, however, that adjustments were made for both new seekers and unpaid female workers on farms.

²See Appendix C.

³For a number of examples of non-comparability of 1951 and 1961 Census labour force data see 1961 *Census of Canada*, Vol. 7, Part 1, Bulletin 7.1-12, "The Canadian Labour Force".

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comparability with each other, and (2) the census gainful worker counts for 1921, 1931 and 1941 must be converted to labour force estimates comparable to the 1951 and 1961 statistics.

An examination of the 1951 and 1961 Census labour force data revealed that the task involved in adjusting these two sets of statistics to a comparable base would be difficult and time-consuming, yielding, at best, only very approximate results. An acceptable alternative procedure, which was adopted, was to use the Labour Force Survey sample statistics for the week closest to the Census reference week in 1951 and 1961.¹ This decision was also influenced by the fact that the monthly surveys provide a reasonably consistent series of labour force statistics for the period from 1945 to the present and thus these historical estimates could be linked to a readily available source of current information.

The decision to use the survey statistics in 1951 and 1961 necessitated adjusting the gainful worker counts in 1921, 1931 and 1941 to a Survey rather than a Census basis. There seemed, moreover, to be yet another argument in favour of this method of adjustment which is perhaps best expressed in a quotation from the introduction to the Labour Force Volume (Vol. IV) of the 1951 Census: "Enumeration of the whole population for census purposes presents problems which are not encountered in continuing sample surveys. The current labour force surveys ask relatively few questions, mainly on one topic, and, being taken frequently, often retain the same enumerator for several successive surveys. For these reasons, the current survey can probe more deeply in order to bring out marginal elements in the Labour Force. Thus [for example], the current survey reported more family members whose principal activity was going to school, keeping house, etc., as having done some unpaid family work on a farm or in a business during the week ending June 2, 1951, than were reported in the Census." Since it is precisely the *marginal elements* in the labour force which are also most likely to be omitted from a gainful worker count, adjusting the gainfully occupied total on a Census labour force basis would tend to understate the extent of the difference between the gainfully occupied and the labour force measures.²

¹In 1951 the Labour Force Survey reference date in June was identical to the Census reference date (week ending June 2) but in 1961 the June reference date for the Survey was the week ending June 17th while the Census used a "sliding" reference date (the week preceding the actual visit of the enumerator) which extended over the first three weeks in June, but which was concentrated (at least for urban areas) on the first week or two. Thus, for purposes of comparison, it was decided to use the May-June averages of the Survey data.

²Cf. Stanley Lebergott, *Manpower in Economic Growth, The American Record Since 1800*, New York, 1964, Chapter 9. For largely the same reasons as presented here, Lebergott also converts his historical data to a Survey rather than a Census base (pp. 357 ff.)

GENERAL METHODOLOGY

The general method used to adjust the gainful worker statistics for 1921, 1931 and 1941 was first to calculate a separate "conversion ratio" for each of a number of specified age and sex groups in the economically active population, using 1951 data, and then to multiply the gainful worker figure for each comparable age-sex group in 1921, 1931 and 1941 by the ratio for the group.¹ The conversion ratios were defined as $\frac{\text{Survey L.F.}}{\text{Census G.O.}}$, where Survey L.F. is the number of persons, in the age-sex

group, who were enumerated in the Labour Force Survey of June 2, 1951, plus the number in the Armed Services and an estimate of the number of Indians on reserves with a labour force attachment.² The term Census G.O. refers to an estimate of the number of workers, of a given age-sex group, who *would have been enumerated in 1951 if the census of that year had utilized the gainful worker concept*. The method by which the gainfully occupied estimates for 1951 were derived is described in what follows.³

¹This method involves the use of a uniform set of conversion ratios for 1921, 1931 and 1941. It is not unreasonable to assume that the proportion of various "marginal" groups in the labour force varied over this period, not only because of long-run changes in the industrial and occupational composition of the labour force, but also because the different censuses were taken at different stages of the business cycle. There are, however, no adequate data available for adjusting the conversion ratios to take account of underlying changes in the economic and social environment. Thus, estimating different ratios for each census would have involved making a large number of quite arbitrary assumptions based on intuitive "guesses" and scattered pieces of inadequate information. The procedure chosen, while admittedly rough, was considered preferable and in all probability results in adjustment in the right direction, although not necessarily of the correct amount, at each date.

²The participation rate of Indians on reserves was assumed equal to that of the rest of the population of the same age and sex. Unpublished data from both the 1951 and 1961 Censuses suggest much lower age-sex specific activity rates for Indians. It seems probable, however, that the main reason for these relatively low rates was that the censuses failed to enumerate most "inactive seekers" — a group which would be particularly important in the case of the Indian reserve population. Since the method of adjustment involves revision to a Survey and not a Census base, it was decided to use the higher rates for Indians. In either case, however, the effect on the overall figures is very small.

It should be noted that Indians on reserves were excluded from census counts of the economically active population in 1901, 1921 and 1951, but were included in 1911, 1931, 1941 and 1961. Members of the Armed Services were included in every census from 1901 to 1961. In 1941 a number of tables showed the total gainfully occupied including all persons on Active Service, as well as the total not including persons on Active Service. Indians on reserves and members of the Armed Services are excluded from the monthly Labour Force Survey.

³The conversion ratios may be thought of as the resultant of two separate steps, summarized as follows:

$$\frac{\text{Survey G.O.}}{\text{Census G.O.}} \times \frac{\text{Survey L.F.}}{\text{Survey G.O.}} = \frac{\text{Survey L.F.}}{\text{Census G.O.}}$$

The first step involves adjusting the gainfully occupied from a Census basis to a Survey basis; the second involves adjusting the Survey-based gainfully occupied figure to the actual Survey labour force figure.

