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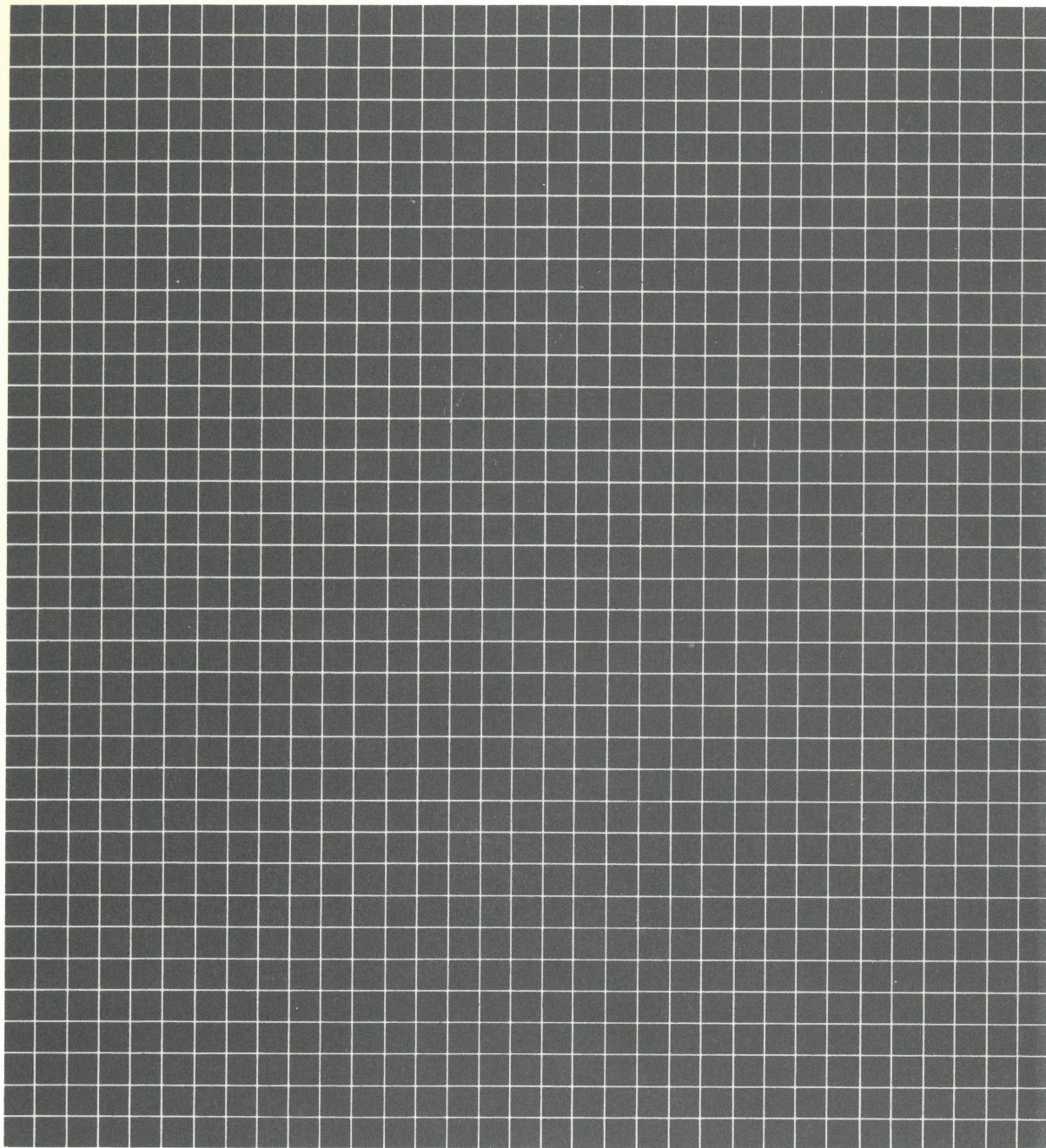
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Dominion Bureau of Statistics

Annual Report

For the Fiscal Year ended March 31, 1967



CATALOGUE No.

11-201



CANADA

ANNUAL REPORT
OF THE
DOMINION BUREAU OF STATISTICS

FOR THE FISCAL YEAR
ENDED MARCH 31, 1967

March 1968
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THE HONOURABLE ROBERT H. WINTERS, P.C.,
MINISTER OF TRADE AND COMMERCE,
OTTAWA, CANADA.

Sir:

I have the honour to submit the Annual Report of the
Dominion Bureau of Statistics covering the operations and
services rendered during the fiscal year ended March 31, 1967.

Respectfully submitted,

Harold G. Duffett.

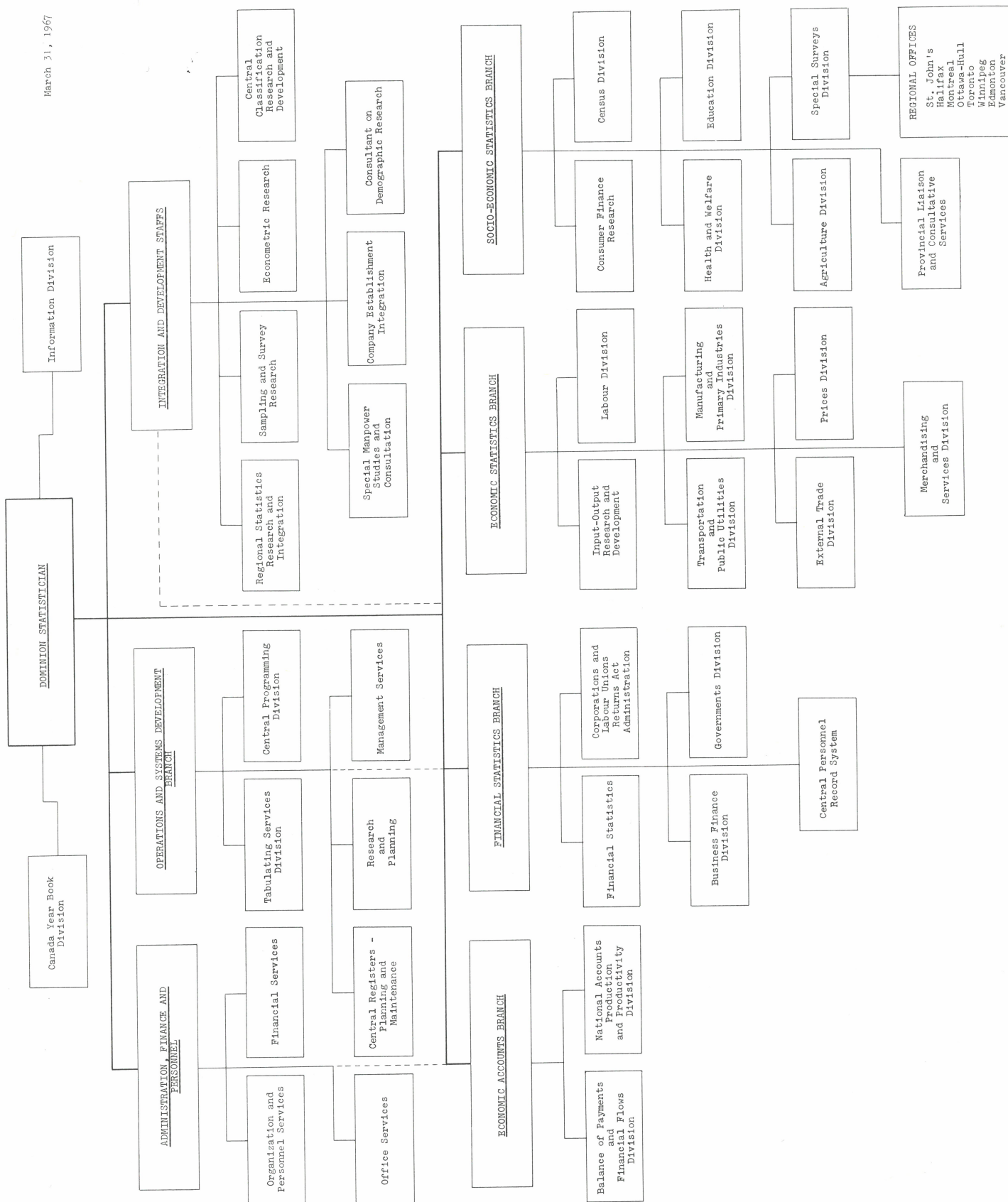
Dominion Statistician.

Ottawa, Canada
March, 1968.

CONTENTS

	<u>Page</u>
Chart of the DBS Organization	6
General Activities	7
Canada Year Book Division	8
Information Division	9
Integration and Development Staffs	
Central Classifications, Research and Development	10
Sampling and Survey Research	11
Econometric Research	12
Regional Statistics, Research and Integration	13
Company Establishment Integration	13
Special Manpower Studies and Consultation	13
Consultant on Demographic Research	13
Economic Accounts Branch	
Balance of Payments and Financial Flows Division	14
National Accounts, Production and Productivity Division	15
Financial Statistics Branch	
Business Finance Division	16
Corporations and Labour Unions Returns Act Division	17
Central Personnel Record System	18
Governments Division	18
Economic Statistics Branch	
External Trade Division	20
Input-Output Research and Development	20
Labour Division	21
Manufacturing and Primary Industries Division	22
Merchandising and Services Division	24
Prices Division	25
Transportation and Public Utilities Division	26
Socio-Economic Statistics Branch	
Agriculture Division	28
Census Division	31
Consumer Finance Research	31
Education Division	32
Health and Welfare Division	34
Special Surveys Division	37
Provincial Liaison and Consultative Services	37
Operations and Systems Development Branch	
Tabulating Services Division	38
Central Programming Division	39
Management Services Section	39
Central Registers Section	39
Administrative Services	
Staff Organization	40
Staff Development and Training	40
Incentive Awards	41
Financial Services	41
Office Services	41
Dominion Bureau of Statistics Senior Officers	42

March 31, 1967



GENERAL ACTIVITIES

In recent years the Dominion Bureau of Statistics has been experiencing a period of rapid growth, in an attempt to catch up with the urgent demands for additional statistical data. Many of these demands have resulted from newly created federal government departments and agencies charged with the implementing of important and far-reaching government programs. Provincial government needs for statistical data, too, have been increasing, particularly in the field of regional development. During the fiscal year the establishment of the Bureau increased by about 300 positions, including the acquisition of staff for certain functions on behalf of other government departments. Pressure for additional statistical services was reflected at the year-end in plans for further increases in 1968-69.

On January 1, 1967 an important series of changes took place in the organizational structure of the Bureau. The previous arrangement, with a large number of divisions reporting directly to the Dominion Statistician, had become inappropriate with the increasing size and complexity of the organization, and consideration had been given over a period of years to a grouping of subject-matter divisions into a number of branches. The main obstacle had been the availability of staff to man such an organization, but by 1966 it appeared that recruitment plus the development of DBS officers could provide the necessary resources. The chart on the opposite page indicates the major characteristics of the new organization. The Socio-Economic Statistics Branch deals mainly with statistics derived from or related to households and persons. The Economics Statistics Branch covers statistics derived from business establishments, while the Financial Statistics Branch, so far as the private sector is concerned, deals with corporations. It includes also the government's Central Personnel Record System, administered by DBS on behalf of the Treasury Board and the Public Service Commission. The Corporations and Labour Unions Returns Act Administration has become increasingly integrated with the DBS statistical system and was incorporated into the Branch as a regular DBS division. The Economic Accounts Branch concerns itself with the analysis and publication of major aggregates such as the National Accounts, the Index of Industrial Production, the Balance of Payments and a time-series data bank. In the reorganization the increased importance of automation was recognized by the creation of an Operations and Systems Development Branch concerned with data processing, computer programming and other similar functions. Administration and Integration and Development functions which perform important services for the entire organization were not greatly altered in the reorganization.

Opportunities and needs for increased automation through the use of computers continue to be evident, and an internal committee of DBS officers reported during the year on very large computer requirements during the next 5 to 10 years. The existing computer equipment is proving inadequate to handle DBS data processing needs and plans are being developed for its replacement with a faster modern installation. The need for developing appropriate operational and programming staff, and for effective further integration of survey and computer processes are matters of concern.

Substantial efforts were expended during the year on introducing a system of program budgeting and responsibility accounting in line with the Government's policies of implementing recommendations of the Royal Commission on Government Organization. In the area of personnel management, classification of positions in line with the Government-wide program of assessing and classifying positions on a uniform basis throughout the Service continued and the intensity increased. To assist in meeting these objectives, it was necessary to reinforce the central personnel and financial staffs and to add administrative officers in some of the larger divisions. To enhance the Bureau's bilingual capability about one hundred officers and other employees attended French classes and a search was under way for a senior officer to act as an advisor to the Bureau on bilingualism. At the end of the year, this position had not been filled.

The quinquennial Censuses of Population, Agriculture and Merchandising were conducted in June 1966, following several months of intensive preparation and the training of some 1,600 Census Commissioners and 35,000 Census Enumerators. Results were fed into the DBS electronic computer equipment and the first results were published early in 1967. Plans for the more comprehensive 1971 decennial Census of Canada are already being considered and the first field test of methods and the self-enumeration procedure will be conducted in London, Ontario in September 1967.

Towards the end of the fiscal year the DBS embarked on a comprehensive program designed to effect gains in timeliness of as many statistical series as possible. As a start, a number of key economic indicators have been selected for immediate attention with the objective of promoting significant gains by the end of the 1967-68 fiscal year. These include employment and payrolls, imports and exports, retail trade, selected commodity data and the index of industrial production. Plans are also under way for making substantial gains in timeliness in a broad range of statistical series during the

next three years. A comprehensive records system is being developed and studies are being undertaken to detect causes for delays and ways and means of eliminating them. Longer-run plans involve large-scale conversion to automatic data processing procedures.

As is particularly necessary in a centralized statistical agency, close contact is maintained with users of statistical data both in federal government departments and outside. Associations representing users are especially important; examples of these are trade associations, the Canadian Council on Urban and Regional Research and the Association of Universities and Colleges of Canada. In terms of both development and use of statistics, close relations were maintained with the various provincial research and statistical agencies, whose importance continues to grow. Internationally, the Bureau has many links with other groups developing statistical concepts and techniques, and in establishing international uniformity in statistics. Canada has been a member of the Statistical Commission of the United Nations for many years, and close, though informal, contact was developed during the year with the Conference of European Statisticians, an extremely competent and influential body operating under the Economic Committee for Europe.

An important event was the holding of the Sixth Conference of Commonwealth Statisticians at the Dominion Bureau of Statistics from September 19 to 30, 1966. Preparation of the agenda, the distribution of contributed papers and the Conference administrative arrangements required a good deal of time of senior officials. Opened by the Minister of Finance, the Conference was attended by 22 delegates from 15 Commonwealth countries, with the addition of observers from the United Nations, the Republic of Ireland and the Commonwealth Secretariat-General, plus specialists from the Bureau and the West Indies. Other Commonwealth statisticians, unable to attend, received copies of papers and summaries of the discussions. 128 papers were contributed and the agenda included statistical topics of interest both to the older

Commonwealth countries and to the developing ones. The first Commonwealth Conference was held in London in 1920 and the following ones: in Ottawa in 1935, Canberra in 1951, London in 1956 and Wellington in 1960. The growth of independence has increased the number of countries attending. The Sixth Conference was designed primarily to promote and continue contacts between the senior officials in each Commonwealth country who are responsible for the preparation of statistics, to discuss concepts and methods and to extend mutual assistance in solving common problems. Topics of discussion ranged from problems of recruiting to construction of national accounts and lessons learned from computer utilization. A condensed report on the subjects covered at the meetings is available to interested persons. The Seventh Conference is scheduled for 1970.

In commemoration of Canada's Centenary of Confederation, a special publication of 512 pages, entitled *Canada One Hundred 1867-1967*, was produced in English and French by the Bureau for release early in the Centennial Year. A Spanish edition will also be produced for use of the Departments of External Affairs, Trade and Commerce, and Manpower and Immigration. A special edition of the Bureau's annual reference volume, *Canada Year Book*, will also be produced in 1967.

During the period of rapid growth in DBS in recent years, recruitment has been a major problem. While recruitment of professional staff at entrance grades has been relatively rapid, the supply of experienced professionals, with appropriate subject-matter knowledge, remains quite limited. However, a number of important positions were filled from outside DBS during the year, including directors for the Census Division, the External Trade Division and indirectly the Governments Division. Other directorates, which became vacant as a result of the reorganization and other internal moves, were filled from within the organization. In a period of continued pressure, the staff has responded by assuming significantly greater responsibilities, and the achievements of the year reflect their skill, loyalty and devotion.

CANADA YEAR BOOK DIVISION

The program of the Division includes the planning, compiling, editing and publication annually of the English and French language editions of two official compendia of information on the Canadian economy, the *Canada Year Book* and the handbook *Canada*, the planning and production of a special volume designed to commemorate Canada's Centenary of Confederation, the revision of material relative to Canada for a score of national and international yearbooks, and the maintenance of a suitably stocked library with appropriate services for statistical research and study.

The work of compiling, editing and printing of the *Canada Year Book 1967*, including a specially designed cover and other features appropriately commemorating the Centennial of Confederation, extended throughout the fiscal year under review. Through the closely co-ordinated endeavours of the Translation Branch and the Printing Bureau with those of the Canada Year Book Division, it was anticipated that both the English and French language editions would be released for sale simultaneously in July or early August 1967 but a breakdown in arrangements for colour plates by an outside printer compelled a much later release.

