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CANADA

DISTRIBUTION OF NON-FARM INCOMES
IN CANADA BY SIZE
1951

Reference Paper
No. 52

DOMINION BUREAU OF STATISTICS
Research and Development Division

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FOREWORD

This reference paper presents two series of income distribution estimates for the year 1951 — the distributions of family and individual incomes. The income concepts used in this study are substantially similar to the cash income components of the Personal Income series published in the National Accounts; thus, these estimates may be regarded as a phase of National Income research.

The main sections of this report analyze the highlights of the income distributions and discuss some of the problems inherent in the use of the data. They also contain tables on the distribution of family incomes and individual incomes for the year 1951, classified by size of total income, by major source of income, by region, by age and sex and by other groupings. Appendices to the report outline sources and methods and include an earlier estimate of family and individual incomes for the year 1948.

The 1948 and 1951 series represent the most recent attempt to measure the distribution of incomes in Canada. An earlier study for the year 1942, prepared by Mr. Lawrence M. Read, has been published in "National Accounts, Income and Expenditure, 1938-1945" (Dominion Bureau of Statistics, April, 1946). Because, at that period, many statistics were in a formative state, Mr. Read's study used a narrower definition of income and was more limited in scope. Gaps in the basic data at that time made these estimates subject to many limitations. Since the publication of this first estimate, the statistical base available for the study of income distribution has broadened substantially. The present studies thus use a more comprehensive definition of income and are prepared in greater detail.

The present report was prepared by Miss J.R. Podoluk of the Research and Development Division, Dominion Bureau of Statistics.

HERBERT MARSHALL
Dominion Statistician.

TABLE OF CONTENTS

	Page
Introduction.....	7
Highlights of the Income Distribution.....	7
Family Incomes.....	7
Chart 1. Percentage Distribution of Families by Income Groups, 1951	8
Chart 2. Percentage Distribution of Families by Income Groups and by Major Source of Income, 1951.....	9
Chart 3. Percentage Distribution of Wage Earning Families by Income Groups and by Size of Family, 1951.....	10
Individual Incomes	11
Statistical Problems of Estimation	12
Problems of Analysis.....	13
Bibliography	14
Notes and Definitions	15

Tables

Family Incomes:

Table 1. Distribution of Families (number and percent) by Income Groups and by Major Source of Income, 1951.....	18
Table 2. Distribution of Aggregate Family Income (amount and percent) by Income Groups and by Major Source of Income, 1951.....	18
Table 3. Percentage Distribution of Families by Income Groups and by Regions, 1951	19
Table 4. Average and Median Family Incomes by Regions, 1951.....	19
Table 5. Percentage Distribution of Families by Income Groups and by Employment Status of Head, 1951	20
Table 6. Percentage Distribution of Families by Income Groups and by Age of Head, 1951	20
Table 7. Percentage Distribution of Families by Income Groups and by Age and Sex of Head, 1951	21
Table 8. Percentage Distribution of Families by Income Groups and by Size of Family, 1951	22
Table 9. Average Size of Family, Average Number of Income Recipients and Average Number of Income Earners, by Income Groups, 1951	22
Table 10. Percentage Composition of Family Incomes by Income Groups and by Major Source of Income, 1951	23

Individual Incomes:

Table 11. Distribution of Individuals (number and percent) by Income Groups and by Major Source of Income, 1951.....	24
Table 12. Distribution of Aggregate Individual Income (amount and percent) by Income Groups and by Major Source of Income, 1951.....	24
Table 13. Percentage Distribution of Individuals by Income Groups and by Regions, 1951	25
Table 14. Average and Median Individual Incomes, by Regions, 1951.....	25
Table 15. Percentage Distribution of Individuals by Income Groups and by Employment Status, 1951.....	26
Table 16. Percentage Distribution of Individuals by Income Groups and by Age, 1951.....	26
Table 17. Percentage Distribution of Individuals by Income Groups and by Age and Sex, 1951	27
Table 18. Percentage Distribution of Individuals by Income Groups and by Age: Major Source of Income: Wages and Salaries, 1951.....	28
Table 19. Percentage Distribution of Individuals by Income Groups and by Age and Sex: Major Source of Income: Wages and Salaries, 1951	28

	Page
Table 20. Percentage Distribution of Individuals by Income Groups and by Relationships to Head of Family, 1951	29
Table 21. Composition of Individual Incomes by Income Groups and by Major Source of Income, 1951	30
Appendix A. Distribution of Non-farm Incomes in Canada, by Size, 1951: Sources and Methods.....	31
Appendix B. Distribution of Non-farm Incomes, by Size, 1948	37
Table 22. Percentage Distribution of Families and Family Incomes by Income Groups and by Major Source of Income, 1948	40
Table 23. Percentage Distribution of Individuals and Individual Incomes by Income Groups and by Major Source of Income, 1948	40

INTRODUCTION

Family incomes in Canada, in 1951, are summarized in Tables 1 and 2 while individual incomes are presented in Tables 11 and 12. Both family and individual units are classified into three subgroups by major source of income: wage and salaries, business income (net income from self-employment), and other money income (investment income, transfer payments and miscellaneous income).

Tables 3 to 10 and 13 to 21 are subsidiary analytic tables on the distributions of family and individual incomes showing detailed sources of family incomes by income group, the distribution of family incomes by the age and sex of the head, by the employment status of the head, by regions and by size of family. For individuals, distributions are also given by region, by sex, by age, by status in the family and by employment status.

The estimates are based upon data collected in an income survey conducted by the Bureau of Statistics in March and April, 1952, and upon income tax statistics. The incomes measured in these distributions are the total cash income receipts from the following sources: wages and salaries, before deductions, business income (net income for self-employment or a profession), investment income, transfer payments (such as family allowances) and miscellaneous income. Further explanations of the concepts are given in the section preceding the tables.

Appendix A outlines the data sources and the methods used in these estimates and discusses the relationship of the present estimates to the National Accounts.

Appendix B contains data from a previous study of the distribution of incomes in 1948 made in conjunction with the Family Expenditures Survey of that year. Some changes in the treatment of family allowances and in the definition of the family unit were made between the 1948 and 1951 surveys; these differences are explained fully in Appendix B. However, despite these elements of incomparability, it is felt that valid comparisons of a broad nature can be made between the two years, particularly for the family distributions.

Highlights of the Income Distribution

The following sections deal first with family incomes (Tables 1 to 10, pages 18-23) and then with individual incomes (Tables 11 to 21, pages 24-30). An analysis of the income distributions by sources of income, size of family, age composition and so forth is necessary for an understanding of the income distribution. The following discussion must be considered as a limited and inadequate approach to the

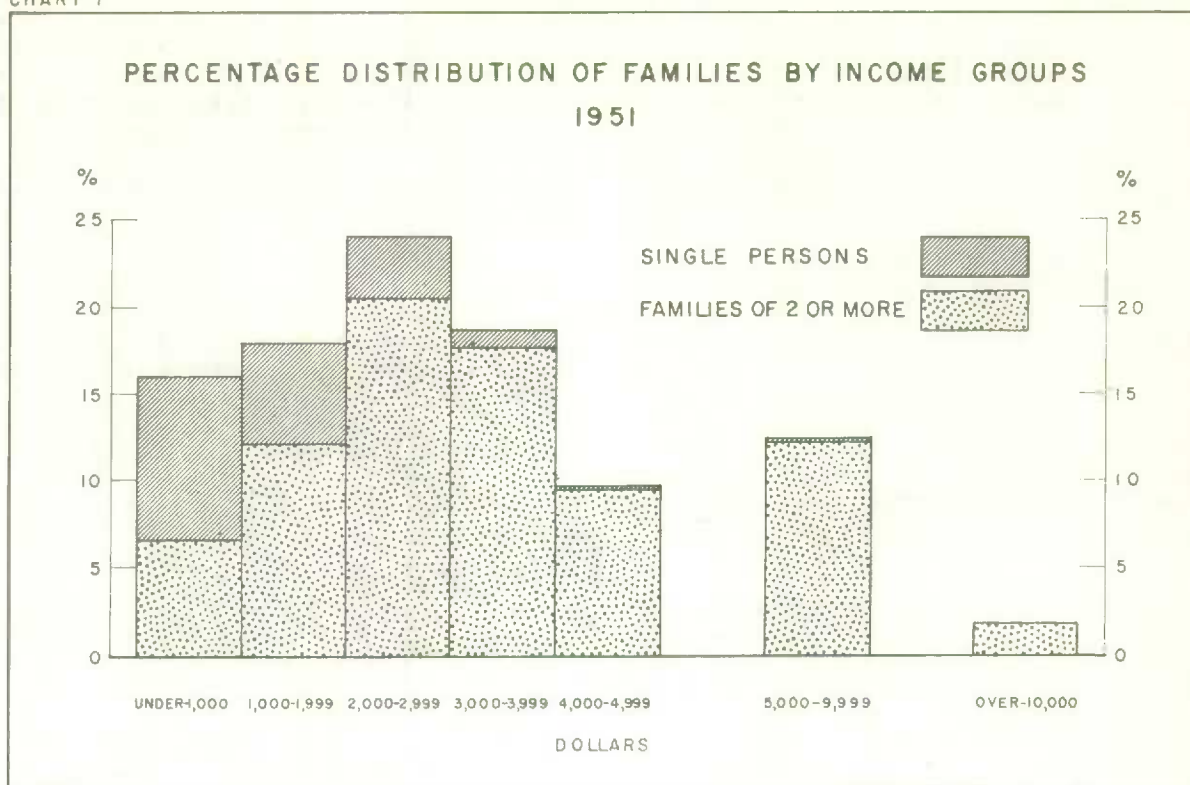
delineation of factors affecting the shape of the distribution. It abstracts the most important findings which might be of general interest but does not attempt to probe intensively. Subsequent sections on the statistical and analytic problems indicate why it is difficult to investigate thoroughly the problems underlying the distributions. It is hoped that such detail as is published in the present report will meet some of the needs of users with widely divergent interests in income statistics. It bears emphasis, however, that in this area, many difficulties hamper the development of general purpose statistics which would meet the needs of groups, such as marketing agencies and trade unions, whose research interests would differ substantially.

Family Incomes

The chart below shows the distribution of family incomes, by income groups, of all families, subdivided into single persons and families of two or more. Single persons are individuals living alone apart from their relatives, occupying a self-contained residence or boarding with an unrelated family. The modal group (that containing the most families) occurred in the interval \$2,500 to \$2,999; the average income (aggregate family income divided by the number of families) was \$3,185 while the median (the income which divides the distribution in half) was \$2,703. Approximately one-quarter of all family units (including single person units) had incomes below \$1,500; slightly over half fell between \$1,500 and \$4,000 while nearly a quarter had incomes above \$4,000. The lower quartile received approximately 6 per cent of aggregate income, the middle fifty per cent some 46 per cent while the upper group received nearly half of all income.

The chart below shows, by income groups, the percentage of all family units falling within each income bracket. In income brackets single persons and families of two or more are indicated separately. Family units in the lower quartile consist largely of single person units; in the income group under \$1,000, nearly 60 per cent of all families are single persons while for incomes of \$1,000 to \$1,999 the ratio is around 33 per cent. Above \$3,000 nearly all family units consist of two or more people. Single persons are usually found in the youngest and oldest age groups — those just beginning their earning careers and those who are in retirement. A substantial number of family units reported no income during the year; these consist partially of young persons who came into existence as separate units toward the end of the year and who were only starting to earn an income in 1952 and older persons who were probably drawing upon savings.

CHART 1



The following tables summarize the statistics underlying the chart; they show the percentage of family units within various income groups and sub-

divide these percentages into single persons and families of two or more.

Income Group	Percentage Distribution of All Family Units	Composition	
		Single Persons	Families of Two or More
		%	%
Under \$1,000.....	15.9	9.4	6.5
\$1,000—\$1,999.....	17.9	5.9	12.0
\$2,000—\$2,999.....	23.9	3.5	20.4
\$3,000—\$3,999.....	18.6	1.0	17.6
\$4,000—\$4,999.....	9.6	.2	9.4
\$5,000—\$9,999.....	12.4	.2	12.2
Over \$10,000.....	1.8	—	1.8
Total	100.0	20.2	79.9

Similar figures for families whose major source of income is wages and salaries are given below:

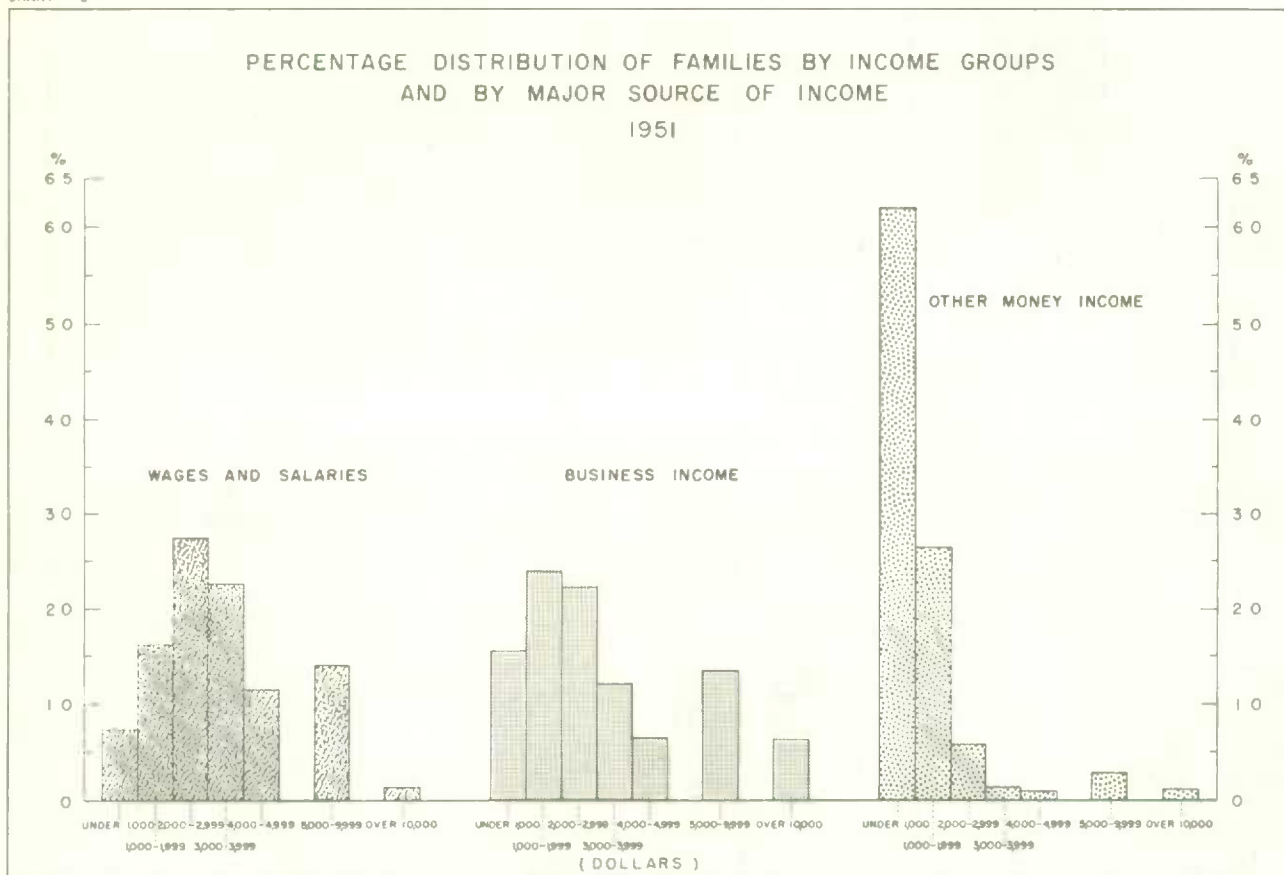
Income Group	Percentage Distribution of All Family Units	Composition	
		Single Persons	Families of Two or More
		%	%
Under \$1,000.....	7.3	4.9	2.4
\$1,000—\$1,999.....	16.2	6.3	9.9
\$2,000—\$2,999.....	27.4	4.2	23.2
\$3,000—\$3,999.....	22.5	1.1	21.4
\$4,000—\$4,999.....	11.5	.2	11.3
\$5,000—\$9,999.....	14.0	.2	13.8
Over \$10,000.....	1.3	—	1.3
Total	100.0	16.9	83.3

Sources of Family Incomes

Chart 2 shows the distribution of family incomes for families whose major sources of income are wages and salaries, business income and other money income (investment income, transfer payments and miscellaneous income). The chart indicates that the shape of each distribution differs substantially when source of income is a consideration. Separate

distributions are not given for transfer payments and investment income since the number of families receiving investment income is rather small and such data would be more affected by sampling error; in addition, as Appendix A indicates, investment income appears to be substantially underreported in the survey. For these reasons the statistics for such families are considered to be less satisfactory than those for other family groups.