THE GAINFULLY OCCUPIED IN 1951 AND THE CONVERSION RATIOS

A comparison of the gainfully occupied and labour force definitions has shown that certain "marginal" groups in the economically active population are likely to be omitted from a gainful worker count but should be included in a labour force enumeration. The procedure used to estimate the gainfully occupied total for each age-sex group in 1951 therefore consisted of estimating the numbers of workers in specified marginal labour force categories and then subtracting these estimates from the Census labour force count. The resulting statistics are assumed to represent the numbers of workers who would have been enumerated if the 1951 Census had used the gainful worker rather than the labour force definition of the economically active population.

A careful consideration of the Census and Survey data in the light of the conceptual analysis presented above suggested that four marginal groups were likely to be excluded in significant numbers from a gainful worker count and should therefore be allowed for in this adjustment procedure:

- (1) **Male and female "new seekers":** Persons who had never worked and were looking for their first jobs. As noted earlier, such persons were specifically excluded from gainful worker counts.
- (2) **Students:** Males¹ in the age group 14-24 whose primary activity during the reference week was attending school but who also worked for an hour or more during that week. The gainful worker count excluded all full-time students even if they worked after school or on weekends.
- (3) **Female unpaid family workers in agriculture:** The gainful worker concept did specifically include women who, in addition to their household activity, were working *regularly* at *outdoor* farm work in a "no pay" capacity. However, the emphasis on *regular* farm work of a specific type would result in the enumeration of a lesser number of female unpaid family workers on farms under a gainful worker rather than a labour force definition.²

¹Females were excluded from this adjustment group because during the historical period under consideration it is highly unlikely that many young girls, in regular school attendance, also worked at part-time or weekend jobs. The kinds of jobs which today are popular with teen-age schoolgirls or young university women - baby-sitting, part-time sales or clerical jobs, etc.-were not widely available during this period, nor was it considered, as it clearly is today, socially "proper" for such young women to work in paid employment. (Certainly, in the period before 1941, a very high proportion of women in the age group 14-24 who were still full-time students would have come from middle-class families.)

²The Labour Force Survey of June 1946, conducted at the same time as the Census of the Prairie Provinces, recorded a female agricultural labour force of 103,000 as compared with a census gainful worker total of 8,000.

- (4) **Females who worked on a part-time basis in non-agricultural industry:** These women were likely to have been excluded wholly or in very large degree from a gainful worker count because most have no firm occupational attachment or stable and regular labour force commitment. The gainful worker count, as has been emphasized, is centred on occupational attachment and on *habitual* or *regular* activity.

A fifth group, which was also considered (and whose omission from the conversion procedure requires some explanation) was that of the recently retired male. As was noted above, in the pre-1951 censuses the enumerators were instructed not to report occupations for persons who, because of old age or physical disability, were no longer following a gainful occupation. But the census schedule asked only for the individual's occupation and it is not unlikely that some enumerators failed to probe sufficiently to determine whether the person had in fact recently retired and was no longer pursuing a gainful occupation at the time of the census.¹ The number of females of this type is unlikely to have been large, but it is probable that the gainful worker count somewhat overstated the numbers of older males. On the other hand, the 1951 Census recorded 8,492 males "retired or voluntarily idle", whose secondary activity during the census week was working. No doubt some of these men, doing odd jobs or working part-time, would not have been "picked up" in a gainful worker count and for this reason the gainfully occupied measure in some degree understated the numbers of older male workers. In the absence of the information necessary to estimate either the numbers of older males incorrectly *included* or the numbers wrongfully *excluded* in the gainful worker figures the assumption was made that these two roughly balanced each other and therefore no adjustment was made for this particular group.

The numbers of persons in each of the four selected "marginal" categories—the "adjustment groups"—are shown in Table 1. A detailed description of their estimation is provided in Appendix A. It will be noted from Table 1 that the adjustment groups are considerably larger for females than males. Indeed, the adjustment group for prime-age males (35–64 years) is negligible.

The derivation of the ratios to be used in converting the gainful worker data from the pre-1951 censuses is shown in Table 2. The "total

¹Cf. United States Bureau of Census, *Estimates of Labour Force, Employment and Unemployment in the United States, 1940 and 1930*, Washington, 1944, p. 11: "The group enumerated as gainful workers in the 1930 Census included a considerable number of persons who had recently retired or become disabled or who, for other reasons, had permanently withdrawn from the labor force." For Canada, however, see *Instructions to Commissioners and Enumerators* regarding the retired in 1931 (p. 35) and 1941 (p. 48). The likelihood of overstatement from this source in these years would not be large.

HISTORICAL ESTIMATES OF CANADIAN LABOUR FORCE

adjustment" for each age-sex group in 1951 (column 2) was subtracted from the relevant 1951 Census labour force total (column 1) to yield the 1951 gainfully occupied estimate (column 3). The June 1951 Labour Force Survey estimates (column 4) were then expressed as ratios to the gainful worker counts to yield the conversion ratios (column 5). Again, it will be noted that the adjustments implied by these ratios are in general much smaller for males than females—less than one percentage point overall for males as compared with over 12 per cent for females. For male teenagers, however, the adjustment was almost 12 per cent, although even here it was exceeded by an adjustment of more than 22 per cent for teen-age girls.

The last step in estimating the historical series of labour force statistics was the application of the conversion ratios to the census gainful worker counts for 1921, 1931 and 1941 to provide the decennial estimates of the labour force, by age and sex, shown in Tables 3-5. It should be noted that, wherever necessary, all estimates have been adjusted to include residents of the Yukon and Northwest Territories, members of the Armed Services and Indians living on reserves. (In the case of the Yukon and Northwest Territories, a proportionate adjustment was made, based on population; in the other two cases, use was made of available specific census data.) All estimates for census dates before 1951 exclude Newfoundland. For 1951 and 1961, estimates are provided both with and without Newfoundland in order to facilitate comparisons with the earlier dates.

Finally, although an analysis of trends in labour force participation is beyond the scope of the present study (this and related matters are treated in separate studies in this Series) some implications of the revised estimates, relevant to such analysis, are worthy of mention. Two of the most important developments in labour force activity which occurred during this period were the decline in participation of teen-age males (largely as a consequence of extended education) and the rise in participation of women, especially middle-aged and older married women. However, as may be seen in Tables 3-5, the participation rates based on gainful worker statistics are considerably lower than those based on labour force estimates for teen-age males and also for females of all ages. Thus an analysis of trends based on the unrevised data (i.e., the census gainful worker counts for 1921, 1931 and 1941) would tend to understate the decline in teen-age male labour force activity over the forty-year period between 1921 and 1961 and, although to a less serious degree, to overstate the rise in female labour force activity over the same period. The effect of revision on the overall activity rate, however, is minor.