In lieu of a standard official Handbook *Canada 1967*, a specially designed, enlarged, illustrated 512-page volume was produced entitled *Canada One Hundred 1867-1967 (Canada Un Siècle 1867-1967)* as the Bureau's contribution to the Government's program commemorating Canada's Centennial of Confederation. A first edition of 500,000 copies in the two official languages was placed on sale through the Queen's Printer's retail outlets as the fiscal year closed in March and provision was being made for publication of a Spanish edition for distribution abroad.

The special inquiries unit, focused around the Canada Year Book coverage of authoritative Canadian data, supplied regular series of statistics for the United Nations Statistical Monthly Bulletins, the United Nations Statistical Yearbook and for the International Labour Office. In addition, it provided up-to-date revisions of Canadian statistical and textual material for many standard national and international reference works and dispensed current and historical data in response to multi-subject inquiries received by the Bureau.

The Library of the Dominion Bureau of Statistics maintains a large stock of books, periodicals, documents and reports for the use of

the DBS staff, research workers and the general public. It also has an extensive collection of statistical publications. The large increase of professional staff in the Bureau has taxed the services of the Library. Because of the greatly increased requirements for new publications and increased funds allowed for purchases, stress was laid on organizing an Acquisitions Unit to handle expeditiously book orders in the Library.

The *Historical Catalogue of Dominion Bureau of Statistics Publications*, produced by the Library, is scheduled for release during the forthcoming fiscal year.

A basic reorganization of the Library, including the addition of library technicians as supporting staff, is in the planning stage and calls for the organization of the Library in two main areas: the Library Information Services Area and the Technical Services Area. It is expected that when this organization is completed and additional staff recruited, the Library will be able to augment its present services with indexing, descriptive abstracting, and establishment of branch and satellite libraries in the subject divisions. It is also planned to apply punched card systems to certain basic library operational records with a view eventually to adopting computer operations.

INFORMATION DIVISION

During the year, the Information Division continued and improved its activities in the dissemination of the published information of the Dominion Bureau of Statistics to the public, the press, radio and television. It also channelled within the Bureau inquiries for statistical information and carried out publicity for the 1966 Census of Canada and other Bureau enterprises as well as handled many of the inquiries received for statistical information.

In connection with the 1966 Census of Canada conducted in June, a full publicity program was prepared which included paid advertising in daily newspapers, ethnic papers, farm journals, weekend magazines and on radio, in addition to the use of posters. Through the provision of information to the press, important support was given to the Census in editorial and news columns as well as that received from television and radio stations on a public service basis, and from grocery chain stores through the use of insertions in their regular advertising.

Toward the end of the year, preparatory work was begun on the publicity planning for the proposed test of a census by mail to be conducted in London, Ontario in 1967.

Exhibits indicating the advantages of using DBS information along with promotional material and statistical publications were prepared for a number of association meetings and conventions held during the year under review.

For the benefit of DBS and others concerned with statistics, preliminary work was begun on a film which deals mainly with the uses of DBS information, especially in business. It is intended primarily for showing at business and association meetings, service clubs, chambers of commerce and other groups.

The Information Division was involved in the preparation of speeches and of articles for a number of publications. Press liaison was undertaken for the development of feature articles on the organization and work of the Dominion Bureau of Statistics, particularly with the business and financial press.

A limited advertising program was undertaken, directed mainly toward the management levels of business and industry. It indicated the kinds of information available from DBS which can be used to the advantage of business firms and solicited requests for a publication on the DBS weekly output of statistics and an introductory booklet on the uses of statistics.

During the year a beginning was made on research work aimed at finding out more about the uses and users of DBS information. This included an analysis of DBS publications subscription lists. An analysis of DBS correspondence in reply to inquiries for statistics was also undertaken as well as a study into the effectiveness of dissemination systems for statistical information.

The volume of inquiries handled by the Inquiries Section of the Division continues to grow. Most of these were received from sources within Canada, but they also included many from abroad. A daily average of approximately forty written inquiries were received; some were transferred to statistical divisions for reply but in many instances, replies had to be assembled from a number of DBS divisions as well as from other sources, and in some cases, special tabulations had to be produced. Besides processing written inquiries, the Section handled numerous telephone requests for statistical information as well as received about 800 visitors who called at the office seeking informa-

tion. In addition, a number of tours of the DBS establishment were arranged for interested groups.

During the year, a system was established to select and provide to a limited number of trade publications the kinds of DBS information which would be of interest to the sectors of business and industry they serve. This has resulted in a wider dissemination of information on the availability of DBS statistics. Work will be continued on this project and it will be expanded to greater numbers of trade publications if it continues to be worth while.

Publication of the Daily and Weekly Bulletins continued. They are essentially summaries of DBS statistical output for the convenience of the press and of users of statistics. The average press run for the year for the Daily Bulletin was 1,700 English and 325 French copies, in addition to 2,700 English copies of the Weekly Bulletin. Publication of a French Weekly Bulletin, with a distribution of 350 copies, was begun during the year under review.

INTEGRATION AND DEVELOPMENT STAFFS

The following professional staffs are attached to the office of the Assistant Dominion Statistician for Integration and Development: Central Classifications (Research and Development); Sampling and Survey Research; Econometric Research; Regional Statistics, Research and Development; Company Establishment Integration; Special Manpower Studies and Consultation; Consultant on Demographic Research. A review of the activities of these staffs during the past fiscal year follows:

Central Classifications, Research and Development

In response to a demand from land use planners and others interested in detailed classification of economic activity for local areas, 4-digit SIC classes have been developed for the non-manufacturing part of the Standard Industrial Classification. Four-digit classes for manufacturing have been available for some time. Generally the 4-digit level of the SIC is less stable than the 3-digit and is, therefore, used less widely for statistical series. The new 4-digit classes have been developed in an experimental way and are subject to review and amendment as experience with their use becomes available.

Work has continued during the year in the preparation for publication of the Standard Geographical Classification manual. During the latter part of 1966 the classification was used in a co-operative project with the Taxation Di-

vision of the Department of National Revenue. The project had a twofold purpose: (1) to create an edit tape which could be used to correct misspelled post office names and, (2) to assign municipality codes on the basis of post office addresses supplied by individuals. Although the resultant convertibility tape was intended to facilitate the tabulation of certain income data by municipality, it would be equally useful for coding any list of post office addresses.

The implementation of the Standard commodity Classification is continuing, notably for manufacturing and transportation statistics. Considerable work has been done on the second draft of an expanded version of the Standard Commodity Classification for coding materials and supplies used as well as commodities shipped by manufacturing establishments. A convertibility computer tape linking the American Standard Transportation Commodity Code, the Canadian Standard Commodity Classification and a list of freight items to be reported by Canadian railways has been developed in co-operation with the CNR and the CPR. Freight statistics for 1967 will be reported by those railways on both the new and the old bases.

The increasingly important field of Occupational Classification has received considerable attention during the year. In co-operation with the Department of Manpower and Immigration, a project is now under way to develop a Canadian Standard Classification and Dictionary of Occupations. This is a major undertaking and will result in a classification suitable for statistical surveys (including the Census); manpower

analysis; operational programs such as employment placement, vocational training and immigration and wage analysis. It is planned that the classification structure will be available for use in the 1971 Census of Population.

During the past year a beginning was made in the program to facilitate the integration of establishment and company statistics. A pilot project was completed to tabulate employment and earnings data for industries on the basis of companies as well as establishments. This project, which will demonstrate the influence of the statistical unit on the industrial distribution of data, will serve as a guide when other series in the Bureau are investigated for the same purpose.

Another project begun during the year is associated with standard data processing codes. DBS divisions which are beginning new work requiring electronic data processing, were asked to use certain standard codes wherever possible. Programmers were also asked to watch for these standard codes and to inform the Central Classifications Staff of cases in which they are not used so that remedial action can be undertaken.

Sampling and Survey Research

During the fiscal year 1966-67 a substantial amount of work was devoted to a program of analysing the coverage and content errors of the 1966 Censuses of Population and Agriculture. This program consists of four projects. The first project involved the selection of a sample of persons from the 1961 Census records supplemented by a sample from other lists, such as a list of immigrants and a list of children born in the period 1961-66. An extensive effort was made, using mail methods as well as personal enumeration, to locate the current address of each person in the sample (approximately 25,000 persons). This phase of the project is almost completed with close to 98 per cent of the original sample of persons being located. The next phase of the project will involve searching the 1966 Census records to ascertain if these persons were enumerated in that Census. An estimate will then be made, by province as well as by broad age groups, of the number of persons not enumerated in the 1966 Census.

The second project is designed to provide estimates of under and over-enumeration of households in the 1966 Census as well as some estimates of content error. It is based on matching approximately half of the households enumerated in the May 1966 Labour Force Survey with the 1966 Census records. The matching has been completed and specifications are now being written for the tabulation programs.

The third project relates to the 1966 Census of Agriculture. It is based on the enumeration of a sample of area segments and farms within these segments by specially trained enumerators, using detailed questionnaires and the comparison of the results of this enumeration with the results of the Census of Agriculture. The field work for the project has been completed and the matching between this special enumeration and the Census of Agriculture is well along the way.

The fourth project is somewhat more specialized. Its objective is to ascertain whether persons who moved a few months prior to the 1966 Census are more likely to be missed by the Census than the rest of the population. For this purpose, the Post Office in Metropolitan Ottawa provided a list of persons who according to their records changed their address during the period May 15, 1966 to June 15, 1966. The Census records are now being searched to ascertain the proportion among these persons who were not enumerated in the Census. It is expected that all four of these projects will be completed by the end of the calendar year 1967.

In collaboration with the Census Division and the Special Surveys Division, work has continued on the planning of test censuses. The first census test will be conducted in September 1967 in London, Ontario. The staff participated in the general and detailed planning of methods and procedures to be used for the census test. A special responsibility rests with the staff in relation to developing specifications for the computer edit of the returns as well as for developing and conducting a program of evaluation of the census test results.

The Labour Force Survey has continued to receive substantial attention from the Sampling and Survey Research Staff. The sampling variability of some thirty characteristics is calculated and issued each month along with the sampling variability of estimated differences. Work continues on the analysis of sampling variability and its breakdown into the components which can be ascribed to different stages of sampling. In collaboration with the Special Surveys Division, a new series of monthly tables has been originated analysing the performance of the survey in terms of non-interviews, the extent to which the sample fails to include the appropriate proportion of persons in different age groups, and other characteristics.

In co-operation with the Labour and Central Programming Divisions, work has continued on the automation of the Monthly Employment Surveys. It is expected that as a result of this project the preparation of estimates from the completed returns, the various procedures which update the sampling frame, the selection and control of the rotation of the sample, the printing of address labels and the control of

the mailing operation will all be handled by computers. The relevant computer programs have now been written and tested and it is expected that the new system will go into production within the next few months.

In collaboration with the Manufacturing and Primary Industries Division, a new survey system has been designed for the Current Survey of Shipments, Inventories and Orders. The objectives of the system are to automate the operation and to improve some of the estimating procedures. The system which incorporates a degree of flexibility, unusual in a computer system, has been tested on a manual basis for several months and is now being programmed for transfers to the computer.

Significant and original research has been carried out on the problem of record linkage by computers. A pilot project has been initiated to link records between two large files. Linkage will be done by the computer using such characteristics as name, age, sex and marital status.

Data collected on goods brought into Canada by tourists have until now been collected and processed on a 100 per cent basis. In co-operation with the External Trade Division, a design was prepared for the selection of a sample of tourist exemption forms in order to reduce the processing load associated with the survey. The sample survey is now operational.

A sample was designed in collaboration with the Merchandising and Services Division for the Wholesale Trades Survey. This survey is now operational. Preparations have begun to transfer the processing operation to the computer.

An extensive research project is currently carried out which will lead to a new design of the Retail Sales Survey. The presently used version of the survey is not based on a probability sample. Also there are some difficulties in the present survey operation in estimating the impact of new stores coming into existence and existing stores going out of business. The current research concentrates on developing a hybrid design of list sampling and area sampling which it is hoped will combine most of the advantages of the two methods.

A new section called the General Survey Systems Staff has been created during the last fiscal year. This section is charged with the development and implementation of an automatic geocoding project. The objective of the project is to use the computer to assign geographic codes and co-ordinates (possibly latitude and longitude co-ordinates) to individual records which relate to locations and which are identified by their postal addresses. Once the records are so geographically coded, this will greatly facilitate the aggregation of statisti-

cal data for any type or any shape of area, for which users would like to get information. The developmental work during the last fiscal year proceeded in three directions. Systems specifications were developed and programming work is partially completed for the computer assignment of the geographic location identifiers in urban areas. Concurrent with this activity, work has begun to develop the large computer-stored directories which are necessary for the operation of the geographic coding system. Finally, arrangements have been made to begin the systems development which will lead to a computer program capable of accepting addresses which are recorded in a non-standard format and translate them into the standard format necessary for the application of the main programs of geocoding.

Consultation services were provided on a large number of smaller problems and projects involving most of the divisions of the Bureau as well as several other federal and provincial government departments. Special mention should be made of the technical aid extended to the Government of Jamaica in designing a general purpose household survey. A paper has been written for the Journal of the American Statistical Association on the new design of the Labour Force Survey and another paper has been written on Record Linkage, which will be presented at the International Statistical Institute in Sydney, Australia, and at the meeting of the Information Processing Association in Jerusalem, Israel.

Econometric Research

The function of the Econometric Research Staff is to carry out studies and consultative work involving the application of econometric methods and to work in close co-operation with research groups in other government agencies.

The Econometric Research Staff contributed substantially to the development of a computer storage and retrieval system (data bank) for published economic time series. This project was carried out jointly with the Current Business Indicators and Data Bank Staff of the Economic Accounts Branch, the Central Programming Division, and in close collaboration with several other government agencies.

Considerable emphasis is placed on the application of computer techniques to the improvement of timeliness and efficiency in the preparation of various DBS series. During the period under review, members of the Econometric Research Staff were involved in major projects of this kind in connection with the national accounts and the indexes of industrial output.

The testing of alternative methods of seasonal adjustment is a continuing function and this involved a substantial portion of the time of one member of the staff during the year.

Also, arrangements were made to support and participate in a developmental time-series analysis project to be carried out at a Canadian university.

Another continuing function is the restoration of continuity in time series which have been broken by changes of various sorts, including changes in classification systems. In particular, effort was devoted to revising employment series for the period before 1961 in accordance with revisions of the industrial and occupational classification systems.

A major research project was initiated to determine the feasibility of estimating certain labour and other series for areas smaller than provinces using econometric methods. This project is being conducted in co-operation with the Regional Statistics and Analysis Staff.

A substantial amount of time was devoted to liaison with other government agencies and the carrying out, or co-ordination, of projects undertaken at their request to meet specific needs for data or analyses.

Regional Statistics, Research and Integration

This staff is responsible for developing, or co-ordinating, research programs designed to improve and extend regional and small area statistics to serve the needs of various federal, provincial and municipal governments; and to increase the utilization of administrative records for statistical purposes.

Considerable progress has been made on a major exploratory project designed to develop post-censal population estimates for counties and census divisions, utilizing data from a variety of sources. Work has begun on developing small area economic indicators utilizing up-to-date statistical techniques. A *Guide to Regional Statistics* is being designed which will include a list of unpublished regional data (excluding population census data). The staff provided substantial assistance in a project of re-defining the boundaries of the Saskatchewan Census Divisions and participated in other projects, in particular developmental work designed to develop income estimates by small areas.

Company Establishment Integration

This is a new program with a dual objective: first, to link financial and production statistics in a fashion which would satisfy demands for information to promote analysis of one in relation to the other within a more consistent and detailed framework than now exists; second, to simplify and reduce the burden of response. Production inputs and outputs such as

sales, payrolls, materials used, and inventories, have been collected for many years by the Dominion Bureau of Statistics and mainly on an establishment basis. Comprehensive financial statements containing the same items of information, on the other hand, have become available much more recently to DBS, and principally on a company basis. A suitable sample of establishment and company returns will be studied to determine the reporting differences for the same items of information, the reasons for these differences and what can be done to eliminate them, where appropriate. If warranted by the results of this study, a reporting system will be developed for companies and their establishments which would insure that, where appropriate, respondents relate or integrate in a consistent fashion at the reporting stage data which apply to the different levels of the organizations. This should be conducive to the simplification of reporting. Experimentation with draft questionnaires designed to link company financial statements with a wide range of data collected at the establishment level is an integral part of the project.

Special Manpower Studies and Consultation

This program is designed to carry out analytical and developmental work in the area of manpower and labour markets. The analytical research program is focused mainly on the analysis of household survey data derived from the monthly labour force sample or the decennial Census. A number of research studies have been published and more are being planned. The studies have been designed to reach a wide non-technical readership but should also be useful to policy formulation in the sphere of manpower programs.

The developmental research program is at present centred on the job vacancy survey being undertaken on behalf of the Department of Manpower and Immigration. Since the measurement of labour demand by means of establishment surveys is largely an uncharted field, the problems arising from the definition of an operationally feasible concept are substantial. The staff is also responsible for planning of an experimental program on labour force definition and measurement. Such developmental research is of growing importance in view of the prominence of manpower policy in Canada and the greatly increased demand for more and more complex labour statistics.

