

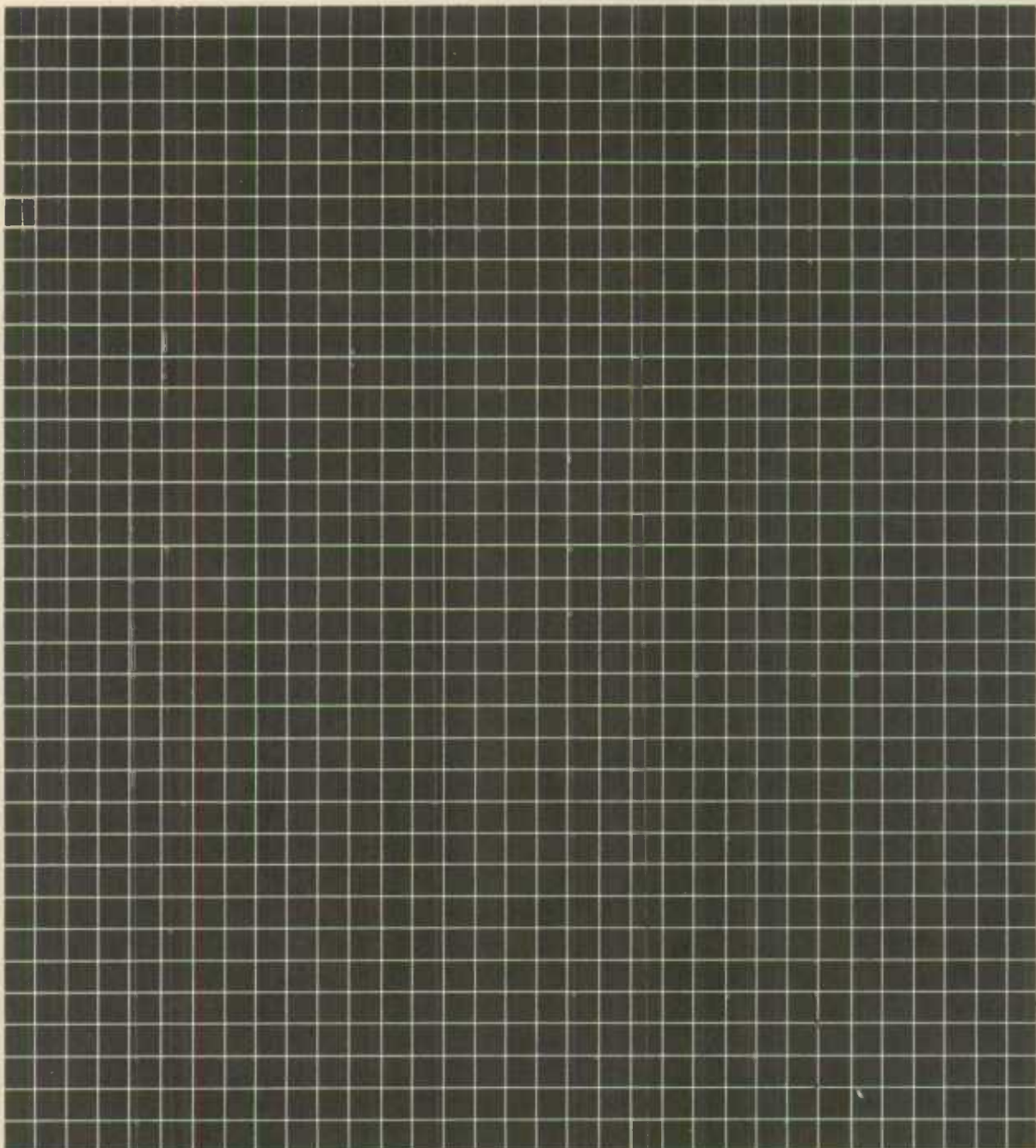
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Dominion Bureau of Statistics

Annual Report

For the Fiscal Year ended March 31, 1971



CATALOGUE No.

11-201



ANNUAL REPORT

OF THE

DOMINION BUREAU OF STATISTICS

FOR THE FISCAL YEAR
ENDED MARCH 31, 1971

October 1972
0001-502

Information Canada
Ottawa

THE HONOURABLE JEAN-LUC PEPIN, P.C.,
MINISTER OF INDUSTRY, 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, 1971.

Respectfully submitted,

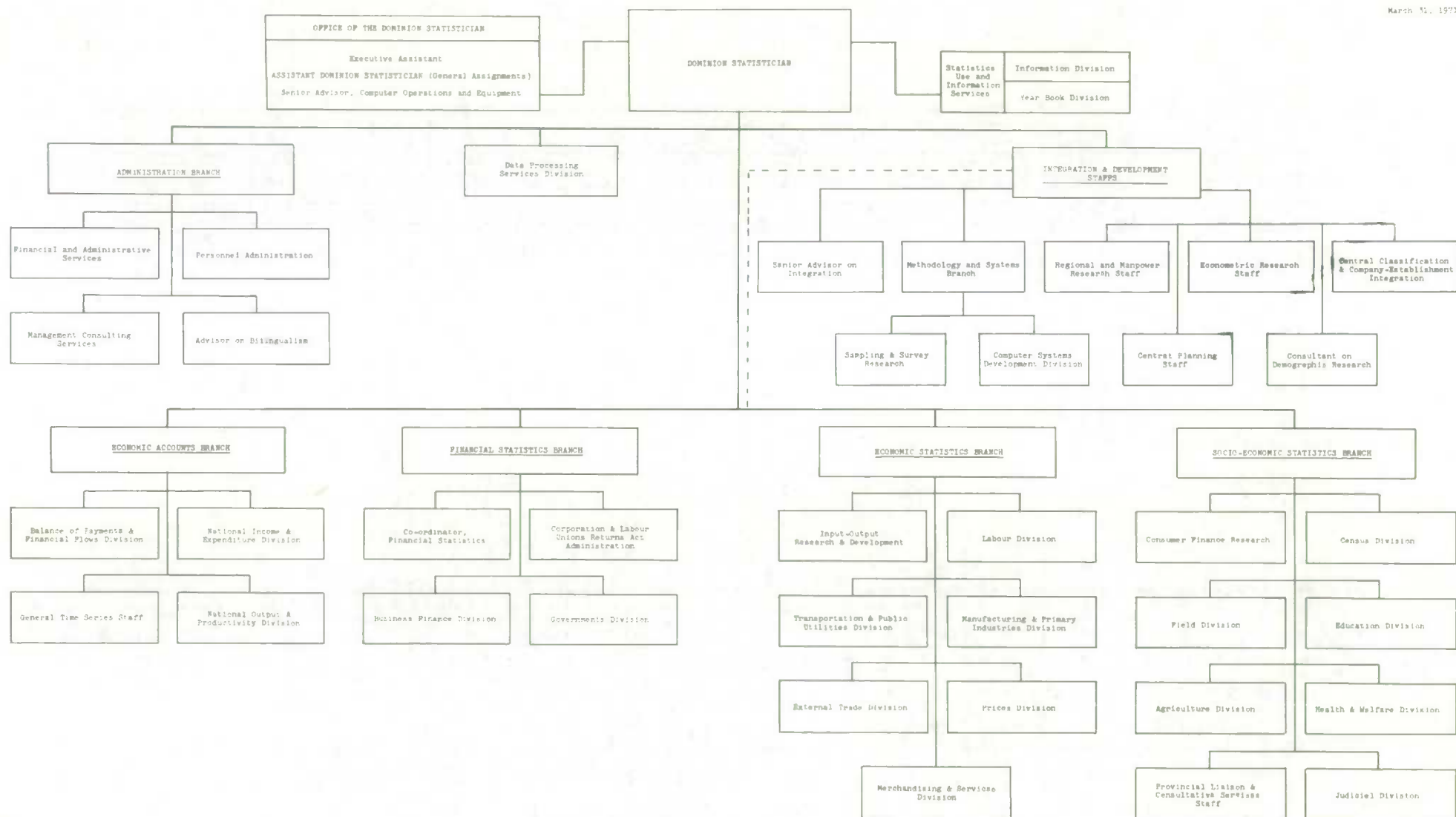
Robert E. Duffett.

Chief Statistician of Canada

Ottawa, Canada
May 31, 1972

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GENERAL ACTIVITIES

The year 1970-71 witnessed the consideration and approval by Parliament of a new Statistics Act, incorporating a basic review of the needs of users, the growing importance of the provinces and the experience of the Dominion Bureau of Statistics with the previous legislation. It is a tribute to the foresight of those who drafted previous versions of the Act, in particular to R.H. Coats who prepared the first Act of 1918, and to understanding by legislators of the objectives of the organization, that the basic principles of the legislation remain untouched, the changes reflecting new opportunities, such as the increasing use and importance of income tax data, and new structural developments in the national statistical structure with the growth of statistical offices in many of the provinces. Access to corporate income tax returns had been facilitated since 1965 through the Corporations and Labour Unions Returns Act (CALURA) which was administered by the Dominion Statistician. Also, access to "personal" income tax returns was becoming an increasingly urgent matter because of the importance of unincorporated businesses (which provide financial statements as part of the return), and because of public interest in personal income distribution. The new Act sets up improved procedures for co-operative arrangements with the provinces, of great importance in avoiding duplication of questionnaires sent to business firms.

The new Act was assented to February 11, 1971 (proclaimed May 1, 1971). The title of the organization is changed from Dominion Bureau of Statistics to Statistics Canada, with a transitional period during which both titles may be used. This provision was of particular importance in connection with the 1971 Census, for which advertising and

questionnaires had to be printed before the passing of the new Act.

Preparation continued during the year for the 1971 Census of Population, Housing and Agriculture, details of which will appear in the next Annual Report.

The balance of the year's activities consisted, as usual, of a great diversity of programmes designed to strengthen the statistical system, and to adapt it to the growing and changing needs of users. Among basic long-run projects was the completion of the first Canadian Occupational Classification and Dictionary of Occupations, a joint project with the Department of Manpower and Immigration. Statistics of the Real Domestic Product were converted from a quarterly to a monthly basis, DBS being the first major statistical agency to take this step.

The organization naturally attaches great importance to its relations with users, and improvements in this respect occurred throughout the year. In addition to the Statistics Use Officers established some years ago in our Montreal and Toronto Regional Offices, further officers were established in Vancouver and Winnipeg, together with strengthening of Head Office staff in this field. A somewhat similar function is performed by Provincial Liaison Officers in respect of provincial governments, and this staff was also strengthened during the year.

As the organization grows in size and complexity, increased delegation by the Dominion Statistician becomes appropriate. In these circumstances the organization becomes continually more dependent on the dedication of staff at all levels, which is gratefully acknowledged by the Dominion Statistician.

STATISTICS USE AND INFORMATION SERVICES

Included in the responsibilities of Statistics Use and Information Services are improvement of the quality of the uses of DBS information in society and the extension of such uses among marginal and non-users; improvement and maintenance of good relations with respondents to DBS surveys, publicity, public relations and information activities for DBS; the compilation and publishing, in English and French, of the comprehensive reference volume the *Canada Year Book*, publication of the handbook *Canada*, and the pro-

vision of library services to DBS, other research workers and the public.

Statistics Use Development

The Statistics Use Development Section continued to operate within the following broad objectives:

(1) Assisting major users of DBS data to improve quality of uses by providing

background information on concepts, definitions, methodology and other technical aspects of the data, by investigating availability of non-published data and by establishing dialogue between users and subject-matter divisions.

(2) Research into who uses DBS information and how it is used, by conducting occasional surveys of respondents to advertising campaigns, and surveys of subscribers to selected publications, and by conducting numerous visits to established users and reviewing current relevant literature on the subject.

(3) Development of additional uses of DBS information, particularly in the business community, through visits, seminars, and lectures so that the output of DBS may receive wider application.

(4) Providing subject-matter divisions with useful comment and criticism received from users of our data regarding the value of the data as it relates to decision-making so that these criticisms may be considered in the design of future statistical programmes.

In addition to the above, the Section was involved with presentations regarding the scope and uses of DBS data to various academic and research institutions and was involved with the organizing and presentation of seminars to various user groups who visited the Bureau. Some of these organizations included the Financial Research Institute, Sir George Williams University, Université du Québec, University of British Columbia, University of Toronto, University of Western Ontario, Toronto Area Research Council, Ryerson Polytechnical Institute and Algonquin College.

During the year Statistics Use Development Officers were established at the Vancouver and Winnipeg Regional Offices to meet the demand for technical assistance in using our information, to locate and encourage new users, and to provide professional consultation and contact at the regional level. In addition, an Officer and Research Assistant were added to the headquarters staff in order to meet the demand for user assistance originating in the headquarters' area, and to provide back-up research services to the Statistics Use Development Officers in the field. Although the Section works primarily with users in the private sector, significant assistance was provided to municipal governments and planning boards regarding access to and uses of DBS data. In addition, some assistance was provided to provincial departments in co-operation with Provincial Liaison Staff.

Information Division

During 1970-71, the Information Division continued its functions of providing promotional material in support of DBS activities, and greatly intensified its programmes related to the 1971 Census.

Improved scheduling and production procedures, in the Publication Services Section resulted in faster release of information, increased timeliness and usefulness of material in the *DBS Daily* and the *DBS Weekly*. Circulation of the *DBS Daily* increased from 2,800 at March 31, 1970 to 3,100 at March 31, 1971. During the same period, circulation of the *DBS Weekly* increased from 7,850 to 9,900.

Other activities of the Publication Services Section included publication of the *Statistical Observer* and a review of the distribution policies for DBS publications.

During 1970-71, the Publicity Services Section was heavily involved in publicity, public relations and advertising activities for the 1971 Census. The Unit prepared promotional material (booklets, folders, posters, press releases) containing information on the methods and purposes of the census to increase Canadians' awareness and acceptance of it. Explanatory material, to be used to help respondents complete census questionnaires, was also prepared by this Section. In addition, the Section is co-ordinating the regional publicity programmes for the census.

Arrangements for the 1971 School Census, a voluntary project in which school children are introduced to the census and have an opportunity to complete a special questionnaire, were undertaken by the Publicity Services Section. Activities of this programme included writing letters to teachers and provincial ministers of education, preparing instruction kits for teachers and co-ordinating the distribution of questionnaires.

The material to be used by census workers, both for their own information and for distribution to respondents, was also prepared in this Section.

Publicity Services also helped promote the work of other DBS Divisions by preparing advance publicity and follow-up reminders for surveys, by informing the general public of the role of DBS.

During the year, the Art and Design Unit of the Information Division continued its work in the preparation of bulletin covers, survey folders, questionnaires, reminder cards and audio-visual displays

for all DBS Divisions. Much of the work of this Unit during 1971 also was the designing and production of census material - posters, information folders, Census Representatives' kits and manuals, questionnaires and follow-up postcards.

The Inquiries Section is the prime DBS centre of contact for both private and public sectors, handling in its normal course of activities some 1,600 inquiries each month. These originate by mail, telephone and through personal approach.

Each of the inquiries is dealt with on an individual basis according to merit and requirement. Elementary requests usually require a minimal time allotment; the more complex queries, however, involve research of DBS reference matter, consultation with other governmental and private sources, and special compilations and other related activities. While most of the inquiries originate in Canada, many emanate from foreign countries.

The Inquiries Section was heavily involved in the processing of late arrivals of coupons generated by last year's advertising programme designed to extend the uses of DBS information. A special advertisement carried in "Foreign Trade" also resulted in a number of inquiries which were processed in this Section.

Also, the Section embarked upon a complete revision of the Bureau's catalogue of publications, and at fiscal year end approximately 60 % of the manuscript was ready for print. The new catalogue will feature separate English and French subject and commodity indexes. The Section plans to issue a new catalogue in January each year.

Supplements to the catalogue, which serve to update the catalogue, showing new titles issued, titles discontinued, and changed titles, were published at two-month intervals during the year. The Section is collaborating with the Census Division in the production of a special catalogue of 1971 Census publications.

Year Book Division

The programme of the Division includes the planning, compiling, editing and publication annually of the English and French language editions of two official basic reference reports on Canada, the *Canada Year Book* and the handbook *Canada*, 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. Because of budgetary restrictions, no edition of the *Canada Year Book* was published in 1970, and a combined 1970-71 edition will be released in the middle of 1971. The handbook *Canada 1971* was prepared for publication in January but, because of technical difficulties, its release was delayed to April 1971.

A Special Inquiries Unit, based on the *Canada Year Book* coverage of Canadian data and other authoritative DBS sources, supplied a regular series of statistics for the United Nations Statistics Monthly Bulletins, the United Nations Statistical Yearbook and also to the International Labour Office. In addition, it provides 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. A study of library services and operations was undertaken in co-operation with the National Library with a view to examining the advisability and practicability of improving services for departmental users, for other government departments, and for the general public. The results of this study are contained in a report, the recommendations of which are currently being examined by DBS management.

DATA PROCESSING SERVICES DIVISION

In the fall of 1970, the data processing activities of the Dominion Bureau of Statistics were reoriented and the Data Processing Division was designated as a unit reporting directly to the Dominion Statistician. This has also meant a reorganization within the Division to reflect the full responsibility for providing a service to the

user divisions of the Bureau. This service has involved the operation of the data processing facility to process the material originating with the user divisions and also the provision of a user consultant service to assist in the resolution of software and hardware problems. A Research and Development Section was organized to

assess equipment and techniques in relation to Statistics Canada needs, to review and update systems and procedures and to anticipate future requirements for data processing capability.

The Division provides a variety of equipment and techniques for the processing of data gathered by the subject-matter divisions of the Bureau. When a minimum of cross-classification is required, aggregates and averages may be obtained by peg-bar methods of compilation using desk calculators. For projects involving more complex cross-classifications and manipulations, the Division uses a large-scale computer with its attendant peripheral equipment. The IBM S/360-65 computer installed in mid-1969 operates on a 5-day week, 24-hour day basis. To meet the increasing volume of work the core memory available in the system was increased from 512,000 to 768,000 in July, 1970, and to 1,024,000 in December 1970. By the end of the year, March 31, 1971, the work load was such that occasional overtime was required on Saturdays and Sundays to meet peak loads and established target dates.

In the area of computer input preparation, a key-edit system was acquired in

March 1970. With this system, 16 operators working simultaneously, transfer data from original documents onto magnetic tape. By mid-1970, initial difficulties with the system were resolved and productivity increases of up to 25 % were achieved dependent upon the application. A second unit of 16 keyboards was added before the end of the year.

The Division co-operated with the Canadian International Development Agency in the installation of a S/360-30 computer in Kingston, Jamaica, for the processing of the 1970 Census of the West Indies. This equipment was formerly installed at the Dominion Bureau of Statistics. Consultant advice was provided, both in Ottawa and in Kingston, Jamaica, concerning the preparation of the Jamaican site. The equipment was successfully installed and a team of four from the Bureau was made available in Jamaica to assist with the initial generation of the operating system, the hands-on instruction of Jamaican personnel and the organization of the initial processing of census data. The Computer Centre, at the University of the West Indies, is operating successfully with local personnel.

INTEGRATION AND DEVELOPMENT STAFFS

The following staffs are attached to the office of the Assistant Dominion Statistician (Integration and Development Staff): Central Classification and Company-Establishment Integration; Econometric Research; Regional and Manpower Research; Consultant on Demographic Research; Central Planning and Programming; and the Methodology and Systems Branch. A review of the activities of these groups follows.