3. Estimates of the Labour Force by Sex, 1901 and 1911

The absence of sufficient age detail for the gainfully occupied population in the 1901 and 1911 Censuses precluded the use of the adjustment ratios described in the foregoing discussion. The best that could be done was to estimate, from the census gainful worker counts for males and females, the total labour force, by sex, in 1901 and 1911. This was done separately for each sex by reweighting the 1921 participation rates according to the population age distributions in 1901 and 1911 and using the overall ratios of reweighted labour force rates to reweighted gainfully occupied rates as correction factors to adjust the actual gainfully occupied figures derived from the censuses of these two years.

As may be seen, this method adjusts for the change in age composition of the male and female population in 1901 and 1911 but otherwise assumes that the relationship between the labour force and the gainfully occupied in each of those years was the same as that in 1921 (and, hence, in 1951). This method of adjustment, then, is consistent with that utilized in the derivation of the estimates for 1921, 1931 and 1941.

The labour force estimates for 1901 and 1911 are presented in Table 10, together with two sets (gainful worker and labour force) of participation rates. Again it may be seen that the participation rates based on unrevised (gainful worker) data are lower than the labour force rates, more so for females than for males.



4. Estimates of the Total Labour Force, 1851-1891

Estimates of the total labour force have also been made for the period 1851-91 (Table 11). For 1881 and 1891 the estimates are based on actual census counts of the gainfully occupied. The 1891 count was adjusted by applying the 1901 ratio of labour force to gainfully occupied separately for each sex and combining the results. The 1881 count was then adjusted on the basis of the 1891 ratio for both sexes combined.

The estimates for the earlier dates were obtained by a different method, there being no acceptable gainfully occupied totals to work with for the period before 1881. (The actual gainfully occupied counts from the 1871 Census were not used because of incompleteness of coverage and doubts as to their accuracy.) Ratios of labour force to population for individual age-sex groups were constructed on the basis of data for 1921, the earliest date for which the necessary age-sex detail was available. These ratios were applied to the actual census population figures in each age-sex group and the results summed over all groups. In this way, a preliminary labour force series was constructed for each census year in the period 1851-81. This series was then used as an index to "project backwards" the 1881 "benchmark" total obtained previously to 1871, 1861 and 1851.



Tables I-II

HISTORICAL ESTIMATES OF CANADIAN LABOUR FORCE

Table 1 - Adjustment Groups for Use in Estimating 1951 Gainfully Occupied by Age and Sex

NOTE.—New seekers, students and female unpaid family workers in agriculture are based on published or unpublished 1951 Census data. Figures for female part-time workers in non-agricultural industry are based on published and unpublished 1951 Census and June 1951 Labour Force Survey data. Residents of the Yukon and Northwest Territories are excluded throughout.

Sex and age group	New seekers	Students whose secondary activity during census week was working	Female unpaid family workers in agriculture	Female part-time workers in non-agricultural industry	Total adjustment
	No.	No.	No.	No.	No.
Men—					
14-19	7,810	13,528			21,338
20-24	906	2,635			3,541
25-34	—	912			912
35-64	—	66			66
65 and over	—	—			—
Totals, 14 and over .	8,716	17,141			25,857
Women—					
14-19	3,976	—	—	27,750	31,726
20-24	456	—	2,334	18,400	21,190
25-34	—	—	4,181	17,246	21,427
35-64	—	—	7,861	31,148	39,009
65 and over	—	—	340	3,769	4,109
Totals, 14 and over .	4,432	—	14,716	98,313	117,461
Both Sexes—					
Totals, 14 and over .	13,148	17,141	14,716	98,313	143,318

Table 2 - Calculation of Conversion Ratios, by Age and Sex, Based on 1951 Data

NOTE.--Total adjustment figures are reproduced from the last column of Table 1. Other figures are based on published and unpublished 1951 Census and June 1951 Labour Force Survey data. Residents of the Yukon and Northwest Territories are excluded; members of the Armed Services and Indians living on reserves are included.

Sex and age group	Labour force based on Census (1)	Total adjustment (2)	Estimate of gainfully occupied (3)=(1)-(2)	Labour force based on Labour Force Survey (4)	Conversion ratio (5)=(4)÷(3)
	'000	'000	'000	'000	
Men--					
14-19.....	322	21	301	336	1.116
20-24.....	499	4	495	496	1.002
25-34.....	1,031	1	1,030	1,030	1.000
35-64.....	2,092	—	2,092	2,085	0.997
65 and over.....	213	—	213	209	0.981
Totals, 14 and over .	4,157	26	4,131	4,156	1.006
Women--					
14-19.....	203	32	171	209	1.222
20-24.....	260	21	239	267	1.117
25-34.....	270	21	249	278	1.116
35-64.....	416	39	377	412	1.093
65 and over.....	27	4	23	23	1.000
Totals, 14 and over .	1,176	117	1,059	1,189	1.123
Both Sexes--					
Totals, 14 and over .	5,333	143	5,190	5,345	1.030

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Table 3 - Population, Gainfully Occupied and Labour Force, by Age and Sex, 1921 (excluding Newfoundland)

NOTE.—Wherever necessary, all figures have been adjusted to include residents of the Yukon and Northwest Territories, Indians living on reserves, and members of the Armed Services, and to exclude inmates of institutions.