Consultant on Demographic Research

The Consultant on Demographic Research provides consultation services in the field of demographic research and related areas and carries out research and analytical work with special reference to internal migration and other components of population change that interact

with migration flow. The Consultant also conducts experimental and developmental research in a number of related fields. During the year, special tabulations of 1961 Census data on migration were prepared at the request of various census data users and for selected census bulletins. Work was continued on the 1961 Census

monograph on internal migration in Canada and a first draft of the 1961 Census monograph on urbanization in Canada was completed. Consultation and special tabulations were provided to the Economic Council of Canada in its development of background information and projection of trends in Canadian urbanization.

ECONOMIC ACCOUNTS BRANCH

The Economic Accounts Branch is responsible for the assembly and analysis of statistics within an overall national accounting framework, through its Balance of Payments and Financial Flows Division and the National Accounts, Production and Productivity Division, the Current Business Indicators Section and the establishment and maintenance of data banks of economic time series.

Balance of Payments and Financial Flows Division

The Balance of Payments and Financial Flows Division is concerned with the construction, analysis and publication of statistics and reports related to Canada's international economic and financial transactions and international investment position. A new addition to these long-standing activities is responsibility for development of a set of comprehensive financial accounts drawing together data for the various sectors of the Canadian economy. The current publication program includes reports covering such areas as the balance of payments, international travel, international security movements and external assets and liabilities.

In the balance of payments field, work was completed on a new publication, *The Canadian Balance of International Payments, A Compendium of Statistics from 1946 to 1965*, which revises earlier data and presents extended detail in convenient and accessible form. Much work was also done on *The Canadian Balance of International Payments 1963, 1964 and 1965*, and *International Investment Position*, which will bring forward the series published in earlier annual volumes and will contain some extended detail including a special analysis of the principal statistics of manufacturing establishments of foreign-controlled enterprises in Canada. This publication will represent a substantial catching up in the Section's program.

During the year under review regular publication of seasonally adjusted series for all the major items of the current account was commenced. The continuing program of developmental work in the balance of payments field involves close observation of new international economic and financial developments and adjustment of the statistical processes and framework to reflect them. Improvements and extensions

were made in the published measures or detail of export credits, forms of short-term money market instruments developing an important international role, the foreign aid program, and the extension of participation in the United States equities market by institutional investors in Canada, as well as work on the early balance of payments effects of EXPO '67. The Section is providing an increasing amount of guidance to users through consultation and correspondence.

International travel statistics were affected by the discontinuance in March 1967 by the Department of National Revenue of issuance of traveller's vehicle permits for automobiles of non-residents entering Canada. The removal of this requirement, which has been made possible through the co-operation of all provincial vehicle licensing authorities, will greatly simplify entry procedures for tourists. Customs control will be maintained through the vehicle registration process. The traveller's vehicle permit was also used as a statistical document to establish the number of foreign vehicles entering and information on state of origin, place of entry and departure, length of stay and expenditures in Canada. It was the basis of important elements in the travel expenditure accounts of Canada and the United States, under a co-operative arrangement between DBS and the statistical authorities in the United States. As a replacement for this procedure, Canadian Customs will record the number of foreign vehicles on entry into Canada into three main groups, on the basis of intended length of stay. For other statistical purposes, vehicles will be sampled through the use of questionnaires jointly by the Canadian and the United States statistical authorities.

Also in March 1967 a new document was introduced by the Department of Manpower and Immigration for control of non-immigrants from countries other than the United States. A series of tabulations will be prepared by data processing and made available to DBS. This procedure will provide more complete information on country of origin. Statistical data on purpose of trip, length of stay, destination, and expenditures in Canada will be obtained through the use of questionnaires distributed by Canadian Customs or Immigration officers as the visitor enters Canada.

In the field of the financial accounts, developmental work has proceeded within the Financial Flows Section in preparation for publication. A description of the program in the Bureau in this field was set out in an article in the *Canadian Statistical Review* in November 1966.

National Accounts, Production and Productivity Division

The organizational changes within the Bureau previously referred to resulted in the creation of a new division called the National Accounts, Production and Productivity Division. The newly created division co-ordinates, processes and analyses information from a variety of sources. This encompasses responsibility for the national accounts income and expenditure flows, the work on gross domestic product by industry in both current and constant prices, (the latter including the index of industrial production) and the development of measures relating to the aggregate productivity performance of the Canadian economy and its major sectors, as well as the productivity analysis of selected industries.

Responsibility for the production of the *Canadian Statistical Review* and the concomitant production of monthly articles for this publication as well as further development and research of seasonally adjusted data has become the direct responsibility of the Economic Accounts Branch as a whole. A regular program of monthly articles in the *Canadian Statistical Review* has been maintained throughout the past fiscal year as well as experiments with more advanced mathematical research techniques for removing seasonal fluctuations from Canadian economic time series. In addition, a more highly developed version of the United States Bureau of the Census computer application for seasonal adjustment has been adopted for a number of economic time series published in the *Canadian Statistical Review*.

In collaboration with the Economic Council of Canada and the Bank of Canada, intensive work in the construction of a time series data bank was also instituted during the past fiscal year. It is felt that the operation of such a bank scheduled for the present fiscal year will be a significant improvement of the Bureau's service facilities.

The work of the newly created division encompasses a wide range of economic statistics. It includes the principal comprehensive statements and indicators relating to the Canadian economy, in particular those which deal with the internal and production data of the Canadian economy. In addition to the provision of day-to-day assistance to many business, academic and government users, considerable material was

furnished to such other government agencies as the Departments of Finance, Trade and Commerce, the Economic Council of Canada and the Bank of Canada for the preparation of their reports and for their needs in fulfilling their obligations as economic advisers to the government.

Regular publications of the division include the following: *National Accounts, Income and Expenditure*, quarterly and annual reports; the monthly publication of the *Indexes of Industrial Production* and the *Quarterly Indexes of Non-Agricultural Real Output* as well as the annual publication of the *Survey of Production* which deals with the output of commodity industries.

In the productivity area, a revised and more up-to-date version of the aggregate indexes of output per person employed and per man-hour in Canada was published during the fiscal year. This revised publication now provides coverage for agriculture and extends the scope of the index back to 1946 and includes the year 1965. A special report, *Productivity Trends in the Synthetic Textile Mills, Breweries and Pulp and Paper Mills Industries*, was published. It is hoped that this report constitutes the first of a number of specialized industry reports which will be published during the course of the next few years.

Of special interest during the past fiscal year has been the basic revision and publication of the monthly and annual indexes of industrial production. This revision resulted in improved data from 1949 to 1965 and was occasioned by the inclusion of more recent census-based annual levels in the manufacturing, mining and electric power and gas utilities industries. This is the first step in a continuing program of improvements which will extend over a number of years and is caused by the necessity to revise the index of industrial production as well as the total real domestic product in constant dollars in order to incorporate revisions to the Standard Industrial Classification and to eventually change the time and weight base from 1949 to 1961.

The division also participated very actively in the international deliberations and conferences which are taking place in connection with the proposed revision of the United Nations international system of standard national accounts. In this connection, members of the staff attended conferences of the working group on National Accounts and Balances of the Conference of European Statisticians in Geneva as well as a conference called by the American Association for Income and Wealth. The division also acted as host, late in the fiscal year, to a senior member of the U.N. Statistical Office to further discuss proposed changes by the United Nations.

A paper on *Problems in the Estimation of Industry Output in Current and Constant Dollars in Canada* was prepared jointly by two members of the staff for the Conference on Research in

Income and Wealth sponsored by the National Bureau of Economic Research which took place in Washington in December 1966.

FINANCIAL STATISTICS BRANCH

The Financial Statistics Branch, which was formed on January 1, 1967 as part of the reorganization of the Dominion Bureau of Statistics, consists of the Director General of Financial Statistics, the Co-ordinator of Financial Statistics, the Business Finance Division, the Corporation and Labour Unions Returns Act Division, the Central Pay and Records System and the Governments Division.

The Dominion Bureau of Statistics has for many years produced important financial series such as those for government and for the balance of payments. In the last few years, however, the work has been greatly expanded, with the assumption of responsibility for the Corporation and Labour Unions Returns Act and substantial increases in the financial statistics produced by the other divisions. Emphasis has been put on the timeliness, consistency and comprehensiveness of financial data. Within the next year or two the fruits of this work will become evident in the publications of the Branch.

Two of the Divisions in the Financial Statistics Branch--the Central Personnel Records System and the Business Finance Division--produce important series in addition to financial statistics. Of course, major areas of financial statistics are included in the Balance of Payments and Financial Flows Division of the Economic Accounts Branch and are also the concern of the Co-ordinator, Consumer Finance Research Staff, of the Socio-Economic Accounts Staff, and other divisions are involved to a lesser extent in financial statistics. The Co-ordinators of the Branches have as one of their functions the maintenance of consistency in their area of concern throughout the DBS organization.

Business Finance Division

The Business Finance Division is responsible for statistics on profits, assets and liabilities, capital expenditures, fixed capital flows and stocks, research and development expenditures, construction activity, housing, building permits, cheques cashed and commercial failures. This work is carried out in the following six sections.

The Financial Statements Section is concerned with the collection, analysis and publi-

cation of quarterly financial data from balance sheets and operating statements in both the financial and non-financial sectors of the economy. Additional work has been done on collection and compilation of 1966 quarterly financial data for fire and casualty insurance companies. These statistics will be published with the other quarterly balance sheet data in 1967. Development work on credit union statistics was begun in 1966 and publication of quarterly balance sheet data is expected to start in 1967. Other development work is continuing in the major industrial groups of the non-financial sector and the additional information will be published following the collection, editing, improvement and analysis of results. Work is also continuing on the development of a single quarterly report for approximately 40 major industrial groupings. This report will show balance sheet items, a statement of revenue and expenses, as well as sources and uses of funds for these industry groupings.

In the Capital Expenditures Section, existing annual surveys are being continued to provide estimates of intentions and current levels of capital and repair expenditures on construction and on machinery and equipment. During 1966, contract drillers of oil and gas wells were surveyed with a revised questionnaire resulting in improved estimates for this area. Work is continuing on the development of new questionnaires and improved survey procedures for the metal and non-metal mining industry, petroleum and gas industry, electric power and pipelines including gas distribution. This work is at various stages of completion in an overall program of adapting questionnaires and survey procedures to take account of special statistical problems in each industry group. Attempts are being made to include related needs of other divisions in the Bureau and other agencies in this up-dating of procedures. Investigations are also continuing to determine the most efficient means of compiling timely mid-year estimates of intended capital expenditures by province to permit future regular publication. In other areas, sources of basic information on new investment projects are being expanded, the coverage of wholesale trade is being re-assessed and preliminary investigations were started for the purpose of determining the feasibility of carrying out a quarterly survey of capital expenditures.

In February 1967, the National Wealth and Capital Stock Section released two publications. The first, *Fixed Capital Flows and Stocks, Manufacturing, Canada, 1926-1960, Methodology*, contains a review of the concepts, sources and other methods used in the preparation of the statistical material on flows and stocks of capital goods in manufacturing industries. The second report, *Fixed Capital Flows and Stocks, Manufacturing, Canada 1926-1960 - Statistical Supplement* is a complete tabular presentation of the estimates of flows and stocks in manufacturing. These estimates are based on five different sets of assumptions on the average economic lives of capital goods. The estimates are also presented in terms of 1949 constant dollars, 1957 constant dollars, current dollars and original dollars. Following publication of this information, work is continuing on problems arising from revision of the Standard Industrial Classification in 1960 because the revisions precluded an immediate extension of capital stock estimates to more recent years. Development is also continuing on estimates of flows and stocks of capital for non-manufacturing industries.

The Scientific Activities Surveys Section carries out two regular surveys for data related to scientific research and development in Canada. The first survey of the Federal Government was completed during the past year and the results were published in *Federal Government Expenditures on Scientific Activities, 1964-65*. A subsequent annual survey, using a shorter questionnaire, was completed in March 1967 and results will be published later in 1967. The regular biennial survey of Canadian industry was completed in February and results will be released later in 1967. During 1966, two additional special projects were undertaken and the results published. The first was an article entitled *Statistics of Scientific Research and Development in Canada* which was included in the November 1966 issue of the *Canadian Statistical Review*. The second was a short report *Expenditures on Scientific Activities by Non-Profit Organizations* which included information from a special survey of non-profit organizations. An additional and important project during 1967 will be the start on a preliminary study of a program of surveys of research in the social sciences. During the coming year, as in previous years, close liaison will be maintained with the Directorate for Scientific Affairs of the Organization for Economic Co-operation and Development, the National Research Council, the Department of Industry and the Science Secretariat.

Annual surveys of construction contractors and federal and provincial government departments were recently completed for 1965 by the Construction Section. These surveys provide basic data on labour and material content of construction work and other related statistics.

Pertinent information derived from the investment survey in the Division was also analyzed for inclusion in the statistics on construction activity to be published during 1967 in *Construction in Canada, 1965-1967*. Some preparatory work was done in this Section as part of studies being started to determine the feasibility of a census of the construction industry and to plan such a census.

The Housing and Building Permits Section continued its regular monthly survey of municipalities for the value, number and type of building permits issued. The resultant monthly data have been published regularly as in previous years. The Section also continues the monthly publication, *New Residential Construction* which includes statistics on dwelling units started, under construction and completed. These statistics are derived from a nation-wide survey by the Central Mortgage and Housing Corporation. Apart from these compilations, work continued in a program of research and development directed toward the improvement of the method followed in estimating residential capital formation. Investigation was centred mainly around the problem of measuring physical volume of construction work put in place as influenced by seasonal variations, regional differences and recent tendencies favouring the construction of high rise apartments and luxury homes. New procedures were also developed to obtain more information from CMHC housing records, particularly in the determination of construction costs of various types of dwellings.

Other work in the Division includes a re-examination of various aspects of the monthly series "Cheques Cashed in Clearing Centres" in co-operation with the Canadian Bankers Association. The quarterly series on commercial failures are also being reviewed.

Corporations and Labour Unions Returns Act Division

The administration of the Corporations and Labour Unions Returns Act, passed by Parliament in 1962, is the responsibility of the Dominion Statistician and during the fiscal period ending March 31, 1967 was integrated into the organization of the Dominion Bureau of Statistics. The main reason for this organizational change was the recognition that the duties and responsibilities of this group had extended beyond the administration of the Act, particularly in connection with the analysis and publication of data formerly produced by the Department of National Revenue in the publication *Taxation Statistics*. The closer association of this division of the Dominion Bureau of Statistics will further facilitate the integration of corporation financial statistics resulting from the financial statements filed by corporations under the Corporations and Labour Unions Returns Act

and the Income Tax Act with other economic statistics.

The purpose of the Corporations and Labour Unions Returns Act is to collect financial and other information on the affairs of corporations and labour unions carrying on activities in Canada; to determine, on the one hand, the extent and effects of non-resident ownership and control of corporations in Canada, and on the other hand, the extent and effects of the association of Canadians with international labour unions. At the same time a program of corporation financial statistics has been developed which will provide considerably more information on the activities of corporations in Canada than has been available previously. This additional information will be available for corporation fiscal periods ending in 1965 and will be published during 1967.

The Corporations and Labour Unions Returns Act requires that an annual report be prepared for presentation to Parliament. Annual reports have been prepared and released for fiscal periods ending in 1962, 1963 and 1964 for labour unions, and for 1962 and 1963 for corporations. It is expected that the timeliness of these reports will be improved during 1967.

Central Personnel Record System

The Central Personnel Record System is a new division located in the Financial Statistics Branch of DBS. It was established by Treasury Board Minute 654427 dated April 12, 1966 and an announcement to the Heads of Government Departments was made through means of a Treasury Board letter released on June 30, 1966. This action resulted primarily from the recommendations of the Glassco Commission which stated "that personnel statistics for the Public Service be centrally tabulated by the Dominion Bureau of Statistics for use of the Treasury Board, the Civil Service Commission and departments". The Government announced approval of this recommendation on November 5, 1963 following which an interagency committee was established for the purpose of developing a draft guide on personnel statistics. After this guide was produced, a firm of management consultants was engaged to design a personnel record system suited to implement the approved recommendation.

The System is under the policy control and general direction of the Treasury Board and will be operated and administered by the Dominion Bureau of Statistics. Closely associated in the development of plans for the new System are the Public Service Commission and departments and agencies of the Federal Government.

The basic purpose of the system is to provide the central agencies, including the Treasury Board, the Public Service Staff Relations

Board and the new Public Service Commission with data on manpower of the Federal Public Service suitable to assist them in deriving policy on manpower management. This includes its implications as regards staffing, career development, collective bargaining negotiations (including pay rate negotiations), projections of future staff requirements and the derivation of relationships between the cost factors of various projects required to be undertaken by the several government departments. In addition, departments will be provided, as required, with data enabling them to improve their personnel management capabilities. The extent to which this information is derived from the Central Personnel Record System will depend upon the departments' need for information and the capability it may have for generating it out of its own personnel records files. The System will also be used for the purpose of deriving statistical information for use in DBS publications and distribution to the general public.

Because the Central Personnel Record System is essentially a service agency with the primary purpose of providing management data for the use of central agencies and departments of the Federal Public Service, it differs from all other DBS divisions. Its source of information is derived from the personnel and other documents relating to positions and personnel produced by both departments and central agencies. Its output is primarily designed to service the needs of the suppliers of information. In addition, it will service the public need for statistics on the Federal Public Service. The Governments Division of DBS which is responsible for the publication of such statistics will be a customer of the Central Personnel Record System.