Central Classification and Company-Establishment Integration Staff

The Division's work falls into three main areas: The Classifications Section maintains and revises existing statistical classification systems, adapts them for special purposes, and develops new classifications: the Company-Establishment Integration Section is concerned with the relationship between statistics based on surveys of establishments (usually operating units within a company) and statistics obtained from financial statements for companies as such; the Central Registers Section develops and maintains a central list of all businesses, institutions and similar organizations engaged in economic activity in Canada including their establishments.

The Classifications Section is concerned basically with four standard classifications. They are: The Standard Industrial Classification, The Standard Commodity Classification, The Standard Geographical Classification and The Canadian Classification and Dictionary of Occupations. Each of these classifications provides a detailed set of groups and classes for the entities appropriate to its field of application. They are essential for the efficient use of statistical data in that they provide a means of making data comparable through common definitions and of eliminating gaps in coverage.

During the past year the Section has been involved primarily in preparing revised editions of the classification manuals. The decennial census (1971 in this case) serves as a benchmark year for many of the statistical series produced by DBS and the classifications are revised in advance for this occasion. These classifications will be introduced to all relevant statistical programmes as soon as feasible.

A revised edition of the Standard Industrial Classification was released during the year and the Canadian Classification and Dictionary of Occupations was delivered for

printing, culminating a massive research and development programme extending over five years. The CCDO programme is a joint project with the Canada Department of Manpower and Immigration who will produce the main dictionary in which some 8,000 occupations are covered, while DBS is producing a manual for coding census data. It is the first time that a classification serving both statistical and job placement purposes has been available. Development work also proceeded on revisions to the classifications for commodities and geographical areas with most of the intensive work being completed in the past year. Manuals for these classifications will be published in the coming year.

Company-Establishment Integration Section is concerned with the relationship between financial statistics pertaining to companies as such, and production statistics pertaining to the operating units (establishments) of companies. In addition, both sets of data have to be used alongside other economic and market statistics. The Section works with other divisions in the Bureau to find ways of extending the usefulness of these statistical relationships for analytical purposes.

To facilitate integration, changes in accounting and reporting procedures have been developed, and some of the Bureau's survey questionnaires are being revised. In the case of small companies it appears that income tax returns and associated documents can usefully supplement or replace surveys. Attention is now being focussed on methods of integrating the data from the more complex large companies that span two or more industries.

The foregoing research relates chiefly to identifying and dealing with integration problems at the data-collecting level. In recent months the Section has also been moving into the area of integration of data aggregates. This parallel line of research seeks to identify problems of relating company- and establishment-based data that enters into the various aggregations used for analytical purposes.

The staff of this Section has also been heavily involved in the work of other divisions as it relates to company-establishment integration. The Canadian Institute of Chartered Accountants has been particularly active in integration-related work, and has conducted several projects in which this Section has participated.

The Central Registers Section administers and develops the DBS Central List of Companies and Establishments, which provides the basic vehicle for standardizing the

classification of companies and their sub-units into standard reporting units for individual DBS surveys. This work area is covered under two main headings, "Maintenance and Development" and "Central List Extension".

Maintenance and Development - During the year the Central List coverage was extended to include all levels of government and some other small sectors not already included to accommodate certain needs of DBS surveys. This, together with natural survey growth, increased the total number of records to approximately 255,000. Copies of the Central List, in whole or in part, were provided to federal and provincial government departments and agencies, as well as to some businesses in the private sector. Large individual businesses as well as business associations continued to examine the Central List as a possible source for a standard "vendor code" system.

Investigation and resolution of differences in establishment definitions between survey lists and the Central List continued, resulting in over 400 modifications in company-establishment identities on the Central List. In addition, regular maintenance of the file required 46,500 additions, 15,000 deletions and over 58,000 other revisions of existing records.

A major effort during the year was the revision and updating of the Standard Geographical Classification Codes and the application of the 1970 Standard Industrial Classification Codes to all records. Both the 1960 and 1970 revisions of the Standard Industrial Classification will be carried on the file until such time as all DBS surveys are established on the 1970 base.

Central List Extension - In parallel with the extension of the Central List to cover all businesses in Canada, was the requirement for a list of all employers to enable classification of the members of the labour force by industry and point of employment in the 1971 Census of Population. By year-end, this list was completed, comprising some 550,000 business names, each of which had been coded in line with the 1970 Standard Industrial Classification and the current Standard Geographical Classification. Preparation of this list has partially accomplished the first phase of extending the Central List to cover all businesses.

Basic work was completed to allow the inclusion of all incorporated businesses, irrespective of size or activity, into the Central List file. Basic information including names and addresses was microfilmed from the cover sheet of Corporation Taxation Returns for the complete year 1969 plus new returns for 1970. At year-end, co-operative

arrangements with Department of National Revenue - Taxation were being finalized for keypunching this information to allow computer match/merge into the Central List file.

The Interdepartmental Working Committee with continuing representation from DBS and Department of National Revenue - Taxation continued investigation into the development of a Common Employer Numbering System applicable to all businesses in Canada.

Effective January 1, 1972, the revenue control function of the Unemployment Insurance Commission is to be transferred to the Department of National Revenue. At that time, Central Registers Section will assume responsibility for continuing maintenance of the sample frame used for the Monthly Employment Survey of small employers. Input for continuous updating of the frame as well as source material for our semi-annual publication "New Manufacturing Establishments in Canada" will be coming from DNR rather than UIC as at present. During the year extensive negotiations were conducted with the Department of National Revenue - Taxation to ensure that with the transfer of the revenue control function to that department there would be no available break in continuity of maintenance of DBS records.

Central Planning Staff

As noted in the previous report, a planning function was formally established in 1969 and a small staff assembled to work under the general direction of the Assistant Dominion Statistician (Integration and Development). The first phase of the staff's activities involved extensive study and discussion with a broad cross-section of Bureau managers of possible approaches to the planning problems faced by a centralized statistical agency. By the latter part of 1970, it had become clear that, while a comprehensive planning system covering subject-matter, methodology, research, integration, automation, production, marketing, finance, personnel and other elements should be the long-term goal, the development and implementation of the system on a step by step basis would minimize the problems of adaptation while at the same time yielding immediate and cumulative benefits.

The cornerstone of this gradual approach is the subject-matter itself and new procedures for the generation and systematic assessment of project proposals are currently under development. Much of this initial work is being done in the context of the departmental programme forecast for which the staff now has responsibility, but it is hoped to

integrate the procedures with the operational work of the Bureau on a year-round basis. Towards the end of the year, the staff assisted in the preparation of a paper on the Planning and Co-ordination of Statistical Programmes in a Central Statistical Office to be presented before the International Statistical Institute in Washington, D.C. in August 1971.

Consultant on Demographic Research

During the 1970-71 fiscal year the major portion of the time of the Consultant on Demographic Research was devoted to the provision of inputs to two substantial federal government projects and to Statistics Canada subject-matter areas. The first included the development of new methodology in regional population projections for Canada in that the migration component of population change was derived from projections of the level and industrial composition of labour demand in each metropolitan area. The second project was an attempt to provide a systematic information base for government policy in the field of population size and composition.

The Consultant also represented the Dominion Bureau of Statistics on an interdepartmental Committee on Demographic Objectives, where he presented papers reviewing the network of interconnections among a wide range of factors determining major aspects of the size, distribution and composition of population, and comparing the assumptions and results of a number of recent projections.

The Consultant chaired and directed work for the 1971 Census Research Sub-Committee, which is in charge of overseeing the development of a suitable data base to conduct research on the 1971 Census output. In this connection, he and his staff executed a major operation over several months, that involved the development of a classification system for referencing tabulations and their contents, and the application of the system to the listing and classification of tabulation units, variables, geographic legends, etc. in the tabulations of all previous censuses of Canada. In connection with the 1971 Census research activities, the subject-matter areas requiring research activity were outlined in several meetings of the Research Sub-Committee and over 600 tabulations specifications were turned in for his analysis, integration and synthesis in connection with such research projects (to supplement tabulations not already covered by the regular subject-matter sub-committees).

The Consultant also chaired a number of other committees including: the interdivisional Technical Committee on Population

Projections, the interdivisional Committee for Research on Vital Statistics, and the Census Division Standing Research Committee.

The Consultant has also served as Acting Assistant Director in charge of the Research Sub-Division of the Census Division. The Research Sub-Division conducts research on population patterns and trends and is in charge of producing population estimates and projections. In addition to these managerial duties he made a number of inputs to discussions and activities concerning division-wide problems. The Consultant also provided consultation on various demographic matters to several government and private agencies including the Economic Council, CMHC, Privy Council and Universities.

Econometric Research Staff

The Econometric Research Staff conducts research and provides consultative services to various DBS subject-matter divisions on the application of econometric and related techniques to the production, analysis and improvement of DBS data. In addition, it works in close co-operation with some of the research groups in other government departments.

During the 1970-71 fiscal year, continued emphasis was placed on the use of econometric and related techniques to improve the timeliness and the quality of various series produced by the DBS. Staff members developed equations for generating earlier quarterly and monthly estimates of some of the components of the National Accounts, and collaborated with the National Income and Expenditure Division in making the historical revisions of the National Accounts.

The staff actively participated in the development of an econometric model for the medium-term analysis of the Canadian economy, in particular, the investment, wages and prices sectors of the model.

A study entitled, *Married Female Labour Force Participation: A Micro Study*, was published by DBS. Another study, the Development of Methods for Estimating and Updating the Coefficients of Input-Output Tables, was documented and included in the Working Paper Series of the Econometric Research Staff.

First drafts of two other studies: Determinants of Hospital Costs in Ontario and An Evaluation of DBS' Capital Stock Estimates for Manufacturing, are being prepared. Satisfactory progress was also made on five other projects: Determinants of the Participation Rate of Married Women in the Canadian Labour Force, Analysis of Industrial Structures, Economics of Education, A Study of

Industry Selling Price Indices and An Assessment of the Usefulness of "Hedonic" Price Indices in the Development of Construction Price Indices.

In co-operation with the Staff Development and Training Section, a one-semester course on Econometrics was given to members of the DBS professional staff.

Regional and Manpower Research Staff

The work of the Regional Research Section on development of estimates of socio-economic data for sub-provincial areas continued to receive the main emphasis during the year. In anticipation of the availability of 1971 Census data for evaluation of estimation techniques, emphasis was given to automating the techniques so that evaluation and, where warranted, subsequent production would be subject to minimal delays.

In addition, the Regional Staff participated in undertaking statistical development projects such as those in close co-operation with provincial agencies and other DBS Divisions.

The Regional Staff continued to provide special data services to the various federal agencies having and interest in regional statistics and participated in statistical developmental work in consultation with other Bureau Divisions.

The Special Manpower Studies Section has maintained its traditional programme but with a new emphasis on the use of current data obtained from the Labour Force Survey and of Labour Force Survey historical files. For example, a new approach to the measurement of primary and secondary labour force participation is being tested from the January survey: two recent studies to be published in the forthcoming Labour Review examine trends in youth participation rates and in educational composition of the Labour Force.

Considerable time has been expended on exploration of methodology and feasibility of developing data series on employment by occupation in close liaison with Sampling and Survey Research and the Job Vacancy staff, as a result of which a pilot survey will be undertaken in June 1971. Other staff activities include the examination and analysis of job vacancy data, liaison with the Department of Manpower and Immigration and the Economic Council of Canada on particular research topics; close co-operation with DBS Labour Division with regard to planning the use of the Labour Force Survey to obtain additional information and special investigations such as paid worker reconciliation.

METHODOLOGY AND SYSTEMS BRANCH

During the year this new branch has been created comprising the Sampling and Survey Research Staff, the Computer Systems Development Division and the Electronic Data Processing Training Staff. The new branch thus combines the major disciplines, except subject-matter, involved in the development of survey and census designs and their automation, thus permitting a better integration of their activities. The responsibility of the branch is to work on the methodology of DBS surveys, design new surveys or redesign existing ones and participate in their implementation; and to design, develop and implement the required computer programmes. The objective of such work is to achieve, through the application of sampling, improved survey methods and automation, one or more of the following: increase the reliability of statistics; improve their timeliness; reduce the cost of compiling them; facilitate the extensive utilization of the collected data in individual surveys by establishing easily retrievable machine-readable data bases; and develop the necessary software to facilitate the creation of broad, integrated data bases.

Within the branch headquarters, the Electronic Data Processing Training Staff is charged with the development of a Bureau-wide EDP training programme aimed at both professional computer systems and subject-matter and clerical personnel. A broad range of courses have been developed including introductory courses, several courses in programming languages, systems analysis, specialized and advanced programming techniques. The development has begun on several courses which will be used to train subject-matter and clerical staff in the use of generalized programmes (utilities).

Sampling and Survey Research Staff

This staff has functional responsibility for the design or redesign of the methodology of surveys and censuses. Most of the work of the staff can, therefore, be grouped around projects of the different subject-matter divisions.

Census Division Projects - The basic design and estimation work for the 1971 Census was completed in the previous year. During the 1970-71 year the staff has been engaged in designing and developing three major evaluation projects and another major project which is oriented towards the 1976-81 Censuses. In addition to these projects, the staff has been developing several smaller evaluation projects and several plans for controlling the quality of the 1971 Census.

(Last year's Annual Report described the objectives, design, etc. of the evaluation projects mentioned below.)

- (1) Post-Census Agriculture Survey - During the past year work has progressed on this project to the extent that the maps to be used by the enumerators have all been sent out, all the manuals and training guides were nearly completed, and most of the specifications were submitted for systems analysis.
- (2) Reverse Record Check - During the last fiscal year developmental work on this project continued on schedule. All specifications for computer systems have been given to the Systems Analysts. Early phases have gone to systems analysis and programming. All the training manuals and training guides have been written as well as the clerical instructions. A dual control system will be implemented for this project and it will utilize clerical and computer methods, and all necessary control sheets, etc. have been designed. The major matching with the 1971 Census questionnaires will be done in the regional offices immediately after enumeration; tracing and follow-up will continue until approximately September 1972.
- (3) Response Variance - Progress on this project continued during the past year. The systems analysis is nearly completed. Arrangements have been made with Census Division for the supply of the necessary data in sufficient time to carry out the response variance calculations and produce estimates of response errors for publication with the other census data.
- (4) Address Register - In a sample of areas a register of addresses is maintained using administrative and Post Office information for update purposes. This register will be compared with the 1971 Census to assess the feasibility of maintaining a national register of addresses in urban areas. The required systems analysis and programming is under way.
- (5) Other Evaluation Projects - In addition to the above projects the staff are involved with somewhere between 20 and 30 evaluation projects, assisting in developing the methodology and the schedule of activities.

(6) Quality Control Plans - During the past year plans were developed for controlling the quality of the printing of the census questionnaires, the stuffing of the questionnaires into envelopes, the logistics of shipping out material to the regions, and in addition to these, quality control plans have been designed to control the work done by enumerators in the field, and by coders in the regional offices. We are presently engaged in developing quality control plans for the microfilming of the census questionnaires and, to the extent possible, of Film Optical Sensing Device for Input to Computers (FOSDIC). At the same time the specifications for DIARY I were written and the analysis was completed as well as the programming. One of the primary functions of DIARY I will be to assist in the control of the microfilming and the FOSDIC reading and, hence, its success is essential. Specifications for DIARY II of the census have also been submitted but the programmes have not as yet been written. The output from DIARY II is a record of changes, imputations, etc. occasioned by the computer editing and correction of all missing and inconsistent data and will be of little use in controlling the quality of the 1971 Census, but information from DIARY II should help pinpoint problem areas that can be improved for 1976.

(7) Work Measurement Study - The purpose of this study is to obtain estimates of time and cost of the various operations associated with data collection. Because of operational and budget constraints only 33 timers will be sent out to 33 selected Commissioner districts (located in groups of three) to time the enumerators' work in six different types of enumeration areas. The sample design and estimation methods have been established.

Labour Division Projects

(1) The Labour Force Survey - The work in this area falls into two parts. One deals with maintenance and the other with methodological aspects of the survey.

(a) Maintenance - There are several studies which provide basis for the measurement of the quality of the Labour Force Surveys.

(i) Non-Interview Rates - These rates are calculated and presented monthly in the

form of graphs for Canada and for eight regional offices. The rates are given for each of the components of non-interview such as temporarily absent, no one at home, refusal and other, and by total in interview by month and year. A high non-interview rate may introduce bias in the estimates.

(ii) Binomial Factors - These compare the sampling variability (variance) of estimates obtained from the Labour Force Survey with what would have been obtained from a completely random sample of the same size. The examination of binomial factors provide an over-all assessment of the performance of the survey design. Graphs of 12-month moving averages have been plotted and presented for two major characteristics (employed, unemployed) for self-representing units, non-self-representing units, and combined within each major region for Surveys 206 (August 1967) to 246 (December 1970).

(iii) Slippage - Rates are calculated and presented monthly in the form of graphs for Canada by age and sex, and for ten provinces by total slippage. A high level of slippage results from incomplete coverage. In this case a bias results and sampling variability is increased. As with non-response, the former is unknown whereas the latter can be found. Slippage levels are also affected by errors in the population projections. The accuracy of the population projections is not known at present and will remain unknown until after the 1971 Census.

(b) Methodology

(i) Variance-Covariance Analysis - Tables are prepared of standard deviations for 40 monthly estimates and for monthly and annual changes. They are used to differentiate changes in the estimates which reflect real

changes in the population from those which reflect apparent changes due to sampling error only.

- (ii) Telephone Study - Designed to determine the effect of telephone interviewing on the quality of the Labour Force Survey data, on the non-response rate, and on the cost of collection. The study is being carried out in the Toronto and Vancouver metropolitan areas from March to October (excluding May) 1971. Depending upon the results, a decision will be made as to the feasibility of introducing telephone interviewing in all self-representing units in all households willing to be interviewed through the telephone.

- (iii) Redesign of Labour Force Survey - Flow charts have been prepared to outline steps and activities essential in the redesign. The cost and variance function is being developed. Work has started on establishing the magnitude of changes in the boundaries of the Self-Representing Units between 1961 and 1971 Censuses. This work is necessary for making decisions on the extent of the redesign to be carried out.

- (2) Employment and Payrolls Survey (ES-1) - The revised version of this survey, referred to in last year's report, became operational at the end of 1970-71 and is now providing the official ES-1 statistics. Some technical difficulties remain to be ironed out of the part of the system that makes imputations for non-respondents and "corrects" data rejected by computer editing procedures.

- (3) Employment Survey - Small Establishments (ES-2) - The revision of this survey to collect the data as a supplement to the Job Vacancy Survey was completed during 1970-71. The possibility of some biases in the old ES-2 is being investigated.

- (4) Job Vacancy Survey - A major revision of the computer system that prepares the JVS estimates was shown to be necessary as more experience with the

data was gained. The revision was completed during 1970-71, the survey is now working and regular publication will begin in 1971-72.

The JVS system and field capacity were utilized for the collection and processing of data on training in industry and summer student employment and proved to be very efficient for these purposes. The staff was responsible for survey design and systems specifications in these surveys.

- (5) Occupational Employment Survey - The staff has designed a survey which utilizes the Job Vacancy Survey frame linked to the ES-1 (see above) frame as a means of selecting an efficient sample of the latter units for the purpose of reporting employment by occupation in an interview survey. Efficient, in this context, means that the sample is controlled, so that in a high proportion of the sample the sampled unit is at the same location as an interview-sample JVS unit. This means that the occupational data can be collected at a fraction of the cost that would be incurred had an independent sample been collected. This design represents a technical innovation of some importance for future business surveys. A small pilot survey was successfully completed in 1970-71. A much bigger one is being undertaken in 1971-72.