Sex and age group	Population	Gainfully occupied	Labour force	Participation rate	
				Gainfully occupied	Labour force
	'000	'000	'000	%	%
Men—					
10-13.....	371	8	8	2.2	2.2
14-19.....	488	299	334	61.3	68.4
20-24.....	349	328	329	94.0	94.3
25-34.....	687	673	673	98.0	98.0
35-64.....	1,323	1,286	1,282	97.2	96.9
65 and over.....	208	127	124	61.1	59.6
Totals, 10 and over	3,426	2,721	2,750	79.4	80.3
Totals, 14 and over	3,055	2,713	2,742	88.8	89.8
Women—					
10-13.....	364	1	1	0.3	0.3
14-19.....	483	117	143	24.2	29.6
20-24.....	359	128	143	35.7	39.8
25-34.....	647	113	126	17.5	19.5
35-64.....	1,133	124	136	10.9	12.0
65 and over.....	198	13	13	6.6	6.6
Totals, 10 and over	3,184	496	562	15.6	17.7
Totals, 14 and over	2,820	495	561	17.6	19.9
Both Sexes—					
Totals, 10 and over	6,610	3,217	3,312	48.7	50.1
Totals, 14 and over	5,875	3,208	3,303	54.6	56.2

Table 4 – Population, Gainfully Occupied and Labour Force, by Age and Sex, 1931 (excluding Newfoundland)

NOTE.—Wherever necessary, all figures have been adjusted to include residents of the Yukon and Northwest Territories, Indians living on reserves, and members of the Armed Services, and to exclude inmates of institutions.

Sex and age group	Population	Gainfully occupied	Labour force	Participation rate	
				Gainfully occupied	Labour force
	'000	'000	'000	%	%
Men—					
10-13.....	431	5	5	1.2	1.2
14-19.....	627	323	360	51.5	57.4
20-24.....	459	430	431	93.7	93.9
25-34.....	771	760	760	98.6	98.6
35-64.....	1,633	1,584	1,579	97.0	96.7
65 and over	285	164	161	57.5	56.5
Totals, 10 and over	4,206	3,266	3,296	77.6	78.4
Totals, 14 and over	3,775	3,261	3,291	86.4	87.2
Women—					
10-13.....	423	1	1	0.2	0.2
14-19.....	616	133	163	21.6	26.5
20-24.....	445	189	211	42.5	47.4
25-34.....	713	156	174	21.9	24.4
35-64.....	1,406	170	186	12.1	13.2
65 and over	272	17	17	6.2	6.2
Totals, 10 and over	3,875	666	752	17.2	19.4
Totals, 14 and over	3,452	665	751	19.3	21.8
Both Sexes—					
Totals, 10 and over	8,081	3,932	4,048	48.7	50.1
Totals, 14 and over	7,227	3,926	4,042	54.3	55.9

HISTORICAL ESTIMATES OF CANADIAN LABOUR FORCE

Table 5 – Population, Gainfully Occupied and Labour Force, by Age and Sex, 1941 (excluding Newfoundland)

NOTE.—Wherever necessary, all figures have been adjusted to include residents of the Yukon and Northwest Territories, Indians living on reserves, and members of the Armed Services, and to exclude inmates of institutions.

Sex and age group	Population	Gainfully occupied	Labour force	Participation rate	
				Gainfully occupied	Labour force
	'000	'000	'000	%	%
Men—					
14-19	672	329	367	49.0	54.6
20-24	513	474	475	92.4	92.6
25-34	911	899	899	98.7	98.7
35-64	1,864	1,796	1,791	96.4	96.1
65 and over	378	185	181	48.9	47.9
Totals, 14 and over .	4,338	3,683	3,713	84.9	85.6
Women—					
14-19	661	145	177	21.9	26.8
20-24	512	215	240	42.0	46.9
25-34	886	221	247	24.9	27.9
35-64	1,674	232	254	13.9	15.2
65 and over	364	21	21	5.8	5.8
Totals, 14 and over .	4,097	834	939	20.4	22.9
Both Sexes—					
Totals, 14 and over .	8,435	4,517	4,652	53.6	55.2

**Table 6 – Population and Labour Force, by Age and Sex, 1951
(excluding Newfoundland)**

NOTE.—Wherever necessary, all figures have been adjusted to include residents of the Yukon and Northwest Territories, Indians living on reserves, and members of the Armed Services, and to exclude inmates of institutions.

Sex and age group	Population	Labour force	Labour force participation rate
	'000	'000	%
Men—			
14-19.....	613	329	53.7
20-24.....	517	487	94.2
25-34.....	1,028	1,010	98.2
35-64.....	2,155	2,047	95.0
35-44.....	917	905	98.7
45-54.....	702	679	96.7
55-64.....	536	463	86.4
65 and over.....	522	206	39.5
Totals, 14 and over.....	4,835	4,079	84.4
Women—			
14-19.....	611	206	33.7
20-24.....	535	261	48.8
25-34.....	1,080	274	25.4
35-64.....	2,059	407	19.8
35-44.....	895	200	22.3
45-54.....	660	139	21.1
55-64.....	504	68	13.5
65 and over.....	507	23	4.5
Totals, 14 and over.....	4,792	1,171	24.4
Both Sexes—			
Totals, 14 and over.....	9,627	5,250	54.5

HISTORICAL ESTIMATES OF CANADIAN LABOUR FORCE

**Table 7 - Population and Labour Force, by Age and Sex, 1961
(excluding Newfoundland)**

NOTE.—Wherever necessary, all figures have been adjusted to include residents of the Yukon and Northwest Territories, Indians living on reserves, and members of the Armed Services, and to exclude inmates of institutions.