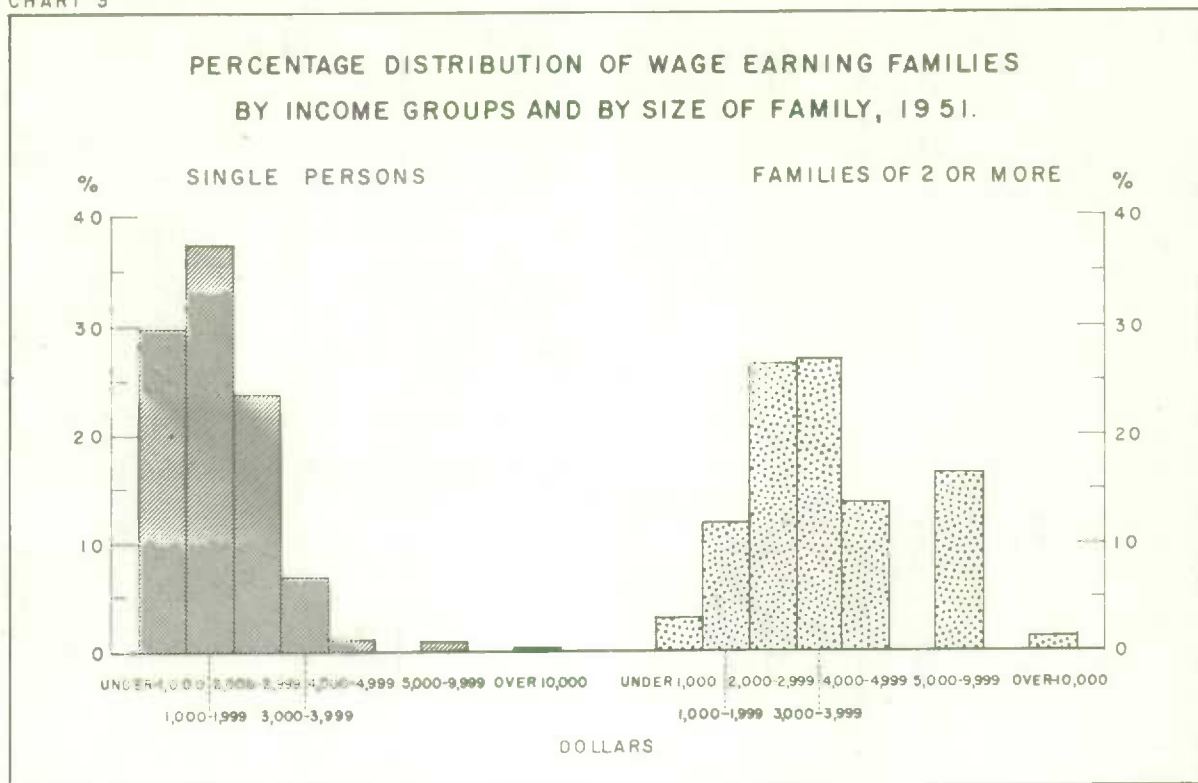
CHART — 2



Wage-earning families show a lower ratio of concentration at the two extremes of the income distribution than do families with business income; approximately two and a half percent of all wage-earning families (and two-thirds of these were single persons) had incomes below \$500 while the percentage with incomes over \$10,000 was slightly over one per cent. The removal of single persons from the income distribution changes the shape of the distribution

even more significantly. Only seven and a half per cent of wage-earning families of two or more persons reported income below \$1,500; approximately 60 per cent fell into the middle range of \$1,500 to \$4,000, while 32 per cent received incomes above \$4,000. Average incomes for wage-earning family units of two or more persons were nearly \$3,700 as compared with an average of approximately \$3,400 when single persons are included.

CHART 3



In contrast, a more unequal distribution exists among the incomes of families whose major source of income is business income and the inequality is more pronounced if the two extremes of the income distribution are considered. Nearly 5 per cent of these families received less than \$500 in income and shared in less than one-half of one per cent of aggregate income. On the other hand, more than 6 per cent of these families had incomes over \$10,000 and received more than 30 per cent of aggregate income. This group of families is a less homogeneous group than wage earning families; in the latter group lower incomes are largely attributable to the age of the head. Lower incomes among wage earning families are usually reported by young persons who are single or recently married and not in the working population for very long. The variations in the incomes of business income families are attributable to the variety of occupations classified in this category. The upper income levels include the incomes of the families of highly paid professionals, such as doctors and lawyers, and family incomes originating from prosperous family-owned businesses. The lower income levels contain families with low revenues from roomers and boarders or families where the head is an own-account earning small amounts of money in an employment such as painting, shoe-repairing or carpentry.

Age is again an important factor in explaining the distribution of the incomes of families whose source of income is other money income. These

families are, on the average, smaller in size than are families with earned income and are usually headed by persons in the older age groups. More than 80 per cent of families in this classification had an annual income of less than \$1,500 in 1951; of all such families more than 80 per cent were headed by persons over 50 years of age and about three quarters of these units consisted of single persons or two person families.

Incomes by Regions

In addition to income source, a number of other factors such as region and age and sex of the head influence the family's income position. By regions, Ontario had relatively less families in the lower income quartile and relatively more families in the upper income quartile than any other section of the country. Approximately twenty per cent of Ontario families had incomes below the \$1,500 level but 30 per cent fell above \$4,000. For metropolitan areas (centres with a population of 30,000 or more) the ratios were fifteen and a half per cent and thirty-five per cent. The Atlantic Provinces had the highest ratios of families in the lower quartile and the lowest ratios in the upper quartile, approximately 36 per cent and 11 per cent respectively. British Columbia, although its families had a higher than average representation in the lower quartile and a less than average representation in the upper quartiles, reported the second highest mean and median family incomes in the country, second only to On-

tario. For wage-earning families only, average incomes in British Columbia exceeded those of Ontario in both metropolitan and non-metropolitan areas although the differences between average incomes in metropolitan centers were not substantial. The Prairie Provinces, which had the highest ratio of farm population, showed the second lowest average income for non-farm families among the regions. Average incomes were \$2,809 while the median was \$2,395. Non-metropolitan areas in the Prairies contained many families headed by agricultural workers who would receive much of their income as income in kind such as free housing.

Incomes by Age and Sex of Head

An analysis of family incomes by age and sex of head of family indicates substantial variations in the family income distribution when these factors are taken into account. For all families, concentration in the bottom quartile is most pronounced for family units where the head is under 19 (largely single persons) and for family units where the head is over 65. Families with a head in the age group 30 to 39 have the smallest ratio of lower income families while families with head aged 40 to 49 have the greatest ratio in the upper income levels. When families are grouped by both the age and sex of the head of the family, it becomes evident, as might be expected, that family units headed by women are more frequently found in the lower income levels. For all age groups average incomes of families with female heads are approximately half or less than half of average incomes of families with male heads. For each group a significantly lower ratio of families headed by males falls into the lower quartiles than is true of all families. The difference is most striking in the younger age group where there are many single women working and forming a single person family unit. In the older age groups women are usually heads of broken families, containing children or other dependents but no male earners. However, in this group families headed by women are of less relative importance than in the younger age groups.

Income by Size of Family

Table 8 indicates that average and median incomes for families increase with an increase in the size of family. Table 9 provides some explanation as to the reason why large families, on the average, appear to be in a better income position. Larger families are more apt to send two or more persons into the labour force and the combined earnings of the primary and secondary income recipients tend to place the family into a higher income bracket. Analysis indicates that in approximately one-seventh of all family units the wife earned some income during the year; an even higher ratio of families contained working sons and daughters. Average size of family increases with income to the \$10,000 level and then declines only slightly; the average number of persons with incomes and with earned incomes per family follows the same pattern. Above the \$5,000 level each family, on the average, contained two persons with some type of income receipt while families with incomes of \$5,000 to \$10,000 also averaged two income earners. On the other hand, in

the income bracket under \$1,000, an income earner was only found in every second family, an indication of the importance of unearned income at this income level.

Individual Incomes

In the distribution of individual incomes the lower twenty-five per cent of individuals received incomes below the \$750 level; half of all individual income recipients received incomes approximately between \$750 and \$2,900 while the remaining twenty-five per cent were above this level. The pattern for individual incomes in the lower income levels repeated that of families; the lower quartile is dominated by the very young and aged, by the individuals receiving investment income and transfer payments. For individuals with business income the family income experience is also repeated—greater inequality exists than is true of the distribution of wage income, with a greater concentration at both ends of the income distribution.

By regions, Ontario again has a higher ratio of individuals in the upper quartile although Quebec has the smallest ratio in the lower quartile. The Atlantic provinces show the same trend in individual incomes as in family incomes with a higher proportion than the national average in the low income brackets and a smaller proportion in the upper brackets. Regionally, the average income of \$2,316 in British Columbia is the highest for the country although the median income is higher in Ontario.

The distribution of individual incomes is substantially different for men than for women with both average incomes and median incomes lower for women. A high proportion of women with incomes are subsidiary contributors to family incomes, either working wives or daughters. They tend to be concentrated at the lower end of the income distribution suggesting that the income reported is derived from only part year economic activity. However, Table 15 indicates that, even in the cases where women are employed the full year, average incomes are little more than half those of full-time male workers; the average total income of male employees working the full year was \$3,097 while that of female workers averaged only \$1,604.

For all individuals, the distribution of incomes is also a function of the individual's status in the labour force. Individuals outside the labour force but receiving incomes reported an average of \$822; employees averaged \$2,376 while employers and own-accounts had the highest income average of \$3,338.

By age groups, individual male incomes reached a peak in the age group 40 to 49 when average income was \$3,173; the highest average female income was reported by those in their thirties and amounted to \$1,399. The male age group 19 and under received the lowest average income while those 65 and over received the second lowest, while the reverse was true of female incomes. The peak in the income distribution of wage earners falls in the same age groups as the distribution of all incomes, although wage earners aged 65 and over are in receipt of av-

average incomes substantially higher than those of all income recipients above 65. Thus, the average income of all persons over 65, and in receipt of income, was \$1,545 for men and \$664 for women; for wage earners over 65 the corresponding averages were \$2,179 and \$870.

Statistical Problems of Estimation

A comparison of the income aggregates of the individual income size distribution and the Personal Income series of the National Accounts indicates that, in the case of a number of income components in the size distribution estimates, the aggregate income may be significantly underestimated. For 1951, although a complete reconciliation cannot be effected because of the omission of the farm sector from the original estimates, there is evidence to suggest that some types of income, such as investment income, are underestimated for the non-farm sector. The experience is similar to that noted in income surveys and income size distributions made in other countries.¹

There are a number of reasons why underestimation may occur. First, income reported in both the Survey of Incomes and in income tax returns may be understated or, alternately, income may not be reported at all. In the Income Survey the memory bias of the respondents may have led to the omission of small income receipts, such as bond or bank interest, or to inaccurate estimation of larger income receipts. The housewife who earns \$50 by working during the Christmas rush or who receives \$10 in dividends may not consider it worth while to report this income receipt². The Survey of Incomes for 1951 was conducted in March and April, 1952, to coincide with the period in which income tax returns were being filed. It was felt that this was the period during which individuals would have the most complete information on hand regarding income receipts of the previous year and, thus, the period in which the errors due to memory bias would be minimized. An examination of the earnings data from the 1946 Quinquennial Census of the Prairie Provinces suggests that surveys timed for other periods of the year occur at periods when it is difficult for individuals with fluctuating monthly incomes to make accurate estimates of earnings without the aid of records. This census, conducted on June 1, 1946, collected data on the wage and salary earnings for the previous twelve months. A frequency distribution of earnings indicated that, to a considerable extent, individuals tended to report incomes concentrated on rounded figures such as \$2,000 or \$2,500. In such instances, these may be only a rough approximation of the actual income and there is reason to believe that such errors are not self-cancelling but exert a downward influence in an income-size distribution.

1. A recent American study has published estimates conforming to National Accounts totals and concepts. For methods used see "Income Distribution in the United States," U.S. Department of Commerce, Office of Business Economics, 1953.

2. For an analysis of field survey problems see "Field Surveys of Consumer Incomes: An Appraisal," Wasson, Hurwitz and Schweiger, *Studies in Income and Wealth*, Vol. XIII, National Bureau of Economic Research, p. 483.

Income tax statistics, which are basic to the estimate of upper income groups, probably reflect fairly accurately the number of individuals in the upper income ranges but not necessarily the aggregate income these individuals receive. Income tax returns are tabulated before assessment, and income is taken off as the taxpayer reports it. Assessment may increase the amount of taxable income on the return, especially on the returns of farmers and businessmen where, if some expenses are disallowed, net income will be increased. For the 1951 tax year more than 50,000 business income returns were reassessed to alter the taxable income reported. Further, as is true of survey reports, individuals reporting incomes may omit small receipts of some types of income such as part-time earnings or investment income.

For the year 1951 some special information was made available by the Department of National Revenue on the re-assessment of individual income tax returns. From these tabulations broad adjustments were made to the upper income distributions of individuals whose major source of income was net income from self-employment and whose major source of income was investment income. However, the adjustments were only approximations since the data were only partially complete. Re-assessments extend over a period of years so that information on all re-assessments of 1951 tax returns will not be forthcoming for some time; the statistics were obtainable only for 1951 returns re-assessed within a year of filing.

Furthermore, the estimate of the number of families and the distribution of family incomes is a byproduct of the distribution of individual incomes. For 1951 no independent series were available on the total number of family units as defined by the Income Survey. Data on the number of Canadian families of different types would be very useful as a check upon the family estimates but the only other information available, that of the Census, is not on a comparable basis. This means that the estimated number of family units may be subject to error. The individual income distributions were obtained by weighting the sample of individuals by independent labour force estimates of individuals by region, sex and labour force status, a method which appears to have yielded satisfactory results.