Manufacturing and Primary Industries Division - The staff has completed initial specifications for edit and imputation modules for a revised Census of Manufacturers System. During 1971-72 it is anticipated that these initial specifications will be translated into detailed systems specifications in preparation for analysis and programming.

Transportation and Public Utilities Division - The pilot survey of Origin and Destination of For-Hire Truck Traffic, by commodity, referred to in the last report, was completed. The decision, made on the basis of the results of this survey, to launch a major survey in 1971-72 has involved the staff in extensive design, planning, and implementation of this survey.

Central Classification and Company-Establishment Integration - During 1970-71 the Sampling and Survey Research Staff carried the main responsibility for the systems design of the project to extend the coverage of the Central Register of business units (to include all business units having at least one employee) and to automate the operation of this register.

The work carried out can be divided into three main categories:

- (1) Central List Maintenance - The actual maintenance of the Central List is the responsibility of a separate operation but certain support work has been carried out by the Extended Central List (ECL) implementation team. This includes the addition of the 1970 Standard Industrial Classification (SIC) code to all Central List records, modification extension and correction of the Standard Geographic Code (SGC) on Central List (CL) records and various record selection and format conversion operations necessary to the ongoing work of the CL. The ECL implementation team has also provided an ongoing consultation service to ensure that innovations in the CL operations are compatible with the ECL system.
- (2) Experimental and Developmental Work - The major portion of this work has been concerned with the development of a record linkage package designed to establish correspondence of identity between pairs of records on the basis of identifying information such as name and address. Some advanced computer systems and statistical methodologies are in the course of implementation and various experimental packages have been used for production work in other areas of DBS operations. Subsequent versions of these record matching procedures have been used to detect and demonstrate duplications in various survey lists within the Bureau. In the course of developing the record linkage package for the ECL certain modules of a computer programme of more general application (for example, efficient and somewhat special purpose sorting procedures) will be prepared and documented for more general use. It has been necessary to develop complex systems of cross-referenced indices of the various numbering systems under which business entities are identified within government departments. Work is in hand on the systems analysis and programming of such systems which will be available in the latter part of 1971 and will become routinely useful procedures for bringing other lists into correspondence with the ECL.
- (3) ECL Implementation - A 'skeletal' version of the ECL system was being programmed at the end of the fiscal year and is scheduled to come into operation by the end of July 1971. Concurrent with this work is the de-

velopment of more sophisticated versions of various steps in the ECL system including record linkage and the more sophisticated structured file maintenance and checking operations necessary to the ECL, and various interrogation facilities. These and other modules will be phased into the skeletal system as they are proven.

Merchandising Division Projects

- (1) New Retail Trade Survey - The first mail-out of questionnaires for this survey under the new design took place in January 1971. Several months of operation are required before all of the technical and operational difficulties are ironed out. However, it is expected that the system will prove itself in the production of data in parallel with the old one for the twelve months of 1971, will be adopted at the end of that period as the official one, and the old system will be discontinued.
- (2) 1971 Census of Merchandising and Services - Together with members of the Computer Systems Development Division this staff has been heavily involved with analysis of the requirements of, and planning for, this census. While the coverage and, hopefully, the quality of this census should be considerably improved by extensive prelisting of merchandising and service outlets it is also true that both the technical and operational difficulties have been greatly increased. Completion of the census, in the scheduled period will require technical and managerial application and skill of a very high order.

Prices Division Projects - Work has proceeded on the automation of the Industrial Selling Price Index but at a slower pace than was hoped for or anticipated. The role of this staff in this project has been mainly that of a consultant throughout this year, the main responsibility resting now with Computer Systems Development Division.

This staff has begun an investigation of the possibility of putting the ISPI sample onto a probability basis and is preparing to undertake a pilot survey along these lines. In addition we have written more exact statements of the various adjustment and analytic techniques used in the ISPI than have been available hitherto.

Data Processing Operations Division - Quality Control of Key punch and Key Edit - There are now 6 major keypunching projects

in this division which are sample verified using one or more quality control plans. Since several of these projects use both keypunching and key editing it was necessary to come up with more than one plan for a particular project. In addition, it was found that because of the variability in operators' punching or key editing error rates, it was worthwhile devising several plans so that the most suitable one could be used for a particular operator and thus reduce the over-all verification rate still further. Work on developing a system of quality control for string punching or string keying is continuing. At the same time, considerable effort has been spent on investigating a means of applying quality control to the data conversion process of the Census of Agriculture. Work has just begun on the development of quality control plans for keying the following surveys: Retail Trade, Census of Merchandising and Census of Agriculture. In addition, quality control plans have yet to be developed for three more surveys.

Education Division - This staff has just started working in the Education Division during the last four or five months of the past fiscal year. Since that time the staff has become involved in several surveys. These include Handicraft Survey, Drama Survey, Elementary and Secondary School Teachers Salary Survey, Transportation Survey and Library Surveys. In the case of the Library Surveys, the staff have begun work on an integrated system of surveys covering libraries. In addition, the staff is also co-operating with the Computer Systems Development and Education Divisions to develop an over-all integrated information system on education.

"Ad Hoc" Surveys - During the period 1970-71 the staff has been carrying out a number of surveys for various government departments on a cost recoverable basis:

- (1) Nutrition Canada - This is a national survey conducted by the Food and Drug Directorate of the Department of National Health and Welfare, with the co-operation of the ten provincial health departments. The Bureau has been heavily involved in this survey. The Methodology of Field Surveys and Consultation Staff has designed the whole survey system, while the Field Division has been given responsibility for some field operations.

The survey has been designed to provide basic information on the nutritional well-being of Canadians in order to assist in the planning of public health programmes. It will determine the type and quantities of foods normally ingested by Canadians in groups characterized by geographical

location, income level, age and sex. From this information the dietary intakes of nutrients, non-nutrient substances, food additives and pesticide residue will be ascertained and the nutritional status of the groups evaluated by clinical examination, anthropometric measurements and biochemical analysis. The survey has been in the field since October 1970 and it involves 21,000 persons selected from the five regions, namely: Atlantic, Quebec, Ontario, Prairies, and Pacific.

The field operations of the survey are expected to be completed by September 1972.

- (2) Canadian Travel Survey - The major survey of domestic travel by Canadian residents planned for the calendar year 1970 on a joint federal-provincial cost-sharing basis was cancelled due to the withdrawal of some provinces for budgetary reasons. The survey was rescheduled for 1971 on a reduced scale under federal sponsorship. Most provinces have opted to participate by working out special arrangements with the federal sponsor, the Office of Tourism, Industry Trade and Commerce Department, i.e., paying for the collection of additional data in their province. DBS is carrying out this major survey for the Office of Tourism with the Travel Survey Section of Methodology of Field Surveys and Consultation Staff providing design, methodology and management. It is an independent household survey of some 12,800 households in all provinces and territories with four personal interviews being carried out at roughly quarterly intervals.

The interviewing will be completed in January 1972 and the results will be made available some time later in that year.

- (3) International Travel - The staff has been working, in co-operation with the Balance of Payments Division, on a thorough review of the collection of data on International Travel. The collection of these statistics involved both Immigration and Customs departments. Recent changes in the organization of these departments as well as an increased demand for more reliable and comprehensive statistics in this field have combined to create an urgent need for developing new methodology, including sampling techniques at border points as well as air and sea ports.

- (4) Other Surveys - A number of somewhat smaller surveys have been carried out in the year 1970-71 for the following government departments: National Defence, Secretary of State, and Communication. In all these cases, the staff have been responsible for survey design, for some of the operational aspects as well as for assisting in analysing the survey result. All these surveys have been conducted on the cost recoverable basis.

Consultation - Substantial resources of the staff have been involved in providing consulting services within the Bureau and for other government departments. The range and the scope of this service vary a great deal and the demand has been continuously increasing. It is not restricted only to the design of household surveys but it also extends to the general field of mathematical statistics.

General Survey Systems - The development of the Geographically Referenced Data Storage and Retrieval System (GRDSR) or as popularly referred to as the Geocoding System, has been continued and the first operational version of the GRDSR System is tested and operational now. The initial application of the GRDSR System is to provide tabulations by arbitrarily defined areas for any combination of census characteristics quickly and inexpensively. The arbitrarily designated areas in the fourteen largest metropolitan centres will be approximated by selecting all of the block-faces which fall within the designated boundaries. In the rest of the country, arbitrarily specified query areas will be approximated by selecting all the enumeration areas which fall within the delineated boundaries. All major elements of the GRDSR System have been tested out using the 1969 Test Census data and procedures. Location co-ordinates have been assigned to all addresses; the location coded addresses have been linked back to the census data; the location coded census data have been stored in a suitable format on a randomly accessible device; retrievals from the geocoded census data by specified areas and specified combinations of census data characteristics have been produced by a suitable generalized retrieval and tabulation programme which can be used by persons not familiar with computer programming. Capability to display retrieval and tabulation results graphically (SYMAP) has also been developed and tested. Outside of the requirements of the census application the GRDSR System is flexible enough to permit any user having a machine-readable data file with addresses, to assign the appropriate geographic location co-ordinate to the addresses, for subsequent retrieval from such a file by

Survey arbitrarily delineated query areas. This kind of system flexibility has been tested and demonstrated, and parts of the system have been turned over already to provincial and a municipal government to be used with their local data files.

In recognition of the fact that various DBS data processing applications for different surveys are similar, a number of generalized programmes have been created to perform functionally recurring data processing applications. These generalized programmes permit the specifications of the data processing operation requirements in a problem-oriented language, which can be successfully learned and used by persons with minimum computer programming knowledge. The various generalized programmes are tools to DBS Staff, which permit them to implement surveys, pilot studies and research work rapidly and inexpensively. These generalized programmes have also the potential to process effectively small and medium-sized surveys on a regular production basis. The generalized programmes described above, which are tested and operational are as follows: Editing and Imputation programme; Data Storage and Retrieval programme; File Linkage programme; Postal Address Analyser System.

Computer Systems Development Division

During the year there were two organizational changes made which affected this division. In the first half of the year CSDD was part of the Operations and Systems Development Branch and in the second half it became a part of the Methodology and Systems Branch.

Shortly after the new branch was formed, the division was reorganized. The new organization orients the division towards the subject-matter programmes of the Bureau, establishing four systems development and programming subdivisions each servicing the requirements, respectively, of the Economic Statistics Branch, Socio-Economic Statistics Branch, other branches and the censuses of population, housing and agriculture.

Programme Maintenance and Quality Control was moved from Data Processing Services Division, and Analysis and Programming Standards was moved from the former OSD Branch Headquarters Staff to CSDD.

The tempo of programming for the 1971 Census was stepped up during the year and at year's end was considered to be on schedule. More programming was done by contracting in 1970-71 than in any previous year.

ECONOMIC ACCOUNTS BRANCH

This Branch, in its general responsibilities, is concerned with a wide range of economic statistics which include the principal comprehensive statements and indicators relating to the Canadian economy. The statistical programme constitutes the major portion of what is referred to as the System of National Accounts. Organizationally speaking, the Divisions of the Branch, namely the Balance of Payments and Financial Flows Division, the National Income and Expenditure Division and the National Output and Productivity Division reflect the contribution of the Branch to the integrated System of National Accounts. Also included in the Branch is the General Time Series Staff which have assumed a bureau-wide function in the development and operation of a computer-oriented system of storage, retrieval and dissemination of data. Thus the scope of the Branch activities extends over the whole ambit of the organized output of Statistics Canada and beyond, providing a set of macro-economic data relating to the Canadian economy. The data are used by economists and others concerned with observing the course and performance of the Canadian economy and advising on policy.

Balance of Payments and Financial Flows Division

The Balance of Payments and Financial Flows Division is responsible for the construction, analysis and publication of statistics and reports related to four important areas of the economy. The first of these involves estimates of balance of payments covering current and capital transactions between Canada and other countries. The second covers Canada's international investment position measuring the country's external assets and liabilities. The third of these areas, the financial flow accounts, is designed to integrate the many financial activities of the Canadian economy into a single statistical framework and to record the flow of funds between the various sectors of the economy. The Division is also concerned with the publication of statistics on international travel covering both Canadians travelling abroad and non-resident visitors to Canada.

The publication programme of the Division included the quarterly reports on the balance of payments and the financial flow accounts, monthly reports on sales and purchases of securities between Canada and other countries and monthly and annual reports covering travel between Canada and other countries. The principal series of international investment and foreign ownership and control

of Canadian industry were published as they became available in the regular quarterly reports of the balance of payments.

During the year the Balance of Payments Section devoted resources to the preparation of reports giving annual data on Canada's international investment position and balance of payments. These reports will include information additional to that contained in the quarterly reports; at the close of the year work on these reports was nearing completion. A special survey covering business service payments and receipts between Canada and all other countries in 1969 was undertaken during the year and the results will be included in the Balance of Payments report noted above.

The staff continued to provide technical assistance and advice during the year on statistical aspects of Development Assistance and to the Working Group on Foreign Ownership.

The International Travel Section made considerable headway over the previous year in advancing the release date of its annual report. The report covering 1969 was released in October and in time for the Dominion-Provincial Conference on Tourism at which the Section presented some statistical highlights of international travel. An advance summary of quarterly travel payments and receipts and numbers of travellers was released in the *DBS Daily* for the fourth quarter of the year, gaining two weeks in timeliness. It is planned to continue this practice in 1971.

As a result of the work of a Bureau Task Force charged with examining methods and recommending improvements in the area of international travel, a pilot sample survey to improve the statistics on the number of international travellers at Canada-United States border crossing points was undertaken towards the end of the year. The results of this project will be available shortly and, if successful, the system will be extended to other border points, providing both better statistics and facilitating the flow of traffic.

During the year, in addition to the regular publication programme, the Financial Flows Section continued to work on methods to improve the timeliness of the release of data. Planning was also undertaken regarding both the automation of processing financial flows statistics and the preparation of seasonally adjusted estimates. None of this work has yet reached a sufficiently advanced stage to influence the publications of the Section.

National Income and Expenditure Division

The Division is responsible for the preparation and publication of the quarterly, annual and historical National Income and Expenditure Accounts including National Income, Gross National Product and Gross National Expenditure aggregates. The Division is also involved in research, developmental and analytical activities related to its subject-matter.

In 1969, the Division had published, in a summary format, the results of an historical revision of annual aggregates for the years 1926 to 1968. The purpose of these new accounts was the incorporation of major statistical revisions made possible by the availability of 1961 Census data as well as the introduction of changes in definitions and structural presentation largely to bring the accounts in a closer relationship to accepted international standards as represented by the United Nations System of National Accounts.

During 1970, the detailed historical series 1926-1968 were updated to include firmer annual data for 1967 and 1968 and were made available on request in computer print-out formats. The Division also revised the quarterly series from 1947 to 1968 to place them on a comparable conceptual and statistical basis with the historical annual series.

Improved timeliness achieved by the efforts of various divisions of the Bureau supplying monthly and quarterly basic data to the National Income and Expenditure Division coupled with increased efficiency as well as automation of several phases of the preparation of the quarterly accounts have resulted in their publication within some 55 days after the reference period, a gain of several weeks over previous timeliness performance. This occurred in spite of largely increased requirements for accuracy even in aggregates published on a preliminary basis.

National Output and Productivity Division

The National Output and Productivity Division regularly publishes indexes of Real Domestic Product for the economy as a whole, its major industry components such as the Index of Industrial Production, and a large number of individual industries. In July 1970, monthly indexes of Real Domestic Product were introduced to the public for the first time for agriculture, forestry, fishing and trapping, construction, transportation, storage and communication, trade, finance, insurance and real estate, community, busi-

ness and personal services, and public administration and defence, along with some industry detail within these groups. These measures had previously been published on a quarterly basis. Thus, including the industry detail available for the monthly Index of Industrial Production, over 120 component series are now available on a monthly basis. The release of the monthly data constituted the culmination of a major data development project in the National Output and Productivity Division which had extended over nearly a decade.

Revisions covering the 1961-70 period were also completed and published by the Industrial Output Section in February 1971. The main features of the revisions were the adoption of 1961 weights based on the final gross domestic product at factor cost distribution, the incorporation into the system of the latest annual or quinquennial census information, up-to-date annual levels, extension of the total activity concept to manufacturing, mining and forestry, and some further improvements of the monthly indicators. This latest release completes the extensive revision and updating programme of the RDP system which commenced with the revisions of the monthly Index of Industrial Production in 1966.

During the year the Industrial Output Section continued to publish current dollar value added on an annual basis for the goods-producing industries by province.

The National Output and Productivity Division revised its published annual aggregate productivity indexes during the year in order to incorporate the Real Domestic Product revisions noted above. The Productivity Research and Analysis Section of the Division uses the Real Domestic Product indexes along with labour input data to derive the annual productivity ratios it publishes for the commercial economy and selected industry components such as manufacturing, commercial services and commercial non-agriculture.

During the year a number of individual industry productivity studies reached an advanced stage of preparation. These studies including ones pertaining to sugar refining, cement manufacturing and petroleum refineries are patterned after earlier releases such as the one for Iron and Steel Mills.

In addition to the above regular publication programmes, the National Output and Productivity Division is engaged in a number of research and development programmes including pilot studies of output, input and productivity for selected components of the important and rapidly growing non-commercial

industries, the development of industry current dollar data, the development of quarterly productivity measures for the major industrial aggregates, and the development of annual and quarterly unit labour cost measures.

During the year the Division's officers continued to play a major role in the development and integration of industry-oriented statistics throughout DBS. Assistance was given to representatives of industry, federal and provincial governments, and visitors from foreign countries with respect to various aspects of Real Domestic Product and productivity statistics.

The Productivity Research and Analysis Section participated in the Second Session of the Working Group on Productivity Statistics of the Conference of European Statisticians during April 1970. The Chief of that Section also gave a talk on recent productivity and wage developments in Canada at the North American Conference on Labour Statistics in June 1970.

FINANCIAL STATISTICS BRANCH

The Divisions of the Financial Statistics Branch produce a wide range of financial statistics on business and governments, and important support series on capital expenditures, construction and housing.

The statistics produced by the Branch are becoming increasingly used to provide an understanding of the operations of the economy. Quarterly financial data are now available for all sectors of the economy and are meeting a demand for up-to-date information on the financing of the corporate and government sectors. The annual data received under the Corporation and Labour Unions Returns Act are throwing a great deal of light on foreign investment in Canadian business and on other aspects of corporate activity.

A prime concern at present is the analysis of the information now being collected to ensure its consistency and usefulness. Particular attention is being paid to problems of classifying companies and families of companies by industry, and to the definitions of the items on the balance sheet and income statement. One of the important objectives of this work is to make it possible to add together the information available on business and governments to arrive at comprehensive totals of financial claims. A second important objective is to provide a framework within which production and financial statistics can be integrated and analysed.

General Time Series Staff

The General Time Series Staff is concerned with three main activities: the continuing publication programme of the monthly Canadian Statistical Review and its various supplements; applied research and developmental work in seasonal adjustment and other smoothing techniques for time series analysis; and the development, implementation and management of CANSIM, the DBS computerized time series data bank.

During the past fiscal year the programmes in the first stage of CANSIM development were fully operational. The base grew rapidly to 26,000 series. For the most part, data originate in the Dominion Bureau of Statistics. A new data retrieval option was introduced which simplifies the use of series from CANSIM for analysis via computerized routines. Use of CANSIM within the government, and public sales of machine-readable data on magnetic tapes, are to be developed further. An enlarged and improved retrieval package is under development and should facilitate further use of the system.

Studies such as Input-Output which require the linking of financial and production statistics are thereby facilitated.