Sex and age group	Population	Labour force	Labour force participation rate
	'000	'000	%
Men—			
14-19.....	869	353	40.6
14.....	167	16	9.6
15-16.....	304	77	25.3
17-19.....	398	260	65.3
20-24.....	567	535	94.4
25-34.....	1,221	1,202	98.4
35-64.....	2,716	2,588	95.3
35-44.....	1,155	1,135	98.3
45-54.....	929	898	96.7
55-64.....	632	555	87.8
65 and over.....	633	194	30.6
65-69.....	229	120	52.4
70 and over.....	404	74	18.3
Totals, 14 and over.....	6,006	4,872	81.1
Women—			
14-19.....	837	265	31.7
14.....	160	8	5.0
15-16.....	291	48	16.5
17-19.....	386	209	54.1
20-24.....	580	294	50.7
25-34.....	1,192	348	29.2
35-64.....	2,682	801	29.9
35-44.....	1,170	365	31.2
45-54.....	896	294	32.8
55-64.....	616	142	23.1
65 and over.....	671	41	6.1
65-69.....	238	24	10.1
70 and over.....	433	17	3.9
Totals, 14 and over.....	5,962	1,749	29.3
Both Sexes—			
Totals, 14 and over.....	11,968	6,621	55.3

**Table 8 - Population and Labour Force, by Age and Sex, 1951
(including Newfoundland)**

NOTE.—Wherever necessary, all figures have been adjusted to include residents of the Yukon and Northwest Territories, Indians living on reserves, and members of the Armed Services, and to exclude inmates of institutions.

Sex and age group	Population	Labour force	Labour force participation rate
	'000	'000	%
Men—			
14-19	632	338	53.5
20-24	530	498	94.0
25-34	1,054	1,034	98.1
35-64	2,202	2,088	94.8
35-44	939	925	98.5
45-54	717	692	96.5
55-64	546	471	86.3
65 and over	534	209	39.1
Totals, 14 and over	4,952	4,167	84.1
Women—			
14-19	629	210	33.4
20-24	549	266	48.5
25-34	1,104	277	25.1
35-64	2,101	412	19.6
35-44	914	202	22.1
45-54	673	141	21.0
55-64	514	69	13.4
65 and over	518	23	4.4
Totals, 14 and over	4,901	1,188	24.2
Both Sexes—			
Totals, 14 and over	9,853	5,355	54.3

HISTORICAL ESTIMATES OF CANADIAN LABOUR FORCE

**Table 9 – Population and Labour Force, by Age and Sex, 1961
(including Newfoundland)**

NOTE.—Wherever necessary, all figures have been adjusted to include residents of the Yukon and Northwest Territories, Indians living on reserves, and members of the Armed Services, and to exclude inmates of institutions.

Sex and age group	Population	Labour force	Labour force participation rate
	'000	'000	%
Men—			
14-19	896	363	40.5
14	172	16	9.3
15-16	314	79	25.2
17-19	410	268	65.4
20-24	582	548	94.2
25-34	1,248	1,223	98.0
35-64	2,774	2,636	95.0
35-44	1,181	1,157	98.0
45-54	949	915	96.4
55-64	644	564	87.6
65 and over	647	197	30.4
65-69	234	122	52.1
70 and over	413	75	18.2
Totals, 14 and over	6,147	4,967	80.8
Women—			
14-19	865	274	31.7
14	165	8	4.8
15-16	301	50	16.6
17-19	399	216	54.1
20-24	595	300	50.4
25-34	1,218	352	28.9
35-64	2,735	807	29.5
35-44	1,193	367	30.8
45-54	914	297	32.5
55-64	628	143	22.8
65 and over	684	41	6.0
65-69	243	24	9.9
70 and over	441	17	3.9
Totals, 14 and over	6,097	1,774	29.1
Both Sexes—			
Totals, 14 and over	12,244	6,741	55.1

Table 10 – Population, Gainfully Occupied and Labour Force, by Sex, 1901 and 1911 (excluding Newfoundland)

NOTE.—Wherever necessary, all figures have been adjusted to include residents of the Yukon and Northwest Territories, Indians living on reserves, and members of the Armed Services, and to exclude inmates of institutions.

Year and sex	Population	Gainfully occupied	Labour force	Participation rate	
				Gainfully occupied	Labour force
	'000	'000	'000	%	%
Persons 10 years of age and over—					
1901 – Men	2,066	1,598	1,618	77.3	78.3
Women	1,957	244	281	12.5	14.4
Both sexes ...	4,023	1,842	1,899	45.8	47.2
1911 – Men	2,913	2,366	2,390	81.2	82.0
Women	2,521	366	419	14.5	16.6
Both sexes ...	5,434	2,732	2,809	50.3	51.7
Persons 14 years of age and over—					
1901 – Men	1,829	1,586	1,606	86.7	87.8
Women	1,729	242	279	14.0	16.1
Both sexes ...	3,558	1,828	1,885	51.4	53.0
1911 – Men	2,629	2,357	2,381	89.7	90.6
Women	2,245	365	418	16.3	18.6
Both sexes ...	4,874	2,722	2,799	55.8	57.4

Table 11 – Total Labour Force, 1851 – 1961 (excluding Newfoundland)

NOTE.—Implicitly or explicitly, all figures have been adjusted (wherever necessary) to include residents of the Yukon and Northwest Territories, Indians living on reserves, and members of the Armed Services.

Year	Thousands of persons	Year	Thousands of persons
1851	762	1911	2,809
1861	1,053	1921	3,312
1871	1,201	1931	4,048
1881	1,474	1941	4,652
1891	1,732	1951	5,250
1901	1,899	1961	6,621



Appendices A-D

A. ESTIMATION OF ADJUSTMENT GROUPS

While general reference is made in Table 1 to the sources of information for the estimates of the adjustment groups, a further note of explanation on the method of estimation is required. Each of the four "marginal" groups are treated separately.

- (1) **New Seekers:** The 1951 Census recorded the numbers of "persons who have never worked and were seeking work", classified by age and sex. Since this information was not available from the June 1951 Labour Force Survey, it was necessary to use the census data but only for persons 14-24 years of age. The very small numbers of "new seekers" aged 25 and over were omitted from the estimates.
- (2) **Male Students:** The 1951 Census recorded 17,141 males whose *principal* activity for the week ending June 2, 1951 was "going to school" but whose *secondary* activity during that week was "working". (This information was not available from Survey tabulations.) The age distribution of these students was secured from unpublished data provided by the Census Division of the Dominion Bureau of Statistics.
- (3) **Female Unpaid Family Workers in Agriculture:** As noted previously, in order to adjust a labour force total to a gainful worker count, it is necessary to subtract some, but not all, of the female unpaid family workers from the total female agricultural labour force. The problem of estimating this adjustment group, then, consists of determining what proportion of the female agricultural labour force should be excluded in each of the age categories shown in Table 1.