Where the extent of the discrepancies for the various income components are known, income size distributions are sometimes adjusted to account for total cash income receipts although this step has not been attempted in the present study. Technically such adjustments may be carried through with a number of available methods. The selection of any method of adjustment is usually based upon arbitrary assumptions and, even with detailed corrections for the various income groups, there is no assurance that the results attained will be superior to the original estimates. Such adjustments generally involve some variation of arithmetic transformations based on either total income or the income components. The usual basis for any such corrections is the assumption that total income or the various income components are under reported by some ratio in all or certain income levels and in all or certain income groups.

Adjustments to National Accounts totals were not carried out for a number of reasons. If the missing income items are received by individuals or families who have not been included in the income distribution, any assignment of income by the above method introduces errors into the distribution. Even if all income recipients have been accounted for in the income estimates, errors will occur through adjustments if the corrections for underreporting are not properly allocated. Appendix B (Sources and Methods) discusses the issues raised in this section.³

Problems of Analysis

The study of the size distribution of family and individual incomes is the study of the two important roles of persons in the economic process—those of both sellers and purchasers of goods and services. Incomes arise out of the sale of resources (labour and capital); such resources are usually owned by individuals and individual incomes should be the starting point for the analysis of the factors determining the distribution, origin, size and other characteristics of income. On the other hand, the family unit as a whole usually determines the allocation of the income available to it; such income is the total income of all individuals composing the economic unit. Thus, the income of the family unit should be the focal point for the examination of the other aspect of the role of persons in the economic process as purchasers of goods and services.

The subsidiary tables included in this report give some insight into the part the individual or family plays in the economic system. The aggregate distribution of individual incomes is obtained by summing the incomes of individuals in the community; the aggregate distribution of family incomes is, in turn, obtained by grouping individuals into family units. Each main series indicates the number of economic units, the size of aggregate income and the major source of aggregate income. For individuals some detail is published on the composition of aggregate income. It must be apparent that such series, by themselves, resemble the foreword of a book, giving only a glimpse of what lies beyond. They present a limited description of the income situation at one brief period of time (a year) but answer few questions. An examination of the data will indicate that incomes are unequally distributed but the main tables, by themselves, give little indication as to why this may be so.

Additional statistics, such as those continued in the present report, indicate that differences in the size of individual incomes are associated with factors such as age, sex, size of community, regional area of residence, educational differences, weeks worked, occupation and occupational status. Other influences which are also associated with income inequality include ability and the ownership of income earning assets.

3. For a discussion of the problems of adjusting for income discrepancies see "An Income Size Distribution from Income Tax and Survey Data, 1944," Liebenberg and Kaitz, *Studies in Income and Wealth*, Vol. XIII, National Bureau of Economic Research, P. 390.

The use to which family incomes may be put is equally affected by many variables. It is frequently suggested that the size of a family's income determines the size and pattern of expenditures and savings and hence the standard of living of the family. In commenting on this problem, one writer points out that this proposition is subject to many qualifications, that income may have both a compulsive and a permissive bearing on expenditures and savings.⁴ The compulsive effects, those expenditures which may be regarded as a fixed charge for the family, are imposed by many family characteristics—the size of family, the occupation of the head, the age composition of its members, and the place of residence to mention only a few. The pattern of compulsive needs may vary at different income levels because the characteristics of families vary at different income levels.

The income remaining after the family meets necessary expenditures is that income which is the permissive element, income available to the family to purchase any other commodities it desires. This additional income alone, however, does not determine the degree which the family can make purchases beyond minimum needs. Family expenditures patterns are only partially influenced by the income of the current year; of perhaps equal importance are the family's asset position and expectations regarding its future income position.⁵ Income data for only one year tend to exaggerate the degree of inequality present in the income distribution. This is because, in a period as short as a year, many families find themselves with incomes which are higher or lower than a normal income. The more individuals or families with incomes higher or lower than usual in the year the greater the inequality of incomes appears to be. If income histories were available for a number of years for a sample of families, it would be apparent that income inequality is not as great as an annual series suggests.⁶

Appendix A (page 31) discusses another analytic limitation of the present series—the differences in the degree to which these estimates account for the distribution of the various income components. Checks with other data indicate that the distributions of wages and salaries and transfer payments appear to be more accurately estimated than the distributions of business income and investment income. Receipts of investment income should be substantially higher than the data show. The income distributions suggest that the greater part of investment income accrues to a group of families whose major source of income is investment income. The incomes of these

4. See Simon Kuznets "Directions of Further Inquiry", *Studies in Income and Wealth*, Vol. XV, National Bureau of Economic Research.

5. For a discussion see James Tobin, "Relative Income, Absolute Income and Saving" *Money, Trade and Economic Growth*, Essays in Honor of John Henry Williams.

6. See Friedman and Kuznets, "Income from Independent Professional Practice," National Bureau of Economic Research, for a proposed method of estimating the "permanent component of income."

families may be higher than estimated although it is also probable that wage-earning and other families receive more investment income than that uncovered by the survey. In the case of business income, own accounts and employers may have reported withdrawals rather than actual earnings; if such was the case the effect again would be an understatement of the family's income position.

As the analysis shows, the family groups in the lower income ranges tend to have characteristics which are different from those in the middle and upper ranges. First, among the low income recipients may be families headed by persons who, because of illness or some other reason, may have received incomes quite different from an income which is normal for their age or occupation. Here, too, are found broken families, the families which have lost the head of family and consist of a woman with dependent children.

Secondly, the size and other characteristics of the families in the sample were taken as they were constituted at the time of the income survey; some of the family units would have been in existence only part of the year and would not have received a full year's income. Hence the income reported, again, would not be representative of the unit's regular income. The number of such families or individuals would depend upon the number of persons entering the labour force for the first time or the number of new family units formed. In Canada the high rate of immigration means that many families have been in the country only part of the year.

Lastly, the low income groups contain a very high proportion of the very young, who are starting their careers, and the aged, who are only working part time or are living in retirement. For the young incomes will usually increase with experience and age. The statistics indicate that individual earnings tend to reach their peak when individuals are in their

forties and that average family incomes are also greatest when the head of the family is in his forties. The aged, even though current incomes may be low, may have accumulated savings to draw upon so that expenditures will be a function of both savings and income rather than income alone.

For greater usefulness the estimates of the income size distribution should be accompanied by detailed information on long term as well as short term characteristics of the family unit. Identical annual income patterns among economic units within the population are not accompanied by identical standards of living. The present series are not completely adequate for either empirical or normative valuations. It is hoped that their publication will stimulate interest in the problems they raise and that future work in this area will be helped by critical comment.

Bibliography

For those interested in some discussion of the problem inherent in income size research, the following articles may be of interest:

Simon Kuznets, "The Why and How of Distributions of Income by Size", *Studies in Income and Wealth*, Vol. V, Page 5, National Bureau of Economic Research.

Dorothy S. Brady, "Research on the Size Distribution of Income", *Studies in Income and Wealth*, Vol XIII, Page 3, National Bureau of Economic Research.

Hazel Kyrk, "The Income Distribution as a Measure of Economic Welfare", *American Economic Review, Papers and Proceedings*, Vol. XL, May 1950, P. 342. Hazel Kyrk, *The Family in the American Economy*, University of Chicago Press, 1953.

George Garvey, "Inequality of Income: Causes and Measurement", *Studies in Income and Wealth*, Vol. XV, Page 25, National Bureau of Economic Research.

NOTES AND DEFINITIONS

The **family** is defined as a group of individuals sharing a common dwelling unit and related by blood, marriage or adoption. Thus, all relatives living together were considered to comprise one family unit whatever the degree of family relationship; aside from single sons or daughters, other relatives most commonly found living in the household were married sons and daughters and widowed parents. Individuals living by themselves or rooming in a household where they were not related to other household members were included in the estimates of the distribution of family income and considered to be single person family units. The estimates exclude families with net income from farming or military pay.

Individuals are defined as all persons aged 14 and over receiving income in 1951 where the major source of income is also from sources other than farming or military pay.

Tables 1 to 10 are analyses of family incomes while 11 to 21 analyze individual incomes. It should be noted that Tables 1, 2, 11, 12 and 21 are primarily based upon survey data but adjusted by income tax statistics. Tables 3 to 10 and 13 to 20 are derived entirely from the sample survey with **no adjustment from tax statistics**. Adjustments were not made in all cases for two reasons: income tax statistics were not available in sufficient detail and the amount of work involved to adjust in each case would have been too great. However, comparisons of the main distributions, before and after adjustments, indicate that means, medians and the percentage distributions by income groups were not significantly altered; the main effect was on the aggregates, not the shape of the income distribution. From this, it seems reasonable to assume that the same effect would have been observed in most cases if adjustments had been more extensive. For this reason the unadjusted subsidiary tables consist entirely of percentage analyses which would in all probability show the same patterns for both adjusted and unadjusted series.

All family and individual income distributions by income group refer to the income group classification of total income. **Total income** consists of income from the following sources:

1. **Wages and Salaries:** gross wages and salaries earned before deduction for such items as income taxes and pension funds. Commission income received by salesmen is also included in this category. All income in kind such as meals or living accommodation is excluded.

Where individuals or families received military pay in the form of reserve army pay, and where this was a minor part of total income, such income was included in the distribution and combined with wages and salaries. The total amount of military pay in-

cluded in the estimates is very small (about \$5 million). In 1951 the strength of the three services was over 100,000 while total cash military pay was approximately \$165 million.

2. **Business Income:** net income (gross income minus expenses) earned from self-employment either on own-account or in an unincorporated business or profession. Included here is net income earned from roomers and boarders and, possibly, in a few instances, net farm income where this is a minor component of income.

3. **Investment Income:** bond interest, dividends, mortgage interest, net rents, estate income and bank interest.

4. **Transfer Payments:** municipal, provincial and federal government payments of relief, old age and blind pensions, veterans' bonuses, veterans' pensions, family allowances, mothers' allowances workmen's compensation and unemployment insurance.

5. **Miscellaneous Income:** retirement pensions, annuities, alimony and other items.

Receipts of gifts, lump-sum settlements from insurance policies, income tax refunds, capital gains and losses, receipts from the sale of assets, and inheritances or bequests were excluded as was all income in kind such as meals or living accommodation.

Families and individuals are classified into subgroups based on major source of income. Major source of income refers to the largest sources of total income; the groupings used are wages and salaries (item 1 above), business income (item 2 above) and other money income (items 3, 4 and 5 above).

Aggregate income of all families in Table 1 is not equivalent to the aggregate incomes of all individuals in Table 11 because some individuals with wages or other non-farm income were members of families where other family members received net farm income as their major source of income. Families in which one or more members received their major income from farming were excluded from the family income estimates.

A number of other points should be noted:

- (a) In Tables 3, 4, 13 and 14, the Atlantic Provinces include Newfoundland as well as Prince Edward Island, Nova Scotia and New Brunswick. Metropolitan centres are defined as centres with a population of 30,000 or more; non-metropolitan centres are centres with a population of less than 30,000.

- (b) The employment status of the head of the family or the individual is his employment status at the time of the income survey and may not be his employment status during the greater part of 1951.

(c) Size of family in Tables 8 and 9 refers to the total number of persons in the family, both adults and children. In Table 9, average number of income recipients per family means the average number of persons with cash income from any source. Average number of earners refers to the average number of persons with income from wages and salaries or net income from self-employment.

(d) Table 15 presents average income by weeks of employment, sex and employment status. The averages refer to the total income of the individual and thus include income from all sources, not simply earned income. The average earned income would be somewhat lower.

TABLES AND APPENDICES

Tables 1-10: Family Incomes

Tables 11-21: Individual Incomes

Appendix A: Sources and Methods

Appendix B: 1948 Non-Farm Incomes

TABLE 1. Distribution of Families (number and percent) by Income Groups and by Major Source of Income, 1951

Income Group	All Families		Major Source of Income					
			Wages and Salaries		Business Income		Other Money Income	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Under \$500	266,000 ¹	7.4 ¹	66,000	2.4	17,000	4.8	125,000	30.3
\$ 500 - \$ 999	304,000	8.5	135,000	4.9	38,000	10.7	131,000	31.7
\$1,000 - \$1,499	311,000	8.6	192,000	6.9	38,000	10.5	81,000	19.5
\$1,500 - \$1,999	334,000	9.3	257,000	9.3	48,000	13.4	29,000	6.9
\$2,000 - \$2,499	394,000	10.9	343,000	12.4	38,000	10.7	13,000	3.0
\$2,500 - \$2,999	467,000	13.0	415,000	15.0	41,000	11.5	11,000	2.7
\$3,000 - \$3,999	673,000	18.6	624,000	22.5	44,000	12.1	5,000	1.3
\$4,000 - \$4,999	347,000	9.6	320,000	11.5	23,000	6.4	4,000	.9
\$5,000 - \$9,999	449,000	12.4	389,000	14.0	48,000	13.5	12,000	2.8
Over \$10,000	63,000	1.8	36,000	1.3	23,000	6.3	4,000	1.1
Total	3,608,000¹	100.0¹	2,777,000	100.0	358,000	100.0	415,000	100.0
Average Income		\$3,185		\$3,408		\$3,961		\$1,465
Median Income		\$2,703		\$2,969		\$2,495		\$ 810

1. This figure includes 58,000 families with no income during the year; these consist mainly of newly formed family units (largely single persons) and of family units headed by the aged. See Page 7.