It is expected that one result of these investigations into company statistics will be a lightening of the load on respondents to DBS surveys through better use of available data. The Economic Statistics Branch and the Financial Statistics Branch are co-operating in this effort.

These and other areas of work are covered in detail below.

Business Finance Division

The statistical programme of the Business Finance Division centres around three related but widely diverse areas.

Statistics of investment intentions and related activities have been in existence the longest of these three areas. These statistics include capital and repair expenditures as reflected in business intentions as well as actual expenditures, residential housing starts and completions as well as value put-in-place, building permits, the construction industry and statistics on the stock of capital in the form of fixed assets.

The profits earned from and the financing of economic activity, the second area, has held considerable interest for economic analysts but has not been represented in the statistical programme to any significant degree until comparatively recently.

The third area has to do with scientific research and development, an activity that leads to economic and industrial advancement.

(1) Capital Investment - Annual surveys of capital and repair expenditures are being continued and provide national, regional and industry estimates of capital formation as well as repair expenditures made to the existing stock of fixed assets. Investment intentions are published by industry and by province in *Private and Public Investment Outlook* early each year to provide information on construction plans as well as intended expenditures on machinery and equipment. A second survey of spending intentions is carried out during the middle of the year and these revised intentions are published in *Private and Public Investment, Mid-Year Review*.

The quarterly survey of investment intentions and realizations of spending plans, initiated in 1968, is progressing favourably. The implementation of the quarterly sample was continued during 1970 and is now expected to be completed during 1971. Adjustments to the quarterly sample in future years will be directed towards providing improved representation in specific industries and geographical regions.

(2) Construction - In addition to the construction data provided in *Private and Public Investment in Canada*, which shows expenditures on new and repair construction as reported by organizations paying for the work done, another report *Construction in Canada* published in June of each year provides information on value of work put in place by type of structure, along with over-all estimates of the labour and material content of this work. This report also provides separate estimates for value of work performed by construction contractors and that portion performed by others engaged in construction work on their own account. Also included are estimates of the equivalent man-years necessary to carry out the annual programme of construction. Information on types of structure is derived from the capital expenditures survey mentioned earlier which also contain information on the labour and material content of own-account construction. The labour and material content of the contract portion is derived from the results of a sample survey of construction firms conducted annually. The detailed investigation of the construction industry started in 1967

is being continued. For the accounting period of 1967, the Construction Section initiated a Census of the Mechanical Contracting Industry. This census, covering six trades, is now conducted annually.

In the 1970 accounting period, a Census of the Electrical Contractors was initiated. Research and development was also started during 1970 on a third census group comprising of Highway, Road and Bridge Contractors. Pilot questionnaires are currently being tested in the field and a full-scale mailing is expected in June. Additional research was undertaken on development of an integrated computer system for processing, tabulating and editing of the Censuses of Mechanical and Electrical Contractors.

(3) Housing - Reports on building permits issued by municipalities in Canada are published monthly with an annual summary. These publications provide data on the number and value of housing units by type and the value of industrial, commercial, institutional and government building construction in more than 1,400 municipalities in Canada. A monthly report *New Residential Construction* contains the results of a nation-wide survey by the Central Mortgage and Housing Corporation, providing data on dwellings started, under construction and completed. These physical measures of housing construction activity are translated into values for the purpose of estimating quarterly and annual residential capital formation.

In addition to the production of current housing and building permit statistics, work was undertaken to improve the quality of building permits statistics provided during the past 15 years. Work in this area will culminate in an historical publication on building permits containing information not previously published: on metropolitan area, county, and economic region groupings. References will be made to population of areas covered and also to municipal annexations and changes in designations.

Developmental work was also carried out toward the extension of the estimates of gross and net capital formation in housing with a view to publishing them quarterly, along with other related housing series.

(4) Capital Stock - Developmental work has continued in the improvement and extension of the estimates of fixed capital flows and stocks. The basic publications in this series were released by the Dominion Bureau of Statistics in 1967. Efforts have continued with interested users of these data to develop a basic information file of punched cards and computer tapes.

(5) Research and Development - Regular surveys on scientific research and development, one of the federal government's activities and one of industry, are carried out. The objective of these surveys is to provide information on the resources (money and people) devoted to science in Canada. These surveys have been confined to the physical and life sciences, however there has been a growing interest in recent years in comparable information in the social sciences. During the year an experimental survey of the federal government's research activities in the social sciences was begun. This survey (and its "follow-ups") will test operational definitions and concepts before a regular survey programme is started.

(6) Financing - Surveys of the financing plans and structure of financial and non-financial corporations in Canada have been continued. The publication *Financial Institutions* provides information on the major financial intermediaries in Canada. Development work is continuing to provide data for the groups not available currently.

The Financial Institutions Section is continuing to provide financial data on the major financial intermediaries in Canada in the quarterly publication *Financial Institutions*, and the annual publication *Credit Unions*. Development work is continuing on groups not currently available such as real estate and investment-holding companies. Also, negotiations have been initiated to add the chartered banks and life insurance groups to the quarterly survey.

Development of quarterly financial statistics of industrial corporations including income and expenditures, profits, dividends and balance sheet information was continued.

During 1970 an historical series of financial statistics was produced for the years 1962 to 1969 for 25 industry groups in the industrial corporation sector. The statistics include complete balance sheets (assets, liabilities and shareholders' equity) income, expenditures and profits. Starting in the first quarter of 1971 the quarterly publication is being enlarged to include seasonally adjusted data, financial ratios and percentages.

Corporations and Labour Unions Returns Act Division

The Corporations and Labour Unions Returns Act Division is responsible for the compilation, analysis and publication of annual financial and taxation statistics of all corporations in Canada and for reporting financial and other information related to the

ownership and control of a group of larger corporations and to the affairs of labour unions carrying on activities in Canada, as required by the Corporations and Labour Unions Returns Act. This Act was passed by Parliament in 1962 and is administered by the Dominion Statistician under the authority of the Minister of Industry, Trade and Commerce. The purpose of the Act is to provide information on the extent and effects of foreign ownership and control of corporations in Canada and on the extent and effects of the association of Canadians with international labour unions.

The publications programme of the Division consists of one bi-annual and four annual publications. It also provides the Department of National Revenue with statistical information derived from the corporate income tax returns as well as primary data for other DBS series.

In comparison with 1969-70, when the publications programme of the Division was brought onto a more timely basis with the release of eleven reports, the 1970-71 fiscal year was largely one of consolidation. Efforts were directed to further improvements in the timeliness and quality of the Division's annual statistical reports and, in total, four reports were published during the year, all of which related to 1968 data.

As part of a programme of integration and quality improvements undertaken during this period in the area of corporation statistics, more extensive use was made of information collected by other DBS Divisions and outside agencies. This permitted the publication in 1968 CALURA reports of statistics on the research and development operations of foreign-controlled companies and the extension of the foreign ownership and control series for the 1969 report (which is now in progress) for several industries where a significant number of corporations are exempt under the Act. Other refinements, which it is hoped to incorporate in the 1969 and 1970 reports are designed to permit further integration with related statistical series as well as to cater to users' requests for more extended and detailed series. These improvements will include the publication of statistics on the taxation of foreign-owned companies and greater emphasis on statistics of foreign control as distinct from foreign ownership.

In the area of labour union statistics, the 1968 Annual Report presented for the first time the names of the principal officers of labour organizations, the names of Canadian representatives on international union executive boards, and the number of collective agreements held by each union carrying on activities in Canada. Arrangements were developed with the Canada Department of Labour to

use information submitted to them for a part of the CALURA 1970 report and thereby ease the reporting burden on labour unions.

The passage of the Corporations and Labour Unions Returns Act in 1962 created an additional requirement for the reporting of financial data by a substantial number of corporations in Canada and the necessity to duplicate, to a considerable extent, tabulation of corporation financial data being carried out by the Department of National Revenue. In order that this duplication might be avoided, an amendment was passed to the Corporations and Labour Unions Returns Act in 1965, relieving a corporation from the obligation of filing a financial statement under the Act if the corporation had filed a financial statement under the Income Tax Act. At the same time, access to corporation income tax returns was made available to the Dominion Statistician. A joint programme of corporation financial statistics was developed that provides the Department of National Revenue with statistical information on the taxation of corporate income and, at the same time, provides data for the purposes of the Corporations and Labour Unions Returns Act and for other statistical purposes.

The Corporations and Labour Unions Returns Act requires that the Dominion Statistician prepare an annual report for Parliament summarizing both the confidential and non-confidential information submitted by corporations and labour unions. The first report was tabled in July 1965, covering fiscal periods of corporations and labour unions ending in 1962. Subsequent annual reports under the Act are released in two parts - Part 1 relating to corporations and Part 2 to the labour unions.

The publication *Corporation Financial Statistics* was developed following the amendment to the Corporations and Labour Unions Returns Act. This publication is based on information contained in the accounting records of over 200,000 corporations and provides information on their operations, including income, expenditures and profits, and on their financial position, including details of assets, liabilities and equity, and a statement of retained earnings indicating the disposition of current earnings. A second publication, *Corporation Taxation Statistics*, deals with the taxation of corporation income. In addition to giving statistics on corporation earnings and taxation by industry, province and corporation size, this publication provides a detailed reconciliation of company book profit with taxable income. This reconciliation indicates the magnitude of the main provisions of the Income Tax Act as well as the magnitude of the main items of income and expenditure which are

treated differently in the Income Tax Act than in company books.

Another publication, *Inter-Corporate Ownership* makes available to the public non-confidential information required under the Corporations and Labour Unions Returns Act and indicates to some extent the magnitude of inter-corporate relationships in Canada. The latest issue of this bi-annual publication was released in February 1970 and related to 1967. In it, corporations commonly owned by another corporation or linked in ownership relationships were grouped together to form ownership complexes. These corporations were grouped when there existed inter-corporate ownership of voting rights of 10 per cent or more. A revised edition of this publication covering the year 1969 is currently being developed.

Governments Division

During 1970-71 the Governments Division continued to concentrate its resources on the improvement of the quality, the timeliness and the further development of its regular output.

During the year, an approach toward the reconciliation of the Financial Management series (which reports government revenues by source and expenditures by function) with the National Income and Expenditure series (which reports on an economic basis) was developed for incorporation into the respective Financial Management publications covering each of the federal, provincial and local levels of government. The publication on the federal government containing such a reconciliation was released in March 1971 - *Federal Government Finance (1968-69)*. The next issue of the corresponding publication on the provincial government level will also contain the noted reconciliations. Moreover, like the federal government publication, the provincial issue will also contain a detailed cross-classification of revenues by source and type, and of expenditures by function and economic object.

The current federal-provincial fiscal arrangements, providing for equalization payments to the provinces, cover the fiscal years 1967-68 through to 1971-72. In 1970-71 the Governments Division completed, for the Department of Finance, its special analysis of provincial government 1968-69 revenues as required by the Regulations. Some difficulties were encountered in classifying certain oil and gas revenues but with the close co-operation of the provinces concerned, these were resolved and the formal compilation was submitted ahead of schedule.

During the year the Division participated in numerous meetings of subcommittees of the Federal-Provincial Continuing Committee on Fiscal and Economic matters. Three subcommittees were active during the year and the Division's input to these in terms of data, time and information was considerable. The work of these subcommittees will continue throughout the coming year and this, together with the Division's recently delegated responsibility for the co-ordination of all of the Bureau's inputs pursuant to the Fiscal Arrangements Regulations, will involve the Division very significantly.

While very substantial historical revisions to the government sector of the National Income and Expenditure statistical series were completed in 1969-70, further revisions were undertaken in 1970-71. The latter which incorporated changes in benchmarks, concepts and statistical universe were extended back to 1965. Similar revisions (back to 1962) were made in the government sector of the Financial Flows series.

In June 1970, the Governments Division convened the final (seventh) session of the Eighth Federal-Provincial Conference on Municipal Statistics. This session approved the new financial classification systems for municipalities. These systems are described in the publication *A Financial Information System for Municipalities* which was released by the Division in November 1970.

As of March 31, 1971, two of the provinces have implemented the essence of the asset, liability, revenue and the functional expenditure systems, and there are strong

indications that the other provinces will have implemented the same by April 1972.

In an effort to assist the provincial Departments of Municipal Affairs in the conversion to the new systems, the Governments Division engaged in several briefing sessions with provincial and municipal officials. Further similar sessions are planned for 1971-72.

In November 1970, the Governments Division convened, in Ottawa, a conference of users of public finance statistics. Provincial governments and several federal government departments and agencies were represented. The principal objective of the meeting was to isolate the major financial-statistics requirements of potential and actual users within government. The proceedings of this meeting have been summarized in one official report. The Conference was very beneficial to the Division and much of the development work now in progress is aimed at meeting more adequately the statistical requirements of prime users.

The Division's developmental work is progressing favourably in terms of available resources. The principal current considerations are: the thorough review of the government statistical universe at each of the three levels; the development of "sources and uses of funds" statements; the reconciliation of government year-end Financial-Management series balance sheets with the Financial Flows accounts; the development of a local government debenture debt data bank and the conversion to computers of some of the major data processing operations.

ECONOMIC STATISTICS BRANCH

As the name of the Branch implies the majority of its activities are concerned with the production of statistics related to the economy of the nation and designed to be of assistance in the formulation of policies and programmes that affect its condition and growth. The Branch directs 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 monthly, quarterly and annual "mail

type" surveys of varying sizes although a number of "enumeration type" surveys are also involved. In some instances administrative records form the source of data. The Branch tends to concentrate on production or sales of commodities and services, materials used, employment, prices, and imports and exports of commodities.

External Trade Division

The External Trade Division is responsible for the compilation, dissemination and analysis of statistics on Canada's foreign trade. The ongoing part of this programme involves the production of monthly, quarterly and annual reports and special tabulations which provide data on trade by commodity, by country, by province of customs clearance for

exports and imports, as well as by mode of transport, by region of lading for exports, and by tariff item by country for imports.

Of special interest during the year has been the Division's extensive involvement in the first stage of full automation of external trade data processing. This project, which is being conducted in conjunction with the Customs Branch of the Department of National Revenue, has a completion target of early 1975.

The first stage consists of the development of a series of data files recorded on magnetic tape which include, in addition to a wealth of historical and current detail on external trade transactions, a series of flexible retrieval and manipulative options. The object is to make available to researchers and policy-makers in the area of foreign trade virtually any conceivable type of tabulation on these data required for analysis. In line with DBS's programme of automation, the data files have been designed with a view to integration with other data systems in the Bureau. Further, they have been designed so that existing statistical and econometric computer programmes can readily access them and transform the data in any standard way. While outputs from this first stage of the system are only slated for later in 1971, progress to date has encouraged the Division in the belief that a new and powerful tool has been added to analytical instruments available for the study of international trade problems.

Since no data project is ever complete without the provision of suitable and consistent historical figures, considerable effort has been devoted to the retrieval and manipulation of back data (initially to 1967) to achieve consistency with current data - particularly from a commodity classification viewpoint. The existence of comparable back data should make it possible to conduct more detailed time series studies and structural comparisons of Canada's trading patterns.

For several years past the Division has accorded top priority to improving the timeliness of its major series and as a result Canada now ranks among the top five nations in the world in the speed with which international trade statistics are produced.

Regrettably during the year under review, as a result of the national postal strike and of technical difficulties in the computer area, the record timeliness performance of 1969-70 could not be matched. During the past year, however, significant progress was made towards eliminating the long standing backlog of basic annual publications and it is anticipated that this

catch-up programme will be completed by the end of 1971.

Contacts with the private sector were maintained and reinforced. The Division is now participating in regular meetings with some twenty-five industry associations. Much emphasis is being placed on the development of commodity classifications which better reflect new technological trends, product diversification, import substitution and export promotion opportunities. Concurrently the Division has expanded its programme of commodity studies which provide industry, on a cost-recovery basis, with detailed information on specific products entering into Canada's trade.

The Division continues to work closely with a number of major federal departments and agencies providing them with material necessary for them to fulfil their responsibilities for policy-planning and development. For example, External Trade Division is collaborating with the newly created Textile and Clothing Review Board in the analysis of imports and their impact upon domestic production, and the Trade Commissioner Service is being provided with greatly enhanced detail on the composition and direction of Canadian exports to the United States.

Another significant development in 1970-71 was the re-establishment of the Interdepartmental Advisory Committee on External Trade Statistics, comprising all major federal users of these statistics, which provides a forum for the discussion of users' data requirements.

Collaboration with the provincial governments has been further extended and agreement has been reached with the governments of Manitoba, New Brunswick and Saskatchewan to provide them with considerable detail concerning the provincial share of Canadian exports. Similar agreements had previously been negotiated with a number of other provinces. Meanwhile, some efforts are being directed toward the development of better detail on the interprovincial movement of goods prior to export.

During the year the Division has participated increasingly in the work of a number of international agencies and committees. Observers were present at meetings of the Customs Co-operation Council in Brussels under whose auspices the Brussels Tariff Nomenclature is produced. This organization is working towards the bringing together of tariff and commodity classifications. Meetings were also held with the British and American statistical agencies to discuss various aspects of electronic data processing systems for handling international trade

statistics. The Sub-Committee on Statistics (Canada-United States Automotive Agreement) held a number of meetings to achieve reconciliation of fundamental discrepancies in counterpart statistics. A satisfactory degree of reconciliation was achieved. Representatives of the Division and of the Department of National Revenue met with the US Department of Transportation to study the development of universal international trade documents, in the context of automated systems. Discussions were held with the US Bureau of the Census and Bureau of Labor Statistics concerning the methodology of international trade index number construction. More generally, consultations with the United Nations Statistical Office, the Secretariat of the General Agreement on Tariffs and Trade and the Organization for Economic Co-operation and Development were maintained and developed during 1970-71.

Among other interesting developments in the work of the Division the following are considered particularly noteworthy; the revision of the official indexes of export and import prices, with year 1968 as the new weighting and reference base, was completed. Unit value indexes for commodities traded with the United States and other special trade measures are being studied. A review of the inland freight component of exports and a study of the landed cost of imports are under way which will be of particular relevance to Balance of Payments adjustments. The Division has been providing an increasing amount of commentary on current trade trends for inclusion in the *DBS Daily* and elsewhere. The publication by this Division of seasonally adjusted trade data commenced in 1970. Increased detail was introduced for major trading countries and areas such as Japan and Latin America, and a concordance was developed which related the Canadian Customs Tariff to the Brussels Tariff Nomenclature, and subsequently to Canadian import data.

The increasing public awareness of the importance of Canada's international trade in terms of the economic well-being of the country has been demonstrated by an ever-growing demand for services provided by the Division. It is worthy of note that this demand has been met by improved utilization of existing manpower and other resources, with an actual drop in the number of man-years utilized.

Input-Output Research and Development Staff

During the fiscal year 1970-71, the Input-Output Research and Development Staff has made considerable progress both in the activities associated with the construction of input-output tables and those related to customer services and analysis.

The 1961 input-output tables have now been reconciled with the National Income and Expenditure Accounts and have been expanded in the area of final demand. Approximately 150 categories of final demand have been estimated: these include consumer expenditures by category of expenditure, government expenditures on health, education, defence, and other current expenditures by level of government, and capital expenditures on machinery and equipment and type of structure by purchasing sector. These revised and expanded input-output tables are now available in machine-readable or print-out form, and will be published in the coming year.