The June 1951 Labour Force Survey recorded a total of 80,000 female "no pays" in agriculture; no age detail was published nor is it available from unpublished data. In order to utilize this Survey figure for our purposes, it would have been necessary, therefore, first to estimate the age distribution of these persons and then to estimate the proportion, within each age category, who would have been missed in a gainful worker count. Rather than follow this procedure, it was decided instead to use the 1951 Census data on female unpaid family workers in agriculture. The Census recorded 18,166 such females,¹ considerably

¹ An unpublished tabulation from the 1951 Census showed 27,325 women, in agricultural occupations, whose primary activity was keeping house, going to school, retired, etc., but whose secondary activity was "working". Of these, 11,907 were classified as unpaid family workers. It might be argued that this latter figure best represents the group of women who would be excluded from a gainful worker count. But taking into consideration the very strong evidence suggesting that the 1951 Census failed, by a wide margin, to enumerate all the female unpaid family workers on farms (see Study on Occupations in this series), it was felt that a figure of approximately 12,000 workers was too low and the adjustment was therefore based on the total number of female "no pays" in agriculture, excluding the 14-19 year olds for reasons explained in the text.

fewer than the comparable Labour Force Survey figure. The census figure, therefore, lies between the two extreme estimates of female "no pays"—that of the gainfully occupied, at the lower end, and the Labour Force Survey, at the upper. For this reason, and because age detail was provided, the census data were used for adjustment purposes for females aged 20 and over. No adjustment was made for women of 14–19 because observation of earlier censuses revealed that, in relative terms, considerably *more* female unpaid family farm workers in this age group were recorded than in the 1951 Census.¹ For this age group, then, the census labour force count was assumed to be approximately identical to that which would have been obtained with a gainfully occupied criterion.

- (4) **Female Part-Time Workers in Non-Agricultural Industry:** Women who work on an intermittent or part-time basis would probably be counted as housewives in a gainful worker enumeration, although in a labour force survey they should, if they worked even for a few hours or sought work during the week, be recorded as members of the current labour force. No *direct* information on this category of workers was available from either the 1951 Census or the June Survey. The estimates shown in the fourth column of Table 1 were derived from a number of different Census and Survey sources in the following manner.

The 1951 Census provided an (unpublished) figure for the total number of females in the non-agricultural labour force who worked one to 34 hours during the census reference week—119,748 women. This figure represents the part-time female work force in non-agricultural industries, i.e., women who *actually* worked less than 35 hours during the reference week, but it is larger than the "voluntary" part-time work force, i.e., women who *usually* work less than 35 hours per week. It was the voluntary part-time work force which was considered more appropriate for adjustment purposes. Thus a ratio of the voluntary to the actual part-time female work force (in non-agricultural industries) was estimated from (unpublished) Survey data,² and this ratio was used to "deflate" the Census estimate (referred

¹ The 1951 Census recorded 3,827 teen-age girls in the unpaid family worker category in agriculture. If, for example, the 1941 Census ratio of female "no pays" to female "paid" employment in agriculture (i.e., total female employment in agriculture minus "no pays") is applied to the 1951 Census paid-employment figure, the resulting number is 4,561, which is almost 20% higher than the number of female teen-age unpaid family workers on farms actually recorded.

² Because the requisite data on the voluntary and actual part-time labour force were not available from either the 1951 Census or the June Survey, there was no alternative except to use (unpublished) statistics from Labour Force Surveys subsequent to 1951. An average ratio was calculated based on May-June estimates for a number of selected postwar years.

HISTORICAL ESTIMATES OF CANADIAN LABOUR FORCE

to above) from 119,748 to 98,313 females (fourth column of Table 1). This total was then distributed by age in accordance with the age distribution of female wage earners who reported earnings of less than \$500 in the 1951 Census.

B. THE REVISED UNITED STATES LABOUR FORCE DEFINITION

In January 1967 the United States Department of Labor introduced revised definitions of employment and unemployment which are intended to "clear up several ambiguities and uncertainties in the [concept]" (News Release, U.S. Department of Labor, November 22, 1966). The changes which centred on the definition of the unemployed and, in particular, the treatment of the "inactive seekers", were in line with the basic recommendations of the President's Committee to Appraise Employment and Unemployment Statistics (the Gordon Committee) as set out in the 1962 Report of that Committee. The definitional changes were adopted following a three-year experimental program of the Bureau of Labor Statistics, in co-operation with the Bureau of the Census, designed to test a number of conceptual variants. A separate experimental sample was utilized for this purpose.

The principal changes in definition relevant to this present discussion were:

- (1) *"To be counted as unemployed a person must have engaged in some specific job-seeking activity (going to the Employment Service, applying to an employer, answering a want-ad. etc.) within the past four weeks. (An exception is made for persons waiting to start a new job in thirty days or waiting to be recalled from layoff.)"*
- (2) *"To be counted as unemployed, an individual must be currently available for work. In the past, the test of current availability was not applied. A high-school or college student, for example, who began to look for summer work in April was counted as unemployed in that month even though he didn't desire to work until the beginning of vacation in June."*
- (3) *"Persons will be classified as employed, even though they were absent from their jobs in the survey week and looking for other jobs. Up to now persons absent from their jobs because of strikes, bad weather, etc., who were looking for other jobs were classified as unemployed."*

The first of these changes has the effect of extending the "activity" criterion to cover a group which, as we have seen, was formerly exempt from its application—the "inactive seekers". It should be noted, however, that the definition of "current" has also been changed; the reference period of one week, which applies to all other categories of the labour force, is extended to four weeks in the case of the "inactive seekers".

The second change introduces a new criterion into the labour force definition—"current availability for work". It is impossible, in the absence of detailed information about the experimental procedure and results, to judge whether this new criterion enhances the *operational* feasibility of the

HISTORICAL ESTIMATES OF CANADIAN LABOUR FORCE

unemployment definition. It does, however, as Commissioner of Labor Statistics Arthur Ross has stated, clarify the definition in the sense of making it "more consistent with public understanding of the term". It is important to note the effect of this change is that the criterion of "current availability" supersedes that of "current activity" in determining the labour force status of certain groups in the population, in particular students and other new entrants.