TABLE 2. Distribution of Aggregate Family Income (amount and percent) by Income Groups and by Major Source of Income, 1951

Income Group	All Families		Major Source of Income					
			Wages and Salaries		Business Income		Other Money Income	
	\$ Millions	Percent	\$ Millions	Percent	\$ Millions	Percent	\$ Millions	Percent
Under \$500	63.5	.6	17.8	.2	4.6	.3	41.1	6.8
\$ 500 - \$ 999	230.1	2.0	105.2	1.1	29.2	2.1	95.7	15.8
\$1,000 - \$1,499	383.1	3.4	244.9	2.6	49.2	3.5	94.0	15.5
\$1,500 - \$1,999	591.6	5.1	459.9	4.9	83.3	5.9	48.4	8.0
\$2,000 - \$2,499	917.6	8.0	799.1	8.4	88.9	6.3	29.6	4.9
\$2,500 - \$2,999	1,298.3	11.3	1,151.3	12.2	116.3	8.2	30.2	5.0
\$3,000 - \$3,999	2,335.1	20.3	2,168.1	22.9	143.7	10.5	18.3	3.0
\$4,000 - \$4,999	1,526.2	13.3	1,410.2	14.9	99.7	7.0	16.3	2.7
\$5,000 - \$9,999	2,959.4	25.7	2,503.4	26.4	364.8	25.7	91.2	15.0
Over \$10,000	1,184.0	10.3	607.0	6.4	434.6	30.6	142.4	23.4
Total	11,493.9	100.0	9,467.4	100.0	1,419.3	100.0	607.2	100.0

TABLE 3. Percentage Distribution of Families by Income Groups and by Regions, 1951

	Income Group										Total
	Under \$500	\$500-\$999	\$1,000-\$1,499	\$1,500-\$1,999	\$2,000-\$2,499	\$2,500-\$2,999	\$3,000-\$3,999	\$4,000-\$4,999	\$5,000-\$9,999	Over \$10,000	
	Percent										
Atlantic Provinces	7.9	13.0	15.0	11.7	13.3	15.9	12.8	5.2	4.7	.7	109.0
Metropolitan	8.1	6.9	6.3	8.9	16.5	17.5	19.0	9.7	6.3	.8	100.0
Non metropolitan	7.8	15.7	19.1	12.9	11.8	15.1	9.8	3.2	3.9	.6	100.0
Quebec	6.5	7.2	7.8	10.2	12.8	11.9	18.9	10.3	12.9	1.6	100.0
Metropolitan	5.9	7.2	7.5	9.3	11.7	12.5	19.9	10.9	13.4	1.9	100.0
Non metropolitan	7.6	7.1	8.3	12.0	14.8	10.7	17.1	9.3	12.1	1.1	100.0
Ontario	6.5	6.9	6.4	7.3	9.5	10.9	22.7	11.9	15.9	1.9	100.0
Metropolitan	4.9	5.6	5.0	6.6	8.4	11.0	23.5	13.3	19.2	2.4	100.0
Non metropolitan	9.5	9.3	8.7	8.5	11.3	10.7	21.2	9.6	10.0	1.2	100.0
Prairie Provinces	9.8	9.4	10.9	10.8	11.5	10.2	17.5	7.2	11.2	1.4	100.0
Metropolitan	8.0	7.4	9.6	9.4	10.1	9.8	19.8	9.0	15.3	1.6	100.0
Non metropolitan	12.5	12.4	12.8	12.7	13.6	10.7	14.4	4.5	5.2	1.1	100.0
British Columbia	6.8	11.2	9.5	7.6	8.2	12.9	24.7	9.3	8.2	1.8	100.0
Metropolitan	4.0	10.9	11.1	7.4	7.3	10.8	23.9	11.0	11.0	2.4	100.0
Non metropolitan	9.8	11.5	7.7	7.8	9.1	15.1	25.4	7.3	5.3	1.1	100.0

TABLE 4. Average and Median Family Incomes, by Regions, 1951

	Atlantic Provinces	Quebec	Ontario	Prairie Provinces	British Columbia
	\$	\$	\$	\$	\$
Average Income:					
All Families	2,293	3,098	3,406	2,809	3,286
Metropolitan	2,721	3,201	3,740	3,161	3,844
Non metropolitan	2,097	2,908	2,818	2,298	2,677
Single Persons	975	1,375	1,444	1,217	1,638
Families of Two or More Persons	2,515	3,523	3,903	3,261	3,669
Major Source of Income: Wages and Salaries:					
All Families	2,597	3,293	3,616	3,023	3,663
Metropolitan	3,009	3,364	3,891	3,413	3,928
Non metropolitan	2,380	3,138	3,050	2,401	3,352
Median Income:					
All Families	2,089	2,730	3,109	2,395	2,759
Metropolitan	2,593	2,835	3,361	2,780	2,930
Non metropolitan	1,786	2,508	2,625	1,983	2,635
Major Source of Income: Wages and Salaries:					
All Families	2,430	2,918	3,311	2,743	3,196
Metropolitan	2,783	2,978	3,489	3,111	3,319
Non metropolitan	2,191	2,756	2,947	2,276	3,080

TABLE 5. Percentage Distribution of Families by Income Groups and by Employment Status of Head, 1951

Income Group	Employment Status of Head ¹		
	Not in the Labour Force	Employee	Employer or Own Account
	Percent		
Under \$500	23.3	2.9	1.8
\$ 500 - \$ 999	20.7	5.1	5.9
\$1,000 - \$1,499	14.8	6.5	11.2
\$1,500 - \$1,999	8.8	8.7	12.0
\$2,000 - \$2,499	5.7	12.5	10.7
\$2,500 - \$2,999	5.3	14.0	11.0
\$3,000 - \$3,999	9.4	23.9	16.6
\$4,000 - \$4,999	5.6	11.4	8.2
\$5,000 - \$9,999	5.6	13.7	16.5
Over \$10,000 .....	.7	1.4	5.9
Total	100.0	100.0	100.0
Average Income	\$1,812	\$3,360	\$4,049
Median Income	\$1,219	\$3,013	\$2,926

1. Individuals were classified by their employment status at the time of the survey. This is not necessarily the same as their employment status during 1951.

TABLE 6. Percentage Distribution of Families by Income Groups and by Age of Head, 1951

Income Group	Age of Head					
	19 and Under	20-29	30-39	40-49	50-64	65 and Over
	Percent					
Under \$500	35.7	8.2	1.8	3.2	6.1	19.4
\$ 500 - \$ 999	27.5	6.6	3.8	4.3	8.8	20.3
\$1,000 - \$1,499	21.3	8.4	5.9	6.8	8.8	14.5
\$1,500 - \$1,999	7.8	12.0	8.8	7.4	9.0	9.5
\$2,000 - \$2,499	2.5	17.4	11.7	10.2	10.3	7.3
\$2,500 - \$2,999	5.3	13.8	16.3	13.0	9.9	6.0
\$3,000 - \$3,999		20.7	30.3	22.5	15.9	9.5
\$4,000 - \$4,999		5.7	9.9	14.0	11.0	6.1
\$5,000 - \$9,999		7.0	10.1	16.6	18.0	6.2
Over \$10,000			1.3	2.0	2.3	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Average Income - All Families	\$860	\$2,552	\$3,246	\$3,779	\$3,373	\$2,099
Families with Major Source of Income: Wages and Salaries	\$974	\$2,638	\$3,288	\$3,718	\$3,601	\$3,092
Median Income - All Families	\$759	\$2,424	\$3,055	\$3,226	\$2,853	\$1,389
Families with Major Source of Income: Wages and Salaries	\$869	\$2,486	\$3,108	\$3,311	\$3,171	\$2,685

TABLE 7. Percentage Distribution of Families by Income Groups and by Age and Sex of Head, 1951

Income Group	All Families	Age of Head					
		19 and Under	20-29	30-39	40-49	50-64	65 and Over
		Percent					
(a) Male Head of Family							
Under \$500	3.9	25.0	2.3	.6	1.8	3.6	13.8
\$ 500—\$ 999	6.6	14.6	4.0	3.1	3.1	6.8	20.3
\$1,000—\$1,499	7.2	27.1	5.9	4.5	5.5	6.9	16.2
\$1,500—\$1,999	8.2	13.5	10.2	7.8	6.7	7.9	9.3
\$2,000—\$2,499	11.4	6.3	19.5	11.1	9.6	11.4	8.1
\$2,500—\$2,999	13.3	13.5	17.4	17.4	13.5	11.0	6.6
\$3,000—\$3,999	22.7		25.7	32.6	24.2	16.6	11.3
\$4,000—\$4,999	11.0		7.0	10.7	15.2	12.3	6.3
\$5,000—\$9,999	13.9		8.1	10.7	18.1	20.7	6.6
Over \$10,000	1.8			1.4	2.2	2.7	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average Income — All Families	\$3,391	\$1,217	\$2,903	\$3,387	\$3,998	\$3,695	\$2,304
Families with Major Source of Income: Wages and Salaries...	\$3,518	\$1,318	\$2,881	\$3,371	\$3,862	\$3,820	\$3,102
Median Income — All Families	\$2,976	\$1,191	\$2,732	\$3,168	\$3,404	\$3,144	\$1,490
Families with Major Source of Income: Wages and Salaries...	\$3,313	\$1,239	\$2,728	\$3,172	\$3,434	\$3,378	\$2,704
(b) Female Head of Family							
		Percent					
Under \$500	24.7	42.6	29.0	16.0	13.9	17.8	35.1
\$ 500—\$ 999	18.0	35.8	16.0	12.3	13.7	18.1	20.4
\$1,000—\$1,499	16.3	17.6	17.5	21.8	17.1	18.2	9.8
\$1,500—\$1,999	13.7	4.1	18.4	19.1	13.4	14.4	10.0
\$2,000—\$2,499	8.5		9.7	18.8	14.9	4.8	5.1
\$2,500—\$2,999	4.1		1.3	3.7	8.6	4.3	4.1
\$3,000—\$3,999	6.6		3.4	3.7	8.6	12.3	4.4
\$4,000—\$4,999	3.4		1.3	.6	3.9	4.7	5.3
\$5,000—\$9,999	4.2		3.3	4.0	4.6	5.3	5.0
Over \$10,000 .....	.6				1.0		1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average Income — All Families	\$1,597	\$ 629	\$1,305	\$1,641	\$2,005	\$1,812	\$1,523
Families with Major Source of Income: Wages and Salaries...	\$2,101	\$ 732	\$1,624	\$2,023	\$2,334	\$2,225	\$3,053
Median Income — All Families	\$1,223	\$ 602	\$1,142	\$1,497	\$1,697	\$1,386	\$ 864
Families with Major Source of Income: Wages and Salaries...	\$1,734	\$ 702	\$1,441	\$1,854	\$2,034	\$1,829	\$2,552

TABLE 8. Percentage Distribution of Families by Income Groups and by Size of Family, 1951

Income Group	Size of Family (number of persons)					
	1	2 or more				
		All Families	2	3	4	5 or more
(a) All Families	Percent					
Under \$500	24.2	3.0	6.7	2.7	1.2	.4
\$ 500—\$ 999	22.6	5.0	9.8	4.1	2.9	2.0
\$1,000—\$1,499	15.9	7.0	10.8	7.1	3.9	5.1
\$1,500—\$1,999	13.4	8.0	12.4	6.7	5.0	6.6
\$2,000—\$2,499	9.7	11.2	11.7	13.3	10.6	9.3
\$2,500—\$2,999	6.8	13.2	12.0	13.5	15.3	12.5
\$3,000—\$3,999	5.2	23.5	19.1	23.0	27.6	25.6
\$4,000—\$4,999	1.1	12.0	8.3	13.7	12.5	14.1
\$5,000—\$9,999 .....	.9	15.2	7.7	14.2	19.4	21.2
Over \$10,000 .....	.2	2.0	1.4	1.8	1.5	3.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Average Income	\$1,364	\$3,535	\$2,698	\$3,648	\$3,790	\$4,169
Median Income	\$1,100	\$3,110	\$2,439	\$3,112	\$3,401	\$3,550
(b) Major Source of Income: Wages and Salaries	Percent					
Under \$500	10.2	.8	2.1	.6	.3	
\$ 500—\$ 999	19.7	2.3	3.7	2.4	1.8	1.1
\$1,000—\$1,499	19.7	4.4	6.6	4.8	3.0	3.0
\$1,500—\$1,999	17.5	7.5	13.2	6.0	4.7	5.6
\$2,000—\$2,499	13.6	12.1	14.2	14.1	10.4	9.8
\$2,500—\$2,999	10.0	14.4	15.2	14.5	15.3	13.0
\$3,000—\$3,999	6.9	26.8	25.1	25.8	29.9	26.8
\$4,000—\$4,999	1.2	13.7	10.2	15.7	13.5	15.6
\$5,000—\$9,999 .....	.9	16.4	8.2	14.9	20.0	22.6
Over \$10,000 .....	.3	1.5	1.3	1.2	1.1	2.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Average Income	\$1,695	\$3,680	\$3,057	\$3,731	\$3,849	\$4,095
Median Income	\$1,510	\$3,319	\$2,835	\$3,294	\$3,484	\$3,652

TABLE 9. Average Size of Family, Average Number of Income Recipients and Average Number of Income Earners, by Income Groups, 1951

Income Group	Average Size of Family	Average Number of Income Recipients	Average Number of Income Earners
number of persons			
All Families			
Under \$1,000	1.71	1.12	.58
\$1,000 - \$1,999	2.59	1.27	.99
\$2,000 - \$2,999	3.28	1.29	1.17
\$3,000 - \$3,999	3.75	1.46	1.36
\$4,000 - \$4,999	4.60	1.62	1.69
\$5,000 - \$9,999	4.38	2.33	2.17
Over \$10,000	4.17	2.23	1.93
Major Source of Income: Wages and Salaries			
Under \$1,000	1.70	1.07	1.05
\$1,000 - \$1,999	2.44	1.21	1.14
\$2,000 - \$2,999	3.25	1.26	1.19
\$3,000 - \$3,999	3.71	1.47	1.37
\$4,000 - \$4,999	4.03	1.85	1.73
\$5,000 - \$9,999	4.48	2.40	2.27
Over \$10,000	4.32	2.35	2.05

TABLE 10. Percentage Composition of Family Incomes by Income Groups and by Major Source of Income, 1951

Income Group	Wages and Salaries	Business Income	Investment Income	Transfer Payments	Miscel- laneous Income	Total
Percent						
(a) All Families						
Under \$500	34.5	0.8	11.2	50.0	5.1	100.0
\$ 500-\$ 999	48.0	7.6	10.3	28.9	5.2	100.0
\$1,000-\$1,499	59.7	9.3	6.4	18.1	6.5	100.0
\$1,500-\$1,999	74.4	10.7	3.2	8.9	2.8	100.0
\$2,000-\$2,499	82.6	7.9	2.7	5.7	1.1	100.0
\$2,500-\$2,999	85.0	7.3	1.7	5.3	.7	100.0
\$3,000-\$3,999	86.1	6.8	1.4	4.8	.9	100.0
\$4,000-\$4,999	86.8	6.3	2.3	3.9	.8	100.0
\$5,000-\$9,999	82.9	10.4	3.5	2.4	.8	100.0
Over \$10,000	50.8	31.4	16.8	.7	.3	100.0
All Incomes	79.3	10.2	4.1	5.2	1.2	100.0
(b) Major Source of Income: Wages and Salaries						
Under \$500	109.5	13.4	2.6	1.3		100.0
\$ 500-\$ 999	93.3	.8	1.4	4.5		100.0
\$1,000-\$1,499	92.0	1.1	.6	5.8	.5	100.0
\$1,500-\$1,999	92.2	1.0	.7	5.9	.2	100.0
\$2,000-\$2,499	92.9	.9	.5	5.2	.5	100.0
\$2,500-\$2,999	93.5	.8	.7	4.7	.3	100.0
\$3,000-\$3,999	92.8	.9	1.0	4.6	.8	100.0
\$4,000-\$4,999	93.3	1.4	1.0	3.9	.4	100.0
\$5,000-\$9,999	93.1	2.1	1.9	2.4	.5	100.0
Over \$10,000	82.6	6.0	10.1	.9	.3	100.0
All Incomes	92.5	1.4	1.7	3.9	.5	100.0
(c) Major Source of Income: Business Income						
Under \$500		90.4	2.3	7.3		100.0
\$ 500-\$ 999	6.4	88.8	.7	4.1		100.0
\$1,000-\$1,499	4.7	76.9	2.3	14.6	1.5	100.0
\$1,500-\$1,999	4.9	85.0	3.4	6.4	.3	100.0
\$2,000-\$2,499	2.2	86.0	4.1	7.4	.3	100.0
\$2,500-\$2,999	6.9	83.2	4.1	4.4	1.4	100.0
\$3,000-\$3,999	10.7	81.1	1.6	6.0	.5	100.0
\$4,000-\$4,999	9.5	79.6	5.4	3.7	1.9	100.0
\$5,000-\$9,999	16.4	77.7	3.7	1.5	.7	100.0
Over \$10,000	11.0	82.8	5.4	.5	.2	100.0
All Incomes	10.8	81.2	3.9	3.4	.7	100.0
(d) Major Source of Income: Other Money Income						
Under \$500	1.8	0.6	15.7	75.3	7.7	100.0
\$ 500-\$ 999	3.5	0.9	22.3	61.3	12.0	100.0
\$1,000-\$1,499	5.2	1.0	21.8	49.2	22.9	100.0
\$1,500-\$1,999	6.8	3.2	24.2	38.0	27.7	100.0
\$2,000-\$2,499	8.6	3.6	54.5	14.3	19.0	100.0
\$2,500-\$2,999	14.8	4.1	34.6	34.0	12.5	100.0
\$3,000-\$3,999	7.4	1.7	54.5	16.6	20.0	100.0
\$4,000-\$4,999	2.2		75.7	2.0	20.1	100.0
\$5,000-\$9,999	18.2	10.7	54.7	2.3	14.1	100.0
Over \$10,000	11.0	2.3	86.7			100.0
All Incomes	8.2	2.9	43.7	31.2	14.1	100.0