During 1966-67 the planning for implementation of the System has advanced rapidly and the initial CPRS tape file will be in existence in the near future. This file will be limited in both the information contained and the number of positions and employees covered. Coincident with the development of the System, an extensive forms study on personnel and position action documents has been undertaken and the results of this study will bring about alterations in the system initially used to support the data. For this reason, and because of the magnitude of the task assigned, the Central Personnel Record System will be substantially limited in its ability to satisfy requests for information on the Federal Public Service during at least the first two years of its existence. A priority system will, therefore, be operated to deal with new demands for data.

Governments Division

In line with the reorganization being effected in DBS, the governments section of the Governments and Transportation Division became a

separate division of DBS effective January 1st, 1967.

The Governments Division is responsible for the collection, tabulation and publication of financial and other data related to the three levels of governments and their enterprises. The emphasis during the past year has been on the improvement of annual statistics, particularly those of municipal governments, and on the development of quarterly and monthly series which will improve the timeliness of the information published. New developments during the year relate to extensions of the statistical program, consultative services and program development.

Discussions were continued with federal and provincial enterprises to obtain quarterly statistics relating to revenue, expenditure, assets and liabilities. Better statistics in this respect will improve the quality of the quarterly estimates of depreciation and profits, and will enable the preparation of quarterly balance sheets, and sources and uses of funds statements.

Considerable effort was expended on improving the quantity and timeliness of financial data provided by provincial governments on both a quarterly and annual basis. Joint collection arrangements with respect to municipal finance statistics were effected with the provinces of British Columbia and Manitoba and improvements in the working arrangements in this respect with the Quebec Bureau of Statistics were satisfactorily effected.

Members of the Division attended numerous meetings with the Secretariat of the Tax Structure Committee and advised on the quality and timeliness of analyses of provincial government revenue and their suitability for inclusion in the base calculations of a new system of federal-provincial tax equalization payments.

The Division was represented on the Inter-departmental Committee on Expenditure Coding set up under the auspices of the Comptroller of the Treasury. This committee met numerous times during the year and made certain recommendations which have resulted in a Management Improvement Policy Decision by the Treasury Board to completely revamp the system of accounting for expenditures in each department. It is gratifying to note that the classifications adopted closely conform to the classification included in the main statistical publications of the Division.

The Division is also represented on the National Committee on Governmental Accounting established by the Municipal Finance Officers' Association of the United States and Canada.

Unless the needs of users of a statistical series are known, it is extremely difficult to evaluate the suitability of the statistical product. In an effort to determine the needs of users of municipal finance statistics, a conference on municipal finance statistics, jointly sponsored by the Canadian Tax Foundation, the Canadian Council on Urban and Regional Research, the Institute of Local Government of Queen's University and DBS was convened at Queen's University in May of 1966 at which some 125 people attended. Since then the staff of the division have endeavoured to evaluate the points of view put forth by the various participants.

An outcome of this convention, DBS has contacted the Departments of Municipal Affairs in each of the ten provinces and has arranged a conference in the early part of April 1967 to determine the minimum requirements which should be suggested for good municipal finance reporting. As a preliminary to this conference, DBS has prepared for publication *A Review of Conferences on Municipal Finance Statistics 1937-1966* and has also obtained the views of each provincial department of municipal affairs on the format of municipal finance reporting as well as prepared a brochure outlining the views of the Division in this respect. It is hoped that the aforementioned publications will become working documents which will set the pattern for a more sophisticated form of finance reporting by Canadian municipalities than has ever been envisaged to date.

In anticipation of convening a conference on provincial finance statistics, in the fall of 1967, similar to the conference on municipal finance statistics, the Division has produced a publication titled *A Review of Dominion-Provincial Conferences on Provincial Finance Statistics 1933-1960*. This publication provides a summary reference to the work accomplished during a number of Dominion-Provincial Conferences on provincial finance statistics which ran from 1933 to 1960. It includes a commentary on the work of each of the six conferences and a detailed presentation of recommended classifications of revenue, expenditure, assets and liabilities, together with suggestions with respect to terminology, accounting treatment for special transactions, uniform fiscal year ends and the co-ordination of statistics relating to government finance. This document may set the stage for fruitful discussions with the provinces and result in a more sophisticated statistical product than has been heretofore available.

Staff of the Division have been active in informing suppliers and users of government statistics of the Division's program.

ECONOMIC STATISTICS BRANCH

The Economic Statistics Branch was formed on January 1, 1967 as part of the Bureau reorganization and covers the operations of six divisions and an "Input-Output" research and development staff. Branch activities are principally concerned with the collection, processing, analysis and publication of statistics derived from business establishments. These consist, in general, of production, sales and service "units" in contrast to the reporting universe of the Financial Statistics Branch which, so far as the private sector is concerned, deals with companies.

For the most part the collection of the information is carried out by means of hundreds of current and annual "mail type" surveys of varying sizes although a number of "enumeration type" surveys are also involved. The Branch tends to concentrate on production or sales of commodities and services, materials used, employment, prices and the internal and external flow of commodities.

External Trade Division

The External Trade Division is responsible for the production of Canada's import and export trade statistics, and for the analytical and clerical work required to produce these series. Available publications and office records provide data on exports and imports by commodity, by country, by province of customs clearance and by stage of fabrication; on exports by mode of transport, and by province of lading; and on imports whether goods arrived directly at Canadian ports or via United States ports and by tariff item.

Stage of fabrication statistics for both exports and imports, and the United States state of consignment statistics for exports are the latest projects of the Division. Compilation by stage of fabrication commenced in January 1966 and office records are available on quarterly basis. The compilation of Exports by U.S. state of consignment, initiated in January 1967, will provide monthly statistics on commodity by U.S. Census subdivision and also on U.S. Census division by commodity. It is hoped that after a period of thorough testing to ensure that the secrecy provisions of the Statistics Act are complied with, the information obtained from these tabulations can be made available to the general public.

The Export Commodity Classification established in 1961 was completely reviewed and revised before reprinting in 1967 and all one-class commodity groups were eliminated to facilitate the task of compiling and publishing export trade statistics by commodity groups

without fear of divulging transactions of individual firms or exporters. The 1967 edition of the Export Commodity Classification shows the effective date when each commodity class was established.

A sampling technique for processing tourist import entries, developed during 1966, provides a breakdown of eight commodities by country of "tourist purchases exempt from duty" instead of total value as previously published. Effective with January 1967, monthly import statistics of tourist purchases will be published on this basis. Also, during the latter part of 1966 and the first months of 1967, feasibility studies were carried out on import statistics by country of origin, mode of transport and the United States state from which consigned. Further progress was also made in the revision of import and export price and volume indexes which are being put on a new 1960-61 base. Despite staff shortages, some progress was made during the last half of 1966 in reducing the backlog of uncoded import documents and plans were formulated for a general improvement in the quality and timeliness of both export and import statistics.

In an attempt to improve timeliness further, special tabulations and program changes are being kept to a minimum in 1967 and additional improvements in the release of preliminary reports are expected from the adoption of accelerated audit techniques and the extension of sampling.

Input-Output Research and Development

The construction of input-output tables for Canada for the year 1961 commenced late in 1962 and during the fiscal year ending March 31, 1967 approached completion. Publication of these tables is expected in the fiscal year ending March 31, 1968.

During the preceding fiscal year the estimation of industrial inputs and outputs was completed on a preliminary basis. Industry and commodity classifications suitable for input-output purposes were defined and data on production, materials used, imports and exports were classified according to these classifications. Service inputs into the manufacturing industries were also calculated in conjunction with estimates of labour and capital inputs. Work also proceeded on the estimates of material, service, labour and capital inputs into Agriculture, Mining, Transportation, Communications, Trade and Services. Trade and transportation charges on the movement of commodities from producers to users were also estimated.

During the coming year, it is expected that the work on assembling the tables will be completed, that apparent discrepancies between various sources of information will be explained and reconciled, that certain totals which can be derived from input-output tables will be compared with corresponding National Accounts' totals and that reconciliations of discrepancies will, as far as possible, take place in conjunction with the impending revision of the National Accounts prior to the publication of the input-output tables.

Labour Division

The Labour Division is responsible for a broad program of labour data ranging from statistics of labour input and labour cost to statistics of unemployment insurance and private pension plans. This program includes both production of statistics and research directed at the extension and improvement of data produced in the Division.

During 1966-67 a number of changes took place in the organization and functions of the Division. A new Job Vacancy Surveys Section was established in connection with the initiation by DBS of a program of surveys designed to develop measures of labour demand. The program of special labour force studies which originated in the Research and Analysis Section was transferred to the Special Manpower Studies and Consultation Staff and the activities of the Section revised to emphasize research oriented to the improvement of Labour Division data.

The Employment Section is responsible for the collection and publication of employment indexes, statistics of hours and earnings and labour income. Employment aggregates by industry and province are also produced on a regular basis.

The new tabulation and publication program introduced in the Section in January 1966 encountered some unexpected problems which resulted in temporary delays in publication in the early part of the year. In response to the expressed needs of provincial governments and others requiring sub-provincial detail the new program provides employment, hours and earnings data for a greatly expanded number of urban centres. The additional time involved in enlarging the detail in the monthly publications of the Section offsets some savings in timeliness which would otherwise have accrued from improvements in organization and programming.

Tests were initiated in the early months of 1967 to appraise the feasibility of automating the mailing and follow-up of the large-firm monthly employment and payrolls survey. The development of a program to computerize and automate the sample selection, rotation, mailing

and follow-up of the small-firm sample survey was also nearing implementation.

In co-operation with the Department of Labour, a small-scale mail survey of employer expenditures on selected employee benefits was carried out in May 1966. The survey demonstrated the feasibility of collecting "fringe benefit" data by mail. Accordingly arrangements were concluded to initiate jointly with the Department of Labour a regular program of surveys, the first of which will relate to the year 1967.

To ensure that statistics produced from the employment and payrolls surveys of the Section meet the requirements of users, a survey of subscribers to Employment Section publications was conducted in January 1967. Users were asked to comment on the series used, frequency and purpose of use, and to make recommendations for improvements. These recommendations will be studied from the standpoint of possible changes in the program of the Section.

Early in 1967, agreement was reached to undertake, for the Department of Manpower and Immigration and under a contract with that Department, a large-scale program of occupational job vacancy surveys. This program will develop information which would be used in determining selective policies regarding immigration, vocational guidance, and training programs for the unemployed. The results could also be useful in increasing the effectiveness of public employment service placement operations. The Job Vacancy Survey Section will be responsible for the processing, analysis and publication of statistics of job vacancies. The officer in charge of the Section will also be responsible for coordinating collection and interview operations conducted by field staff of the Special Surveys Division with the activities of the Job Vacancy Surveys Section.

As noted above, during the summer of 1966 the program of the Research and Analysis Section was reconstituted to emphasize projects related to the development or improvement of data produced in the Labour Division. Such projects will include investigations aimed at improving timeliness in monthly series, studies aimed at developing uniform concepts and definitions for various labour series, critical evaluation of alternative sources of data from the standpoint of elimination of duplication in collection of information. A start has been made on investigating possibilities for improving timeliness, and other projects will be undertaken when a new Chief of the Section is appointed.

The Unemployment Insurance, Pensions and Manpower Section is responsible for compiling statistics reflecting the operations of the Unemployment Insurance Commission and the Canada Manpower Service of the Department of Manpower and Immigration. In addition, an expanding pro-

gram of private pension plan surveys is carried on by the Section.

During the latter part of 1966, subject-matter experts of the Section took part in a series of meetings with the Unemployment Insurance Commission and the Department of Insurance to estimate the effects of proposed amendments in the Unemployment Insurance Act. These discussions involved the production of statistics regarding the additional number of persons who could be covered by possible changes in the wage ceiling. Advice was also given on the collection of statistics for persons in agriculture covered by unemployment insurance as at April 1, 1967.

A series of discussions took place with officers of the Department of Manpower and Immigration regarding statistics produced in the Section reflecting the operations of the Canada Manpower Service. In co-operation with the Department of Manpower, a new facsimile monthly report consolidating a number of existing reports was produced. It is anticipated that this report will be adopted as soon as certain problems involving changes in the procedure for registering persons with the Canada Manpower Service are solved.

Work was continued on the processing of returns received in connection with the survey of coverage of all pension plans in Canada taken in January 1966. The results of this survey will provide a variety of information concerning private pension plans including number and type of plans, number of persons covered, number of persons retiring on pension and some information regarding such persons. In addition, the copies of plans submitted with many of the returns will provide a basis for research studies into the provisions of certain types of plans.

A senior officer of the Section attended meetings of the Canadian Pensions Conference and held preliminary discussions with provincial delegates regarding the statistical programs to be developed by provinces in connection with new pension plan legislation. Discussions were also held with the Department of National Revenue and Department of Insurance regarding the possibility of joint arrangements for collection of information relating to pension plans in order to meet the statutory requirements of these departments and DBS statistical needs through a single return.

Senior officers of the Division presented papers at the Conference of Commonwealth Statisticians held at DBS in September 1966. The Division was also represented on the Canadian Delegation to the 11th International Conference of Labour Statisticians in Geneva, October 1966.

Manufacturing and Primary Industries Division

As a result of the departmental reorganization, the Division, while continuing to be responsible for the development and maintenance of programs of industry and energy statistics, is no longer administratively responsible for productivity research and analysis. The Section concerned with this work now forms part of the National Accounts, Production and Productivity Division.

Again this year the work of the Division reflected the emphasis placed on quality and timeliness of the various series. Of equal importance was the expanded service to users, particularly to the Department of Industry and provincial statistical agencies.

The Industry Statistics Section, which is responsible for the annual and current statistics of the manufacturing and primary industries, was able to achieve some further improvement in timeliness in the editing of the 1965 annual censuses of manufacturing and forestry. This resulted in a net gain of four weeks over that of 1964 which has now reduced the edit phase of these censuses to 12 months. Although still not satisfactory, this represents a saving of three months over that for 1963. The edit of the annual census of mining, however, has not progressed as expected due to problems related to the linking project for 1961 to 1963. These result from the inadequacy of reported data concerning "non-mining" activities for these years, necessitating considerable contact with respondents. The revised data are now expected to be available in late summer of 1967 rather than early in the year, as originally planned.

Although the linking project for the annual census of logging was completed during the past year, the revised "establishment type" data have not been released since subsequent analysis indicated that statistical comparisons between the "activity" and "establishment" data are questionable due to significant changes in the universe between the three years. It now appears that the linkage period must be brought forward to cover the years 1963 and 1964 when the logging universe became more stable. "Activity" type statistics are now being prepared for these two years and it is expected that the revised data will be published in the 1965 logging report later this year.

During the year a field officer was recruited and given intensive training in all aspects of forestry statistics prior to being stationed at Vancouver in March 1967. His main duties will be liaison with users and suppliers of statistics in the important forest-based industries of British Columbia.

The quinquennial survey of the primary fishing industry has progressed almost on sched-

ule with the collection phase 90 per cent complete. Editing of the returns received is proceeding satisfactorily and tabulations for the province of Quebec have been completed.

Again during the past year the Section was subjected to relatively heavy demands from the Department of Industry and in order to meet its requirements undertook five new surveys including a special survey on automotive parts and accessories involving over 1,000 respondents. In addition, four new surveys were undertaken on behalf of various industry associations and a revision of the Chemical Directory last issued as a reference paper in 1960 was completed. This will be published during the summer of 1967.

In the Energy Statistics Section, the refined petroleum products series was extended to include a presentation of fuel consumption by type and major use. Considerable improvement has been achieved in electric power disposition and use statistics and monthly data are now published for domestic, general service (commercial) and industrial use. With the increasing emphasis on small area statistics, improvements have been introduced in the following series providing statistics at the municipal level: *Electric and Gas Meter Registrations*, *Electricity Bills* and *Inventory of Prime Mover and Generating Equipment*. A new publication on natural gas bills will be of generally the same type and scope as the *Electricity Bills* report, providing small-area data on consumption, customers and rates for natural gas. In addition, coal and coke statistics are now available by economic regions or economic regional groupings. Finally, a survey of retail gasoline sales statistics was instituted on a quarterly basis for selected metropolitan areas.

In the Shipments, Inventories and Orders Section, the monthly estimates were revised to the 1964 base derived from the Census of Manufactures, and the basic framework of the survey was revised to provide for the publication of shipments by major industry groups for three provinces--Quebec, Ontario and British Columbia--and for two regions--the Prairie Provinces and the Atlantic Provinces. This will require the extension of probability sampling to all industries and the use of computer estimation. Subject to the availability of programming and computer resources and the co-operation of respondents in prompt reporting, the system will be implemented during the coming year and should result in improved timeliness as well as greater detail.

During the year the Analysis and Development Staff concentrated its efforts on improving timeliness and expanding the analytical content of the general (or all-industry) reports on manufacturing; on further development of the Industrial Commodity Classification; and on the

servicing of numerous and frequently complex inquiries for both the government and private sectors. All provincial reports for 1963 and an *Advance Statement* for Canada and the provinces, 1964, were issued. The latter also contained revised data for the 1961-1963 period for industry groups and provinces, together with statistics on the 40 leading industries in 1963 and 1964, ranked by value of shipments of goods of own manufacture.

Pending implementation of computer processing of the *Geographical Distribution* report, a series of *Advance Statements* on manufacturing statistics for sub-provincial areas was instituted. The first of these, providing all-industry totals by census division or county for the 1961-1964 period, was issued in March 1967. Preparation of the remaining two--all-industry totals for census metropolitan areas and selected cities, and individual industry totals for the seven largest census metropolitan areas, ranked by value of shipments of goods of own manufacture--was well advanced by the end of the year.