Finally, the third change—classifying as *employed* job-holders who had *not* worked but had *looked* for work—is a straightforward rejection of the activity criterion in favour of the criterion (newly resurrected) of job attachment.

In summary, then, the new definition of the economically active adopted in the United States in January 1967 involves both a significant extension and a significant restriction of the "activity" criterion.

C. DECENNIAL CENSUS QUESTIONS, 1871-1961

Presented in this Appendix are the questions relating to economic activity which were asked in each of the decennial censuses from 1871 to 1961. (So as to present these questions in their proper context, some of the other questions asked are also included.) In all cases the questions are presented more or less as they were worded, and for the 1951 and 1961 Censuses the relevant portions of the questionnaires are reproduced as they actually appeared.

The 1871-1941 questions are based on unpublished summary material provided by the Census Division of DBS.

1871 CENSUS OF CANADA

Numbered in the order of visitation 1 2 3 4 5 6	Names	Sex	Age	Born in last 12 months	Country or province of birth	Religion	Origin	Profession, occupation or trade

Married or widowed	Married within last 12 months	Instruction			Infirmities			Date of operation and remarks
		Going to school	Over 20 unable to read	Over 20 unable to write	Deaf and dumb	Blind	Unsound mind	

HISTORICAL ESTIMATES OF CANADIAN LABOUR FORCE

1881 CENSUS OF CANADA

Numbered in the order of visitation	Names	Sex	Age	Born within last 12 months	Country or place of birth	Religion	Origin	Profession, occupation or trade

Married or widowed	Instruction	Infirmities			Dates of operation, remarks
	Going to school	Deaf, dumb	Blind	Unsound mind	

1891 CENSUS OF CANADA

Numbered in order of visitation	Names	Sex	Age	Married or widowed	Relation to head of family	Country or province of birth	French Canadian	Place of birth, father

Place of birth, mother	Religion	Profession, occupation or trade	Employers	Wage earners	Unemployed during week preceding census	Number employed during year

Instruction		Infirmities		
Read	Write	Deaf, dumb	Blind	Unsound mind

HISTORICAL ESTIMATES OF CANADIAN LABOUR FORCE

1901 CENSUS OF CANADA

Numbered in order of visitation		Names	Sex	Colour	Relationship to head	Marital status	Month and date of birth	Year of birth	Age
Dwelling House	Family or household								

Country or place of birth (if in Canada specify Province or Territory and add "r" or "u" for rural or urban as the case may be)	Year of immigration to Canada	Year of naturalization	Racial origin	Nationality	Religion	Profession and trade
						Profession or trade (if person has retired from prof. or trade add "r" for retired)

1901 CENSUS OF CANADA—concluded

Profession and trade (concl.)				Wage-earner			
Own means	Employer	Employee	Own account	Work home or factory (specify by "f" for factory and "h" for home or both as the case may be)	Months employed at trade	At home	At factory

Wage-earner (concl.)		Education and language						Infirmities a. Deaf and dumb b. Blind c. Unsound mind
Earnings	Extra earnings	Months in school	Read	Write	English	French	Mother tongue (if spoken)	

HISTORICAL ESTIMATES OF CANADIAN LABOUR FORCE

1911 CENSUS OF CANADA

Profession, occupation, trade or means of living				
Chief occupation or trade	Employment other than at chief occupation or trade	Employer	Employee	Working on own account

Wage - earners							
State where person is employed as "on farm", "in woollen mill", "at foundry shop", "in drug store", etc.	Weeks employed in 1910 at chief occupation or trade	Weeks employed in 1910 at other than chief occupation or trade, if any	Hours of working time per week at chief occupation	Hours of working time per week at other occupation, if any	Total earnings in 1910 from chief occupation or trade	Total earnings in 1910 from other than chief occupation or trade, if any	Rate of earnings per hour when employed by the hour, in cents

1921 CENSUS OF CANADA

Profession, occupation, and employment

Chief occupation or trade (Be specific, give as definite information as possible)	Employer "E" Employee or worker "W" Working on own account "O.A."	(a) If "Employer" state principal product (b) If "Employee" state where employed, as "farm", "cotton mill", "foundry", "grocery", etc. (c) If on "own account" state nature of work

Profession, occupation, and employment (concl.)

Total earnings in past 12 months (since June 1, 1920)	If employee, were you out of work June 1, 1921?	Number of weeks unemployed in the past 12 months (since June 1, 1920)	Number of weeks unemployed since June 1, 1920 because of illness

HISTORICAL ESTIMATES OF CANADIAN LABOUR FORCE

1931 CENSUS OF CANADA

Occupation and Industry			
Occupation Trade, profession or particular kind of work, as carpenter, weaver, sawyer, merchant, farmer, salesman, teacher, etc. (Give as definite and precise information as possible.)	Industry Industry or business in which engaged or employed, as cotton mill, brass foundry, grocery, coal mine, dairy farm, public school, business college, etc.	Class of Worker	Total earnings in the past twelve months (since June 1, 1930)

Unemployment			
If an employee, were you at work Monday, June 1, 1931?	If answer to previous question is NO, why were you not at work on Monday, June 1, 1931? (For example, no job, sick, accident, on holidays, strike or lock-out, plant closed, no materials, etc.)	Total number of weeks unemployed from any cause in the last 12 months	Of the total number of weeks reported out of work in [pre- vious] column, how many were due to - No job Illness Accident Strike or lock-out Temporary lay-off Other causes

1941 CENSUS OF CANADA

Occupation, Industry and Status			
Occupation	Industry		Status
Trade or profession, as stationary engineer, insurance agent, etc.	Give kind of product made or dealt in or service rendered, and branch of industry		Employer, own account, wage-earner or unpaid family worker
	Kind of product or service, as for example, rubber shoes, drugs, etc.	Branch of industry, as for example, manufacturing, retail trade, etc.	