TABLE 11. Distribution of Individuals (number and percent) by Income Groups and by Major Source of Income 1951

Income Group	All Individuals		Major Source of Income					
			Wages and Salaries		Business Income		Other Money Income	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Under \$500	1,012,000	18.1	431,000	10.3	131,000	22.3	450,000	54.1
\$ 500-\$ 999	794,000	14.2	478,000	11.5	96,000	16.5	220,000	26.5
\$1,000-\$1,499	631,000	11.3	481,000	11.6	72,000	12.2	78,000	9.4
\$1,500-\$1,999	667,000	11.9	576,000	13.8	60,000	10.3	31,000	3.7
\$2,000-\$2,499	719,000	12.9	642,000	15.4	59,000	10.0	18,000	2.1
\$2,500-\$2,999	586,000	10.5	544,000	13.1	36,000	6.2	6,000	.8
\$3,000-\$3,999	688,000	12.3	638,000	15.3	41,000	7.0	9,000	1.0
\$4,000-\$4,999	238,000	4.3	207,000	5.0	26,000	4.4	5,000	.6
\$5,000-\$9,999	198,000	3.5	144,000	3.4	45,000	7.6	9,000	1.1
Over \$10,000	52,000	.9	24,000	.6	21,000	3.5	7,000	.8
Total	5,585,000	100.0	4,165,000	100.0	587,000	100.0	833,000	100.0
Average Income		\$2,086		\$2,255		\$2,517		\$936
Median Income		\$1,768		\$2,090		\$1,458		\$461

TABLE 12. Distribution of Aggregate Individual Income (amount and percent) by Income Groups and by Major Source of Income, 1951

Income Group	All Individuals		Major Source of Income					
			Wages and Salaries		Business Income		Other Money Income	
	\$ Millions	Percent	\$ Millions	Percent	\$ Millions	Percent	\$ Millions	Percent
Under \$500	288.7	2.5	108.9	1.2	32.8	2.2	147.0	18.9
\$ 500-\$ 999	573.1	4.9	353.6	3.8	67.7	4.6	151.8	19.5
\$1,000-\$1,499	772.4	6.6	592.0	6.3	87.4	5.9	93.0	11.9
\$1,500-\$1,999	1,156.0	9.9	1,000.1	10.7	105.5	7.2	50.4	6.5
\$2,000-\$2,499	1,600.5	13.7	1,431.3	15.2	128.7	8.7	40.5	5.2
\$2,500-\$2,999	1,599.5	13.7	1,485.9	15.8	96.4	6.5	17.2	2.2
\$3,000-\$3,999	2,353.2	20.2	2,178.5	23.2	144.8	9.8	29.9	3.8
\$4,000-\$4,999	1,045.7	9.0	908.6	9.7	114.0	7.7	23.1	3.0
\$5,000-\$9,999	1,280.8	11.0	907.0	9.7	308.3	20.9	65.5	8.4
Over \$10,000	974.9	8.4	424.9	4.5	388.9	26.4	161.1	20.7
Total	11,644.8	100.0	9,390.8	100.0	1,474.5	100.0	779.5	100.0

TABLE 13. Percentage Distribution of Individuals by Income Groups and by Regions, 1951

	Income Group										Total
	Under \$500	\$500-\$999	\$1,000-\$1,499	\$1,500-\$1,999	\$2,000-\$2,499	\$2,500-\$2,999	\$3,000-\$3,999	\$4,000-\$4,999	\$5,000-\$9,999	Over \$10,000	
	Percent										
Atlantic Provinces	24.1	18.9	13.5	9.6	12.2	11.6	7.2	1.2	1.4	.3	100.0
Metropolitan	14.1	13.9	11.2	10.0	18.7	15.3	12.1	1.6	2.7	.5	100.0
Non metropolitan	28.2	20.9	14.5	9.4	9.5	10.2	5.2	1.0	.9	.2	100.0
Quebec	13.2	12.9	13.2	14.6	14.6	10.2	13.3	3.7	3.4	.8	100.0
Metropolitan	10.5	12.6	12.2	14.4	14.6	11.7	14.8	4.0	4.3	.9	100.0
Non metropolitan	17.8	13.4	15.0	14.8	14.6	7.8	11.0	3.3	1.9	.5	100.0
Ontario	16.6	11.0	8.9	11.1	12.8	10.9	17.2	6.4	4.1	.9	100.0
Metropolitan	13.8	9.0	8.5	11.3	12.9	12.1	19.1	7.9	4.1	1.2	100.0
Non metropolitan	20.8	14.1	9.6	10.7	12.6	9.0	14.6	4.1	4.0	.7	100.0
Prairie Provinces	19.5	13.3	12.9	13.0	12.8	8.9	10.0	2.4	3.7	1.2	100.0
Metropolitan	18.0	11.6	12.8	14.8	13.0	8.9	11.2	3.4	5.0	1.4	100.0
Non metropolitan	22.0	21.8	13.1	10.2	12.5	9.0	8.0	.7	1.7	.9	100.0
British Columbia	14.7	17.0	10.1	9.6	11.0	12.0	17.7	4.4	2.3	1.3	100.0
Metropolitan	12.7	16.9	11.6	10.8	12.7	11.1	15.7	3.6	3.1	1.9	100.0
Non metropolitan	17.1	17.1	8.3	8.1	9.1	13.0	19.9	5.3	1.4	.8	100.0

TABLE 14. Average and Median Individual Incomes, by Regions, 1951

	Atlantic Provinces	Quebec	Ontario	Prairie Provinces	British Columbia
	\$	\$	\$	\$	\$
Average Income:					
All Individuals	1,563	2,095	2,289	1,923	2,316
Metropolitan	1,979	2,245	2,482	2,113	2,462
Non metropolitan	1,394	1,843	1,997	1,624	2,144
Major Source of Income: Wages and Salaries:					
All Individuals	2,060	2,174	2,443	1,992	2,588
Metropolitan	2,144	2,297	2,600	2,161	2,563
Non metropolitan	1,597	1,943	2,177	1,685	2,618
Median Income:					
All Individuals	1,258	1,865	2,093	1,580	1,926
Metropolitan	2,020	2,009	2,286	1,756	1,906
Non metropolitan	1,030	1,628	1,756	1,236	1,962
Major Source of Income: Wages and Salaries:					
All Individuals	1,643	2,008	2,344	1,846	2,404
Metropolitan	2,159	2,126	2,479	1,965	2,258
Non metropolitan	1,371	1,804	2,111	1,594	2,590

TABLE 13. Percentage Distribution of Individuals by Income Groups and by Employment Status, 1951

Income Group	Employment Status ¹		
	Not in the Labour Force	Employee	Employer or Own Account
		Percent	
Under \$500	53.1	6.8	4.5
\$ 500 - \$ 999	25.8	10.3	8.9
\$1,000 - \$1,499	9.5	11.4	16.0
\$1,500 - \$1,999	4.2	14.5	12.0
\$2,000 - \$2,499	2.8	16.1	14.6
\$2,500 - \$2,999	1.4	13.7	10.3
\$3,000 - \$3,999	1.7	18.3	13.2
\$4,000 - \$4,999 .....	.7	5.5	4.4
\$5,000 - \$9,999 .....	.7	2.9	10.7
Over \$10,000 .....	.2	.5	5.4
Total	100.0	100.0	100.0
Average Income	\$822	\$2,376	\$3,338
Median Income	\$471	\$2,216	\$2,294

Average Income by Weeks Employed and by Employment Status

Weeks Employed	Employment Status ¹			
	Employee		Employer or Own-Account ²	
	Male	Female	Male	Female
	\$	\$	\$	\$
50-52	3,097	1,604	4,117	1,412
40-49	2,493	1,445		
30-39	1,523	932		
20-29	1,077	718		
10-19	690	401		
9 and Under	350	180		

1. Individuals were classified by their employment status at the time of the survey. This is not necessarily the same as their employment status during 1951.

2. Average incomes by weeks employed for less than full time employment are not shown for employers and own-accounts because it is felt that the sample is not large enough to provide useable figures.

TABLE 16. Percentage Distribution of Individuals by Income Groups and by Age, 1951

Income Group	Age					
	19 and Under	20-29	30-39	40-49	50-64	65 and Over
	Percent					
Under \$500	38.8	11.2	7.6	8.3	11.9	43.4
\$ 500 - \$ 999	27.1	13.9	6.9	9.1	12.5	23.0
\$1,000 - \$1,499	16.0	14.9	9.0	8.0	11.3	11.1
\$1,500 - \$1,999	11.7	19.3	10.5	9.7	11.6	6.5
\$2,000 - \$2,499	3.6	17.4	13.9	15.0	14.5	6.1
\$2,500 - \$2,999	2.2	9.8	15.5	14.8	11.6	3.0
\$3,000 - \$3,999 .....	.4	10.0	24.2	19.9	15.0	3.7
\$4,000 - \$4,999		2.3	6.5	8.2	4.5	1.6
\$5,000 - \$9,999 .....	.1	1.1	4.7	5.3	5.6	1.0
Over \$10,000 .....		.1	1.0	1.6	1.4	.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Average Income	\$828	\$1,811	\$2,716	\$2,728	\$2,343	\$1,196
Median Income	\$706	\$1,758	\$2,567	\$2,496	\$2,092	\$ 643

TABLE 17. Percentage Distribution of Individuals by Income Groups and by Age and Sex, 1951

Income Group	All Incomes	Age					
		19 and Under	20-29	30-39	40-49	50-64	65 and Over
		Percent					
(a) Males							
Under \$500	8.5	39.2	5.3	1.1	3.0	4.1	27.5
\$ 500—\$ 999	9.8	23.3	10.4	3.9	4.8	8.3	24.7
\$1,000—\$1,499	9.3	13.4	10.8	6.9	5.9	9.7	14.9
\$1,500—\$1,999	11.1	13.1	16.4	8.7	8.5	12.0	9.0
\$2,000—\$2,499	15.2	6.0	20.8	14.1	15.6	17.5	8.9
\$2,500—\$2,999	14.4	4.1	14.4	19.1	18.3	14.4	4.5
\$3,000—\$3,999	19.6	.8	16.3	30.4	24.8	19.2	5.9
\$4,000—\$4,999	6.1		3.7	8.5	10.4	5.6	2.3
\$5,000—\$9,999	4.7		1.8	6.1	6.9	7.4	1.3
Over \$10,000	1.2		.1	1.3	1.8	1.9	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average Income	\$2,575	\$ 902	\$2,192	\$3,109	\$3,173	\$2,785	\$1,545
Median Income	\$2,371	\$ 731	\$2,170	\$2,900	\$2,832	\$2,453	\$ 954
(b) Females							
Under \$500	35.6	38.3	20.4	29.5	26.2	35.9	67.6
\$ 500—\$ 999	22.3	31.3	19.6	17.0	23.5	25.2	20.4
\$1,000—\$1,499	15.8	18.9	21.3	15.9	15.1	16.2	5.3
\$1,500—\$1,999	13.9	10.2	23.7	16.7	13.5	10.4	2.7
\$2,000—\$2,499	8.2	1.1	12.0	13.3	13.0	5.5	1.9
\$2,500—\$2,999	2.2		2.6	3.4	3.4	3.2	.7
\$3,000—\$3,999	1.4		.2	3.7	3.6	1.9	.3
\$4,000—\$4,999 .....	.4		.1		.9	1.3	.4
\$5,000—\$9,999 .....	.1	.2	.1	.2		.3	.4
Over \$10,000 .....	.1			.3	.9		.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average Income	\$1,061	\$ 746	\$1,211	\$1,399	\$1,254	\$ 998	\$ 664
Median Income	\$ 822	\$ 686	\$1,234	\$1,109	\$1,009	\$ 779	\$ 370

TABLE 18. Percentage Distribution of Individuals by Income Groups and by Age: Major Source of Income: Wages and Salaries, 1951

Income Group	Age					
	19 and Under	20-29	30-39	40-49	50-64	65 and Over
	Percent					
Under \$500	38.8	8.9	5.9	5.2	5.0	12.5
\$ 500 - \$ 999	26.7	14.2	6.1	8.0	8.3	11.8
\$1,000 - \$1,499	16.4	15.2	8.5	7.0	10.7	16.6
\$1,500 - \$1,999	11.9	20.2	10.9	10.1	12.7	14.1
\$2,000 - \$2,499	3.5	18.3	14.7	16.0	17.0	17.3
\$2,500 - \$2,999	2.2	10.3	16.6	16.3	14.9	10.3
\$3,000 - \$3,999 .....	.4	10.0	25.7	22.0	18.9	11.4
\$4,000 - \$4,999		2.3	6.9	9.1	5.3	3.2
\$5,000 - \$9,999 .....		.6	4.1	5.4	6.0	1.8
Over \$10,000 .....			.5	.7	1.2	.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Average Income	\$828	\$1,813	\$2,658	\$2,763	\$2,618	\$2,015
Median Income	\$709	\$1,789	\$2,616	\$2,613	\$2,390	\$1,822

TABLE 19. Percentage Distribution of Individuals by Income Groups and by Age and Sex: Major Source of Income: Wages and Salaries, 1951

Income Group	All Incomes	Age					
		19 and Under	20-29	30-39	40-49	50-64	65 and Over
Percent							
(a) Males							
Under \$500	8.5	39.8	4.6	1.0	2.2	1.9	7.6
\$ 500—\$ 999	9.8	22.4	10.6	3.4	3.8	6.1	11.7
\$1,000—\$1,499	9.3	13.7	10.5	6.3	4.7	8.5	16.1
\$1,500—\$1,999	11.1	13.2	16.8	8.5	8.4	11.7	15.1
\$2,000—\$2,499	15.2	5.8	21.7	14.4	15.9	18.4	18.5
\$2,500—\$2,999	14.4	4.2	15.2	20.1	19.3	16.7	11.2
\$3,000—\$3,999	19.6	.8	16.2	31.7	26.7	22.0	13.0
\$4,000—\$4,999	6.1		3.6	8.8	11.2	6.1	3.6
\$5,000—\$9,999	4.7		.8	5.2	6.8	7.1	2.1
Over \$10,000	1.2			.6	.9	1.5	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average Income	\$2,575	\$903	\$2,148	\$3,025	\$3,119	\$2,873	\$2,179
Median Income	\$2,371	\$727	\$2,172	\$2,407	\$2,888	\$2,601	\$1,982
(b) Females							
Under \$500	35.6	37.7	15.7	23.8	17.1	20.8	47.3
\$ 500—\$ 999	22.3	31.4	20.0	15.8	24.6	19.7	12.7
\$1,000—\$1,499	15.8	19.3	22.7	16.5	15.7	22.5	20.0
\$1,500—\$1,999	13.9	10.4	25.7	19.6	16.7	18.3	7.3
\$2,000—\$2,499	8.2	1.1	12.8	15.8	16.4	9.3	9.1
\$2,500—\$2,999	2.2		2.7	4.2	4.6	5.5	3.6
\$3,000—\$3,999	1.4		.2	4.2	3.9	2.4	
\$4,000—\$4,999 .....	.4		.1		1.0	1.4	
\$5,000—\$9,999 .....	.1		.1	.2			
Over \$10,000 .....	.1						
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average Income	\$1,061	\$745	\$1,279	\$1,341	\$1,364	\$1,289	\$870
Median Income	\$ 922	\$695	\$1,314	\$1,314	\$1,263	\$1,210	\$605