Extensive revisions were made to the draft version of the Industrial Commodity Classification (an adaptation of the Standard Commodity Classification) to incorporate, where practicable, suggestions received from other government departments and industry, and modifications for factors not fully provided for in the preliminary draft. Although these revisions will necessitate a postponement in the implementation of the classification, the resultant improvements in both structure and processing are expected to more than compensate for the delay.

Computer processing of statistical data was both extended and improved during the year. A system for processing the data collected in the survey of manufacturers' shipments, inventories and orders was specified and implemented. A very worthwhile beginning was made on a project to computerize the processing of most of the energy surveys during the next few years. Good progress was made with the development of computer programs to encompass the principal statistics of the primary industries. For example, the computer processing of logging statistics, begun in 1965, was extended and improved in 1966, and the required preparatory work done for inclusion of mining statistics in 1967.

A considerable amount of time and effort was expended in checking and revising the geographical coding of the establishments whose records comprise the computer tape files for manufacturing principal statistics. Precise geocoding in this and other areas is of the utmost importance in meeting the increasing demand for additional tabulations, by smaller geographical units, in greater detail. A concomitant problem is, of course, the avoidance of the

disclosure of confidential data, which becomes increasingly difficult with the proliferation of geographical levels of publication. The potential of the computer for assisting with the solution of these problems is being increasingly exploited.

Despite considerable difficulty and attendant delay, a computer program for the production of statistical tables was advanced to the point where it will be satisfactorily operative in 1967. The successful completion of this program will permit earlier publication of two reports of *Manufacturing Industries of Canada* series which have been delayed during its development, namely, *Geographical Distribution* and *Type of Organization and Size of Establishment*. It should also result in a substantial reduction in the time required for the future preparation of other publications through the elimination of many steps formerly required in manuscript preparation, vari-typing and proof-reading. It should be noted, however, that there is some concern regarding the availability of adequate programming and tabulating resources.

Merchandising and Services Division

The Merchandising and Services Division is responsible for the development and maintenance of a statistical program involving: (1) a quinquennial census of merchandising and service establishments, and (2) current surveys on a monthly, quarterly, annual or occasional basis, required to produce continuing estimates of sales, inventories and consumer credit, or financial aspects not covered in a Census, such as operating expenses, or broad areas of interest, such as advertising. Administratively, the Division is divided broadly into the two major survey areas: in the Census area, subject-matter and operations are combined, while in the Current area specialized subject-matter sections exist.

During the year all standard or fully-established surveys were maintained and reports issued. All outstanding bulletins from the Census of 1961 were finalized and released. In addition, a heavy new program was initiated in the Division involving definitional problems and new samples for consideration, design or implementation.

Work was commenced on the first Quinquennial Census of Merchandising and Service Establishments to cover the year 1966. As a major part of a program of modernization and amplification of the statistical product of the Division, approval had been secured to convert from a very detailed Decennial Census of Retail, Wholesale and the Service Trades to a streamlined Quinquennial Census, with post-census sampling for important detail previously associ-

ated with the Census, such as fine detail of commodities sold and a somewhat extensive section on employment. There had been an earlier decision, already acted upon, to develop an annual census-type survey of Wholesale Trade, leaving only Retail Trade and the Service Trades in the situation of having to rely entirely on the Census for a complete measurement and analysis of their universes. In making the earlier decision, however, it was explicit that in any Census year, the annual survey of Wholesale Trade should provide for Census data requirements; that a new listing of places of business should be secured for Wholesale Trade as well as for the Retail and Service Trades; that business shifts from one area to another should be studied as a single project, with common agreement on reclassifications; that there should be a maximum integration of processing, planning and activity; and further, that statistical releases in Wholesale Trade as well as in Retail and the Service Trades, should be in the form of standard Census bulletins, capable of being brought together into Census volumes.

As of January 1, 1967, the monthly retail trade statistics for the Independents' segment is based on a new sample designed from the 1961 Census. The January report is in a new format, sectionalized by provinces, in line with the increasing interest in provincial statistics. This report also contains revised estimates for the years 1965 and 1966 by kind of business and by province, to ensure maximum meaningfulness for the new series. Revisions for the years 1961-64 have been prepared and will be released in the near future. The two other segments of Retail Trade, Chain Stores and Department Stores, are covered in separate monthly surveys so that data on total Retail Trade may be available. The Chain Store Survey has been revised to conform to a new and more restrictive definition introduced in the Census of 1961, which provided the appropriate benchmark. The Department Store Survey has been revised slightly, to deal with some problems arising from the appearance of department store type Discount Houses, but a complete updating of this survey can only be achieved through the implementation of a new definition in the Census of 1966. This definition has been worked on for some two years, most particularly with the Department Stores themselves, and reflects a need to measure business done in a particular physical structure, the Department Store as seen by the public, against the business done in other competitive structures, such as the Shopping Centre.

During the year, a number of outstanding problems in the new Retail Voluntary Chain Survey were resolved. An adequate working definition of a voluntary chain outlet was developed and editing procedures were set up, permitting a considerable forward movement at the operational level. Discussions are taking place on the for-

mat design for the Voluntary Chain publication. A number of cross-tabulations are possible and these are being studied. It is proposed that the results from the Voluntary Chain Survey will be published in two stages, the first one being Food, the second non-Food. It is hoped that the publication on *Food Voluntary Chains* will be released by the end of 1967. The data will cover the years 1963, 1964 and 1965. The non-food segment of the Voluntary Chain Survey should be ready for publication about December 1967. Arrangements were made to secure necessary data for the year 1966 from the Census of 1966.

In addition to surveys limited to respondents classified to the three areas of Retail and Wholesale Trade and the Service Trades, the Division takes certain surveys which cross normal jurisdictional lines. An example of this is in the field of advertising where a new annual report was published during the year. This report brings together data from other DBS reports on *Printing and Publishing, Radio and Television Stations, Import Statistics, Advertising Agencies and Motion Picture Theatres*. A few small surveys are necessary to round out the picture which is necessarily presented from the media angle. The data thus presented do not include the internal costs incurred by such advertisers. To secure this cost, a special sample survey of about 20,000 advertisers is required at least once in five years; in-between years can be estimated. Such a survey is now almost completed for the year 1965. In taking this survey, it was clearly advantageous to ask the advertisers to report total costs, broken down into (a) billings against and (b) other internal expenditures. The latter permits the rounding out of the expenditure universe as available from the media angle annually while the sum of (a) and (b), *i.e.*, total expenditure by the advertiser, permits the calculation of advertising to sales ratios and the publication of these in considerable trade detail. In addition, the 1965 survey asked the advertiser to break down "billings against" into the significant media groups involved so that, for the first time, it will be possible to link the two in a trade, or industry, analysis.

Finally, the 1961 Census Monograph *Trends in Canadian Marketing* was up-dated wherever possible to 1965 and drafts sent to selected readers for comment. Reviews and useful suggestions have now been received, and the Monograph will be completed by mid-year, 1967.

Prices Division

Effective April 1, 1966, a reorganization of the Prices Division distinguished and brought under the control of two Assistant Directors, two main categories of price statistics, *viz.* Retail Prices and Living Costs, and Industrial Prices. Under the first are included the measurements of retail price movements and price

differentials as they relate to changes and differences in the costs of living and real incomes of population groups within Canada and between Canada and other countries. Included also are family budget surveys and studies, securing and analysing cross-sectional data on family expenditures and family attributes. Industrial Prices, on the other hand, embrace measurements of price movements and differentials in the production and distribution of commodities and services in which the primary focus is on prices of the outputs and inputs of individual industries and groups of industries within the Standard Industrial Classification. In the reorganization, a third group, *viz.* Central Research Section, also was established to co-ordinate and integrate research and analysis in prices and to provide a small nucleus of specialists in methodology.

During the latter part of the year an interdepartmental conference was held to discuss the Prices Division's plans for an accelerated program for price statistics. The detailed plans for expansion of published price indexes, improvements in quality and reliability, and the development of an integrated framework for price statistics met with the general approval of a group of the main users. Providing resources are made available, this program will be launched in 1967.

In the 1966-67 period, the work program in the Retail Prices and Living Costs area has been related largely to the production and maintenance of the quality of existing price index series. Insofar as the national and regional city consumer price indexes are concerned, there has been some progress made in expanding and improving the collection of price data. These changes include the substitution of enumerative pricing for mail-in at some locations, and the addition of new cities such as Moncton, Chicoutimi and Corner Brook to the list of locations priced for inclusion in the national Consumer Price Index. Senior Officers of the Prices Division appeared before the Joint Parliamentary Committee on Consumer Credit (Prices) which has been looking into the reasons for recent rises in living costs.

In the field of family expenditure statistics, the year's activities were centred around survey processing, analysis and publication. Because 1966 was a census year, no expenditure surveys were undertaken. Results from the 1962 survey became available in the year and the publication *Urban Family Expenditure 1962* will be in print in 1967. This sample survey referred to the complete budget of urban families defined as those comprising two to six persons, with family incomes in the range \$3,000 to \$8,000.

Tabulations from the 1964 survey became available early in 1967, providing a large volume of cross-classified detail to serve pur-

poses related not only to revision of the consumer price index but also for research in expenditure patterns of various population groups. Because restrictions of family size and income were not applied in this survey, the computer processing program afforded an opportunity to test program specifications and classifications similar in scope to those required for a survey covering the whole urban population.

During the year, the International Prices Section processed and analysed surveys of retail price conditions being encountered by Canadian government personnel at forty foreign locations. Officers of the Section contributed to the work of the Advisory Committee on Isolated Posts regulations set up by the Treasury Board to review allowance policy with respect to federal government employees serving in remote areas of Canada. In continuation of the program of visits to foreign posts to assess living cost conditions, an Officer of the Section toured all centres in the Far East where Canadian government personnel are serving.

The work program in the Industrial Prices field in 1966-67 has been mainly directed to the production and maintenance of published price indexes, including quality improvements through the extension of price collection and the redesign of the price questionnaire.

Progress has been made, however, toward publication of a new price index relating to the construction and equipping of electric generating and transmission facilities, and revision of the commodities priced in the building materials indexes. The former index is expected to be published in 1967 and, relating basically to input costs, will cover materials, labour and capital used in transmission, distribution and transformation and switching facilities. Extensive commodity detail will be published and where possible regional data will be given. The revised building material indexes will be published during 1967 and will cover price movements more representative of commodities now included in the indexes. The revised price sample should also be capable of yielding some price information relating to regions.

The revision of the concepts, item content, weights and price samples relating to the Index of Prices Paid by Farmers (Farm Operation) continued throughout the year under review. Publication of the revised index, on a 1961 time base, is expected to take place late in 1967.

Transportation and Public Utilities Division

As part of the general administrative reorganization of DBS implemented January 1, 1967 Transportation was divorced from the Governments and Transportation Division and officially constituted the Transportation and Public Utilities

Division. The Division consists of three sections: the Aviation Statistics Centre, the Transportation Section and the Public Utilities Section. The former deals exclusively with aviation statistics including the work formerly done by the Transportation Section in this field, but also embracing the statistical work of the Department of Transport and the Air Transport Board. Transportation covers rail, road and water transport, while the Public Utilities Section covers radio and television broadcasting stations, telephone systems, telegraph and cable companies and community antennae (T.V.) systems.

On April 1, 1966 the Aviation Statistics Centre was organized, responsible to DBS but located within the Department of Transport, to provide statistics on behalf of the Department of Transport, the Air Transport Board and the Dominion Bureau of Statistics and to assume general responsibility for the production and development of aviation statistics. The Centre also provides special statistics for the planning and development of Canada's airports, air routes and airline services. It represents an extension of the provision of statistical services in keeping with the Glassco Commission recommendation for increased centralization of statistical activity within government. By putting the Statistical Operations Unit close to its primary users, the potential for increased accuracy and the timely meeting of special requirements can be realized. Through centralization of the collection and analysis of related statistics, economies of time and money can be achieved by eliminating duplication and providing integrated data.

At the present time, DBS statistics are confined to the Civil Aviation series concerned principally with financial and operational data of Canadian air carriers. Aviation statistics collected and compiled for the Air Transport Board and the Department of Transport cover station activity and traffic flow, origin and destination information, and aircraft movements. This large body of information forms the basis for airport development policies, the assignment of new routes and the negotiation of bilateral agreements. Along with the above program, the Centre has a commitment to develop a broad range of aviation statistics for the use of the general public.

One of the more immediate problems is to co-ordinate a number of DBS, DOT and ATB surveys which, to some extent, overlap in coverage and content. Methods of integrating these surveys are now being studied, in order to eliminate duplication, to reduce the burden on respondents, and to streamline collection and production. In the field of airport and aircraft movement information, a reorganization is under way to extend surveys to a number of municipally and privately operated airports. This should pro-

vide a measure of regional aviation activity. The requirement for forecasts indicates the need for development of historical series wherever possible as a basis for trend analysis.

In the field of rail transport, a project to develop a computer tape to facilitate conversion of railway freight data from the United States Standard Transportation Commodity Code (the code now in use) to the Bureau's Standard Commodity Classification is nearing completion. In addition to producing uniformly-based commodity data for all modes of transport and comparability with other DBS economic series, the SCC provides for a breakdown of certain items of commerce of regional significance, such as potash and plywood, not previously identified separately.

Another DBS-Rail Industry Committee has been established to examine all aspects of the rail statistical program including timeliness, periodicity, reporting forms, instructions, concepts and terminology. In connection with this work, two user surveys have been conducted, one to advise of the impending review and solicit ideas and suggestions which might assist in improving rail statistics, and the other to obtain user comments on the feasibility of publishing railway commodity data on a quarterly, rather than a monthly, basis. As a result of the latter survey, quarterly reporting for this particular series was inaugurated January 1, 1966.

During 1966 the financial and operating results of railways, which for some years had reflected different time periods in the same publication, were brought together on a same month basis. The present arrangement will facilitate direct correlation of the two sets of statistics.

Due to the continuing development by railways in Canada of new integrated services for small package freight and less than carload shipments, through the co-ordination and use of piggyback and other inter-modal transport techniques, a review of railway express statistics is to be undertaken at the earliest opportunity. An attempt is also being made to devise weekly estimates of rail ton-miles to supplement present weekly carloading statistics and thereby enhance the usefulness of this series as an important indicator of business activity.

The new transportation legislation (Bill C-231 passed by the House of Commons January 27, 1967), will undoubtedly have far-reaching effects on transportation in Canada. While the extent to which the present statistical coverage of the industry will satisfy requirements of the Canadian Transportation Commission is not known, it is expected that the Bureau will work closely with the new body to ensure that its statistical requirements will be satisfactorily met.

During the past year a major review of the Motor Transport Traffic Survey continued. A redesign has been proposed for coverage of the industry. The design is in two parts: a Truck Fleet Survey and an Individual Truck Survey. The former would be carried out on a monthly or quarterly basis (yet to be determined) while the latter would be carried out annually. The feasibility of incorporating commodity origin and destination statistics in the Fleet Survey will be actively explored. Target date for introduction of the revised methodology is 1969.

In co-operation with the provinces considerable progress has been made during the year in automating sampling selection procedures used in the Motor Transport Traffic Survey through use of computers, replacing manual selection of the quarterly samples.

Increased public awareness of the seriousness of motor vehicle traffic accidents has resulted in numerous demands being made upon the Bureau to convene a Dominion-Provincial Conference to review in particular definitions and concepts currently used by the provincial authorities for reporting purposes. The last such conference was held in 1954. A number of procedural steps are being undertaken by DBS preliminary to deciding whether such a conference should, in fact, be called. The Bureau is working closely with the Canadian Conference of Motor Vehicle Transport Authorities (CCMVTa) regarding this problem.

The Dominion Bureau of Statistics was officially represented on the Canadian Government Specification Board's Committee on Automotive Safety by the Transportation and Public Utilities Division. This Committee recently made public its *Guide to Traffic Safety*.

In the field of water transport, a major extension to the *Shipping Report* neared completion. Commodity flow charts, to become *Part VI* of this series, were prepared and charts for 1963, 1964 and 1965 will be released during the year. The charts graphically illustrate coastwise and international movements in Eastern Canada of the eight high-volume commodities (wheat, other grain, pulpwood, iron ore, bituminous coal, gypsum, newsprint and fuel oil) for which origin and destination statistics are published in *Part V*. These charts, containing loading and unloading data by port and density flow lines, should provide a useful picture of interprovincial and regional trade in these commodities.

For the 1965 *Shipping Report* the selection of Canadian ports published separately was reviewed according to volume handled. As a result, a number of growing ports will be published for the first time. A similar review of the Canada-United States water-borne traffic revealed that about 75 United States ports handled

sufficient volume to warrant separate codes. Commencing in 1967, therefore, these will be identified and the resulting origin and destination tabulations will thereby be substantially expanded.

Research into certain activities directly related to water transportation such as steamship agencies, stevedoring and salvage firms was undertaken during the past year to judge the feasibility of undertaking new surveys to collect principal statistics in these areas.

For some years the Public Utilities Section has assisted the Department of Transport and the board of Broadcast Governors to obtain radio and television statistics. During the year, a written agreement which describes the procedure for the collection of data from broad-

casting stations as well as a procedure for the dissemination of information to users was formulated and approved by all three agencies.

The National Advisory Committee on Broadcasting Statistics assisted in improving the reporting schedules. Recognizing the importance of definitions in the expanding communications field, a subcommittee was formed to develop a Glossary of Terms on the Broadcasting Industry. Arrangements are nearing completion to begin a new series of statistics on the activities of community antennae television systems (cable TV) during the coming year.