Considerable progress was made in the annual updating project which was initiated in fiscal year 1969-70. This project involves the construction of input-output tables for the years 1962 to 1967 in both current and constant (1961) dollars. Tables for subsequent years will be constructed as data become available. The procedures for the annual updating are extensively automated and make use of large amounts of new data. The target date for the completion of the current dollar series is the end of 1971.

Input-output tables for each of the four Atlantic Provinces have been constructed for the year 1965 and are now available. A publication is being prepared which will include some analytic models based upon the Atlantic Provinces tables along with the presentation of the tables.

The Input-Output Staff has continued to participate in projects and task forces intended to improve the quality of economic statistics at DBS. An increasing number of resources has been devoted to these projects, particularly in the area of service industry statistics, commodity classifications, mining statistics and the system of national accounts. It is on the basis of these projects that plans for the construction of 1971 base year input-output tables are being formulated.

With respect to activities associated with customer service and analysis, the Input-Output Staff provided a wide range of services to large corporations, researchers at universities, and provincial and federal government agencies. Two general purpose models based upon the most detailed input-output tables were constructed and made operational - an output determination model and a price determination model. At the present time, these models are of the fixed coefficient variety based upon 1961 data. Subsequent versions of these models will incorporate more recent data and modifiable coefficient methodology. These models are being maintained by the Input-Output Staff in order to provide analytical services to various researchers so that the confidential data embodied in the

data base can be utilized to the fullest extent possible within the bounds set by the Statistics Act. As well as services arising from the operation of these models, the Input-Output Staff has provided special data tabulations and technical advice to various researchers. In particular, the staff has co-operated with provincial government agencies who are engaged in input-output work.

The Input-Output Staff has continued to participate actively in the construction of a large-scale medium term economic policy simulation and projection model known as the CANDIDE model. This model is being constructed by an interdepartmental task force whose members include representatives from the Economic Council of Canada, the Departments of Regional Economic Expansion, Manpower and Immigration, Finance, the Bank of Canada, and the Dominion Bureau of Statistics.

Labour Division

The Labour Division is concerned with production of a broad and varied programme of establishment, household and administrative statistics. The subject-matter covered includes statistics of the labour force, employment, unemployment, labour income, employer labour cost, occupational job vacancies, pension plans and data relating to the operations of the Unemployment Insurance Commission and Canada Manpower Centres of the Department of Manpower and Immigration.

During the fiscal year 1970-71 progress was made in the Employment Section by the introduction of new computerized programmes for both large and small firm monthly surveys. The latter will involve use of employment data already collected in conjunction with the Job Vacancy Survey thereby eliminating separate collection and reducing response burden on the business community, especially small operators.

The results of the first survey of employer labour cost in the mining industry were published. This survey provides the first official Canadian statistics regarding the composition of the wage package in the mining industry and the cost of so-called fringe benefits.

In September 1970 a special survey of establishments in the retail trade industry was carried out. Specific objectives included the determination of the impact of part-time employment on average weekly earnings and investigation of the relationship between earnings in large and small establishments.

During the past year the Unemployment Insurance and Manpower Section undertook, for the Unemployment Insurance Commission, a special project involving the production of statistics indicating the residence of insured persons as opposed to the location of their place of employment. This information was required by the Commission in connection with validating boundaries of regions for which unemployment rates will be compiled under the proposed new Unemployment Insurance Act.

This staff also provided the coding capability for a feasibility study regarding the possibility of developing industrial accident statistics using data obtained from the Workmen's Compensation Boards of Nova Scotia and Manitoba.

During the year negotiations were completed with the federal Department of Insurance and the Pension Commissions of the provinces of Quebec, Ontario, Saskatchewan and Alberta, for a joint co-operative statistical programme for private pension plans. On the basis of this agreement, these agencies supplied data from their administrative records which were used as a main input by the Pensions Section for producing statistics regarding the coverage and characteristics of pension plans in 1969. To provide national statistics these data were supplemented by surveys in those provinces where co-operative arrangements have not yet been developed. This use of administrative records as a substitute for surveying employers substantially reduced the response burden on the business community and has produced more comprehensive and timely data than were formerly available.

In the Job Vacancy Survey Section plans were completed during 1970-71, for introduction in mid-1971, of a regular monthly statistical report providing information on occupational job vacancies by occupational group and province. These published data will be the first official measure of labour demand in Canada and will represent a substantial addition to information for labour market analysis.

At the beginning of the fiscal year, the Labour Force Survey Section was transferred from the Special Surveys Division to the Labour Division. Since the transfer was completed, steps are under way to expand and increase the usefulness of the data from the survey. These steps will include enlarging the regular publication to include additional tabulations, extended use of packaged computer programmes to reduce turn-around time on special requests, and plans for quarterly and annual publications to supplement monthly data.

During the year, the Analysis and Development Section was responsible for a number of contributions to the analytical and developmental programme of the Division. A cost-benefit study was prepared regarding the production of industrial accident statistics, a project for computerizing the disaggregation of components of labour income was developed to facilitate analysis of changes, and a contribution was made to a DBS committee investigating reconciliation of household and establishment derived employment data. The first issue of a new publication which would provide a vehicle for research and analytical articles in the field of labour statistics was also drafted.

Manufacturing and Primary Industries Division

The Division is responsible for the output of statistics in the fields of manufacturing, mining, forestry, fishing and energy. The results of these surveys are made available to users in the form of publications, bulletins and special tabulations.

During the past year the work of the Division has been concentrated on improving the quality, analysis and timeliness of its data. Improvements have been experienced in the release of advance information on a number of the surveys and acceptable progress has been made in reviewing statistical definitions, reporting procedures and alternative sources of data.

In the last report, mention was made of the joint study undertaken by DBS and the Canadian Institute of Chartered Accountants. The questionnaires have now been re-structured and the revised short form for the use of small establishments has been implemented. The revised long form is being tested with a number of large manufacturing companies and should be implemented with the 1972 Census of Manufactures.

It is worth noting that the work on the use of tax returns for statistical purposes mentioned in last year's report is progressing satisfactorily and that the Division should be able to discontinue surveying a large number (approximately 10,000) of small manufacturers within the next two or three years.

The automation of the Census of Manufactures which was referred to last year has progressed reasonably well. The automation of the mailing module has been completed and is being used in the 1970 Census. Arrangements are being made so that the master file (names and addresses) and appropriate programmes will be available to any provincial

statistical agency requiring them. It is also worthy of note that the photoprint modules also referred to should be completed in time for processing the 1970 Census of Manufactures.

The work of developing a standard industrial commodity classification proceeded more slowly than anticipated but the bulk of the developmental work has now been completed and a number of commodity classes will be implemented with the 1971 Census. Complete implementation is not expected however until the 1972 Census. One feature of the new classification is that data on domestic shipments, exports and imports will be made available on a routine basis for approximately 1,500 commodities. Comparison of domestic shipments, exports and imports will be possible for a significant number of additional commodities.

In relation to new work, perhaps the most significant items have been the provision of data on the interprovincial shipments of selected commodities, the facility to undertake projects for various users on a cost-recoverable basis and the developmental work undertaken in connection with the 1970 revised Standard Industrial Classification (SIC). Statistics for the Census of Manufactures for 1970, the year of overlap, will be published on both the 1960 and 1970 revised SIC.

A further point of interest is the establishment of a DBS/Provincial Committee on the Census of Manufactures. It is expected that through this device, the joint statistical requirements of the federal and provincial governments can be met. Finally, the Division has initiated a programme of studies in the field of industrial organization. The first phase, already well advanced, has involved an analysis of changes over time in individual enterprise shares of shipments in four industries (yielding results publishable without revealing individual respondent data). Planning is under way on a second phase, the development of a set of regularly publishable measures of industrial concentration on an enterprise and establishment basis. Consideration is being given to various other possible studies in the area of industrial organization. Liaison with users continued to form an important part of the Division's activities and the past year saw the development of close working relationships with the statistical arm of the Provincial Mines Ministers' Conference, the Council of Resource Ministers and the Chemical Industry.

Reference should again be made to the volume of enquiries handled which continue to run in the neighbourhood of 15,000.

Finally, the role of the Division in the international statistical community continued to be of importance. Officers participated actively in supplying information for a number of international agencies, training of statisticians from foreign countries and in supplying advice and assistance to statistically underdeveloped countries.

Merchandising and Services Division

The function of this Division is to collect, process and publish data on the retail, wholesale and service sectors of the economy, as well as to undertake special studies and surveys in areas related to the distribution of goods and the provision of services from primary and secondary sources to the final consumer or end user.

During the year under review, planning for the 1971 Census of Merchandising and Services continued at an accelerated rate, in the Quinquennial Census Section. The review of kind of business classifications and of the concepts and definitions to be employed in the census was completed. Draft questionnaires were circulated for comment to other DBS Divisions, federal and provincial government departments, trade associations, etc.

In addition to the census and its ensuing publications, the Quinquennial Census Section is also responsible for a quinquennial survey of retail sales by commodity classes. The results of the 1968 commodity survey will be available about mid-1971.

During 1970-71 much of the activity in the Retail Trade Section was centered around the inception (in January 1971) of the new monthly retail trade sample. Although delays and problems were encountered in the developmental phase of the project, the majority of programmes have now been completed and are undergoing extensive testing and "de-bugging". It is anticipated that the first of the new and expanded monthly retail trade publications, based on the new retail trade sample, will be released by January 1972.

Work was completed on the revision of the current monthly retail trade series for the four years ended December 1970, based on the new benchmarks of the 1966 Census of Merchandising and Services. A report on the 1966-69 period was published in the November 1970 issue of the *Canadian Statistical Review* and the 1970 data were published in *Retail Trade*, January 1971. Special reports covering the entire intercensal

period 1961 to 1969 were published in two parts; Part I was released in March 1971 and Part II will be available in June 1971.

Most of the efforts of the Wholesale Trade Section during 1970-71 were concentrated on completion of the 1966 Census material and preparations for the forthcoming 1971 Census. As a result, no annual surveys of wholesale trade were undertaken for either 1969 or 1970.

A second survey of *Construction Machinery and Equipment Sales*, covering 1969, was undertaken during the year as a follow-up to the initial survey of 1967, and the data - which measure the market for approximately 130 major commodity lines in quantitative and dollar terms - were released in January 1971. This survey will now be undertaken annually.

One of the monthly wholesale trade publications, *Steel Warehousing*, was discontinued with the December 1970 issue because of continuing poor response and lack of interest on the part of companies operating in this industry.

During the year just ended, the Service Trade Section was principally involved in updating the current publication programme, the preparation and planning for the 1971 Census and the development of new surveys in the accommodation field, franchising statistics in the food-serving industry and other fields.

Although some improvements have been made in the publication programme, they have not yet reached the desired level. For example, the annual *Hotels* survey has encountered numerous problems over the past few years, with the result that only the 1966 and 1967 reports have been published so far during 1970-71. However, the 1968 publication is in the final stages and the 1969 results (which include, for the first time, data on motels, tourist courts and cabins and other types of accommodation) are currently being tabulated.

Other annual reports issued during the year included *Advertising Agencies, 1968*, *Funeral Directors, 1968*, *Motion Picture Production, 1968*, *Motion Picture Theatres and Film Distributors, 1968* and *Power Laundries and Dry Cleaning Plants, 1968*. The 1969 surveys in these areas (with the exception of funeral directors, which is an occasional survey) were all being readied for publication as the year drew to a close.

The monthly survey of *Restaurants* and the semi-annual survey of large hotels have been maintained on schedule. The semi-annual

hotel results, showing percentage changes in receipts by provinces or regions, are published exclusively in the *DBS Daily*. A new monthly sample of restaurants was introduced in January 1971, concurrent with (and as part of) the new monthly retail trade sample. It is expected that the new sample will provide data on receipts of various kinds of restaurants, including take-out food outlets and industrial restaurants, which have not previously been available.

In the Consumer Credit and Special Projects Section, two important measures aimed at improving the quality of consumer credit statistics were related to the information supplied by sales finance and consumer loan companies. First, data on passenger cars known to be financed for commercial purposes were segregated from ordinary passenger car financing, in order to refine the consumer component of instalment financing. Second, inconsistencies in the method of reporting by these financial institutions were eliminated; commencing with January 1971, outstanding credit balances were reported on a "net" basis, i.e., excluding unearned income charges.

In addition to the above, and with the object of improving timeliness in the release of monthly consumer credit data and rationalizing the publication of allied information, it was decided that the publication *Credit Statistics* would be renamed *Consumer Credit* under the same Catalogue number but containing only the table relating to national estimates of consumer credit and the monthly and quarterly detail on the credit extended by retail stores. Remaining statistics will henceforth be released in a separate new monthly publication entitled *Sales Financing*.

The Section is also exploring the possibility of incorporating statistics on the credit extended by public utilities and by certain credit card-issuing companies in the car rental, transportation and hotel fields.

Among other projects of this Section are surveys of "non-store" retailing in Canada and the provision of data on inventories. There are two surveys at present in the non-store retailing field: *Direct Selling in Canada* and *Campus Book Stores*, both of which are published annually. In the case of inventories, the only data published are for retail chain and department stores. Plans are proceeding, however, for the design of a new sample (using, as a base, the new monthly retail trade sample) which will be used to derive estimates of inventory held by independent retail stores. Further studies will be undertaken in connection with the provision of wholesale inventory statistics.

During the 1970-71 fiscal year, the Research and Development Section was increasingly involved in the preparatory work for the 1971 Census of Merchandising and Services, including the formulation of concepts and kind of business definitions. Also, the development of a new monthly "Bulletin" was completed and the first such report, containing an analysis of the seasonal nature of sales in retail chain and independent stores, is now at the printers.

During 1970-71 the report on the Destination of Manufacturers' Shipments for 1967 was published. This was undertaken in collaboration with the Manufacturing and Primary Industries Division and shows total value of manufactured shipments by industry which originate in each province, broken down by province of first destination and export.

The Integration and Response Analysis Section was formed during the 1970-71 fiscal year and is responsible for the over-all application and integration of uniform concepts and reporting procedures in divisional surveys and for the assessment and improvement of the quality of value data reported. The efforts of the Section have been concentrated on assisting with the conceptual framework of the 1971 Census and ensuring that the resulting data will be compatible with data produced in the current statistical series of the Division. In addition, the Section will continue to be engaged in negotiations with officers of large firms, in order to properly define and classify the operations of such firms and ensure accurate reporting.

Prices Division

The function of the Division is to collect, compile and publish data on prices and consumer expenditure patterns. The Division is divided into three subject areas -- Retail Prices and Living Costs, Industrial Prices, and Central Research. In the first group are included the measurements of retail price movements and price differentials as they relate to changes and differences in the cost of living and real incomes of population groups within Canada and between Canada and other countries. Included also are family budget surveys and studies providing statistics on family expenditure for various types of families. Industrial prices, on the other hand, covers measurements of price movements in the production and distribution of commodities and services in which the primary focus is on the price of outputs and inputs of individual industries within the Standard Industrial

Classification. The Central Research group co-ordinates research and analysis in prices in areas common to other subject areas, including the treatment of quality change, analytical techniques and price index methodology.

In the area of consumer price indexes, progress was made in the expansion of consumer price index coverage, with the regular production of indexes for Thunder Bay and Quebec City, as part of a programme which also includes the production within the next year of separate indexes for Edmonton, Calgary, Regina and Saskatoon. Work was well advanced on a major updating of the weighting patterns of the Canada and regional city indexes based on 1967 family expenditure data. Revised indexes are expected to be available by the end of the fiscal year 1972-73. As part of the revision programme some sixty new item specifications were developed and introduced into the regular field pricing system. Work was begun on the production of estimated "actual" prices for narrowly defined item specifications, in order to meet needs which are better satisfied by price data than by indexes of price movement. To facilitate this programme as well as the weight-base revision a revised sample of retail outlets was under development. The planning of an analysis of consumer price index production procedures was undertaken as the first stage in the establishment over the next few years of an automated processing system.

Activities in the Family Expenditure Section were concentrated on the production of family expenditure statistics from the large volume of data collected in the 1969-70 programme of national expenditure surveys. Results from the 1969 household survey of family food expenditures in which some 10,000 families participated were issued in an advance release at the end of 1970, to be followed by a two-volume report *Family Food Expenditure in Canada, 1969* scheduled for publication by mid-1971. This survey provided, for the first time, average food expenditures and quantities for Canada and each of five geographic regions, classified by urban-rural location and other family characteristics. Throughout the year work proceeded on the processing, systems design and delineation of tabulation requirements for the 1969 survey of the full budget, which is expected to yield first results about mid-1971. This survey, which netted over 15,000 records of family expenditure and income will constitute a valuable data base for years to come, and for this reason a generalized tabulation system was developed which will have continuing usefulness, not only in meeting needs from the 1969 survey, but for future surveys as well. On the analytical side, multiple regression

techniques were used to implement a broad programme of research in consumer expenditure behaviour, working initially with data from 1964 and 1967 Urban Family Expenditure surveys and eventually with 1969 data.

In the field of comparative retail prices and living costs, price comparisons were carried out at St. John's, Nfld., Saint John, N.B. and Halifax, N.S., to fill gaps in the inter-city retail price comparisons published for May 1969. The results of the surveys in the Atlantic Provinces will be published in 1971 and integrated with updated indexes from continuing surveys in other provinces. The development of additional inter-city comparisons for shelter items was continued and it is expected that some results will also be published in 1971. The number of isolated posts covered in studies of retail price and living cost conditions for Treasury Board purposes in administering the allowance system for federal government personnel serving in such areas, was expanded following development and introduction of mail questionnaires to supplement information collected in personal visits. The results of surveys carried out in the West Coast region of British Columbia, the Labrador coast and Newfoundland, and the Eastern Arctic, will become available during 1971. The Division is in the early stages of work to develop a series of comparable family budgets for Canada as a whole and for major cities. These budgets are intended to provide measurements of place-to-place living cost differentials, as opposed to the pure price comparisons of the current studies. Consultations with other departments and agencies are being conducted to assist in formulating programme objectives and to agree upon methodology for establishment of comparable quantities and quality levels of goods and services to be included in the various regions. Provision was made for extension of the comparative price programme to other smaller cities through joint cost-sharing arrangements between the sponsoring community, the province, and the Bureau. Continuing the International Prices Section's support of the Canadian Government's foreign service allowance system for expatriate civilian and military employees, full-scale retail price and living cost surveys for 36 foreign cities were analysed. Abbreviated surveys were analysed for 16 additional locations. In addition, the results of previous comparative living cost studies for all locations, where Canadian personnel are serving, were reviewed and updated where warranted in the light of current price and exchange rate situations including the implications of the strengthening Canadian dollar. A full survey of shelter costs for military personnel serving

in Europe was launched with analysis scheduled for early 1971-72. Analysis of a world-wide family expenditure survey of Canadian government personnel abroad comprising returns from some twenty-five hundred respondents was largely completed and will be finished in early 1971-72. During the year under review, officers of the Section visited nine locations in the Caribbean and Central America where Canadian government personnel are serving.

In the industrial prices field, publication of indexes of manufacturers' selling prices was continued for ninety-eight industries and for four hundred and twenty commodities in manufacturing industries. Within these published indexes, on a 1961=100 basis, an additional forty-four new commodity indexes were developed and published and fifty-nine others were classified as "releasable, but not published".

A major revision of the Price Index of Commodities and Services Used by Farmers - Farm Operation, is in the final stage, and it is expected that the revised series will be released shortly. Total, group and some item price indexes will be published quarterly for Eastern, Western and all Canada from 1961 on a 1961 time base. While price indexes at the total and group levels are not produced by province, a wide range of item price indexes relating to provinces or economic regions will be available on request.