TABLE 20. Percentage Distribution of Individuals by Income Groups and by Relationship to Head of Family, 1951

Income Group	Head	Relationship to Head			
		Wife	Son or Daughter	Parent	Other Relative
Percent					
(a) By Income Groups					
Under \$500	8.6	46.0	21.4	64.9	26.1
\$ 500—\$ 999	10.3	21.2	19.8	17.2	16.3
\$1,000—\$1,499	9.5	11.8	17.1	6.2	12.2
\$1,500—\$1,999	10.5	10.4	16.9	3.8	19.2
\$2,000—\$2,499	14.3	6.3	13.3	3.2	11.6
\$2,500—\$2,999	14.0	1.8	5.7	2.9	6.7
\$3,000—\$3,999	20.0	1.6	4.3	1.3	6.3
\$4,000—\$4,999	6.4	.3	.9		1.6
\$5,000—\$9,999	5.1	.2	.4	.3	
Over \$10,000	1.3	.3	.2	.3	
Total	100.0	100.0	100.0	100.0	100.0
Average Income Male	\$2,844		\$1,576	\$1,052	\$1,696
Female	\$1,114	\$979	\$1,165	\$ 571	\$1,119
Median Income Male	\$2,612		\$1,434	\$ 496	\$1,679
Female	\$ 892	\$593	\$1,110	\$ 368	\$ 947

Income Group	Head	Relationship to Head				
		Wife	Son or Daughter	Parent	Other Relative	Total
Percent						
(b) Within Income Groups						
Under \$500	32.5	24.3	26.3	10.7	6.2	100.0
\$ 500—\$ 999	47.9	13.6	30.0	3.5	4.8	100.0
\$1,000—\$1,499	53.5	9.3	31.4	1.5	4.3	100.0
\$1,500—\$1,999	55.7	7.7	29.3	.9	6.4	100.0
\$2,000—\$2,499	70.1	4.3	21.3	.7	3.6	100.0
\$2,500—\$2,999	84.0	1.5	11.2	.8	2.5	100.0
\$3,000—\$3,999	90.6	1.0	6.3	.3	1.6	100.0
\$4,000—\$4,999	93.7	.5	4.3		1.5	100.0
\$5,000—\$9,999	96.7	.4	2.6	.2		100.0
Over \$10,000	90.3	4.0	4.8	.8		100.0
All individuals	63.6	8.9	20.7	2.8	4.0	100.0

TABLE 21. Composition of Individual Incomes by Income Groups and by Major Source of Income, 1951

Income Group	Wages and Salaries	Business Income	Investment Income	Transfer Payments	Miscellaneous Income	Total Income
\$ million						
(a) All Individual Incomes						
Under \$500	109.6	26.2	23.3	123.5	6.1	288.7
\$ 500 - \$ 999	348.1	63.4	40.1	94.2	27.3	573.1
\$1,000 - \$1,499	574.7	78.5	28.1	60.5	30.6	772.4
\$1,500 - \$1,999	966.7	100.2	23.0	47.8	18.3	1,156.0
\$2,000 - \$2,499	1,376.8	123.9	28.3	56.0	13.5	1,600.5
\$2,500 - \$2,999	1,417.3	92.1	15.5	67.1	7.5	1,599.5
\$3,000 - \$3,999	2,095.0	134.5	34.4	85.2	4.1	2,353.2
\$4,000 - \$4,999	873.0	106.6	30.4	33.7	2.0	1,045.7
\$5,000 - \$9,999	875.6	290.4	86.1	23.5	5.2	1,280.8
Over \$10,000	415.1	357.2	193.2	3.7	5.7	974.9
Total	9,051.9	1,373.0	502.4	597.2	120.3	11,644.8
(b) Major Source of Income: Wages and Salaries						
Under \$500	108.1	1.6	1.2	1.2		108.9
\$ 500 - \$ 999	342.2	1.8	2.4	7.1	.1	353.6
\$1,000 - \$1,499	566.8	2.7	2.2	18.8	1.5	592.0
\$1,500 - \$1,999	961.2	3.5	4.4	29.4	1.6	1,000.1
\$2,000 - \$2,499	1,368.9	7.1	7.9	45.2	2.2	1,431.3
\$2,500 - \$2,999	1,413.0	5.8	8.1	55.1	3.9	1,485.9
\$3,000 - \$3,999	2,080.1	9.7	12.1	75.9	.7	2,178.5
\$4,000 - \$4,999	862.1	7.3	8.7	30.1	.4	908.6
\$5,000 - \$9,999	848.5	17.7	21.6	18.1	1.1	907.0
Over \$10,000	367.7	14.9	39.0	1.5	1.8	424.9
Total	8,918.6	68.9	107.6	282.4	13.3	9,390.8
(c) Major Source of Income: Business Income						
Under \$500 .....	.1	27.9	.5	4.2	.1	32.8
\$ 500 - \$ 999	2.1	60.4	1.8	3.1	.3	67.7
\$1,000 - \$1,499	4.1	74.3	.9	6.9	1.2	87.4
\$1,500 - \$1,999	2.8	94.9	2.7	4.6	.5	105.5
\$2,000 - \$2,499	2.6	115.6	4.4	5.6	.5	128.7
\$2,500 - \$2,999	3.0	86.2	1.5	4.9	.8	96.4
\$3,000 - \$3,999	10.8	124.3	3.4	6.1	.2	144.8
\$4,000 - \$4,999	8.6	98.7	3.4	3.1	.2	114.0
\$5,000 - \$9,999	19.8	271.3	12.3	4.2	.7	308.3
Over \$10,000	22.4	338.5	24.7	2.1	1.2	388.9
Total	76.3	1,292.1	55.6	44.8	5.7	1,474.5
(d) Major Source of Income: Other Money Income						
Under \$500	1.4	.1	21.6	118.1	6.0	147.0
\$ 500 - \$ 999	3.8	1.2	35.9	84.0	26.9	151.8
\$1,000 - \$1,499	3.8	1.5	25.0	34.8	27.9	93.0
\$1,500 - \$1,999	2.7	1.8	15.9	13.8	16.2	50.4
\$2,000 - \$2,499	5.3	1.2	16.0	7.2	10.8	40.5
\$2,500 - \$2,999	1.3	.1	5.9	7.1	2.8	17.2
\$3,000 - \$3,999	4.1	.5	18.9	3.2	3.2	29.9
\$4,000 - \$4,999	2.3	.6	18.3	.5	1.4	23.1
\$5,000 - \$9,999	7.3	1.4	52.2	1.2	3.4	65.5
Over \$10,000	25.0	3.8	129.5	.1	2.7	161.1
Total	57.0	12.0	339.2	270.0	101.3	779.5

APPENDIX A

DISTRIBUTION OF NON-FARM INCOMES IN CANADA, BY SIZE, 1951 SOURCES AND METHODS

The main estimates presented in this report were based upon two major sources of data: income statistics collected in a Survey of Incomes in March and April 1952, conducted by the Dominion Bureau of Statistics, and special tabulations of income tax

statistics made available by the Department of National Revenue. The first sections of this appendix describe in detail the nature of the information while the remaining sections describe the methods used to integrate the two series.

I. Survey of Incomes, 1951

In the spring of 1952 the Survey of Incomes was carried out in conjunction with the Labour Force Survey, a quarterly survey of 1% of the population, and utilized the same sample and enumerators. The income questions were not given to the total labour force sample which consisted of more than 30,000 households, but to a selected portion of these households. Each household in the labour force sample, at this time, was retained in the sample for four consecutive surveys and during each survey approximately one-quarter of the sample was rotated out. The segment of the spring labour force sample which was being dropped was designated as the segment to be sampled for income data.

Within this segment, income information was to be secured only from individuals whose major source of income was from non-farm income, although information on family composition was to be obtained from farm families for weighting purposes. Some families with income from military pay and allowances were sampled but these schedules were not used, as data for these families were fragmentary.

Two sets of questionnaires were designed. Both questionnaires have been reproduced at the back of this reference paper. One was a control card for the enumerator who was to fill one in for each household and to list information on each member of the household regardless of the person's age. The questions on farm income were inserted to determine whether the individuals were to be sampled; the questions on the completion of the questionnaire were intended to check on the completeness of family data.

When the enumerators called at each sample household to obtain labour force statistics they obtained the control card information and, where possible, also collected the income data. It was

intended that all adults in the family be contacted individually for income information to ensure greater accuracy in the returns. If it was impossible to do this on the first call the enumerators left an income schedule for each member of the household aged 14 and over, and called back in a week or ten days. On the second visit enumerators picked up completed schedules and noted any refusals. Non-co-operating households were contacted by letter and asked to return completed questionnaires to regional offices. This request brought in a substantial number of questionnaires from individuals who had not returned forms to the enumerators.

On the income schedule individuals were asked to report cash income receipts of the following items: (a) wages and salaries (b) military pay and allowances (c) business income (net income from self-employment) (d) investment income (e) income received from the government, such as old age pensions and unemployment insurance (f) miscellaneous income.

Individuals were asked not to report the amounts of family allowances received and estimates for family allowance receipts were calculated at the office from the information secured on the family size and age composition. Although family allowance payments are made to the mother, the survey treated them as part of the income of the father. This change in allocation was made because of the experience with the 1948 estimates where family allowance receipts were considered to be the income of the wife. This treatment resulted in the addition of approximately a million and a half women to the income distribution at the lowest range. Such a treatment in 1951 would have increased the number of individuals in the income distribution by as much as a third and would have decreased the value of the figures for analytic purposes.

II. Estimation of Family Incomes from Survey

From the survey two sets of estimates were prepared—one set was an estimate of the distribution of family incomes and the other set an estimate of the distribution of individual incomes. It should be noted that the concept used was that of "family" income rather than "household" income. The control card completed by the enumerator was for the household as a whole. In processing the data, each household was broken down into family units—defined as a group of persons living together and related by

blood, marriage or adoption. Married sons and daughters living with their parents were considered to be members of their parents' family unit, not separate family units. Single persons in the households who were present as roomers or servants and not related to any other members of the household were treated as one persons family units. The information on the control card on each individual's relationship to the head of the household allowed a division of household members into families.

Income and other information for each family was transferred to a set of punch cards. Family income cards were prepared for two types of families: (a) those families in which one or more members received farm net income or military pay and allowances as a major source of income. Complete income information was not available for such families but cards were included for weighting purposes in inflating the sample to obtain aggregate figures. These families were excluded from the actual tabulations of family incomes; (b) those families for whom complete income data had been collected. Punch cards were not prepared for families in which only some of the members co-operated, although this information was used for the individual income distribution. Schedules were used for 1,150 families whose main income was from farming and from service pay and for whom family income data were incomplete while there were approximately 5,600 non-farm families who furnished complete income information for all members of the family. The analysis of family incomes by different family characteristics, presented in Tables 3 to 10, is derived from the original family income estimates based upon the sample of 5,600 families. Estimates of family incomes in Tables 1 and 2 were derived by another method. (See page 35).

No estimates were available, by regions, of the total number of families as defined by the survey. Census statistics used a narrower family unit definition which was not considered suitable for income survey purposes. The following method was used to make a separate estimate of the number of families from the labour force sample. The labour force sample provided an estimate of one per cent of all occupied households within each Primary Sampling Unit. From the income survey which covered $\frac{1}{4}$ of the households in the labour force survey, information was obtained on the total number of families per income sample household in each Primary Sampling Unit. This family-household ratio was applied to the one-per cent occupied household estimate to obtain a one percent estimate of the number of families in each Sampling Unit, and, in turn an estimate of the total number of families. The family income cards were sorted by Primary Sampling Units and in each Sampling Unit cards were duplicated at random to build the sample up to one-half of one per cent of the estimated number of families. This was done in order to simplify the weighting of the results. As a check, the sample in each province was used to derive a population total for the province. In some provinces the population total obtained appeared too low suggesting that the estimated number of families was also too low. In these cases further adjustments were made to bring the estimated number of families in line with population figures.

III. Estimation of Individual Incomes from Survey

A different procedure was used to derive the distribution of individual incomes. The estimate was based upon the returns from all persons aged 14 and over, including those who had no incomes. Individual returns were used from the 6,750 families discussed above as well as from another 750 families where only some of the family members provided data. Cards were punched for all individuals aged 14 and over and then sorted into two categories: (a) individuals who were not in the labour force; and (b) individuals who were in the labour force. For the first group, the sample was built up, by provinces, to give the appropriate sex and age distribution of the adult non-labour force population as estimated by labour force statistics. For the second group the sample was inflated by provinces, for the agricultur-

al and non-agricultural labour force, to predetermine estimates of the labour force by sex and by occupational status (employee, employer and own-account, and unpaid family worker). After these adjustments were made to account for the total population aged 14 and over, the cards of persons receiving no income were removed and estimates were made of the distribution of individual incomes.

These distributions were broken down into the following income categories: Individuals whose major source of income was: (a) from wages and salaries; (b) from net income from self-employment; (c) from investment income; (d) from transfer payments; (e) from miscellaneous income.

IV. Income Tax Data for 1951

Special tabulations of income tax returns, by size of total income, and by income components were made available for the following groups: farmers; forestry operators; fishermen; accountants; doctors; dentists; lawyers; engineers and architects; entertainers; osteopaths and chiropractors; nurses; other professionals; employees of agricultural enterprises, business enterprises, institutions, educational institutions, dominion government, provincial governments, municipal governments, private individuals and other employees; salesmen; sole proprietors without employees; sole proprietors with em-

ployees; partners in business; individuals with investment income predominating; individuals with pension income predominating.

Total income in each income group was broken down into the following income components: wages and salaries, business profits, professional income, commission income, farm income, dividends, bond and bank interest, net rental income, mortgage interest, annuity income, estate income and miscellaneous income.

The estimates for each of the groups listed above were based upon a 10 per cent sample of all individual tax returns filed. The statistics were extracted on a declared, prior to assessment, basis. This means that the figures reported by the taxpayers were accepted by the statistical section of the Department of National Revenue without waiting to take account of any changes which might later be made by the assessments branch.

The above classifications of individual taxpayers were based on the earnings status of the taxpayer rather than on a strict occupational basis. The method of earning the income was given preference over the type of work performed. Thus, a doctor or lawyer working on a salary basis was classed as an "employee" while only those engaged in practice for profit were listed in their professional capacity.

V. Construction of the Distribution of Individual Incomes

The four income distributions obtained from taxation statistics were nearly equivalent to four of the five individual income distributions obtained from the Survey of Incomes. The main difference arose out of the concept of income used—the Income Survey included transfer payments as part of total income while income tax statistics exclude them. Income tax returns do not supply an income distribution of individuals whose main income was from transfer payments since such income is not taxable.

The next steps in the construction of the income size distributions are described below for each of the five income groups. In general, where comparable statistics were available both from taxation statistics and the Income Survey, taxation statistics were used as the basis of the estimate for upper income levels, while the survey was used for incomes at the lower levels. Because of 1951 filing requirements it was felt that tax returns above the level of \$3,000 should present a reasonably accurate distribution of upper levels. Below \$3,000 income tax returns are incomplete as the lower the income level the more likely it is that the income is not taxable and hence, not reported.