Research on the feasibility of introducing surveys in the field of waterworks utilities and sewage disposal systems was also initiated during the year.

SOCIO-ECONOMIC STATISTICS BRANCH

In accord with the organizational changes of the Dominion Bureau of Statistics described in the introduction to this Annual Report, the Socio-Economic Statistics Branch was created January 1, 1967. The Branch is responsible for a wide range of demographic, sociological and economic statistics which deal predominantly with information about persons and families derived from household and institutional sources. They include the following: censuses of population, housing and agriculture; statistics on elementary, secondary, higher and adult education, vocational training and school finance; agriculture statistics; health, vital and judicial statistics; family income, assets and liability statistics. The Branch is also responsible for the field operations of DBS including the labour force survey, and eight Regional Offices, as well as for provincial liaison and consultative services.

Agriculture Division

The Agriculture Division, besides maintaining the established flow of data relating to all phases of the agriculture industry, was active in introducing changes needed to keep pace with new demands for statistical services. The rapidly changing structure of the industry, involving a continuous process of regrouping resources directly attached to the farm sector and in allied industries, has produced new and difficult challenges in the data collection and analysis field. The trend towards increased specialization has sharply magnified the differences in the allocation of resources between farms. Although the trend has been accompanied by greatly improved agricultural productivity, it has enhanced the data collection and sampling problems. As a result, the Agriculture Division is adopting more sophisticated sampling tech-

niques as rapidly as resources permit. Random sampling, specially tailored sampling frames, structuring of the universe into unique strata and related techniques are becoming integrated with and are being used to strengthen the historic methods of data collection.

The new statistical methods are necessary to provide data which will aid in the development of a more efficient allocation of resources, both at the farm level and by the growing number of industries now supplying inputs for the farm sector and the marketing and distributing of the increasing flow of output from farms. Methods for measuring net income flows to delineate social problem areas from the commercial sector of the industry, as well as methods to measure flows to various commodity groupings, are being considered in relation to needs for government policy formation purposes.

The Crops Section publishes a continuous and comprehensive flow of timely data and market information on field and horticultural crops in Canada. At the farm level much data is collected by means of mailed questionnaire inquiries of a sample of volunteer crop correspondents, seeking information on such topics as growing conditions, forecasts of acreage to be planted, probable yields and actual yields and farm stocks and quantities of grain fed on farms. Although published reports usually refer to provincial totals only, the data for many items are tabulated by smaller geographical areas and made available to provincial authorities.

In order to ingegrate material from farm surveys with other available detail on grains and oilseeds, two comprehensive reports, the *Wheat Review* and the *Coarse Grains Quarterly* are published. These publications collate and anal-

yse national and international data and policy changes of importance to the production and marketing of the major commercial grain and oilseed crops. An expansion of the vegetable oilseeds occurred during the past year. Detailed data on the movement of Canadian commercial grains and oilseeds are published in the *Grain Statistics Weekly*. Historical data are made available for reference purposes in a series of handbooks and in the annual *Grain Trade of Canada*.

Due to the changing nature of marketing, especially for those commodities where producer and processor groups negotiate prices in advance of the harvest, there has been a growing demand for more precise early-season forecasts of probable production. Such data would help alleviate one of the variables in the negotiation process. As a start in meeting these rather difficult and precise requirements, the Crops Section has been developing a system of objective yield estimates. In co-operation with the Quebec Bureau of Statistics, apple counts have been under way in Quebec for a number of years and in 1964 the program was extended to sour cherries and peaches in the Niagara Peninsula of Ontario.

After two years' preliminary investigations using small samples it was possible to assess the size of sample required for an operating program and the coverage of sour cherries and peaches in Ontario was expanded in the summer of 1966. Activity was confined to the Niagara district for sour cherries but in the case of peaches some orchards in Essex County were included. In addition, some preliminary study of developing similar grape crop estimating techniques was undertaken. In 1966, at the request of the growers' group, a program was initiated to apply objective crop estimating techniques to apples in the Interior of British Columbia. This will be a two-year project on an experimental basis. Further pilot studies were carried on in introducing objective measurements to obtain more reliable early-season production estimates for Ontario winter wheat. Plans were made for extending this survey to a wider area in the province and introducing area sampling on a trial basis as a possible means of generating field crop acreage statistics.

A mushroom growers' survey was initiated on an annual basis and the first report published. New questionnaires were introduced for the greenhouse and nursery stock industries in response to changing economic and technological conditions. A new survey was introduced to secure earlier and more detailed data on the area and yields of the principal processing vegetables.

A pilot study to obtain fertilizer use by crops and by small areas was conducted for Saskatchewan and a report was released. Fertilizer use has expanded rapidly in the Prairie Provinces in recent years and there is a strong

demand for more data to describe the changes and effects of this major shift in farm practices. Farmers' intentions to use commercial fertilizer in each of the Prairie Provinces is now a regular feature of the early season information on field crops.

The Farm Finance Section conducted its regular semi-annual, large-scale sample farm surveys of crop acreages, livestock numbers and disposition, farm woodlot production and farm wages. Estimates were prepared and published for: indexes of farm prices and production; farm cash receipts and net income from farming operations; farm wage rates; farm capital; and the value of total agricultural production. Revised estimates of farm income and expenditures for the years 1950 to 1965 were completed and published during the year. These revisions were based on the most up-to-date information from private and government sources, including the Census of Agriculture and the 1958 probability survey of farm expenditure and income. They also include changes in methods of calculation which have been developed in recent years. A new edition of the Division's Handbook series which deals with farm income estimates was prepared and will be published early in the 1967-68 fiscal year. It will present estimates by component and by province for each of the years 1926 to 1965.

During 1966, all of the revised production data used in the revised income estimates were incorporated into the Index of Farm Production. This revised index, which still retains the time base of 1949 = 100, will be published for the first time in the spring of 1967. The construction of an index of physical inputs for the agricultural industry was initiated during the summer and it is expected to continue during the coming year. When completed, it should be a useful complement to the Index of Farm Production and provide the means for some further analysis of farm income.

Revised estimates of the value of farm capital were also completed for years 1951 to 1965 and a complete series for the years 1941 to 1965 published in the *Quarterly Bulletin of Agricultural Statistics*. Estimates of the value of agricultural production are in the process of revision and should be ready by mid-year 1967.

During the year, the Livestock and Animal Products Section undertook on a continuing basis two additional surveys, completed and published historical revisions on livestock and poultry statistics, and conducted operational research with the objective of improving livestock and poultry estimating procedures from sample data. One of these surveys is conducted on an annual basis and the second is monthly. The objective of the annual survey is to obtain data on the Canadian hair and fur seal industry and is the first attempt to gather data for estimating the

value of seal pelts for the four Canadian sealing areas, *i.e.* the North Pacific, the Northwest Territories, Quebec and the Atlantic Coast. Results of this survey were first published in the 1966 issue of the annual publication *Fur Production*. The purpose of the monthly survey is to provide an indication of the volume of frozen vegetables held in commercial storage facilities in Canada that are intended for remanufacture. Results from this survey were first published in January 1967 monthly report *Stocks of Fruits and Vegetables*.

The Handbook of Agricultural Statistics, Part VI, Livestock and Animal Products, brought together historical series on cattle, hogs, horses, sheep and lambs, with particular reference to numbers on farms, farm values and selected price series for the period 1871 through to 1965. The main purpose of this Handbook is to consolidate in one volume these selected series on livestock statistics for Canada and the provinces. The annual report, *Production of Poultry and Eggs*, was expanded in 1966 to include current estimates and revised series for the years 1955-1965. The purpose of this change was to incorporate into one volume all the revised data for that period. It is the intention to continue this practice in future to simplify user problems. The first bilingual version of this report was published in 1966.

Operational research was conducted on a continuing basis throughout the year in an endeavour to develop more efficient techniques for utilization of sample data for the preparation of livestock and poultry estimates. Results to date have not been conclusive, but techniques developed are expected to be more fully exploited when sample data are computerized. Selected data were provided to the central data bank which is operated under the auspices of the Central Data Processing Service Bureau, the Bank of Canada and the Economic Council of Canada.

In its regular program, this Section issued monthly reports on the output of dairy factory products, commercial fluid milk sales, milk production and its farm value, egg production, and on stocks of principal food commodities held in storage. In addition, quarterly reports were issued on numbers of pigs on farms and forecasts of farrowing intentions; semi-annual estimates of other livestock and poultry on farms; and annual reports of meat and wool output and domestic disappearance. The Section also issued comprehensive annual reports on livestock statistics, poultry and egg statistics, fur production and dairy and cold storage statistics.

Work in the Special Projects and Research Section during the past year was concentrated on completing the final drafts of two reports from the Farm Expenditure and Income Survey. A re-

search report entitled *Farm and Family Income, Farm Expenditure and Resources in Canadian Agriculture* was prepared with direct assistance from the Economics Branch, Canada Department of Agriculture. This study provided needed information on farm income, farm family income, farm expenditures and farm resources for three economic groups of agricultural holdings. Little information was hereto available on the distribution of income among farms and farm families, and the pattern of expenditure for different sizes and types of farms.

The other report, bearing the title of *Motor Vehicles and Machinery on Farms*, consists mainly of detailed statistical tables accompanied by the essential descriptive and explanatory material in the text. It will serve as a statistical reference or handbook. The tabular material is presented separately for each province. One group of tables contains detailed items for the numbers, values, operation and operating expenses for motor vehicles and power machinery, and the numbers, values and cost of repairs for other farm machinery. In a second group of tables, the farms (or land holdings) are classified according to the area of improved land, product type of farm, and cash receipts from sales of products and services produced by the farm. Within these classifications, the tables contain summary items of numbers, values and operating expenses for farm machinery and equipment. In addition, other selected items are provided to reveal certain farm characteristics which are relevant to the use and operation of machinery and equipment.

Work was started on compiling a new set of farm mailing lists based on information obtained from questionnaires completed for the 1966 Census of Agriculture. The main objective of this project is the production of a master tape file required for computer processing of the farm mailing lists. In addition to processing of the farm mailing lists, the master tape file will be used for the preparation of selected lists and classifications of farms for special surveys, and for research projects related to sampling and survey methods. A change in the method of addressing survey schedules will be introduced when the 1966 Farm Mailing Lists are ready for use. With the new method, addresses are produced by a computer on continuous folded paper, and an impression of the addresses is placed on the survey schedules by a heat transfer process.

Some preliminary work was started to examine the feasibility of applying computer processing methods to surveys conducted by the Agriculture Division. As a first step, a detailed flow chart of the present survey processing operation is under preparation by the Management Services Section with assistance from the Agriculture Division.

Census Division

The principal activity of the Census Division centred around the taking of the five-year Census of Population and Agriculture in June 1966 and the processing of the returns therefrom. A series of five preliminary releases was issued during the July to September period of 1966, giving provisional population counts for some 5,000 incorporated cities, towns, villages and municipalities across Canada. A complete catalogue of the 1966 Census publications was also issued. In the interests of economy and timeliness, provision was made for the use of computer print-outs as photocopy for printed reports in all cases (population and agriculture) where the computer programming could be adapted to this cost-saving method.

A field force of approximately 40,000 persons was required to take the 1966 Census of Canada. This task force had to be hired, trained and directed during a very short period of time. Seven manuals of instruction, totalling some 1,000 pages, were prepared in English and French for reference and training purposes. This material was used in a series of training steps in which nine master trainers from the Census headquarters staff instructed approximately 90 Regional Office Representatives located across Canada and who, in turn, instructed approximately 1,500 Census Commissioners. The Commissioners, in turn, selected and trained about 35,000 enumerators. In addition, training was given to approximately 1,300 temporary personnel employed in the Regional Offices and in Head Office to process the census documents, correct rejects from the machine edits and to prepare the material for publication. Approximately 200 tons of questionnaires, training material and office supplies were shipped from Ottawa early in May to meet the needs of Census Commissioners, enumerators and field staff.

Preparations for taking the Census included the delineation and description of some 38,000 enumeration areas and the preparation of individual maps of each area for the field enumerators. For tabulation and publication purposes, official groupings of the enumeration areas were prepared. These listings respect the federal electoral districts, as well as all provincial divisions and subdivisions. For the first time, detailed maps have been prepared for sale, showing enumeration areas within federal electoral districts, a number of rural municipalities and the census tracts.

At the close of the year, the tabulations for population, households and families, and agriculture were being checked preparatory to releasing the series of final reports on these subjects. Arrangements were being made to microfilm the population documents. To assist in the direction of the Regional Office processing, professional members of the Head Office staff were given specific training and then supervised

the processing of the returns in the eight Regional Offices. A number of methodological studies and quality checks were developed and conducted during the 1966 Census operations. Analyses of these studies are being made to assist in planning for future censuses.

In connection with the 1961 Census, a number of volume and special reports were completed and published during the year. These cover mainly subjects of the labour force, income and migration. In addition, considerable information, not contained in the published reports, was provided to meet specific requests from a wide variety of users on the subjects of population, agriculture, housing, households and families. These data were presented either in the form of computer tapes, computer print-outs, or manuscript copies. Considerable progress has been made on the writing of several 1961 Census monographs by university professors, with assistance from Census Division or Bureau personnel. Two of the monographs are presently being prepared for publication.

Some research has been carried out towards improving the 1971 Census. This includes tests of establishing accurate address registers for computer listing and addressing questionnaires for a "mail out-mail back" census. A machine-readable household population questionnaire is being developed for field testing. Definitions and concepts were examined and revised or reworded for use in a self-enumeration type census. A geocoding system, which identifies data according to a national grid and to block faces (in urban areas) is being studied. Such a system would facilitate the provision of data for any geographical area.

The regular series of reports on estimates of population and of families was continued during the year. The annual report on *Canadian Citizenship Statistics* was published, and statistical tables prepared for the annual report of the Citizenship Registration Branch, Department of Secretary of State. For the first time, projections of the number of families in Canada were made relating to the years 1970, 1975 and 1980.

The number of requests for verification of age from early census and national registration records increased by 11% to 54,000. This was primarily due to recent changes in the Old Age Security regulations, although there was also an increase in the number of requests from the Social Administration Offices of the United States.

Consumer Finance Research

During the year under review, the results of the 1964 Survey of Consumer Finances were published in *Incomes, Assets and Indebtedness of Non-Farm Families in Canada, 1963*. In addition

to income data, this survey collected data on consumer balance sheets in more detail than the previous surveys conducted in 1956 and 1959. A special feature of the survey was a detailed questionnaire on stock holdings and other corporate investments. It is planned to carry out more analysis of the data in 1967 and requests have been received from university researchers for access to the data collected for research purposes.

Another Survey of Consumer Finances was conducted in March-April 1966. For the first time the survey was expanded to include farm families so that the sample was representative of all families and not restricted to non-farm families as in previous surveys. In addition, some data were secured on the characteristics of family owned businesses. Results of the survey will be published in 1967.

Planning has begun on the next survey which will be carried out in the spring of 1968 and will collect data on the work history of individuals as well as income. It is hoped to expand the sample size from the present 12,000 to at least 30,000 households to secure intercensal data on the income distribution by provinces. In past surveys, the sample has not been large enough to provide statistics separately for the Prairie Provinces and the Atlantic Provinces. Because of the need for better provincial and regional data it is felt that one such large-scale survey should be undertaken to provide some improved inter-censal data.

The income monograph *Incomes of Canadians*, one of the series of census monographs, was completed and the manuscript will be ready for publishing in several months.

Publication of 1961 Census statistical reports on income was completed. In total, six reports were published in Volume IV of the Census series, as well as a special census tract report and eight special reports. One of the special reports contained an analysis of family characteristics and family income on an "economic family" basis which is conceptually comparable to family definition used in the Surveys of Consumer Finances and the United States censuses. A review article on incomes was also prepared for Volume VII (General Summary and Review) of the main census report. In addition, a substantial amount of unpublished census statistics was made available to users upon request.

A number of research projects were carried on which should be completed in 1967. Data had been accumulated several years ago from which quality checks of census income data could be attempted. Analysis was started of these data and a study of the conceptual consistency of census income and labour force statistics was initiated. A study is also in progress of the

characteristics of farm population by farm characteristics. This will be carried out from a match of a sample of 50,000 farm records with the corresponding census of population records. It is hoped that one of the by-products of the study will be data from which an evaluation can be made of the possible effect of changes in farm definitions upon farm population statistics.

More data have been accumulated on the misreporting of class of worker on labour force and census surveys and a report will be prepared on the subject. Recommendations have been made and accepted that this question be revised on census questionnaires in view of the experiences to date.

Education Division

Several forces operating during the past year will have future effects upon the work of the Education Division.

The federal-provincial conference on tax-sharing and on the financing of higher education held in October 1966 brought to an end as of March 31, 1967 federal support of the operating costs of the nine programs which have characterized vocational education over the past several years. Just what effect this will have on these programs as operated by the provinces, and consequently on the statistics of vocational education, remains to be seen. The conference was primarily concerned with transfers of funds to the provinces for the support of post-secondary education. In future this is to be at the rate of either \$15 per head of population or 50 per cent of defined operating cost. As a result, there will be a greater emphasis on both financial statistics and enrolment data for all types of post-secondary education.

Throughout the nation there is a growing emphasis on post-secondary and adult education, both academic and vocational, as evidenced by the establishment of new junior and community colleges, the growth of technical training, and an increasing number of adults seeking, by one means or another, to upgrade their education. All this requires change in emphasis and extension of education statistics.