The development of price indexes related to capital expenditures continued during the year. In residential construction, the price sample of single-unit houses constructed by large builders was expanded from five to seven cities and the study of an alternative method of measuring price change for single-unit houses utilizing regression techniques was continued during the year. In the area of non-residential construction, the first direct pricing of a commercial office building was completed employing the technique of pricing completed components of work-in-place. In 1971 the same building will be repriced in four cities together with a light industrial building. This latter building will be priced on the basis of a sample of major items of work-in-place. In engineering construction, a provincial highway construction price index for Quebec was released for the first time. Prices used in this index related to contractors bids for work-in-place. Work continued on development of indexes of electric utility construction and publication of a price index for hydro-electric generating stations is expected by mid-1971. Development work also continued respecting pricing of commodities for which

there is no regular production of identical items from period to period, i.e., unique goods. This work is concentrated presently in the fields of electrical utility equipment, railway rolling stock, precast concrete, fabricated steel, laminated timber and prefabricated housing. The review of price indexes of machinery and equipment purchased by industry progressed during the period and the index for the construction industry will be published by mid-1971.

In the service industries group, further development of price indexes of freight rates was undertaken with investigation of data sources and preliminary negotiation to obtain data for design of weighting diagrams and price samples.

The systems analysis of the Industrial Prices Automation Project begun in 1970 continued through the year. The project is divided into nine phases. The Systems Analysis and Design Report for the first phase (Phase A - Selection of Industry, Commodity and Establishment Samples) was completed. The systems analyses of the remaining phases are in progress, with completion of all phases expected by the fall of 1971. The complete system is expected to be operational by mid-1972.

Transportation and Public Utilities Division

This Division is responsible for a comprehensive statistical programme covering transportation and public utilities in Canada, and consists of three sections: Transportation, Public Utilities and the Aviation Statistics Centre. A variety of surveys are carried out covering financial, traffic and operating statistics for each mode of transport, both passenger and freight. These include urban transit, the inter-city bus industry, the motor carrier industry, household goods, moving and storage, rail transport, air carrier operations, air passenger origin and destination, water transportation, shipping and canals. Various related services, facilities and operations such as international toll bridges, tunnels and ferries, warehousing, road and street mileage and expenditures, airport station activity, aircraft movements, motor vehicle registrations, rates and regulations, fuel sales, revenues and traffic accidents are also covered. Telephone, telegraph, radio and television broadcasting and cable television industries are surveyed in the Public Utilities Section. These surveys also include detailed information on financial and operating statistics.

In view of government control and regulation of the transportation and communications industries in Canada, a unique and highly important aspect of the work of the Division consists of providing the statistical requirements of various regulatory agencies in these fields. This includes each of the Committees of the Canadian Transport Commission - the Water Transport Committee, the Rail Transport Committee, and the Air Transport Committee. During the year, the Motor Vehicle Transport Committee commenced phasing in its regulatory function and the Division assisted the Committee in a major survey of extraprovincial motor carrier companies.

With the passing of the Broadcasting Act on April 1, 1968, the Canadian Radio Television Commission assumed regulatory responsibility for the community antenna television industry in Canada. A joint DBS-CRTC co-operative reporting agreement was drawn up during the year and a uniform period of reporting established for the industry. A similar co-operative agreement with the CRTC covers radio and television broadcasting in Canada.

In addition, the Division has a number of co-operative collection arrangements with several provincial motor carrier regulatory boards and public utility commissions.

The Division's Aviation Statistics Centre and Public Utilities Section provide many of the statistical requirements of the Department of Transport and the Department of Communications, respectively.

During the year, a comprehensive review of the entire statistical programme of the Division was commenced. Assessment teams were established to critically examine gaps and deficiencies in coverage, under or over reporting, quality, accuracy and timeliness of data, survey methodology, collection, compilation and processing procedures, etc. This involved contacting important respondents and data users to assess their need for new or additional data in the light of industry developments, accounting, classification or other changes. A number of changes and procedures have already been or are in the process of being implemented in various programmes, as a result, and include: a new survey covering container movements (origin and destination) and possibly details of commodities transported, a co-operative arrangement with the St. Lawrence Seaway for the processing and reporting of Canal Statistics, discontinuance of Part VI of the Shipping series (*Commodity Flow Charts for Selected Commodities*), a review of the *Motor Carriers - Freight* series, a review of all communication surveys

to improve coverage, the expansion of telephone, telegraph and cable statistics, re-activation of the DBS Advisory Committee on Rail Transport Statistics and three of its working subcommittees, introduction of Service Bulletins into each subject-matter area to accommodate requirements for various types of unpublished information quickly, the introduction of promotional brochures in each subject-matter area, and introduction of changes to improve timeliness.

During the year the Division conducted a pilot survey to determine the feasibility of obtaining commodity, origin and destination data for trucking. Shipping documents of one kind or another were sampled from some two hundred for-hire trucking companies by specially trained representatives of DBS. Various experimental tabulations and cross-classifications of the data were compiled and analysed to provide estimates of interprovincial commodity flows. The success of this pilot survey established the feasibility of obtaining commodity flow data in this way and as a result a much larger survey will be carried out during 1971-72.

As outlined in previous years' reports, the new expanded *Railway Carloadings* report was successfully completed during 1970 despite reporting and other problems inherent in any new data system. Also, the quarterly *Railway Freight Traffic* publication was converted to a new commodity structure based on the DBS Standard Commodity Classification. This has produced much better comparability between railway statistics and other commodity series published by DBS.

During the year, the Aviation Statistics Centre participated in the negotiation of the Canada-United States bilateral agreement concerning scheduled air services between the two countries. Also, this year saw the launching of five new publications by the Aviation Statistics Centre:

International Air Charter Statistics is a new quarterly publication representing the sole official source of information on this important and growing area of air transport. Requested by the Air Transport Committee of the CTC, the new survey covers the charter activities of all air carriers between Canada and other countries using aircraft with a gross take-off weight on wheels in excess of 18,000 lb.

Two new reports on *Air Passenger Origin and Destination* were produced. The *Domestic Report* is a continuation and expansion of a series previously released by the Air Transport Committee, while the *Canada-United States Report* combines for the first time in a single publication, data on air passenger

traffic between Canada and the United States. Inclusion of the US data is the result of a quarterly exchange of magnetic tape records between the US Civil Aeronautics Board and the Aviation Statistics Centre.

Transcontinental and Regional Air Carrier Operations is a monthly publication covering the operations of seven air carri-

ers, representing over ninety per cent of gross flying revenues.

Air Carrier Operations in Canada, a new quarterly report provides information which previously appeared in *Civil Aviation Monthly*. In addition, a report on *Aircraft Movement Statistics* was produced for the Department of Transport.

SOCIO-ECONOMIC STATISTICS BRANCH

The Socio-Economic Statistics 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 the Dominion Bureau of Statistics including the Labour Force Survey, and eight regional offices, as well as for provincial liaison and consultative services.

The organization of the Branch comprises the following units: a small Branch headquarters staff; Agriculture Division; Census Division; Consumer Finance Research; Education Division; Health and Welfare Division; Judicial Division; Provincial Liaison and Consultative Services; and the Field Division.

Agriculture Division

The prime function of the Agriculture Division is the planning, operation and co-ordination of a statistical system for the collection, evaluation and publication of annual, monthly and seasonal information concerning the agricultural industry. Specifically, this includes crop acreages and livestock numbers, production, utilization, value and prices of farm commodities, farm wage rates, farm expenditures and receipts, farm capital, physical volume of output, domestic consumption of food, stocks of agricultural products, farm inputs, farm practices, and indexes of farm prices. Much of the data is collected directly from farmers and agricultural industries by means of mail questionnaire surveys on a sampling or partial coverage basis. Administrative data collected by governmental departments and agencies are

also a source of valuable agricultural statistical information for the Bureau.

The statistical programme of the Agriculture Division is conducted in close co-operation with provincial government departments with which the Division has joint surveys and other work-sharing arrangements. There is also close collaboration with agencies such as the Canada Department of Agriculture for the purpose of procuring administrative statistical data.

During the year the Division continued to plan and implement a programme for the automation of its data processing and the improvement in timeliness of data preparation and publication. The annual Federal-Provincial Conference on Agricultural Statistics, held at the latter part of the year, featured the participation of representatives of farm organizations, credit advisers, and publicity agencies. The theme of the Conference centered on the present and future statistical needs of the farming community, the format in which data should be presented to farmers, and the means of dissemination.

An interdepartmental committee involving the Bureau and the Canada Department of Agriculture was established to consider the needs of the Department for new, more timely and better quality data to deal with the rapid changes taking place in the structure of agriculture and the demands for policies to meet new developments. These discussions were also concerned with the development of new and more sophisticated survey methods to meet these requirements.

The Division is presently organized into the following Sections: Crops, Livestock and Animal Products, Farm Income and Prices, and Special Projects and Research.

The Crops Section is responsible for a programme of collection, analysis and publication of statistics and market information on field and horticultural crops for Canada and the provinces. Much of the data on the

principal grain and oilseed crops is collected largely by means of mail questionnaire surveys of farm correspondents. Information is published on growing conditions, acreage intentions, fertilizer use, probable yields, farm-held stocks of grain, prices received by farmers and crop production. Allied with these surveys are those of the grain milling and oilseed crushing industries. These statistical systems are designed to meet the information requirements of farmers, marketing agencies and allied industries. Data obtained from these farm surveys are integrated with a vast array of statistics emanating as by-products of the operations of the Canadian Wheat Board, Board of Grain Commissioners, trade groups such as the National Millers' Association and several government departments to provide continuous studies of the supply, movements and trade of Canadian cereals, feed grains and oilseeds. An agriculture reporting programme relative to world trade in grain and oilseed crops is maintained through the co-operation of the Canadian Trade Commissioner Service in order to provide a better assessment of Canada's position in the international trade of these commodities as well as of new and changing policies affecting this trade.

In addition to the regular statistical programme, numerous research studies were carried out in 1970-71 to meet the economic and statistical requirements of both the government and private sectors.

The monthly survey of forage crop seed processors established in 1967 was designed to collect such data as seed purchases and inventories on hand. This series provides an indispensable check on production of these crops as well as a picture of marketing patterns. In an effort to obtain more information at the farm level, a post-harvest mail survey was carried out in the fall of 1970. A special survey of mustard seed growers, along with the regular survey of seed corn sales, was also undertaken.

The Special Crops Unit is responsible for statistical and subject-matter output systems relating to horticulture crops, honey and maple products, on a national and provincial basis. Large volume mail questionnaire surveys form an essential part of the data collecting system. However, mail questionnaire surveys do not provide unbiased data that can be used for testing the objectivity of the response on the part of the respondents. Accordingly, systems to test quality are necessary and are being designed. In recent years objective random sample surveys involving statistical and biological variables have been used in forecasting the peach, grape and sour cherry crop in Ontario. Results obtained from these objective esti-

imating surveys show that, for the most part, these techniques are quite satisfactory for these crops. Two of the most extensive surveys carried out in the Unit are those of the greenhouse and nursery industries.

The Research Unit is associated with much of the development work undertaken in the Crops Section involving the application of probability sampling methods. A major revision of the objective grape survey was undertaken last year, and the objective sour cherry probability sample is currently being redesigned. A pilot study to provide unbiased estimates of potato yields by variety and grade in the Maritime Provinces is now being planned. Preliminary studies have been undertaken on the possibility of collecting crop yield data using a questionnaire that will permit the transfer of data directly from questionnaire to computer tape by an optical character recognition device.

The Livestock and Animal Products Section provides a comprehensive body of statistical information covering most aspects of the Canadian livestock industry. The ongoing programme of the Section consists of publishing a series of periodic reports on the following commodity groups: milk and manufactured milk products, cattle and calves, pigs, sheep (including wool), horses, poultry and eggs, and furs. The activities of the Section during the past year were directed, in the main, towards improving the effectiveness of the methodology for the ongoing programme. In addition, several new areas of need were identified and the feasibility of meeting these needs is receiving close study.

One of the more important projects undertaken during the year was the publication of the handbook of dairy statistics. This publication includes a large number of the most important dairy statistical series, dating back to 1920.

A study indicated that the production of unsalted butter was not sufficiently large to warrant the collection of information more frequently than once a year. This survey was expanded to include cultured butter. A request to collect statistics of substitute dairy products was investigated, but no satisfactory conclusion has yet been reached. A survey to obtain more detailed information from dairy farms is under study. The goal is to measure structural change taking place in the dairy industry at the primary producer level through the monthly dairy correspondent survey. Traditionally, milk utilization has been shown on a milk equivalent basis, which considers only the butterfat component of milk. Due to changing use patterns, efforts during the past year have been directed toward developing a method to show milk utilization on a not-fat solids basis.

Arrangements have been made with the Canada Department of Agriculture district poultry offices to collect, compile and forward monthly data on cold storage stocks of poultry products to DBS for publication. The Section discontinued collection of storage stocks of fresh poultry products in 1970. This decision was made jointly with the Canada Department of Agriculture and follows the pattern set for reporting stocks of red meat a year earlier.

In the area of livestock statistics a study was initiated, in co-operation with the Canada Department of Agriculture, to examine conversion factors used to derive grain-consuming animal units. There is need for these units to reflect current feeding practices in order to plan for storage facilities, transportation requirements, exports, imports, and other related activities. The past year also saw considerable work being done on the revision of small-area livestock estimates from 1951 to date. Increased emphasis on regional economic planning has increased the demand for county and census division data.

During 1970 the size of the monthly survey of egg producers was increased with particular emphasis placed on obtaining regular reports from large-scale poultry enterprises. With a high percentage of the eggs now being produced on large specialized single enterprise farm units, it is important that they be adequately represented in the sample and the returns stratified by size of operation.

The annual census of chinchilla ranches was discontinued in 1970 after conferring with federal and provincial government departments and the trade.

A refinement to the "Replicated Sampling Method" for making livestock and poultry estimates was introduced to account for class jumping by producers from one size stratum to another. Although the method is still under study, initial results look quite promising.

In 1970, the livestock portion of the June-December Survey of Crops and Livestock was processed for the first time using electronic data processing techniques. All three Units of the Section made substantial progress towards placing historical data in the Bureau's data bank (CANSIM). Apart from making data readily available, the data bank will permit manipulation and analysis of stored data.

Throughout the fiscal year 1970-71 the Farm Income and Prices Section continued

its regular programme of activities dealing with the production of statistical series measuring farm income, expenditures, prices, capital investment, land values and wage rates. In addition to improving the quality and timeliness of many of these estimates, the Section became involved in several major new developments.

In response to many requests and to meet the requirements of the 1970 Canadian Agricultural Outlook Conference, forecasts of farm income on a provincial and item basis were developed for the first time. An examination of such forecasts in early 1971 suggested that the accuracy was generally very satisfactory. The reception of this forecast information was especially encouraging and a project for forecasting cash receipts on a quarterly basis is presently in the development stage. In a further attempt to provide decision-makers with up-to-date information on the state of the agriculture sector, monthly farm cash receipts are now being calculated. Such estimates are available approximately 35 days following the reference month and, together with comparative historical information, are now being forwarded to all provincial statisticians. Supporting these programmes is the development of manipulative and retrieval systems associated with the Bureau's data bank (CANSIM).

The Special Projects and Research Section has a major responsibility in the planning, development and implementation of computer systems for the processing, storage and retrieval of data collected in surveys conducted by the Agriculture Division. These activities involve co-ordination of the work by commodity statisticians in the Agriculture Division and technical specialists in the Methodology and Systems Branch. The Section also participates directly in defining the requirements for data processing and in specifying the contents and format of data input and output. During 1970-71, work was concentrated on identifying the requirements and developing the design of computer processing systems for (1) the June and December Surveys of Crops and Livestock and (2) the Central Register of Farms.

The Agriculture Division followed with keen interest the progress of the Farm Economics, Co-operatives and Statistics Branch, Ontario Department of Agriculture and Food (ODAF) in the development and implementation of a system for computer processing of data from the December Survey of Crops and Livestock, 1969, for Ontario. The success achieved by ODAF encouraged the Agriculture Division to consider an adaptation of this system which would provide similar capabilities for processing data from the June

Survey of Crops and Livestock, 1970, for the Prairie Provinces and British Columbia. Use of the IBM 1287 Optical Character Recognition (OCR) scanner to generate survey data files on magnetic tape was the feature of the data processing system developed by ODAF which provided the greatest stimulus for the Agriculture Division to proceed with the introduction of a computer system for processing survey data. The OCR system offered an effective alternative to keypunched data cards and the card reader for transferring the survey data from questionnaires to magnetic tape in machine-readable form.

Early in March 1970, the Agriculture Division began testing the OCR system of data transfer and the ODAF processing procedures, using data for British Columbia from both the June and December Surveys of Crops and Livestock, 1969. After evaluation of the experience and results obtained from these test operations, the decision was made to initiate a modified version of the ODAF system on a production basis to process data in the livestock sections (cattle, pigs, sheep and horses) of the June Survey of Crops and Livestock, 1970, for the Prairie Provinces and British Columbia. Operation of the system was extended for the December Survey of Crops and Livestock, 1970, to include the data in the livestock sections for Quebec, and the poultry and farm expenses sections for all five provinces.

Use of the modified ODAF system will be continued only until operational capability is attained with a system designed specifically to provide fully for the requirements of the Agriculture Division. Work on the development of this system was started in April 1970, with the assignment of a computer systems analyst to the project. The proposed design of the system provides for: (1) retention of the OCR scanner for transferring survey data from questionnaires to magnetic tape; (2) the capability for processing survey data to produce indicators used in the estimating procedures for current agricultural statistics; (3) the flexibility to permit changes in the specifications for editing the survey data and the contents of the output tabulations and (4) a simple data file structure to allow the use of generalized computer programmes currently available in the Dominion Bureau of Statistics for the retrieval and manipulation of data.

This design is considered as an interim step in the development of a more sophisticated system which will incorporate the additional flexibility in data retrieval and processing required for intensive statistical research and data evaluation.

The development of a new system for addressing questionnaires, designated as the

Central Register of Farms, will extend the capabilities of the present system. The Central Register of Farms is intended to be more than a source of names and post office addresses for farm operators. To extend the functions of the Register, each individual data record will contain, in addition to items for identification of the farm holding, several types of information which can be used for a variety of statistical purposes. Size of the holding and production activities at the census reference date will be identified by a set of values, including total acres of land, acres seeded to major crops, numbers of livestock and poultry, value of land and buildings, and cash receipts from sales of farm products during the previous year. A series of codes, indicating the commodities produced on each holding at the census reference date, will be updated according to information reported on commodity sample surveys. The data record for each agricultural holding on the Central Register will provide for a record of the response to survey questionnaires mailed to the operator. These are the basic types of information to be maintained on the Central Register of Farms, and which are potentially useful in developing ad hoc surveys for special purposes or for redesigning regular periodic surveys to extend the scope and to refine the quality of the information collected.

Census Division

During the past year, the Census Division directed its main emphasis toward the final preparation of the 1971 Census of Population, Housing and Agriculture. With the experience gained from an extensive testing programme which began in 1966 and which included a Trial Census in 1969, final revisions and modifications were made in the "Self-enumeration" census. In 1971, for the first time in Canada, householders will complete the census questionnaire for their own households, except in certain remote areas such as the Newfoundland outposts and the Northwest Territories, which will be enumerated by the traditional canvasser.

As a part of the new technical methods to be employed, the questionnaires will be microfilmed, after which, the microfilmed information will be transferred to computer tapes.