Above the \$3,000 income level the distributions obtained from the Income Survey for individuals with incomes mainly from wages and salaries and for individuals with incomes mainly from business or professional income showed more individuals and a higher total income than did income tax returns. Part of this difference was due to the broader concept of income used in the Income Survey but part was possibly due to sampling error. The adjusted estimates for the upper income levels are lower than those of the Income Survey but higher than those of income tax statistics.

In the upper income levels the distributions of the number of individuals and total income groups with income from investments and from pensions were similar for both the Income Survey and income

For purposes of estimating the distributions of income the income-receiving groups listed above were combined as follows:

1. Individuals whose income was derived mainly from wages and salaries—this comprises all the groups of employees listed above as well as salesmen.
2. Individuals whose income was derived mainly from professional income or business income: forestry operators, fishermen, doctors, dentists, lawyers, engineers and architects, entertainers, osteopaths and chiropractors, nurses, other professionals, sole proprietors without employees, sole proprietors with employees and partners in business.
3. Individuals with investment income predominating.
4. Individuals with pension income predominating.

tax statistics. The major effect of substituting income tax data was to smooth the distribution in these ranges.

By groups the procedure followed is described in the next sections.

A. Distribution of Incomes Derived Mainly from Wages and Salaries.

1. The income components in the distribution obtained from income tax returns were grouped into income components equivalent to those used in the Survey of Incomes. The income items were combined as follows: (a) wages and salaries, and commission income which was considered to be a form of wages and salaries; (b) farm income, business income and professional income as these are all earned in self-employment; farm income was included only where it was a minor source of income; (c) dividends, bond interest, bank interest, net rental income, mortgage interest, estate income and other investment income. These items approximate investment income on the income schedule. (d) Annuity income, pension income and miscellaneous income.

2. At each income level above \$2,500 income tax statistics were adjusted to add into total taxable income an estimate for receipts of transfer payments. This adjustment was based upon the average receipt of transfer payments at the upper income levels in the Income Survey. The adjustment for the receipt of non-taxable income resulted in a redistribution of individuals among income levels as total income was increased. In addition to adjusting for the receipt of transfer payments the amounts of net income received from self-employment, where this represented a subsidiary source of income, were also adjusted upward as the Income Survey indicated that such receipts, for wage earners, were consistently larger than the amounts reported on income tax returns.

These adjustments to the average total income of income tax payers amounted to some \$100 to \$200. The next step was to calculate the redistribution among income ranges after the increase in total income. The method used assumed that, within each income range, all incomes increased by the same amount. Thus, if the average income in the income range \$2,500 to \$3,000 went up by \$150, it was assumed that all incomes in this range increased by this amount. This would mean that all individuals whose incomes previously fell between \$2,850 and \$2,999 would now receive incomes of \$3,000 to \$3,149 and would move into the next income range.

The following formula was used to calculate the groups to be shifted after the income adjustments:

$$r = p + p(1-p)(3-6a)$$

where a is the proportion of the income range of the bracket up to the point denoting the arithmetic mean income of the bracket and p is the corresponding proportion up to the point of interpolation. Then r is the proportion of the frequencies falling below the point of interpolation and $1-r$ is the proportion of the frequencies above the point of interpolation and hence, the proportion to be shifted into the next income range¹.

The proportion of the aggregate income shifted was calculated by multiplying the number of frequencies shifted by the midpoint of the new income range within which these frequencies fell.

3. After these adjustments the distribution of incomes from wages and salaries above \$3,000, derived from adjusted income tax statistics, contained approximately 50,000 fewer individuals than the upper income levels of the distribution derived from the Survey of Incomes. The distribution of incomes below \$3,000 derived from the Survey of Incomes was adjusted by increasing the frequencies below \$3,000 by 50,000 individuals; these were distributed percentagewise in the same ratio as the original distribution. The distribution of incomes above \$3,000 developed from the adjusted income tax statistics and the distribution of incomes below \$3,000 developed from the Income Survey were then combined to obtain the distribution which is published in the main part of this report.

The major difference between the published distribution and the original distribution of the Survey of Incomes is the reallocation of some frequencies between income groups; in general, there was some adjustment downward from the higher to the lower ranges. The total number of individuals as derived from the income survey was left unchanged.

Despite these adjustments the final estimates may still be subject to both sampling and response errors; since, fundamentally, the estimates are based upon a sample they may vary somewhat from the true distributions. In addition, many individuals with

some earnings may have either omitted to report or understated the total amount earned. However comparisons of the estimates with labour force statistics and national income estimates suggest that sampling and response errors may not be too significant for wage-earners.

B. Distribution of Incomes Derived Mainly from Business Income.

1. Income tax statistics for the distribution of business income were adjusted by same methods as outlined above for the distribution of incomes from wages and salaries. In addition a further adjustment was made for the effect of reassessment on the net incomes reported at income levels above \$2,500.

This adjustment was made from special information made available by the Department of National Revenue. For employees, own accounts and employers, and individuals with investment income, tabulations were made of the 1951 income tax returns which were reassessed by the Department. The tabulations indicated, by income ranges, the number of returns reassessed and the amount of the tax increase or decrease. These tabulations were made only for those returns where reassessment would alter the amount of taxable income reported before the deduction of allowable exemptions. Reassessment had almost no effect upon the distributions of incomes from wages and salaries but was significant for net business income. From income tax statistics, average net taxable income was computed for each income range. From this the marginal rate of taxation on additional income increments was determined. This rate was applied to the tax change to estimate the income change resulting from reassessment. In all income ranges there was a net upward adjustment in total income. The adjustments for reassessment added approximately \$60 million to the aggregate incomes above \$3,000.

The next step after the adjustment of total incomes for receipts of transfer payments and for reassessment was the redistribution of the frequencies between income ranges by use of the formula described in the previous section.

2. As with previous distribution, the frequencies above \$3,000 were less than the frequencies in these income ranges in the Survey of Incomes. The distribution derived from the Survey was adjusted below the \$3,000 level to bring the frequencies up to the estimate derived from the Income Survey.

3. During the processing of the schedules from the Income Survey, there was evidence to suggest that many individuals with roomers or boarders neglected to furnish information on this type of income receipt. Where any type of income was reported by an individual with roomers the schedule was accepted as submitted; where no income was reported, although roomers lived in the household, the information for the individual was not used. On the questionnaire net income from roomers and boarders should have been reported as net income from self-employment. However, no specific mention was made on the form that this was the appropriate

1. This formula was developed for interpolation in American size distribution statistics. See "Income Distribution in the United States" United States Department of Commerce, Office of Business Economics, Page 38, for a fuller description.

treatment of this income, although enumerators were instructed upon this point. It seems probable that, unless specifically asked, enumerators would not have advised on the treatment of this income. As a result, through a misunderstanding in the majority of cases, this income appeared to be omitted.

The omissions seemed large enough and obvious enough that some adjustment should be made for them. From the distribution of individual incomes obtained from the Family Expenditures Survey, 1947-48, a separate distribution of incomes derived mainly from net income from roomers and boarders had been tabulated. These figures were used to add in an estimate for this group in the 1951 income distribution. The adjustment added approximately 150,000 individuals with receipts of \$90 million. The experience of the 1948 survey indicated that the majority of such receipts fell under \$1,000 and it was here that the adjustment was made. In 1948 more than half the aggregate income that was derived from roomers and boarders accrued to housewives for whom this was a comparatively small income receipt. The remainder went to individuals whose major source of income was from some other source. The adjustment made to the 1951 estimates is intended to correct for the omission of the first group. Some individuals in other income groups undoubtedly may not have reported such receipts but no adjustment was made to other groups for possible under-estimation of this additional income. National Accounts estimates of net income from roomers and boarders in 1951 were approximately \$150 million so that the adjustment made was not intended to cover the total Accounts estimate. Some net income was reported and the adjustment was made with this consideration in mind.

VI. The Distribution of Family Incomes

Survey data were used to complete the study of the distribution of family incomes by estimating an adjusted distribution of family incomes from the adjusted distribution of individual incomes. Special tabulations were made from the original data of the Survey of Incomes cross-classifying individual individual incomes by family incomes for each main income group. The tabulations contained the following information: (a) the major type of income received by the individual (i.e. wages, business income) (b) the income level of the individual (c) the major type of income the family received (d) the income level of the family. Thus each of the main income receiving groups of individuals were tabulated separately and cross-classified by family incomes.

The revised income distribution of individuals was distributed among the family income levels and the family income types in the same ratio as the original distribution. Aggregate income itself was distributed by family income levels in the same ratio as the distribution of individuals.

The next step after the distribution of individuals among family income levels was the estimation of the number of families represented. Here again

C. Distribution of Incomes Derived Mainly from Investment Income.

The derivation of this distribution was similar to that of the previous distribution. Income tax statistics were adjusted to allow for the addition of transfer payment receipts and to take account of the effect of reassessment. The Survey of Incomes provided the basic data for the distribution of incomes below \$3,000 while, again, tax statistics were used above \$3,000. The main effect of the substitution of income tax data in the upper income levels was to give a smoother income distribution and to increase the estimate of total incomes. Both distributions gave similar estimates of the number of individuals falling in the upper ranges of the income distribution.

D. Distribution of Incomes Derived Mainly from Transfer Payments.

This distribution was estimated from the Survey of Incomes. Because the Income Survey did not ask for a breakdown of the type of transfer payment receipts (e.g. old age pensions, veterans' pensions, etc.) it was not possible to use data published by government sources as a check upon the estimates.

E. Distribution of Incomes Derived Mainly from Miscellaneous Income.

Income tax statistics were used here for the upper income ranges, the Survey of Incomes for the lower. The methods of adjustment was similar to that used in the other distributions.

survey information was used for the average number of income recipients per family at each family income level for families with different types of income. The average number of income recipients was divided into the number of individuals at each income level to obtain the number of families at these levels.

An illustration is given below of the application of the methods described above.

Assume 200,000 individuals with wages and salaries as the major source of income and total income under \$500. Tabulations show that:

(i) 50,000 are in family units with incomes under \$500 and major source of income wages and salaries;

(ii) 50,000 are in family units with incomes \$500 to \$1,000. These are distributed as follows: 35,000 are in families with major source of income wages and salaries; 10,000 are in families with major source of income business income; 5,000 are in families with major source of income other money income;

(iii) 100,000 are in family units with incomes of \$1,000 to \$1,500. These are broken down as follows:

75,000 are in families with major source of income wages and salaries; 15,000 are in families with major source of income business income; 10,000 are in families with major source of income other money income.

The revised income distribution of individuals whose main income is from wages and salaries shows 250,000 individuals with incomes below \$500. These individuals are distributed among the family income levels and the family income types by a straight percentage distribution in the ratio of 250,000 to 200,000. Thus the new distribution of family incomes is derived from the revised individual income size distribution by substitution of the new numbers and by distribution of these percentages among family incomes in the same ratio as the original distribution.

VII. Relationship of Income Size Distributions to the National Accounts

A comparison of the aggregate income from the individual income size distribution of this report with the income aggregates of the Personal Income series of the National Accounts indicates that certain components, e.g. investment income and net income from self-employment, may be significantly underestimated in the size distribution. This must be considered one of the most serious defects of the present estimates. In total the differences may not appear to affect the end product to any substantial degree but the analytic value of the breakdowns of certain of the individual size distributions is lessened because of these discrepancies. This is especially true of the distribution of investment income.

The Personal Income series of the National Accounts summarize the source of current income of individuals and private non-commercial institutions such as charitable organizations and hospitals. The series consist of imputed income as well as cash income. Among the imputed items are labour income received in kind, imputed rents of owner-occupied homes and imputed banking services to individuals. Furthermore, some of the cash income components of the Personal Income series are not received directly by individuals or families during the year. Among such items are employer contributions to pension funds, the investment income of life insurance companies and the investment income of industrial pension funds. The inclusion of such items in the National Accounts introduces differences in concepts between the Accounts and the income size distribution estimates. On the other hand certain income components included in the income distributions have no equivalent in the Personal Income series. Examples are annuity income, retirement pensions and royalties.

Adjustments were made of the Personal Income Series of the Accounts for 1951 to make them as comparable as possible to the income distribution estimates and comparisons were made of the two series to determine to what extent the income distributions agreed with the National Accounts².

Once the redistribution is completed the number of families is estimated by following method. Assume that for families whose major source of income is from wages and salaries and who fall in the income bracket \$2,000 to \$2,500, the following number of individuals have been allocated to this income range:

50,000 individuals with major source of income from wages and salaries.

10,000 with major source of income from business income.

10,000 individuals with major source of income from other money income.

This is a total of 70,000 individuals.

Assume that the Income Survey shows that the average number of income recipients per family at this level is 2.0. Dividing by this number an estimate of 35,000 families with incomes of \$2,000 to \$2,500 is obtained.

Where comparability existed between components of the two series, comparisons were made of the two sets of aggregate income estimates. A complete reconciliation cannot be effected because of the exclusion of the farm sector in the income distribution study. However, the aggregate income estimates in the main tables are 98 per cent of cash wages and salaries, 91 per cent of net income from self-employment, 82 per cent of transfer payments and 62 per cent of investment income. Some fraction of these income receipts was undoubtedly part of the total income of farmers but it is impossible to estimate what percentage went into the farm sector. Thus the total discrepancy in cash income cannot be calculated. The present estimates account for 94 per cent of the total non-farm cash components of the Personal Income series in the Accounts. Of the remaining 6 per cent some went to farmers in such forms as family allowances, bond interest and rents.

To summarize, in total the estimates of this paper do not differ greatly from the cash income estimates of the Personal Income series. However, the differences between some of the individual components are substantial.

Some indication of why differences exist has already been given in the discussion of the response errors which may be contained in the sample. Another source of error which may lead to differences between sample results and data obtained by other methods is sampling variability. Since the estimates are not derived from a complete census the means and medians obtained will, to some degree, differ from the true distribution and will affect the aggregate income estimates. It is not possible to measure the sampling error of the arithmetic means as a check on the extent to which aggregates might be affected.

2. For data on the concepts and estimation of Personal Income see "National Accounts, Income and Expenditure 1926-1950". Dominion Bureau of Statistics. See Table VI and Notes 1 to 9, Pages 116-117.

APPENDIX B

DISTRIBUTION OF NON-FARM INCOMES, BY SIZE, 1948

The size distributions of individual and family incomes for 1948 are not shown in the same detail as the 1951 series presented in the main part of this report, although they were originally prepared in a similar fashion. Instead, this appendix shows the percentage distribution of individuals and families and of individual and family incomes by size. Information is also given an average and median incomes.

There are a number of reasons why the detail has been omitted. Basically the 1948 estimates were derived by somewhat similar methods but there are a number of conceptual and methodological differences. The main differences are these: (1) The family concept used in 1948 differs from that used in the Survey of Incomes for 1951. The concept used was identical with that of the Family Expenditures Survey, 1947-48, which defined the family as "a group of persons who meet expenses from a common income" or "one person who is financially independent". A one person spending unit was a financially independent person who kept his income and expenses separated from those of relatives and friends. Under this definition unrelated individuals might form a spending unit but, in the sample, instances of this occurring were rare so that this difference in treatment is not significant. In 1948, as in 1951, unmarried sons and daughters living with parents were considered to be part of their parents' unit but the treatment of married children in the household depended upon the arrangements prevailing in regard to incomes. Married children in 1948 may have been considered to be separate family units in many instances, whereas, in 1951 they were always part of the parental unit.