Over the past few years there has been an increasing number of requests from a variety of sources for forecasts--especially of enrolment--of all levels of education. The most important of these requests have come from the Economic Council of Canada, and from regional and provincial councils and commissions. To meet them, a unit was established in the Division to establish the required historical series and prepare projections of enrolments for the use of the Economic Council.

During the year, the Elementary-Secondary Education Section has co-operated with the Ontario Department of Education to develop a common questionnaire for private schools which would provide the data required by both Ontario and DBS. In future the Ontario Department of Education Data Centre will be responsible for collecting the reports and processing them and will provide the Education Division with required tabulations. Publication of the two major annual publications of the Section: the *Survey of Elementary and Secondary Education* (1963-64) and the *Salaries and Qualifications of Teachers in Public Elementary and Secondary Schools* (1965-66) was delayed in the absence of required information from two provinces.

The regular work of the Vocational Education Section includes the collection, processing and tabulation of statistics on eight technical and vocational training programs, six of which are monthly reports; and the collection, processing and tabulation of data on enrolments and staff in private trade schools and business colleges. During the year the *Survey of Vocational Education and Training* was published. This gave data for the years 1961-62 and 1962-63. In addition three reports were prepared for the Training Branch of the Department of Manpower and Immigration. These included: *Enrolment in Vocational Courses in Public Secondary Schools*, *Full-time Enrolment in Vocational Courses under Federal Provincial Agreements*, and *Full-time Post-Secondary Enrolment in Canadian Institutes of Technology*. In response to requests by education planners and others, questions relating to respondents' general education and vocational training were included in the November 1966 Labour Force Survey. The processing of these questionnaires is just getting under way and should throw considerable light on the education level and specific vocational qualifications of the Canadian population. At the end of the year tabulations on a survey of training in industry were nearing completion and publication should soon follow.

Despite the loss of the Chief of the Adult Education Section in mid-year, the normal publication program was maintained. During the year the *Survey of Adult Education*, 1963-64 was issued, Parts I and II of the annual *Survey of Libraries*, 1963-64 were published as well as preliminary releases on university and college libraries for 1965-66, and on median salaries of library school graduates. This latter material was prepared in view of the Canadian Library Association Conference in June.

A major revision of the publication *Organization and Administration of Public Schools in Canada* was completed and issued during the year. It has been adopted as a text in a number of universities. Offprints of chapters on individual provinces were provided for most provincial education departments.

A survey of *Canadian Education through Correspondence*, 1963-64 was published early in the year. In addition, the Canadian chapter for the UNESCO *International Guide to Educational Documentation* was prepared.

Projects in different stages of progress include a survey of special education in Canada, a survey of membership of Canadian school boards, and survey of the instructional staff in teacher-training institutions. A list of formal qualifications and certificates of vocational training granted by professional bodies, government and other agencies was prepared for Australian census officials.

The regular publication program of the Higher Education Section was delayed during the year. *Part I* of the *Survey of Higher Education* (Fall Enrolment in Universities and Colleges) was issued for 1965-66, and *Part II* (Degrees, Staff and Summary) for 1963-64. Beginning with the 1966-67 issue released during the year, *Tuition and Living Accommodation Costs at Canadian Degree-granting Universities and Colleges* became a regular annual publication. By the end of the year the 1967 edition of *Awards for Graduate Study and Research*, formerly prepared by DBS but by the Association of Universities and Colleges of Canada (AUCC) for 1963, was completed by DBS and in press. As in past years, two reports on university salaries, one on salary scales and the other on actual salary ranges, at about 50 institutions, were prepared for the Canadian Association of University Business Officers, and were subsequently reprinted in *The CAUT Bulletin*.

Much time was spent in working with officials of the higher education support branch of the Department of the Secretary of State and with other federal officials with regard to the Federal Government's new role, beginning in 1967-68 in financial assistance to post-secondary education; and with the AUCC in determining weighted enrolment counts for the distribution of 1966-67 federal operating grants to universities. A conference on higher education enrolment statistics, attended by university and governmental representatives, was held during the summer. Close contact continued with higher education associations. The Chief of the Section again prepared the chapter on "Education" for the *Canadian Annual Review*, and compiled background material, at its requests, for the report of the Committee on the Financing of Higher Education in New Brunswick.

The Finance Section is responsible for the publication of financial statistics of all levels of education of all types, as supported by all three levels of government and by private sources, as well as for statistics on the finances of vocational training and related cultural activities. In addition to its regular work, the Section prepared considerable data

for the federal-provincial conference on the financing of post-secondary education and subsequently further work was performed related to the preparation of the resultant legislation. Heretofore financial data on higher education has been based on returns from a limited number of the larger institutions who accounted for 80 per cent of the enrolment. Beginning with the survey for 1964-65, conducted during this year, coverage was extended to include the remaining universities and colleges.

A Manual of Accounting for School Boards which has been in preparation by a committee representing the provinces and DBS was published and quantities provided to the provincial Departments of Education for distribution to secretary-treasurers of public school boards.

There was a considerable number of requests requiring special compilations, particularly from universities and persons engaged in studies undertaken under auspices of either provincial or regional commissions or the Economic Council of Canada.

Health and Welfare Division

This Division is responsible for the production of statistics on the state of health of the Canadian people, on the enforcement of law and on the administration of justice in Canada. Three sections share the responsibility for producing statistics on health. The Vital Statistics Section is concerned with the events of birth and death, as well as with those of marriage and divorce. In particular, it carries out studies on natality, mortality, fertility and life expectancy. The Institutions Section is concerned with the services, facilities, staffing and finances of general and special hospitals and of mental and tuberculosis institutions. The Public Health Section is concerned with the individual conditions and the personal characteristics of patients in hospitals and of mental and tuberculosis institutions. The Public Health Section is concerned with the individual conditions and the personal characteristics of patients in hospitals of every treatment type. It is also concerned with the incidence of a number of communicable diseases. The fourth section, the Judicial, is responsible for the production of criminal and judicial statistics based on information supplied to it by police departments, courts, correctional institutions, the Penitentiary Service and the National Parole Board.

As in the past the Division published information on the medical, social and other characteristics of patients confined to general and allied special hospitals, and tuberculosis sanatoria. The Division issued a third report (1962) on morbidity in general and allied special hospitals and has undertaken an accelerated

program to produce the 1964, 1965 and 1966 reports by the end of 1967. The 1962 report shows detailed diagnostic information for nine provinces and is subdivided into age and sex groups; rates are shown for these population groupings. This work represents a significant addition to morbidity knowledge in Canada and constitutes the only available source of information in Canada for many conditions and diseases. Substantial information for disease research is also tabulated and stored in the divisional reference library to answer special requests for more detailed age-sex breakdowns than could be published. The Division also laid the groundwork for a publication dealing with surgical procedures carried out in the hospitals. In this area much valuable and currently unavailable information will soon become available for study in conjunction with the incidence of disease and the classification and utilization of hospitals.

Besides the work on morbidity in general and special hospitals, the regular monthly and annual reports on the incidence of tuberculosis were published. The Division was represented on a committee appointed at the Third National Tuberculosis Conference. On March 7, 1967 there was issued a glossary of definitions, standard terms and diagnostic criteria approved by the Department of National Health and Welfare, the Dominion Bureau of Statistics and the Canadian Tuberculosis Association, for use in chest clinics, hospitals and sanatoria, and by departments of health. An important innovation in the Tuberculosis field is that, commencing in 1966, information was also received on outpatient chemotherapy as well as inpatient treatment, making the compiled data much more comprehensive and useful in the study of this disease.

The Division issued weekly bulletins on the incidence of communicable diseases, for the benefit of public health authorities and exchange of current information with the World Health Organization, Pan-American Sanitary Bureau and the United States Department of Health. The figures of weekly incidence were later compiled into an annual report for the year. Tabulations of certain venereal infections reported to the Division were forwarded to the Department of National Health and Welfare for inclusion in a special report.

Many special time-consuming requests for morbidity information were answered. These came from federal and provincial government departments, from medical researchers, commercial concerns and individuals. The requests have varied in their nature. The information provided has ranged from data on hospital utilization to incidence of emphysema and lumbago and included special compilations for inclusion in special brochures for national studies such as one dealing with maternal and child health.

Tabulations requested by research specialists, governmental, and other organizations in the field of mental health were many and varied. Liaison with individuals and organizations concerned with mental health statistics in the provinces and in other countries, such as the Canadian Psychiatric Association, National Institute for Mental Health, and Provincial Directors, was greatly improved. Many valuable suggestions for the development of mental health statistics were obtained from these and other sources. An evaluation of current mental health statistics was undertaken, and as a result a thorough revision of *Volume I - Institutional Admissions and Separations* and *Volume II - Patients in Institutions* completed. New tabulations, designed to relate mental health statistics to the real world of patients, physicians, and hospitals were introduced, and also an expanded analysis of these statistics was offered to our users. A special report, clarifying the changes in patient characteristics in terms of age, sex, diagnosis and types of treatment facilities since 1955, was published.

A major development was the addition of approximately 50 Residential Treatment Centres for Emotionally Disturbed Children to the reporting system. This entailed a great deal of liaison work, including visits by DBS officers to each Centre, as well as planning in processing and analyzing new source of data. Planning for future development, including more complete coverage of mental health facilities, and improving the quality and timeliness of the data, received a great deal of attention during the year.

The Institutions Sections produced a wide range of statistics of general and allied special hospitals, mental institutions and tuberculosis sanatoria covering facilities available, services provided, personnel employed, training facilities and finances. Eleven annual reports are published to convey to the user the variety of statistics collected. These publications have been prepared since 1961. During the year, officers of the Section have had a number of meetings with officials of the Canadian Nurses Association and the Department of Manpower and Immigration. This has resulted in the initiation of a survey of salaries of graduate nurse personnel employed in the public, general and allied special hospitals. It is hoped that the results of this survey will be published in the fall of 1967. Information will show average and median salaries according to the employee's category in the hospital and qualifications.

Officers of the Section have been deeply involved in the revision of the Annual Return of Hospitals which will come into effect for the 1968 reporting year. These same officers have contributed much to the revision of the Canadian Hospital Accounting Manual which is used by all

hospitals in the country and assists in obtaining uniform statistics.

The Division met its statutory obligations in the field of Vital Statistics by preparing and publishing the regular series of reports, and by supplying the provinces with basic tabulations for births, stillbirths, marriages and deaths, as required under Dominion-Provincial Agreements. Throughout the year demands for information continued at the high level that has been reached for the past few years. These demands have come from public health officials, from education authorities, from individuals engaged in medical research, from manufacturing and distributing firms, from market research agencies and from other government departments, as well as from the public at large. Many of these demands represent requests for detailed analyses of current and historical records. More frequent this year than ever before have been requests for intensive investigations of the patterns of nuptiality and fertility. These latter requests have been occasioned by the recent drastic changes in the birth and marriage rates. New developments in hospital and medical care have added to the already considerable flow of demands for information on mortality due to particular causes. Most of these varied special requests required special calculations and compilations, as the information demanded was not available in any published form.

To meet a number of demands at once, as well as at the same time satisfying special interest groups, several analytical studies have already been published, and others planned. These studies relate to cancer, accidents, heart disease, foetal and infant mortality, nuptiality, fertility, and life expectancy. The reports all deal with the latest trends in these areas and seek to elucidate factors associated with the direction and magnitude of the trends. Besides a planned special life expectancy study, a series of annual life tables is being initiated, to serve as a general reference for those interested in survivorship, and for government and other bodies responsible for long-term projections and planning.

Since 1945, the Division, on behalf of the provinces and the Family Allowances Administration, has been preparing alphabetic registers of births, marriages, and deaths. It would be agreeable if this task, which is not directly statistical in nature, could be carried out by some other body; negotiations to this end, and investigations into suitable alternative methods of supplying the listings, have been continuing.

Processing of vital records in the Bureau is an expensive and lengthy process. Economies have already been realized by making arrangements with the five largest provinces to share with them the cost of producing basic statisti-

cal records. It was possible to make these arrangements because statistical procedures were standardized. Further economies, and even more complete co-operation with provincial authorities, should be possible once the vital statistics output flows from a specially written electronic computer program. In the meantime, to advance publication dates and to meet pressing demands for new statistics, the existence of a general-purpose program has been taken advantage of, and a large number of routine calculations are being carried out automatically by electronic equipment. With the availability of additional computer resources, these compromise tabulation arrangements are being replaced by a fully-computerized program.

Each year the Division provides the Vital Statistics Council for Canada with its secretariat service. In addition to work immediately associated with meetings of the Council or of its committees, the secretariat service is usually involved in the examination of a number of problems designated by the Council. Some of these problems relate to legal and administrative features of the vital statistics system, while others extend to the general sphere of social statistics. As an illustration, the Secretariat made arrangements, on behalf of the Council, for a full investigation and redesigning of the present registration forms used by the provinces, involving collecting views, summarizing opinions, and circulating results to all Council members. One of the objectives of this investigation was the standardization of content, size and format of the records used by all the provinces, subject to local legal requirements where some variation is inevitable. Since the records serve both legal and statistical purposes, provision must therefore be made for meeting both requirements. The anticipated benefits will be both administrative and statistical; there will be cost economies, a new convenience in processing, a new ease of record exchange, economies in storage of the forms, and other advantages for the provincial administrators. At the same time the statistical usefulness of the schedules will also have been thoroughly reviewed.

The Judicial Section is responsible for national statistics on law enforcement, the administration of justice and corrections, including crime, delinquency, traffic enforcement, police administration, adult courts at the trial and appeal levels, juvenile courts, penitentiaries, prisons and reformatories, training schools, parole and such continuing special studies as murder statistics. The Division put out twenty-one reports, statistical supplements, manuals and papers during the year bringing its Judicial Section publication program virtually up to date. All annual reports for 1965 were published except *Juvenile Delinquents* (1964) and *Statistics of Criminal and Other Offences* (1964).

The Division responded to the recommendation of the Department of Justice Committee on Juvenile Delinquency encouraging the Bureau to continue its efforts to integrate and improve the accuracy of its various statistical series on crime and delinquency by fully supporting these important objectives. Necessary changes in the responsibilities of officers of the Judicial Section were made and one officer freed to continue working on the development of integrated systems on a full-time basis. The project at its present stage, requires the development of systems which will integrate information on offences known to the police, offences cleared and how they were cleared, persons charged, disposition, results of appeals, admission of persons to correctional institutions or probation, discharge under varying circumstances of these persons and their subsequent encounters with the law on later occasions; in short a full statistical description of the process of dealing with offences, accused persons and offenders.

Intensive work was undertaken in one province in conjunction with senior provincial officials to develop an integrated system to meet provincial information requirements for administration, statistics and for research, as well as the Bureau's more limited requirements for data and statistical research. A pilot study of the system, as developed for the courts, was conducted. In a second province, developmental work is at a beginning stage, and discussions have been started with a third province.

The Division issued the second edition of its statistical report on Murder, which in itself was a pilot study of the integration of criminal statistics nationally. Two further pilot studies were completed and written up as papers. One of these, a five-year follow-up of inmates released from a Canadian penitentiary produced data on recidivism for the first time in Canada. The other study, an analysis of sentences imposed on inmates admitted to federal penitentiaries during the fiscal year 1965-66, produced important information on sentencing practices. Both these pilot studies were carried out as a part of the plan for developing a generally integrated system of criminal statistics.

The integration program was discussed in detail with the Chairman and members of the Canadian Committee on Corrections when they came to visit the Bureau in the course of their studies. They accepted the conclusion that an integrated system was the only accurate means of describing statistically the process and efficiency of justice.

Additional work undertaken involved the preparation and issuing of the French language edition of the revised *Uniform Crime Reporting*

Manual; translation into French publication and distribution of the Manual on Classification of Motor Vehicle Traffic Accidents; the extension of the man-hours tabulations for the Royal Canadian Mounted Police; the planning for the tabulation of assistance cases for the RCMP research and statistical staff and the revision of procedures to permit a continuing recidivist study on all persons released from federal penitentiaries. The operations staff was given training in the method of conducting the preliminary edit of the statistical returns for all series. This will release the co-ordinating staff to deal with the more serious problems by way of in-depth studies and by personal contact. At the request of the Department of Justice considerable preliminary work has been done on a proposed civil judicial statistics program. Annual tables for the reports of the Commissioner of Penitentiaries and the National Parole Board were prepared; special tabulations were prepared for Criminological Research Centres, government departments and for students and other interested persons.

Special Surveys Division

Through its eight Regional Offices, the Special Surveys Division is responsible for all field survey activities of the Dominion Bureau of Statistics. Current information on many topics is obtained by part-time interviewers working under the supervision of the different Regional Offices, who interview each month a scientifically selected sample of approximately 34,000 households across the country. Questions on labour force activity are asked each month and the resulting monthly bulletin *The Labour Force* presents details of employment and unemployment for Canada and the five regions of the country. At the same time, information is obtained on rents to be used in the compilation of the rent component of the Consumer Price Index.

These interviews were used frequently during the year to obtain information on a variety of other topics as the basis for special studies. These included details of personal income (April 1966), household facilities and equipment (May 1966), smoking habits (September 1966), annual employment experience (October 1966), vocational and technical training (November 1966), immigration and education (February 1967), medical care received (March 1967).