A series of quality checks has been included in the field and office operations throughout the eight Regional Census Offices in order to ensure as complete and accurate a census as is possible, while an extensive

publicity programme has been designed to provide information and direction to the household respondents.

Development of the tabulation programme for research studies will be continued and work has started on several of the proposed projects within the evaluation programme.

To begin with, a Field Information Reporting System was introduced to control expenditures in relation to the progress of operating certain specific tasks in the 1971 Census.

The Census Division has directed considerable effort toward improving the effectiveness of the computer storage and retrieval of data. Master files have been established for the urban centres designated for geocoding. Geocoding could be used to describe any Address Register at the users' request and in this vein, the Census Division was represented on a Task Force to consider the feasibility of a DBS Address Register.

Initiated in 1969, the Census Data Access Programme has been designed to cope with the expected increase in requests following the completion of the data. The programme envisages the dissemination of data through magnetic tapes, disc packs and micro-films as well as through printed media. A dictionary of census terms and a catalogue are under way in order to assist the user as he describes his requirements.

While the prime concern during this fiscal year has been the 1971 Census, ongoing activities included the release of the regular series of estimates of population and families, and the updating of current statistics on citizenship, immigration and emigration. A new series, "The Population Projections for Canada - 1969-84" was completed and published, and plans were laid for the 1971 issue of this series. Two special reports, "Population Estimates by Provinces as a Variable of Fiscal Equalization Formulae", and "Mother Tongue for Counties and Census Subdivisions, 1961 Census" were released. The number of requests for searches of early Census and National Registration records for proof of age totalled 33,000 for the year.

The Division represented the Bureau at a number of national and international meetings during the year, including the Conference of European Statisticians, Population Association of America, Organization for Economic Co-operation and Development (OECD), Canadian Economic Association (CEA), and the Canadian Statistical Association (CSA). A number of meetings were attended, relating to data use and access, such as the

Seventh Federal-Provincial Conference on Economic Statistics, the FAO Conference on Food and Development, a Conference on the Establishment of an Information and Research Centre for the Social Sciences. Liaison was maintained throughout the year with the United States Bureau of the Census and other international statistical agencies. The Division continues to provide consultative services, including discussion of 1971 Census plans, to various government departments and agencies, universities and private concerns.

Consumer Finance Research Staff

The Consumer Finance Research Staff conducted the 1968 Survey of Consumer Finances in which 22,000 family units were interviewed, thus providing the largest range of income data available since the 1961 Census. The main report from this Survey, *Income Distributions by Size in Canada*, was released at the end of 1970. Special reports will be published in 1971 to include a study of the work experience of the labour force and a report on the low income populations. Data from the latter study were made available to the Senate Committee on Poverty. Other reports to be released in 1971 are on census family incomes and comparative income distributions for the 1965-67 period as well as an econometric research study of Canadian family incomes.

The 1970 Survey of Consumer Finances was carried out in May 1970 and comprehensive data on incomes, assets and indebtedness were collected from a sample of approximately 12,000 households. This was the fourth Survey of Consumer Finances to collect asset and debt data, but the first such survey to include farm households. Preliminary income data from the survey were released early in 1971 and the main reports on the income distribution and on balance sheets will be published toward the end of 1971, or early in 1972.

The staff assumed responsibility for the annual Survey of Household Facilities and Equipment and was responsible for the preparation of the 1970 report. Plans are being made to improve these surveys by providing data on the characteristics of households as well as on facilities and equipment, by periodically integrating these surveys with the Surveys of Consumer Finances. Plans were completed for an experimental re-interview survey of 1,500 households to be carried out in May 1971. The households to be re-interviewed were in the sample of the 1970 Survey of Consumer Finances. The purpose of the survey is to test alternative approaches to the collection of data on annual changes

in assets and debts. Households will be asked to report net changes in selected asset and debt holdings throughout the previous year as well as amounts held or owed in 1971. The data collected will be matched with data supplied by the same respondents in May 1970, in order to evaluate the effectiveness of recall questions on savings in comparison with the savings estimates derived from the comparison of balance sheets at different points in time.

The development of estimation procedures for annual estimates of income for counties and census divisions was completed during the year. A description of the sources and methods as well as estimates for 1966 will be published in the April 1971 *Canadian Statistical Review*. Estimates for 1967 to 1969 will be released during the coming fiscal year and a reference paper will be published. These studies have been made available to researchers and others working with income tax statistics.

A member of the staff is representing Canada on an international committee working on the development of a conceptual framework for a system of income and expenditure distribution statistics as a complementary system to the National Accounts. At a meeting in Geneva in October 1970, Canada agreed to participate in an international study of income distributions data to be developed consistent with that proposed in the international concepts. Other countries participating include the United Kingdom, France and Hungary. Participating countries have agreed to attempt to complete the study by the end of 1972. The research for the international study will be carried out by the Consumer Finance Research Staff.

Increasing attention is being given to policy requirements in the field of social statistics and to evaluating existing social statistics. A departmental committee has been set up to study international recommendations for a system of social accounts and to develop proposals for a possible Canadian system. The Co-ordinator is a member of a small working group set up to develop specific proposals as to requirements for social statistics data. An interdepartmental committee has been established under the chairmanship of the Co-ordinator, to organize working groups on selected problems in the area of the statistical measurement of levels of living, possibly considering social indicators, comparative budgets and poverty studies.

Members of the staff participated in the planning of the subject-matter tabulations and reports to be produced from the 1971 Census of Canada as well as on preliminary planning of the 1971 Census. Members

of the staff participated in other DBS working groups in such fields as pension plan statistics, the development of new data from income tax statistics and the planning of changes and improvements in the DBS household survey structure. Considerable assistance was provided to a number of government studies, task forces and royal commissions, as examples, the social security white paper, the Royal Commission on the Status of Women and the Senate Committee on Poverty and the study on urban problems. A member of the staff contributed to the study on urban poverty to be released by the Department of Urban Affairs. The Co-ordinator was a member of an interdepartmental committee set up by the Social Planning Committee of the Cabinet to study and make recommendations to the Cabinet on the Report of the Royal Commission on the Status of Women. Consultative assistance was also provided to private individuals and organizations such as the Canadian Council on Social Development and the Canadian Tax Foundation which were preparing briefs to the government or carrying out research.

Education Division

The Education Division is responsible for the collection, interpretation, and analysis of statistics related to education.

Education in Canada has undergone such a significant change in the last decade that enrolments have more than tripled at the post-secondary level. New types of institutions have been established to provide alternatives to the universities, and expenditures on all levels of education have mushroomed from \$1.46 billion in 1959-60 to \$6.85 billion in 1969-70.

The Education Division has been reorganized to cope with the resulting and ever-increasing demand for data. There are now five subject-matter Sections (Student, Facilities, Teacher, Financial, and Cultural Information), a Projections Section, and a Systems and Development Section.

Considerable progress has been made in the Education Division towards automating its surveys. The all-important task of creating standard classifications, definitions, and codes for automatic processing has proceeded apace. Plans have been laid for developing computer systems for each subject-matter Section, and the considerable enthusiasm of provincial Departments of Education and other respondents bodes well for the success of these systems.

A new programme on interprovincial movement of students which has been discussed with DBS officials and some Departments of Education, will be implemented for the coming year 1971-72. This will give interested parties information by sex and age on the elementary-secondary student population moving in or out of the provinces.

A series of publications, dealing with the totality of education by region, was initiated. Included are publications covering the Atlantic Region, Western Canada, and North of the 60° Parallel. By next year, a uniform automated system of enrolment statistics for Canadian universities will be available to provincial and federal agencies. Work is almost complete for the publication of data on enrolment in elementary and secondary schools covering the school years 1963-64 to 1968-69. Plans are in progress to do the same for the school years 1969-70 and 1970-71; this will help meet the demand for enrolment data at the elementary-secondary level for recent years.

The first edition of a new annual publication on Canadian Community Colleges and Related Institutions was released in September. This 60-page report covered all post-secondary student enrolments and graduations by institution, programme, age, and sex in both terminal vocational and university transfer programmes.

A course title classification coding system was developed, which will serve both as a basis for standardizing tabulations of vocational training and as a part of the special survey of training in industry undertaken for Manpower and Immigration.

During the last year considerable effort was made to improve the quality and coverage of university enrolment statistics. In particular, the amount of information provided on graduate students was increased vastly and new tables were provided for particular areas of professional education such as engineering, dentistry, medicine, educational nursing.

In the past year and in co-operation with other federal agencies, the ground work was laid for an entirely new approach to the area of university statistics, whereby the Division is presently revising the collection programme so that the data respond to the analytical requirements of a varied and important clientele. For the first time, compilations will separate diplomas awarded from degrees awarded; they will give an idea of the area of study of most persons graduating with a Bachelor degree, and also data will be provided by institution instead of by province only.

The 1970-71 fiscal year was the first year of operation for the Teacher Information Section. The Section assumed the responsibility of collecting data of educational staffs at all levels of education. Surveys of trade and vocational staffs, together with a study on the supply and mobility of university staffs will eventually provide individualized personnel records.

During the year under review, the Financial Information Section undertook comprehensive studies of public expenditures on education since 1960, and on financial aid provided to students at the post-secondary level by federal and provincial governments.

In its initial year of operation, the Cultural Information Section is continuing its regular surveys of libraries while developing new programmes for publication in 1971-72 to include a survey of Museums, Galleries and Archives, facilities for the Study of the Arts in Canada; Canadian Literary Awards; Professional Companies for the Performing Arts; Music Competition Festivals in Canada and the activities of Craftsmen in Canada.

The publication *Advanced Statistics of Education* has been improved and enlarged. Appearing early in September, it shows enrolment and other variables for the previous school year, preliminary figures for the year just completed and estimates and forecasts for the two following years. Publications from the Projections Section for 4-year time series, will show current trends in enrolments and the totals for the last school year.

Health and Welfare Division

The Health and Welfare Division, comprised of four Sections, is responsible for the production of statistics on the status of the health of the Canadian people, the occurrence of illnesses, and the distribution, cost and availability of health care and treatment. The Vital Statistics Section concerns itself with birth, death, marriage and divorce. In addition to carrying out general surveys of these events, the Section conducts special studies, for example, in mortality, fertility and life expectancy. The Mental Health Section considers the measurement of patient characteristics and patient movement as these relate to mental disorders and the use of psychiatric facilities. The Public Health Section is responsible for the investigation of individual conditions and personal characteristics of patients in general and special treatment

hospitals and in tuberculosis institutions, the volume of newly discovered cases of malignant neoplasms and the incidence of communicable diseases. The Institutions Section collects data on the services, facilities, staff and finances of general and special hospitals and mental and tuberculosis institutions, the operations of agencies providing related health services or types of related domiciliary care, and the supply and demand for health manpower resources.

All four Sections attempt to integrate their current and previous output, so as to facilitate the elucidation of trends. The Division, on occasion, conducts non-repetitive, special investigations. It is intended to extend both in broad and in restricted terms, the coverage of the areas assigned to it.

The Division met its statutory obligations in the field of vital statistics by supplying basic, annual tabulations of births, stillbirths, marriages and deaths as required under Dominion-Provincial Agreements. The Division has continued to supply alphabetic registers of births, marriages and deaths to the provinces and to the Family Allowances Administration for certification and verification purposes.

Demands for information continued at a high level, largely from public health officials, education authorities, individuals engaged in medical research, manufacturing and distributing firms, market research agencies and other government departments and from the public at large. Of particular interest were the requests for intensive investigations of the patterns of nuptiality and fertility, occasioned by the drastic changes in the birth and marriage rates in recent years. New developments in hospital and medical care have added to the demand for information on mortality, due to particular diseases reported as causes of death. Most of these requests required special calculations and compilations, as the information demanded was not available in any published form. Analytical studies have already been planned and published relating to cancer, accidents, suicide, heart disease, foetal and infant mortality, nuptiality, fertility, and life expectancy, in an attempt to show the direction and magnitude of the trends. These reports and studies have been supplemented by a series of technical reports which deal with methodological techniques of life-table construction, statistical measures of trends, and the techniques for projections of births, marriages and deaths. In addition, calculations on fifteen-year projections of births, marriages and deaths were initiated as the base for population projections for demographic and economic planning

purposes. "Record-linkage" projects for fertility and population projections have been planned to indicate the interrelationship of infant and pre-school mortality, reproductive histories and family-planning patterns.

To reduce the cost and time to process vital statistics, arrangements have been made with the five largest provinces to share the cost of producing basic statistical records, thus necessitating standardization of certain statistical procedures. Further economies, and even more complete co-operation with provincial authorities, are being effected through computerization, in an effort to advance publication dates and thus to provide accelerated service.

Discussions with provincial authorities are progressing toward the adoption of a geographic classification for population projections and for short- and long-term social and economic planning.

Arrangements were made with the Department of Justice for the collection and compilation of divorce statistics under the new Federal Divorce Act, which became effective in July 1968. This system will provide extensive information about the characteristics of the individuals and the number of dependents involved.

The present series of statistics on causes of death, begun in 1971, will be extended to include all medical diagnoses reported on the death certificates. The objective here is to provide detailed epidemiological information, which will give an insight into the etiological processes and interaction of diseases which lead to premature death. This new statistical series was made possible through the use of new computer techniques developed and made available to DBS by the U.S. Public Health Service.

Each year, the Division acts as the Secretariat to the Vital Statistics Council for Canada. Although certain of these problems relate to the legal and administrative features of the vital statistics system, others extend to the general sphere of social statistics. As an illustration, a full investigation to redesign the present registration forms used by the provinces, was undertaken for the purpose of standardizing the content, size and format of the records used by the provinces, subject to local legal requirements. The records serve both legal and statistical purposes and will be put into effect across Canada by January 1, 1973.

The Mental Health Section fulfilled its responsibility to provide information concerning the social, demographic and medical characteristics of patients being treated in psychiatric in-patient facilities together with a report on the movement of patients admitted and separated during 1970-71. Brief, up-to-date information, summarizing the data on patient movement within the reporting psychiatric facilities was released in a Parliamentary Report in January 1971. The 1970 Parliamentary Report provides detailed information on patient characteristics, stated in detailed diagnostic tables including drug dependence tables which will list the drug responsible for the particular dependence. In recent years, there has been an accelerated development of specialized treatment facilities for intensive but short-term care for all types of mental illness; nevertheless, conventional treatment of mental illnesses has continued in general hospitals with out-patient psychiatric facilities. The Section has started a preliminary analysis of in-patient units, and has also initiated discussions with certain provincial Departments of Health and Welfare in order to establish means by which data might be collected for individuals being treated in out-patient psychiatric facilities and in non-specialized in-patient facilities in general hospitals.

The increased demands from social scientists, social workers, federal, provincial and private agencies has prompted the Mental Health Section to use general purpose computer programmes and to redesign particular programmes in order to better serve the user and to reduce costs. The Mental Health Section has undertaken to develop and expand its general morbidity statistics output which concerns in-patient hospitalization together with the incidence and treatment of particular diseases. The Section is presently collecting morbidity information on chronic respiratory diseases and diabetes. Reports were published on the incidence of cancer in Canada during 1969 and on surgical operations performed in general and associated special hospitals. Both these reports were produced by photographing computer output.

The French manuscript of the *Classification internationale des maladies*, adaptée was published in 1970. In the companion volume which has been translated into French, all the medical terms have been converted to machine-readable form for alphabetic arrangement by computer and photoproof production. Information Canada is converting the computer output into the printed volumes. Both these volumes will be distributed nationally as well as internationally by Information Canada.

The changes in the legislation for Therapeutic Abortions under Section 18, Criminal Law Amendment Act, 1969, led to establishment of a monthly reporting system of the number of abortions performed in general and associated special hospitals. This project was undertaken at the request of the Department of Justice, and in co-operation with the Provincial Hospital Insurance Commissions. Since only eight of the ten provinces participated, the monthly reporting system did not produce satisfactory data, and as a result, reports were sought directly from the individual hospital performing the operations.

During this fiscal year, the Institutions Section carried out a number of major developments associated with the operations and finances of hospitals and the supply and demand for health manpower. A survey conducted in participating hospitals concerning the usefulness of the recently introduced Quarterly Hospital Information System, provided valuable comments for improvements in the system, many of which will be incorporated in the revised 1972 version. The availability of two years of quarterly data has enabled certain comparisons and trend analyses. Edit observations in English and French are available to reporting hospitals to indicate problem areas in the hospital's quarterly forms. A special analytical programme was introduced for pediatric hospitals in the last quarter of 1970.

The groundwork has been laid for the computerized production of the annual List of Canadian Hospitals and Related Institutions and Facilities. This design work will soon allow for the production of a number of comprehensive listings covering major groups in the health care delivery system and will expand in the future to cover Nursing Homes, Welfare Institutions, Welfare and other health related facilities.

Preliminary plans have been made to expand the annual surveys of health manpower. These programmes are being designed in consultation with the Departments of National Health and Welfare and Manpower and Immigration, the provincial government departments and other concerned agencies. The reports produced in this series will be released in 1971 and will contain data based upon geographic location, type of employment and educational qualifications. An occasional series composed of twelve reports, giving data for thirteen health manpower occupational groups will be finalized in late 1971. The series has been designed to show trends in each province during 1961-68 in employment patterns, turnover rates and other related areas. The Annual Survey of Registered Nurses will be available in April 1971.

Judicial Division

The principal objective of the Judicial Division is to measure the effectiveness of the judicial process; that is, law enforcement, judicial procedure and rehabilitative services. The new programmes stress the reduction of the respondents' work load by devising reporting systems based on either "administrative-statistical" or "legal-statistical" forms which provide complete and accurate operational data, numerous means for returning to respondent information for administrative or social research, and the integration of statistical series within provinces.

Detailed discussions have taken place with representatives from the province of Ontario and from the Northwest Territories who are interested in a complete revision of their court reporting systems. Similarly, DBS is studying the implications of obtaining detailed data on the use of bail and summonses at the expressed request of the Minister of Justice. The request of the Solicitor General's Department for an integrated statistical system has produced interest in several provinces to adopt the model juvenile court statistics programme now employed in Manitoba. Arrangements have been made to implement a new Prison/Reporting Programme in Nova Scotia during the next fiscal year.

The Royal Canadian Mounted Police and DBS are considering the possibility of automating their statistical programme for crime reporting. The Police Records Manual, prepared at the request of the Canadian Association of Chiefs of Police, was distributed to police departments as a guideline to ensure better statistical reporting under the Uniform Crime Reporting Programme. As a result of the Uniform Crime Reporting Programme, investigations are under way to extend RCMP jurisdiction for reporting narcotic offences to the police departments.

Seminars were held at Zone Meetings of Chiefs of Police in Ontario where the UCR system was discussed and explained in detail and related problems were identified and resolved. The seminar has proven to be a most effective way to communicate with respondents and accommodate the specific requirements of separate provinces. Efforts are continually being made to increase the liaison with the provinces and the Judicial Division has begun the first phase of an internal training programme designed so that each field liaison officer may effectively cover the three areas of the Police, Courts and Corrections.

Provincial Liaison and Consultative Services Staff

The Provincial Liaison and Consultative Services Staff co-ordinates and initiates the Bureau's contact with provincial government departments, particularly in the former's capacity as producers and users of statistics and responds to provincial requests for general or specific assistance in the statistical field. Secondly, the staff co-ordinates requests for data on travel, tourism and outdoor recreation through the co-operation of several divisions in DBS.