The use of the 1948 concept leads to a larger estimate of the number of families and correspondingly smaller average family size and average family income. During a period of involuntary sharing of accommodation, such as wartime, the differences in income size distributions constructed on these two different concepts would be substantial. In 1951 the extent of involuntary sharing of accommodation was probably not substantial so that the differences resulting from the use of a family concept differing from that used in 1948 may not be too important. An examination of the 1951 estimates indicates that several hundred thousand families had married sons and daughters living with their parents. Whether, under the 1948 definition, these would be considered separate family units cannot be determined. In 1948 there were also units with married sons and daughters present.

(2) Checks with population figures indicate that the estimated number of family units in 1948 may be too high. The 1951 estimates were adjusted to population figures. The distributions of individual incomes in 1951 were weighted separately with the use of labour force data; in 1948 the distributions of

individual incomes were byproducts of the distributions of family incomes. The data in 1948 were examined and adjusted by other information but cannot be considered to be statistically as satisfactory as the 1951 estimates.

(3) In the 1951 estimates of the distribution of family incomes, all families where at least one member of the family received the greater part of his income from farm net income or from military pay were excluded from the estimates. The original estimates for 1948 contained an income size distribution of the incomes of families and of individuals whose major source of income was from farm net income and military pay. The statistical deficiencies of the estimates for the farm sector were such that it was decided not to include the data in this appendix. However, the method of deriving the distribution of family incomes was such that in the 1948 distribution of nonfarm family incomes the estimates contain families in which some member of the family received his main income from farming although the major part of the family income was from other sources.

The 1948 series in this appendix include estimates for individuals and for families whose major source of income was military pay and allowances; the 1951 estimates exclude these families and individuals. In 1948 the three armed forces had a strength of approximately 35,000; in 1951 the size of the services was just over 100,000.

(4) The income concepts used in both years were identical but there is one important difference in the allocation of income receipts. In the 1948 Family Expenditures Survey family allowances were treated as the income of the housewife. In the majority of cases this would be her sole income receipt. It is estimated that this added approximately a million and a half women, in this category, to the income distribution of individuals with money incomes from investment income, transfer payments and miscellaneous income. The majority of these persons would have incomes of less than \$500. Since the total number of individuals with nonfarm incomes exclusive of this group was less than five million it is readily apparent what a distortion such a treatment introduces into the distribution, with an accompanying diminution in the value of individual statistics for analytic purposes. For these reasons it seemed more realistic, in 1951, to add such income receipts to the income of the husband. This difference in the allocation would have no effect on the distribution of family incomes since these are a combination of all incomes of family members.

The tables contained in this appendix do not present a percentage distribution of all individual incomes because the treatment of family allowance receipts has this significant effect on the shape of

the distribution. The groups affected least are those with major source of income from wages and salaries and business income (earned income). It is estimated that in 1951 the change in treatment would have raised average incomes in these groups by something less than \$50. The average incomes shown for wage earners in 1951 are \$366 higher than in 1948 and, of this, more than \$300 would be attributable to an increase in cash incomes over the period. The distribution which is very greatly affected in 1948 by this treatment is the distribution of incomes from other money income. These figures have little comparability with 1951.

(5) In 1948 Newfoundland was not part of Canada so that the 1948 figures are exclusive of Newfoundland; the 1951 figures include Newfoundland. If Newfoundland were omitted from the 1951 estimates it is probable that, both for individual and family incomes, average incomes would show still greater increases for 1951 as compared with 1948. Despite these qualifications it is felt that the 1948 statistics are of interest and, when contrasted with 1951 figures, give some indication of the changes in incomes over this period. Conceptual differences account for only a minor part of the differences between 1948 and 1951 incomes except in the case of individuals whose major source of income is other money income; the increase in cash incomes themselves accounts for the greater part of the difference. But, because of the qualifications listed above, statistics for 1951 should not be compared directly with those of 1948. Statistical and conceptual differences probably affect the distribution of family incomes less than they affect the distribution of individual incomes.

Sources and Methods

The 1948 estimates were prepared from two basic sources of data: Income tax statistics for the calendar year 1948 and the Family Expenditures Survey, covering the period September 1, 1947 to August 31, 1948, conducted by the Bureau of Statistics in September, 1948. The data and methods used are described briefly below.

1. Special tabulations of income tax returns filed for 1948 were provided by the Department of National Revenue. The tabulations were identical with those made for 1951 and described in the section on 1951 sources and methods. These were grouped by major source of income: wages and salaries, military pay and allowances, farm net income, other net income from self-employment, investment income and pension income.

2. From the Family Expenditures Survey distributions of individual incomes were obtained for the groups listed above and for individuals with their main source of income from roomers and boarders and miscellaneous income.

The income detail secured in the survey was much greater than that available in income tax statistics or than that secured in the Income Survey for 1951. All types of investment income and transfer payments were obtained separately. To obtain com-

parability with income tax statistics the various income components were combined into equivalent categories.

3. An element of incomparability arose between income tax statistics and the survey data because the former were for the calendar year 1948 while the latter referred to the twelve month period ending on August 31, 1948. An adjustment was made to change the distributions of the income groups of the Family Expenditures Survey to a calendar year base. This was done by assuming that the components of the incomes of these individuals increased (or decreased) in the same proportion as did the components of the Personal Income series in the National Accounts between the twelve months ending September 30, 1948 and the twelve months ending December 31, 1948.

4. The integration of the survey data and income tax statistics was, on the whole, done by methods similar to those used in 1951. In general, where comparable statistics were available both from income tax statistics and the Family Expenditures Survey, income tax statistics were used as the basis of the estimate for upper income levels, while the survey was used for incomes at the lower levels. The \$3,000 income level was the joining point for 1948 as well as 1951. The general effect of the substitution of income tax statistics at the upper levels was to reduce the frequencies of wage and salary earners and increase the frequencies of individual with net income from self-employment in these income ranges.

As was the case in 1951, where income tax statistics were used adjustments were made to include an estimate for receipts of non-taxable income such as certain types of transfer payments. The addition of non-taxable income in the upper income brackets increased aggregate income receipts and resulted in an upward shift of some income recipients. The formula used to calculate the shift in 1948 was not the same as that used for the 1951 estimates although the differences are small.

5. The Family Expenditures Survey sample of families was inflated by the size of the family and by province. Subsequent checks indicated an under-representation of families of the self-employed and farmers. This under-representation was carried over into the distribution of individual incomes derived from the family income schedules. In 1951 the individual income distribution was estimated independently of the family income distribution so that more accurate estimates of earners were available.

In 1948 to adjust the distributions of incomes derived from earned income, in order to correct the imbalance, an independent estimate of the numbers of individuals working for pay or profit as employees or own-accounts and employers was prepared. The only national estimates in this area were the quarterly labour force surveys of the population aged 14 and over, based on a one percent sample of this population. However, these estimates were valid for only one point of time, the period at which each survey was conducted. The quarter of peak employ-

ment would indicate the minimum number of individuals at work during the year but not the total number since many individuals not at work in this quarter may have worked at some other period of the year.

A special study was made of a sample of labour force cards to calculate an adjustment factor for labour force data for an estimate of the number of employed persons in 1948. The study was made possible by the fact that each household in the labour force sample is retained in the sample for four successive quarters. By a matching process a representative sub-sample of 3,624 labour force cards were matched, up for the June, August and October surveys in 1949 and the March survey of 1950. It was necessary to use this particular period since the cards for earlier periods were not available. The assumption was made that the sample findings for this period would be equally applicable to 1948.

From these cards an estimate was secured of the numbers not employed in August who were employed in one or more of the other three quarters. From these estimates adjustments were applied to the August labour force figures to secure an estimate of the total number employed during the year.

The adjustment made may still have resulted in an underestimate of individuals employed as it would not include an estimate for individuals whose employment did not coincide with any of the four surveys but who may have been employed between surveys. Another factor which may have made the estimate too low is the fact that it was based upon a sample of individuals who remained in one place during the year although possibly shifting in and out of the labour force. Since persons who moved were excluded, individuals with highly seasonal work would not likely have been in this sample and their exclusion would also lead to an understatement of turn-over.

These employment estimates, with some further adjustment, were used to complete the estimates for the distributions of individual incomes derived mainly from earned income (wages and salaries, business income, net farm income). The distributions obtained by joining income tax figures with the survey figures were not altered above the \$3,000 income level but each distribution was adjusted below this level so that the number of individuals in each income distribution conformed to these estimates.

Adjustments to the distributions of incomes from military pay and allowances and from transfer payments were made from published data on the number of individuals in receipt of such income.

6. The final step was the conversion of individual incomes into family incomes by methods similar to those used to make the family income estimates for 1951.

Comparison with the National Accounts

The same comparison that had been made of 1951 incomes aggregates with the Personal Income series of the National Accounts was made for the 1948 estimates. Since the original estimates for 1948 had included the farm sector a complete reconciliation could be effected where this had been impossible in 1951. In 1948 the reconciliation indicated that the estimates covered 95.5 per cent of total cash Personal Income although certain items such as net farm income and investment were substantially underestimated. Because farm income differed by more than 20 per cent and because of the significance of farm income in the income distribution, the farm sector was excluded from the tables shown in this appendix. In 1948, items in the income size distribution series which had no equivalent in the Personal Income series were approximately one and a half per cent of total cash Personal Income.

Definitions and Notes on Tables

The income concept used in 1948 is the same as that of the 1951 estimates. Definitions may be found on page 15. The classification by major source of income is also similar but the definition of family is somewhat different (see page 37).

Table 22 presents the percentage distribution of family incomes in 1948. The first two columns show the distribution for all families and are summaries of the three groups shown separately in the other columns.

Table 23 contains information on the distribution of individual incomes in 1948. The first two columns (the distribution of incomes derived mainly from earned income) summarize the next four columns (distributions of incomes from wages and salaries and from business income). The last two columns show the distribution of incomes from unearned income (transfer payments, investment income and miscellaneous income).

TABLE 22. Percent Distribution of Families and Family Incomes by Income Groups and by Major Source of Income, 1948¹

Income Group	All Families ²		Major Source of Income					
			Wages and Salaries ³		Business Income		Other Money Income	
	No.	Total Income	No.	Total Income	No.	Total Income	No.	Total Income
	Percent							
Under \$500	6.7	.6	2.1	.2	6.1	.6	35.5	5.8
\$ 500-\$ 999	9.0	2.7	5.0	1.5	11.3	2.6	31.4	18.6
\$1,000-\$1,499	8.7	4.2	8.3	3.8	10.8	4.2	9.1	8.3
\$1,500-\$1,999	14.7	10.2	15.4	10.3	13.8	7.4	11.8	15.2
\$2,000-\$2,499	17.5	15.3	19.5	16.3	17.7	12.6	5.2	8.3
\$2,500-\$2,999	14.4	15.3	18.0	18.3	3.4	2.9	1.1	2.0
\$3,000-\$3,999	16.6	21.1	18.9	23.0	19.1	20.0	.2	.6
\$4,000-\$4,999	5.2	8.5	6.1	9.3	2.8	5.1	1.5	4.9
\$5,000-\$9,999	6.2	14.9	5.9	13.4	11.4	23.6	3.5	15.4
Over \$10,000	1.0	7.2	.7	3.9	3.5	21.1	1.0	20.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average Income		\$ 2,613		\$ 2,743		\$ 3,170		\$ 1,351
Median Income		\$ 2,310		\$ 2,491		\$ 2,225		\$ 730

1. 1948 figures exclude Newfoundland. In 1951 estimates were included for Newfoundland.

2. The definition of the family unit in 1948 differs conceptually from the definition used in 1951. See page 37.

3. This classification includes families whose major source of income was military pay and allowances. 1951 estimates exclude such families.

TABLE 23. Percent Distribution of Individuals and Individual Incomes by Income Groups and by Major Source of Income, 1948

Income Group	Major Source of Income: Earned Income						Other Money Income ²	
	All Earned Incomes ¹		Wages and Salaries		Business Income			
	No.	Total Income	No.	Total Income	No.	Total Income	No.	Total Income
	Percent							
Under \$500	13.6	1.8	12.0	1.5	22.9	3.2	79.2	33.5
\$ 500—\$ 999	13.3	5.2	12.0	4.8	20.8	7.7	13.3	21.0
\$1,000—\$1,499	13.6	8.9	13.5	8.9	14.2	9.1	3.3	9.5
\$1,500—\$1,999	18.7	17.1	19.2	17.6	16.1	14.6	2.1	8.6
\$2,000—\$2,499	17.9	21.2	19.9	23.5	6.3	7.4	.6	3.1
\$2,500—\$2,999	11.7	16.7	12.4	17.8	7.4	10.5	.3	1.9
\$3,000—\$3,999	6.8	12.4	7.3	13.2	4.1	7.7	.5	4.2
\$4,000—\$4,999	1.7	4.1	1.7	3.9	2.1	4.9	.1	1.4
\$5,000—\$9,999	2.0	6.9	1.6	5.5	4.2	15.1	.2	4.0
Over \$10,000 .....	.6	5.7	.3	3.3	2.1	19.7	.2	12.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
 Average Income		\$ 1,889		\$ 1,890		\$ 1,883		\$ 428
 Median Income		\$ 1,753		\$ 1,825		\$ 1,221		\$ 892

1. Earned income consists of wages and salaries, military pay, and allowances and net income from self-employment. Columns 1 and 2 summarize columns 3 and 5, 4 and 6, respectively.

2. This distribution is not identical with the 1951 distribution because of the change in treatment of family allowances. For an explanation see page 37.

SURVEY QUESTIONNAIRES

Supplementary Schedule - Complete One for Each Household

1. Primary Sampling Unit	2. Segment or Block		3. Household Number		
4. Assignment Card Line Number					
5. Relation to Head of Household					
6. Age					
7. Sex					
8. Marital Status					
9. Indicate if farm income was major source of income in 1951	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
10. Questionnaire Received?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
11. If Questionnaire not Received had this person any income?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
FOR OFFICE USE ONLY					
12. Family Number					
13. In the Labor Force	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
14. Status in the Labor Force					
15. Industry					
16. Occupation					

Name _____

SURVEY OF INCOMES 1951

PSU

Segment or
Block

Household
Number

Assignment Card Line Number _____

This survey refers to the income received in the twelve months of 1951. If you have any questions regarding the type of income, please ask our enumerator when he calls.

In 1951 how much did you receive as:

1. Salaries and wages Show total salaries and wages before deductions for pensions, taxes, etc.	
2. Military pay and allowances	
3. Net income from own business or profession Show net income (gross receipts minus expenses) from a business or profession in which you were engaged on your own account with or without paid employees.	
4. Investment income Include bond interest, dividends, net rents, estate income, etc.	
5. Income received from the government Include Veterans' Payments, Old Age Pensions, Unemployment Insurance, Veterans' Pensions, Workmen's Compensation, etc. Do not include superannuation pensions (see Question 6) or family allowances (excluded throughout)	
6. Other money income Include retirement pensions, annuities, etc. Do not include gifts, lump-sum receipts from insurance policies, income tax refunds or receipts from the sale of property. Do not include income received in kind such as meals or room and board.	
7. Total income	

8. How many weeks did you work in 1951?

Of this, how many weeks were: Full-time?

Part-time?

Include as weeks worked holidays or illness with pay.

9. If you worked less than the full year, indicate why:
(unemployed, voluntarily idle, etc.)

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