Another important activity of the Regional Offices is the collection of monthly data on retail prices and the costs of services used in the compilation of the Consumer Price Index. Some hundreds of items or services are priced each month in representative outlets in the larger cities of the country. Adherence to strict specifications is required in commodity

pricing to ensure comparability of the index over long periods of time. Permanent staff of each Regional Office carry out the more difficult pricing and exercise close supervision over part-time pricing representatives who are being used increasingly in all centres.

Regional Offices have other functions such as the collection of business reports for almost all subject-matter divisions of the Bureau. Each office maintains a reference library of all DBS publications for the convenience of those wishing to obtain assistance or to refer to DBS data.

On June 1, 1966 enumeration commenced for the quinquennial Census of Population and Agriculture. Prior to the starting date of the Census, an augmented Regional Office staff had selected and trained, in co-operation with the officers of the Census Division, about 1500 Census Commissioners, supervised these Commissioners and indirectly some 35,000 enumerators who completed Census enumeration during the month of June. Large clerical staffs were employed in each Regional Office to receive, edit and process enumeration forms for transmittal to Head Office.

Provincial Liaison and Consultative Services

Most of the provincial capitals were visited by the Director of Regional Statistics and Analysis Staff and the Co-ordinator of the Provincial Liaison and Consultative Services, during the year, for informal discussions with provincial government statisticians and economists concerning present and potential regional statistical requirements and related matters.

Assistance was provided to various organizations on subjects ranging from assembly of information for specific regions like the North-western Quebec Economic Region, to consultation in the establishment of a questionnaire for the Division of Youth, Department of Education, Province of Ontario.

Consulting services were also provided to organizations such as Agriculture and Rural Development Act Administration (ARDA), the Area Development Agency (ADA) and the Atlantic Development Board (ADB) at the federal level, the Quebec Economic Council, the Royal Commission on Economic Opportunities in Newfoundland, the Department of Industry, the Province of Manitoba and several universities. The staff completed an analysis of a pilot survey on labour force for the Province of Quebec and carried out a manpower survey of Bell Island, Newfoundland, on behalf of the Atlantic Development Board. This survey was aimed at providing basic information to establish a plan of relocation for the population of Bell Island.

OPERATIONS AND SYSTEMS DEVELOPMENT BRANCH

The Operations and Systems Development Branch consists of two divisions and two sections all of which provide non-administrative services to subject-matter divisions. The Tabulating Services Division and the Central Programming Division provide a range of mechanical and electronic data processing services, and the professional skills and advice required for effective use of these services. The Management Services Section offers assistance in organizing that part of divisional work which can not economically be mechanized, and in transforming manual to mechanized operations. The Central Registers Section is developing a new central service: an integrated list of establishments classified by the Standard Industrial Classification and the Standard Geographical Classification, which is currently used to eliminate duplication and ensure completeness of particular divisional surveys, and which should eventually provide a basis for central mailing lists. The central services are being strengthened to increase their effectiveness in aiding the production of timely and detailed statistics and in facilitating the effective use of operational staffs throughout the Dominion Bureau of Statistics.

In addition to the divisional work described below, senior members of the Central Programming Division and the Tabulating Services Division continued to participate in the long-range assessment of DBS equipment needs. They served on a committee which studied DBS applications suitable for computer processing and assessed the computer facilities required. One result was that Treasury Board granted permission to up-grade one of the medium-sized computers now installed at DBS to carry the workload over the next 18 to 24 months. Studies continue of specifications for a possible new large computer to replace the obsolescent model now in use, and of alternative methods of preparing input for computer processing, with particular emphasis on optical scanning equipment now available and under development.

Tabulating Services Division

The subject-matter divisions of the Dominion Bureau of Statistics gather data which form the basis for statistical tables and the Tabulating Services Division provides the facility, using a variety of methods, to process the data and reduce it to more manageable form for further analysis or publication.

When a minimum of cross-classification is required, aggregates and averages may be produced directly as a clerical operation by means of peg-bar methods of compilation, using comptometers and desk calculators. Some 35 operators handle a considerable volume of data, particularly where monthly, quarterly, and annual tabulations of a repetitive nature consti-

tute a large part of the work. Many other special projects are handled on a recurring or non-recurring basis involving more complex calculation procedures.

Many DBS projects involve more complex cross-classifications which necessitate more difficult and rapid manipulations of the data. For these projects the Division uses:

- (1) a large key punch section with over 100 key punch/key verify machines;
- (2) a wide variety of unit record (punched card) equipment including sorters, collators, reproducers, interpreters, card proving machines and tabulators;
- (3) 1 medium and 2 small scale electronic computer systems.

During the year some 30 million punch cards were used in total, of which about 20 million were key punched by some 125 key punch and key verify machine operators. In January 1967 an evening shift was initiated, working from 7 p.m. to 10.45 p.m. (a half shift) to increase our overall production without an increase in space and machine requirements.

Editing of the data by mechanical means and seeking out inconsistencies which may arise through misinterpretation of instructions, definitions governing the collection of data, and errors in recording answers, are important functions of the unit record sections and computer centre. After errors revealed by the editing function have been corrected, and before the actual tabulation of totals, averages, medians, and percentages, the punched cards or records on magnetic tape must be sequenced, grouped and classified by the various characteristics of the data.

To an increasing degree, tabulations are prepared which can be used directly as photocopy for printing publications. This eliminates both the typing or vari-typing of data from rough tables and the proof reading of final copy. This method has been in use for a considerable time for statistics of external trade and has been extended to include tables for statistics of shipping, canals, penitentiaries, building permits, commodity index, stock inventories, and electric and gas meter registration.

Most of the time and effort of the Division is allocated to the work of the DBS. However, some requirements of other government departments and agencies have been accommodated on a cost-reimbursement basis and, on the other hand, the Bureau makes use of other computer facilities when time is not available on our own equipment or when our own facility lacks the required capacity. The DBS installation now con-

sists of an IBM 705 computer system, an IBM 1401 and an IBM 360/30 computer system and peripheral equipment. Throughout the year the computer centre operated on a 3-shift, 24-hour day, 5-day week basis with some week-end work to maintain schedules and meet deadlines, yielding some 5,300 productive hours on the 705 system and 12,600 productive hours on the 1401/360 systems. Over 4 million sheets of original tabulations were produced in the year under review.

This being a "quinquennial census" year, about 4½ million documents were written on to magnetic tape by the 'Document Reader'. At the end of the fiscal year, processing of this data was under way in the computer centre.

Central Programming Division

The Central Programming Division develops the systems and technical instructions which permit DBS work to be processed on electronic computers. The establishment strength of this division at March 31, 1967 was 59 with all positions filled. This is the first time in several years when there were no vacancies at the end of the year. Experienced programmers continue to be in short supply but recruitment of trainees through the Public Service Commission was successful. Requests for programming services continued to be greater than the supply.

During the year a total of 544 new computer programs were written as well as maintenance on continuing systems. Programming for volume requirements of the 1966 Census of Canada was completed.

Programs written by the Scientific or Mathematical Processing Section continued to be mainly for the Sampling and Survey Research and Econometric Research Divisions although there is a noticeable trend toward increased requirements for the Current Business Indicators, Regional Statistics and Analysis, and Health and Welfare Divisions.

Resources in the Data Processing Section were distributed 22 per cent for the Census Division, 74 per cent for other DBS Divisions and 4 per cent for outside agencies. This 4 per cent is a significant drop from 8 per cent in the previous year. There are two reasons for this decrease. Firstly, special requests for 1961 Census tabulations had to be curtailed in order to concentrate on 1966 Census programs. Secondly, programming requirements for processing Federal Government Employment and Pay Research Bureau surveys are in the process of being transferred from the Central Programming Division to the Financial Statistics Branch.

Conferences and seminars were attended in Montreal, Miami and Geneva. Visits were made to Washington, Seattle, Toronto, Chalk River and Edmonton in connection with specific projects.

Management Services Section

The Management Services Section was established in the latter part of 1965 to provide a departmental consultative service for improvement in the utilization of production staffs. Considerable effort was spent initially on the recruitment of staff, and by the end of the 1966-67 fiscal year a satisfactory staffing level was reached.

Several significant study projects were undertaken and completed during the year. These include: replanning of the Consumer Price Index monthly survey to facilitate computer processing; development of an integrated judicial reporting form for joint use by the Quebec Department of Justice and DBS; development of a mechanized system of personnel records to aid personnel management, recruiting and budgeting; determination of staff requirements based on workload and development of a revised organization structure for the Publications Distribution Unit of DBS.

Projects which were in progress at the end of the year include; studies of the records management requirements of the Census and other divisions for the purpose of developing suitable information storage and retrieval systems; a workload study covering the Education Division; the establishment of production standards for typing irregular tabular material; planning of physical facilities and clerical procedures for the Central Personnel Records System; functional reorganization of the Personnel Section to reduce manpower requirements; and a study of the manual processing procedures in the Agriculture Division for the purpose of assessing the feasibility of mechanization.

Central Registers Section

The Central Registers Section administers and develops the DBS Central List of Companies and Establishments, which provides a basic record of the firms which should be included in individual DBS surveys. The Central List numbering system was adopted during the year for several surveys in the Business Finance Division, Merchandising and Services Division, and the Health and Welfare Division. At the close of the year under review its adoption by other surveys in these divisions and in the Education Division was being initiated.

Investigation and resulting clarification of inconsistencies in the Central List continued. During the year 450 such problem cases were cleared and there was a remaining backlog of some 250 cases requiring solution. Because of continuing mergers, expansion and reorganization in business, it is unlikely that this backlog can be reduced by any significant amount. In addition, regular maintenance of the Central List record required 30,000 additions,

11,000 deletions and over 72,000 revisions of existing records due to changes in name, location, activity or establishment breakdown.

Interest increased in the use of the Central List record for industrial classification by government departments and agencies and by business. The numbering system used in this record is also being examined by industry as a possibility for establishing a standard "vendor code" system in business.

During the year it became evident that the existing abbreviated record on magnetic tape was inadequate to accommodate the demands made on the Central List. Accordingly, an outline of a sys-

tem for enlarging the tape record was developed. The new system will be fully automated and is capable of providing unique identification and uniform industrial and geographical classification of all DBS respondents and of identifying each DBS survey covering a respondent or reporting unit.

The co-operative arrangement continued with the Unemployment Insurance Commission whereby their local offices collect a Nature of Business Report from all new registrants. This has proven to be the major source of information necessary to keep DBS survey lists up-to-date. It results in the semi-annual publication *New Manufacturing Establishments in Canada*.

ADMINISTRATIVE SERVICES

Under this general heading are found a series of functions serving the Dominion Bureau of Statistics as a whole, including administration, staff organization, financial control, publications distribution and office services such as the addressograph unit, drafting unit, stenographic pools, supplies, mail and messenger services.

Staff Organization

Arrangements for the maintenance of an effective work force is the function of the Organization and Personnel Sections. In carrying out these functions it is necessary to maintain close liaison with the Public Service Commission on recruitment, pay, promotions, transfers and related matters.

The staff employed on continuing operations on March 31, 1967 numbered 2,459, an increase of 211 from the number employed on March 31, 1966; and there were 236 term employees on the Census staff on March 31, 1967. During the year, 81 statisticians and economists were recruited and 44 were separated. During the summer of 1966, 54 research assistants were employed on summer projects. Throughout the year 248 promotion competitions were conducted.

Casual clerks were recruited for compilation work on the 1966 Census up to a maximum of 331 in head office for the month of July, 1966. This number was reduced to 52 by March, 1967.

The establishment authorized for the fiscal year was 2,663 continuing positions and 722 man-years of casual clerical assistance including 574 for 1966 Census work.

The Health Unit, a branch of the Public Service Health Division of the Department of National Health and Welfare, continued to provide an industrial nursing service for employees.

Staff Development and Training

An extensive training and development program was implemented over the past year and included departmental, Public Service Commission and out-training courses. In the past year the emphasis has been on non-professional training.

The Public Service Commission annually conducts courses in government administration at three levels--junior, intermediate, and senior. This department took advantage of the junior level course and sent six junior officers for training. Because of the large numbers of managers to be trained, the DBS training office organized departmental managerial development courses for the junior and intermediate levels. Fifty-four DBS supervisory personnel graduated from the junior course this year. The intermediate level course will commence in the fall of 1967. For senior management, the department conducted a one-week seminar in Cornwall, Ontario. Its objectives were to familiarize the senior managers with the new personnel and financial management philosophies in the Public Service resulting from latest legislation. Twenty-eight personnel from the directors to the Dominion Statistician levels attended.

In addition to the management development courses, there were other courses organized to instruct line managers in specific techniques: sixteen attended a Divisional Administration Officers Course; forty-six attended a Job Analysis and Job Evaluation Course; sixty attended Computer and Data Processing Courses.

With the expansion of the Public Service Commission language training facilities this year, DBS was able to enroll 102 personnel in the French and 17 in the English courses.

During the year, twelve External Aid trainees from nine countries spent from two weeks to one year at DBS, participating in vari-

ous External Aid programs. These trainees came under fellowships granted by various Canadian Aid programs as well as United Nations and Pan-American Health Organizations.

Twenty-five personnel qualified for 50 per cent reimbursement of registration fees for evening and correspondence courses this year. Three junior statisticians were on educational leave with an allowance equivalent to half-pay to pursue post-graduate degrees in Economics and Statistics.

Training and development is expected to increase in importance because of the growing demands being made on managers and the complexity of new technologies with which they must deal. It is hoped that in the coming year more training for the professional staff will be available.

Incentive Awards

During the year, 32 suggestions from DBS employees were considered by the Incentive Award Committee of which 10 were carried forward from the previous year. Of these suggestions, 10 were approved for awards valued at \$377.50 with an estimated saving to the Bureau of \$5,050. At the end of the year nine suggestions were still under investigation.

Financial Services

This Section has two main functions, one concerned with the financial operation of the Bureau including the co-ordination of the program review and estimates. The second is concerned with the sale and distribution of DBS publications.

The Accounts Unit examines and controls expenditures, audits travel claims and commercial accounts, maintains a budget reporting system and interprets financial regulations. During 1966-67 a start was made on reorganizing the accounting system and estimates procedure to give emphasis to the statistical program aspects of the operation and to set up accounting responsibility centres in line with the various activities.

The Publications Distribution Unit maintains current mailing and subscription lists for distribution of publications. During the fiscal year 1,411,571 pieces of mail were dispatched and 21,288 mail orders were received. The subscription mailing list now contains 175,111 mailing plates.

Office Services

As of March 31, 1967, Typing and Transcribing Services included four Typing Units located in DBS, one in No. 8 Building to service the Census Division, and one (established in May 1966) in the Kent-Albert Building to service the

Aviation Statistics Centre. The number of lines (or equivalent) produced in all Units during the fiscal year totalled 7,832,516. In addition, staff assigned to particular areas produced 1,087,533.

The Printing Liaison Services Unit, in addition to maintaining liaison with the Vari-type and Printing Sections of the Canadian Government Printing Bureau situated at DBS, is responsible for examining manuscript of DBS publications being submitted for composition and advising on layout, format, standards, stock and binding of publications. During the 1966-67 fiscal year, this unit processed and prepared 15,400 pages of copy for printing.

The Drafting Unit prepared 2,625 graphic illustrations by means of charts, maps, displays, publication covers and pamphlets, for the Divisions of the Bureau and other Departments and Agencies of the Government, an increase of 9.4 per cent over the previous year. In addition, the Unit completed a series of 42 charts for the Royal Commission on Health Services.

In the Forms Design Unit, the continuance of the trend toward more extensive use of mechanical equipment and automated data processing in the production of statistics has resulted in additional time being spent on analysis and development of such forms. During the year under review, the Unit processed 3,356 forms comprising 9,649 pages of reprints, revisions and new or redesigned forms; 690 specialty forms and envelopes were prepared and 2,287 other miscellaneous printing jobs, comprising 29,609 pages, were processed.

In the Addressograph, Mail and Supplies Unit 18,595,216 forms were addressed for the various divisions of the Bureau. In addition 216,934 plates were embossed, 124,693 corrected and 320,097 deleted. In addition 200,700 pieces of mail were enveloped by hand and 3,291,316 were inserted by machine. Late in the year, the Unit acquired a heat transfer printer which will accept addressing jobs based on computer-originated address listings.

During the year 25,882 bags of mail were deposited with the Post Office and 10,968 were received. In addition to mail for delivery in Canada, 18,632 pieces of registered mail, 19,875 air mail, 1,190 special delivery, 6,116 parcel post and 99,149 foreign mail were dispatched. Also included in mail dispatched were 1,840 bags containing 4,401,069 letters for the Department of Agriculture.

The Supplies Unit submitted 1,221 printing and stationery requisitions to the Department of Defence Production, for an estimated value of \$716,150. The supplies inventory as at March 31, 1967 was \$39,336; the annual stock turnover rate, therefore, was 18.2. Replacement value of DBS office machine and equipment inventory, based on original cost, was \$771,516.

DOMINION BUREAU OF STATISTICS SENIOR OFFICERS

Dominion Statistician Walter E. Duffett

Assistant Dominion Statistician (Integration and
Development) S. A. Goldberg

Assistant Dominion Statistician (Administration,
Finance and Personnel) H. L. Allen

Director General (Operations and Systems Development
Branch) L. A. Shackleton

Assistan Dominion Statistician (Socio-Economic
Statistics Branch) L. E. Rowebottom

Director General (Economic Accounts Branch) C. D. Blyth

Director General (Financial Statistics Branch) G. A. Wagdin

Director General (Economic Statistics Branch) V. R. Berlinguette

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