Provincial Liaison Activities: A major responsibility of the staff is to act as a focal point to improve and extend federal-provincial communication in the statistical field. This year saw the appointment of the first two professionally qualified liaison officers to Halifax and Edmonton. Following frequent and regular requests for provincial statistical series, an advanced information system has been developed by the headquarters' staff, in co-operation with subject-matter Divisions, in order to provide interested provincial officers with required statistical series as soon as they become available in DBS.

Again this year, all provinces were visited by members of the Staff and a variety of general consultative and liaison services were provided through bilateral meetings. The Seventh Federal-Provincial Conference on Economic Statistics held in Banff, Alberta, May 19-23, 1970, attended by over 100 delegates, was a major undertaking for the staff, which acted as this Conference's secretariat. A Summary Report, including the Conference Resolutions, has been issued.

During the year, the staff continued its extensive review of the more than 700 co-operative agreements with the provinces. Additionally, the staff has begun to document statistical or administrative data series produced by provincial departments. The staff is involved in a wide variety of internal DBS activities which concern policies and programmes affecting the provinces. In addition, the staff continues to inform DBS officials of provincial policies and programmes.

Travel, Tourism and Outdoor Recreational Statistics: The staff represents the Bureau on various committees concerned with travel statistics and research. It is the secretariat for the Travel Research Planning Committee and its Technical Sub-committee of the Federal-Provincial Conference on Tourism.

A review was conducted of a consultant's report commissioned by DBS in 1967, which has been distributed to the interested federal departments and directors of DBS. Following this, a report was prepared containing recommendations for the future role of the staff for the collection and dissemination of data on travel, tourism and outdoor recreation.

A new annual publication is being prepared which will contain an outline of the data produced in DBS on travel, tourism and outdoor recreation. In its second edition, this report is scheduled to contain a section on domestic travel to be derived from the 1971 Canadian Travel Survey. This is a major household survey being conducted by DBS on behalf of the Office of Tourism. Both the provinces and DBS hope to obtain special information on international travel by Canadians which can be related to other international travel statistics produced in the Bureau. The staff is also continuing to participate in the planning of a number of interview surveys of tourists from the United States.

The staff participated in the Federal-Provincial Conference on Tourism and in all meetings of its Technical Sub-committee, in the annual meeting of the Travel Industry Association of Canada (formerly the Canadian Tourist Association), and in the first annual meeting of the Travel Research Association (incorporating the Eastern and Western Councils on Travel Research).

The Co-ordinator was also extensively involved in a variety of preparatory activities which led to passage of a new Statistics Act.

Field Division

This Division is responsible for all field survey activities of the Dominion Bureau of Statistics. It administers eight Regional Offices located in St. John's, Halifax, Montreal, Ottawa, Toronto, Winnipeg, Edmonton and Vancouver. These offices have a variety of functions including the conduct of the Censuses of Population and Agriculture, the monthly Labour Force Surveys with their associated supplements and Special Surveys, the monthly pricing of Commodities and Services for the Consumer Price Index, a continuing Job Vacancy Survey, and numerous special projects. These offices also provide service to other DBS Divisions by collecting a variety of reports from local business establishments. They foster and promote the fullest use of the DBS statistics by providing a local reference library

and by giving assistance to users in satisfying their statistical needs.

Preparations have continued for the Tenth Decennial Census which will be conducted in 1971. The Field Division is responsible for the task of enumerating approximately 21.6 million people scattered across 3 1/2 million square miles for the census.

Regional Census Offices of the Field Division instructed approximately 135 Regional Office Representatives located across Canada. They, in turn, will instruct approximately 2,000 Census Commissioners. The Census Commissioners will select and train about 42,000 Census Representatives. In addition, technical training will be given to over 3,000 temporary personnel employed in the Regional Offices and in Head Office to process the census documents through a number of methodological and quality checks. Regional processing offices will be closed by the end of October.

One of Canada's most important economic indicators is provided by the monthly Labour Force Survey, which compiles the official employment figures for Canada. This survey employs some 750 part-time interviewers who obtain information each month from a sample of over 30,000 households, scientifically selected to represent all geographic and economic regions 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 for each of the 5 regions of the country.

In conjunction with these monthly surveys, supplementary questions are included to obtain limited information relating to other matters of current interest. During the 1970-71 fiscal year, these questions dealt with such subjects as student employment, smoking habits, weeks worked, immigration, paid absence from work, movement of persons within Canada and multiple job holdings. Special questionnaires are also used where more extensive detail is required; e.g., the annual Household Facilities and Equipment Survey in May and the monthly Rent Survey which is regularly conducted with the Labour Force Survey. These surveys are conducted for other divisions within DBS and for other federal government departments.

Apart from the supplementary and special surveys conducted directly with the Labour Force Survey, special surveys which use the Labour Force Survey sample are conducted separately. The National Food Expenditure Survey of about 1,200 households per month was continued to the end of 1970. The Family Expenditure Survey of 22,000 households was carried out with over 600 interviewers participating.

In order to obtain complete records on family income, assets, and indebtedness, the Consumer Finance Survey based on a sample of 12,000 households commenced in late April 1970. Together, these Family Expenditure and Consumer Finance Surveys provided the most comprehensive record of family income, expenditure patterns, assets and debts ever compiled by the Dominion Bureau of Statistics.

Price collection for the Consumer Price Index is an important Regional Office activity. Retail prices for some 300 commodities and services are collected monthly in 34 cities across the country. Over the past year, separate indexes have been made available for Thunder Bay and Quebec City. Pricing is being done for next year's revision of the CPI and for improved representation of chain and independent food outlets.

The Field Division has done work for the Comparative Living Costs Section for St. John's (Nfld.), Saint John (N.B.) and Halifax Fuel Costs and Public Utility rates have been studied as well as retail prices of cigarettes and tobacco.

A substantial increase in ad hoc pricing is expected in 1971-72 which will place irregular demands of time and scope on the Field Division's resources.

Further pricing is expected for the Industrial Prices Section in connection with their Tract Housing Survey. Indexes are to be constructed for selling prices of new homes on a national and regional basis to show changes required in financing and investment policies.

The Current Business Surveys Section of the Field Division is responsible for the timely collection of business reports from

non-response firms. These reports, which in some cases account for up to 30% of the universe, are collected for almost all subject-matter Divisions of the Bureau.

A pilot study was conducted this year for a "Trucking Origin and Destination" Survey which commences April 1971. This survey will engage the Field Staff in an elaborate selection procedure for sampling the mass of records of trucking firms.

During the past year, the Job Vacancy Survey achieved full coverage of all economic sectors, with the exception of Agriculture. Thirty-four thousand questionnaires were mailed out on a bi-monthly basis. Through a combination of personal visits and telephone contacts, the field force of 50 interviewers carried out approximately 4,000 interviews per month.

During the year, the Field Division also conducted work on special projects, notably the Canadian Travel Survey and the Nutrition Canada Survey.

The Canadian Travel Survey consists of interviewing approximately 12,800 households representing both urban and rural areas within the 10 provinces of Canada. The Survey began in March 1971 and will be completed in January 1972. The results will provide statistical information on the travel habits of Canadians which will be useful to the provinces and the Federal government, and will aid in developing tourist resources.

The Nutrition Canada Survey will involve the interviewing and clinical examination of 21,000 Canadians between September 1970 and September 1972. The results of this survey will help to evaluate the need for new food legislation, changes in food composition controls, and revisions in nutritional education.

ADMINISTRATION BRANCH

As a result of a reorganization effected during the year, the Bureau's Financial and Administrative Services were brought together with Personnel Administration to form the Administration Branch. The Director General was given over-all responsibility for administration, finance, personnel, the bilingual programme and management services. A review of the services provided to the Bureau by various parts of the Branch follows.

Personnel Administration

Staffing - Some easing of the recruiting situation became apparent as the year

progressed, with a greater supply of qualified candidates available for professional and technical needs. The proportion of bilingual people recruited to the officer categories was improved. Staffing services were rendered more flexible and effective through (a) acceptance of delegated staffing authority for the Administrative and Foreign Service Category, and (b) adoption of selection processes alternative to the formally advertised competition, namely, Data Stream and in-house Manpower Inventory searches.

Special efforts were directed towards the training of regional managers in the practice of the newly sub-delegated staffing function, through both the preparation of

manuals and through personal instruction. Another notable activity was the planning and preparation of a programme for the staffing of the Regional and Head Offices of the 1971 Census with a requirement of 4,000 or more casuls.

Permanent employees hired during the year numbered 490 of whom 95 were statisticians. Term employees hired numbered 1,047. Of the total separations of 1,136, 337 were continuous employees (of which 64 were statisticians), and 799 were term employees.

Employees on staff at the end of the year numbered 3,303 continuing (permanent), and 757 term.

The services of 406 students were utilized during the summer: 39 as research assistants and 367 in a clerical capacity.

During the year 643 employees were promoted. Competitions open to the public were held in 47 other cases.

Appeals lodged numbered 18: of which 10 were against internal competitions, one against an interdepartmental competition, and 6 against recommendations for promotion without competition. Of these, 10 were dismissed, 8 were allowed.

Classification - To facilitate control and to improve service to line managers, an organization was introduced whereby each of the five officers of the section was made directly responsible for all classification requirements relating to a particular category in DBS as a whole.

A total of 1,885 position classification reviews were carried out in a total of 6,908 positions. More extensive study and analysis was required in reaching classification decisions to ensure validity and consistency in relation to effects of changes on existing functions and positions within each organization.

Classification grievances were of a normal nature with a total of six received and resolved. Of these, one was handled under delegated authority: five were submitted to the Treasury Board Review Group.

As the classification training courses of previous years had culminated in a bank of knowledgeable officers within DBS divisions and branches to be utilized on the evaluation process, the current need for classification training was somewhat diminished.

Preliminary studies were carried out on the policies, procedures and internal audit requirements involved in the anticipa-

ted delegation of classification functions to the Branches.

Development and Training - This Section continued expanding in all phases of the training of DBS employees during the fiscal year 1970-71.

Ever-increasing demands for EDP training, in keeping with this Department's move to automation, absorbed some 50% of the over-all training effort. There were 24 types of EDP courses conducted from which 491 employees graduated. These courses were given to systems analysts, programmers, subject-matter specialists and their support staff in all occupational groups. This represented a 100% increase over EDP training during 1969-70 and was accomplished without any significant increase in training staff by presenting most of these courses on video tapes.

In the area of supervisory and management training 116 selected employees were given training in effective supervision and management principles and techniques. This represented a 35% increase in graduates of these courses over the previous year.

With respect to professional staff, 40 graduated from in-house courses in Algebra and Analysis, Calculus, Sampling Theory and Econometrics.

Nine employees under the long-term educational leave programme pursued studies for post-graduate degrees aided by departmental grants totalling \$60,000. Another \$10,000 was devoted to 200 employees who took a wide variety of evening and correspondence courses, in many subjects, to improve their on-the-job performance.

The Section also organized special training for 14 foreign-aid students referred to DBS by the Canadian International Development Agency.

To upgrade the performance of clerical and technical officer staff, courses were presented in statistics and accounting at the introductory level. There were 74 employee graduates from this series compared to 30 in 1969-70.

All courses and programmes came in for extensive revision and improvement as the year progressed. The training staff acted as consultants to line management and much of this revision and improvement resulted from committee work at both the management and staff levels. Demands for VTR and audio-visual presentations of all types necessitated the establishment of an educational media technologist and this area of training expertise will be heavily emphasized in 1971-72.

Manpower Planning and Utilization - A comprehensive employee evaluation programme covering some 1,300 employees in the Scientific and Professional, Administrative and Foreign Service and Technical categories was implemented during the year.

A manpower inventory system, containing both qualitative and quantitative data on all employees in the Scientific and Professional, Administrative and Foreign Service, and Technical categories, was established in support of the staffing and manpower planning activities.

A detailed analysis of the DBS work force was completed as a preliminary step to development of an annual manpower plan covering recruitment, selection and staff development in DBS.

A system for capturing and maintaining detailed information on staff turnover and recruitment was introduced and the first annual analysis of the data completed.

Departmental manpower strength and utilization data is now produced from the Personnel Data System without external inputs. The system meets both the departmental and the new Treasury Board requirements for the exercise of manpower controls.

Staff Relations - Collective Agreements now cover 16 occupational groups in DBS, three are in the Professional and Scientific Category, two in the Technical, five in the Administrative and Foreign Service, four in the Administrative Support, and two in the Operational Category. The Section's advisory and monitoring role with respect to interpretation of the agreements, resolution of complaints and grievances, and discipline continues.

Staff Services - During the year the Government, as an employer, introduced the Disability Insurance Plan, and the Staff Services Section worked with the Superannuation Branch of the Department of Supplies and Services in administering it within DBS. A new procedure on pay and attendance was prepared relating to the casual clerks to be hired for the 1971 Census. Several meetings were organized with the Census Division and the Regional Representatives to explain this procedure. Five collective bargaining agreements affecting the Bureau staff were implemented; and salary revisions were paid accordingly.

Incentive Awards - There were 47 suggestions carried over from the 1969-70 fiscal year, of which 23 were rejected during the year. Fourteen of these received approval and granted awards valued at \$1,819.95, one

received a second-year saving award valued at \$848.64. Two of these suggestions are awaiting implementation and eight are still being investigated. During the year 18 new suggestions were received of which 12 have been rejected, one has been approved, and five are still being investigated. The Dominion Statistician made 25-year Long Service Awards to 211 DBS employees.

Bilingual Development

Progress towards management objectives in respect to bilingual development dealt primarily with resources on hand. An inventory of the language capacities of current staff was instituted through the development and administration of a second language standard evaluation test. Of 800 employees tested during the year, 500 proved to be, in fact, bilingual. Approximately 600 employees who claimed some knowledge of both official languages remained to be tested at the end of the year.

Many employees who were undergoing intensive language training were compelled to withdraw from the programme because of requirements related to the taking of the 1971 Census. Nonetheless, 219 employees were given training in the French language, and 21 in English.

Two monitors provided tutorial lessons to course participants at the rate of two hours per week for each group.

In addition to the testing, the training, and the tutorials, a nomination was made to the Secretary of State that four organizational units in the Bureau be converted to French language working units.

Management Consulting Services

The Section provides an internal consulting service to assist Bureau managers in the identification, analysis and solution of organizational and methods problems, and in the planning and development of new or improved systems. During the year, the Section carried out a variety of projects throughout the Bureau.

Assistance provided to the Census Division included: development of the framework for an over-all information storage and retrieval system; analysis of special requests for census information and development of a unique retrieval system; and development of an automated system for controlling the master printing schedule for

1971 Census documents. At the end of the year, preparations were being completed for conducting a process measurement study during both the actual census-taking in June and the subsequent manual processing. The results of this study will assist in preparing estimates for use in planning future censuses.

Several projects were carried out for the Field Division. A combined financial control and project control system was developed for the Regional Offices. A study is being carried out on data collection by Field Representatives to develop consistent time allowances for this work. (This study is separate from the census study because the statistical surveys in this area are repetitive and data are collected by direct enumeration.) A feasibility study was also undertaken to evaluate facsimile data transmission between the Regional Offices and Ottawa. A pilot installation is now under intensive testing prior to full-scale implementation.

One of the many potential uses of this facsimile installation is the simultaneous release by the Information Division of the DBS Daily Bulletin in major cities across the country.

A study was carried out in the Education Division covering the planning, scheduling and controlling of work procedures in the Division. At the end of the year, a comprehensive progress monitoring and control system was being installed.

A study of the function and organization of the Administration Branch was carried out in the latter half of the year. A number of recommendations arising out of the study were being implemented at the close of the year.

A study of the Bureau's policy and practice regarding free distribution of statistical publications was completed during the year, and many of the recommendations in the Report were being implemented.

A study was begun of the systems and procedures used in the Retail Prices Section to produce the Consumer Price Index. The purpose of this study is to improve the manual system as a first step toward increased automation.

A study was completed covering the internal distribution of mail with a view to taking best advantage of the new postal codes when these are introduced in the spring of 1971.

During the last half of the year, the Section was actively participating with the Bureau of Management Consulting to determine the feasibility of a Production Management function in the Bureau. A pilot system was being tested at the end of the year.

A number of other projects were also undertaken, primarily in the area of providing administrative skills and advice on a short-term or ad hoc basis on a wide range of subjects.

Financial and Administrative Services

As the result of a reorganization which took place during the year, Financial Services, Office Services, Management Progress Reporting and Cost Accounting System (PRACAS) and Records Management were grouped together to form Financial and Administrative Services.

Functions of the Financial Services Section are performed by the Financial and Publications Distribution Units. The Financial Unit is responsible for the over-all financial operations of the Bureau, including the co-ordination of the Programme Review and Main Estimates and the supply of financial management information. The Unit examines and controls expenditures, audits travel claims and commercial accounts, interprets financial regulations and advises line managers on financial matters. Having accepted responsibility for full pre-audit, allotment and commitment control during 1969-70, a commitment control system utilizing a bookkeeping machine and computer records has been designed and implemented. Also during 1970-71 a Revolving Fund operation was initiated. The Fund is used to reimburse the Bureau's operating budget, both funds and man-years, for expenditures incurred on special ad hoc statistical work performed at the request of users. The Publications Distribution Unit is responsible for the sale and distribution of DBS publications and maintains current mailing lists for distribution of publications and subscription statistical reports. During the fiscal year 2,108,189 pieces of mail were dispatched and 63,259 mail orders were received. The subscription mailing list is currently made up of 232,426 addressograph mailing plates.

The Office Services Section continued to provide the essential services of accommodation, stationary and supplies, purchasing, telecommunication, drafting, forms management, stenographic pools, duplicating, printing, addressing, and mail. Among the major accomplishments during the year was

the planning and provision of approximately 130,000 square feet of office space for the 1971 Census of which more than one-third was special purpose space for the processing of census returns. The design and production of census forms and the continuation of the conversion to bilingual publications, forms and questionnaires continued throughout the year. The Section administered over 500,000 square feet of office space in four buildings, provided service to over 1,400 telephones, addressed approximately 15,000,000 mailing pieces and dispatched over 31,000 bags of mail.

During the 1970-71 fiscal year work continued on the development of a Bureau information system to meet the needs of the various levels of management. Known as "PRACAS" it is a multiproject cost control system that has the capability to accommodate projects which range in size from a few thousand dollars to several millions, in duration from a few weeks to many months and in technical complexity from straight-forward production to advanced research and development projects. At present over 650 projects which represent the Bureau's full programme of social and economic statistics have been identified. PRACAS is automated and features a graphed project

status report which provides monthly data on the utilization of resources such as man-years, funds and associated costs in relation to planned objectives and progress achieved. Through the use of the System an environment is being created for the development of project managers who will assume the responsibility of controlling cost and progress of complex undertakings from research and development stages through to publication.

The Records Management Section has made steady progress in its programme to install and operate standard filing systems in all divisions of the Bureau. Abbreviated surveys were completed of the records keeping procedures in use in all areas of the Bureau and an estimate made of the probable cost to each responsibility centre. Assistance was given in the production of guidelines for scheduling statistical records, i.e., the establishment of retention periods and eventual disposal of all records. Several file classification systems were developed for specialized areas which are now in operation. Detailed studies were completed and reports also prepared containing recommendations for improved records operations in several branches of the Bureau.

DOMINION BUREAU OF STATISTICS SENIOR OFFICERS

(As of March 31, 1971)

Dominion Statistician Walter E. Duffett

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

Assistant Dominion Statistician
(General Assignments) H.L. Allen

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

Director General (Economic
Accounts Branch) E.B. Carty

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

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

Director General (Methodology and
Systems Branch) I.P. Fellegi

Director General (Administration) G.R. Labossière

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