Occupational Trend	Unemployment		Employment and Earnings (For wage-earners only)	
What was your occupation in 1931? (This question refers only to persons 25 years of age and over)	If a wage-earner, were you at work on June 2, 1941? (Yes or No)	If not, give reason	Number of weeks worked and total earnings during 12 months prior to June 2, 1941	
			Weeks employed including paid holidays and time off with pay	Total earnings in dollars

HISTORICAL ESTIMATES OF CANADIAN LABOUR FORCE

1951 CENSUS OF CANADA

14. BIRTHPLACE (IN MOST PROVINCES OR TERRITORIES, THIS PERSON'S BIRTHPLACE IS THE SAME AS HIS OR HER USUAL OCCUPATION)

15. CITIZENSHIP (CITIZENSHIP)

16. ORIGIN

17. INDUSTRY

18. USUAL OCCUPATION

19. WAGE AND SALARY CARRIERS

20. ACTIVITY DURING WEEK ENDING JUNE 3, 1951

21. WHAT DID THIS PERSON DO DURING THE WEEK ENDING JUNE 3, 1951?

22. NAME OF FIRM OR BUSINESS - FOR WORK UP THIS PERSON'S STREET

23. INDUSTRY - WHAT TYPE OF BUSINESS OR INDUSTRY IS THIS?

24. OCCUPATION - WHAT KIND OF WORK DID THIS PERSON DO IN THIS INDUSTRY?

25. IS THE OCCUPATION REPORTED IN SECTION 23 THIS PERSON'S USUAL OCCUPATION?

26. ASK QUESTIONS 28 AND 29 FOR WAGE AND SALARY CARRIERS

27. CLASS OF WORKER

28. REES INDEX

29. WAGE AND SALARY

30. WAGE AND SALARY

31. WAGE AND SALARY

32. WAGE AND SALARY

33. WAGE AND SALARY

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100. WAGE AND SALARY

1961 CENSUS OF CANADA

Questions 16-25 of the Population Questionnaire (Form 2A)
for all persons 15 years of age and over (as applicable)

16. Did you have a job of any kind last week? (Even if not at work, or part-time)	Yes <input type="checkbox"/> No <input type="checkbox"/>	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> If answer is "No" to all three questions, omit Questions 19-25 C </div>
17. Did you look for work last week?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
18. Did you have a job at any time in the past 12 months?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
19. Number of hours usually worked each week?	1-19 20-29 30-34 35-39 40 41-44 45-49 50+ Never worked	(Omit Questions 20-25)
20. For whom did you work last week, (or when you last worked)?	Name of firm, government agency, or other employer:	
21. What kind of business or industry was this?	As retail grocery, auto manufacturing, city busline transportation:	
22. What kind of work did you do in this industry?	As sales clerk, lathe operator, purchasing agent:	
23. Did you operate your own business or work for others in this occupation?	WORKED FOR OTHERS Wage or salary earner <input type="checkbox"/> Unpaid family worker <input type="checkbox"/>	OPERATED OWN BUSINESS With paid help <input type="checkbox"/> Without paid help <input type="checkbox"/>
24. In how many weeks did you work for wages or salary in the past 12 months?	1-4 5-13 14-26 27-39 40-48 49-52 (Include weeks worked part-time and leave with pay)	None (Omit Question 25)
25. What was your gross wage and salary income (before deductions) in this period?	0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10,000 11,000 0 100 200 300 400 500 600 700 800 900 1000 12,000 15,000	

QUESTION 26 FOR ALL MALES 25 YEARS OF AGE AND OVER

26. Did you ever have any <u>wartime</u> service in the active military forces of Canada or allied countries?	In what wars?				None
	Wars prior to 1914	World War I (1914-18)	World War II (1939-45)	In Korea (1950-53)	
	In what forces?				
	Canadian	Allied	Both		

Serial No.	Relationship	Primary Family	Family No.	Birth-place	Citizen-ship	Origin	Religion	Language	Employ-ment	Industry (Ques. 21)	Occupation (Ques. 22)
0 - 0	Self	0	0	0	0	0	0	N.S.	0	0	0
10 - 1	Grand-child	10	1	10	10	10	10	N.S.	100	10	1
20 - 2	Father or mother	20	2	20	20	20	20	N.S.	200	20	2
30 - 3	Brother or sister	30	3	30	30	30	30		300	30	3
40 - 4	Brother or sister 2 or 3 in-laws	40	4	40					400	40	4
50 - 5	Other relative	50	5	0	0	0	0		500	50	5
60 - 6	Lodger	60	6	1	1	1	1		600	60	6
70 - 7	Partner	70	7	2	2	2	2		700	70	7
80 - 8	Employer	80	8	3	3	3	3		800	80	8
90 - 9	Inmate	90	9	4	4	4	4		900	90	9

FORM 2-21

FOR 'W', 'L', OR 'J' IN QUESTION 14 OR 19 ASK		FOR OFFICE USE ONLY		
23. For whom did this person work?		MAJ	MAJ	MAJ
24. INDUSTRY In what kind of business or industry did this person work?		MANUFACT	MANUFACT	MANUFACT
25. OCCUPATION What kind of work did this person do in this industry?		MANUFACT	MANUFACT	MANUFACT

26. In what class of worker did this person belong?		MANUFACT	MANUFACT	MANUFACT
WORKED FOR OTHERS		MANUFACT	MANUFACT	MANUFACT
Paid worker		MANUFACT	MANUFACT	MANUFACT
Unpaid family worker		MANUFACT	MANUFACT	MANUFACT
27. Make comments on all vague, difficult or unusual situations		MANUFACT	MANUFACT	MANUFACT

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ACTIVITY LAST MONTH	MAJOR	SECONDARY
28. What was the person doing during the week ending _____?		
W	Worked	W
L	Looked for work	L
J	Had a job but not at work	J
U	Temporarily unable to work	U
M	Kept home	M
R	Went in rotation	R
B	Participated in voluntary work	B
OTN	Other	OTN
	Did nothing else	

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