

SPECIAL SURVEYS PROGRAM

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Resident within the Social Statistics Field of Statistics Canada is a group of survey design and implementation specialists whose mandate is to manage surveys of a 'special' nature providing data not usually produced as part of the national program for major statistical series. These surveys, in most cases, are carried out for sponsors on a cost-recovery basis.

'Manage' as mentioned above includes by definition a wide range of resource inputs and hence an equally wide range of potential outputs. Expertise on survey design, methodology, project management, field collection and data processing is amassed and coordinated in the group. The group is able to provide outputs related to the design and implementation of full survey programs as well as specific outputs for specific users related to any of the components in the overall survey process. These activities are referred to collectively as Statistics Canada's Special Surveys Program (SSP). Organizationally, the SSP is comprised of dedicated resources from the following Statistics Canada Divisions: Special Surveys (Management and data processing), Census and Household Survey Methods (Survey Methodology) and Regional Operations (Field Collection).

The term 'special' generally refers to the ad hoc or user specific character of the project carried out. The surveys are directed at data production of a special interest not normally produced by Statistics Canada. The surveys are also 'special' in that they provide information that cannot be easily obtained elsewhere. For example, for large surveys (producing small area estimates) or surveys where it is necessary to tie into other bureau data (supplements to the ongoing Labour Force Survey), the group may indeed be the only organization capable of performing the work. The SSP, as well as services related to the design and implementation of surveys, offers statistical consultation services on demand.

This paper is designed to provide a basis for understanding the nature of the Statistical service provided by SSP to Federal Departments and agencies. The discussion is organized in sections with Section 1 focussing on the historical evolution of the SSP. Section 2 describes the new Treasury Board initiative on Common Services and illustrates the part that can be played by Statistics Canada in general, and the SSP in particular, in the efficient and effective provision of statistical services. Section 3 offers a description of the capacities used to conduct survey projects emphasizing the efficiencies possible by piggy-backing on existing Statistics Canada surveys. New capacities presently being developed to allow a broadening in the range of work capable of being performed in SSP are also mentioned. In Section 4, the organization of SSP is described highlighting the interdisciplinary and interdivisional project team approach to conducting survey projects. The role of the Federal sponsors and their relationship to the survey design and implementation process is also defined. Section 5 describes the surveys conducted over the last few years in the

SSP demonstrating the wide range of subject matter topics surveyed and capacities utilized.

Section 1 - Historical Background

The basic rationale for an SSP was developed and took shape in the spring of 1973 as part of the major reorganization of Statistics Canada initiated by Dr. Sylvia Ostry, then the Chief Statistician of Canada. During this reorganization, it was argued that Statistics Canada's production responsibilities were two-fold encompassing those that it had a statutory responsibility to undertake as a central statistical agency and those it could undertake because of the capacities and expertise developed in providing the former. It was also recognized that the demand for new and special statistics in support of Departmental program planning was increasing in scope and magnitude. Unfortunately, it was clear that most of the new consumers of statistics had little or no statistical capability of their own. It seemed then logical and necessary that Statistics Canada offer access to the physical and human capital resident in its confines as well as to the inherent efficiencies possible by fully exploiting its own production capabilities. In summary, it became a matter of both quality and efficiency that the bureau undertake the production of specialized statistics on request.

To this end, the Special Surveys Coordination Division was created with a mandate that combined responsibility for the management of new 'ad hoc' household surveys (i.e., surveys of a non-recurring developmental or special interest nature) with the administration of the Treasury Board's 'ten respondent' directive, requiring all federal surveys to be reported to Statistics Canada. Since that time, the latter responsibility has been moved to the bureau's Federal and Media Relations Division, leaving the responsibility for special surveys requests with the Special Surveys Division (SSD). This division, while directly providing the managerial and processing expertise, coordinates the other inputs (collection, methodological, etc.) to the survey process and in this way acts as a focal point for special surveys. The division and the collectivity of disciplines it coordinates (SSP) has been in existence in its present format since 1976 and has, since that time, successfully completed some 80 survey projects.

Prior to the fall of 1981, requests for survey services provided by SSP were typically 'ad hoc' generated by word of mouth from satisfied customers, new or repeat work from past clients or referrals from bureau subject matter divisions. However, the fall would see the promulgation of a cabinet policy which would change somewhat the nature of these requests. During this period, the cabinet approved a policy on Common Services by which designated service departments and agencies are required to offer and deliver common services to sister departments and agencies in support of their programs. In turn, program departments, with varying degrees of obligation, are required to avail themselves if possible of

the services being so offered. The Section which follows will attempt to provide some background on the policy and illustrate its impact on Statistics Canada, in general, and on the SSP in particular.

Section 2 - Common Services and the Special Surveys Program

The need for the Common Services Policy was first identified by the Lambert Commission. According to the Commission, the basic objectives of all common service activities should be the achievement of the highest possible degree of probity, prudence and integrity and of the greatest value for money. It was felt that the concentration of expertise, specialization and economies of scale inherent in service organizations, while not necessarily guaranteeing such objectives, did offer the opportunity for their achievement. In effect, the Policy was conceived with the aim of minimizing potential lost opportunities.

At the request of the Treasury Board, Statistics Canada was asked to participate as a common service department in light of its central role in the provision of statistical services. The department, in response to this initiative, accepted the opportunity in principle and established a Task Force to define those bureau services that it would be willing and best suited to provide in the spirit of the Policy. The Task Force made the recommendation that statistical services for the purpose of the Policy be defined as those relating to:

- the development of statistical information through surveys or use of administrative data including design, organization, statistical evaluation, interpretation and analysis; the development of statistical standards, classifications, registers and sampling frames; and the dissemination of large statistical data bases for general access in electronic modes.

The recommendation was accepted by the Chief Statistician and as such, Statistics Canada agreed to be classified as a Common Service Department under the 'Right of First Refusal' condition of the Policy. According to this condition, all departments and agencies would be required to provide Statistics Canada reasonable opportunity to make an offer to supply statistical services. The offer could be refused by the department requesting the service on the grounds of its cost, quality or other appropriate consideration, on the understanding that it would be accountable for that decision.

Since the promulgation of the Policy in June 1982, Statistics Canada has established a focal point for common service requests and a process for their disposition. Within the Federal and Media Relations Division of Statistics Canada, the Federal Department/Agency Relations Group serves as the entry point and is responsible for the disposition process. The Group is required in performing this role, to identify the area in the bureau that can best provide the required services and to coordinate any associated activities such as the arrangement of sponsor/service division contacts and the maintenance of

a record of the events involved to servicing the request. In some cases, the Group will prepare cost estimates and contract arrangements for the service division. The Group is presently in the process of establishing an awareness program to inform the various departments and agencies of the Common Services Policy as it specifically relates to the provision of statistical services. To this end, focal points have been established in the departments to act as liaison for common service initiatives and information sessions are being held so as to ensure the good will of client departments and hence the practical operation of the common service arrangement. As departments become more informed of the nature and intent of the process, it is anticipated that some large part of the statistical services provided by the bureau will be generated and administered in this way.

With respect to the SSP, it is only necessary to consider the definition of statistical services provided above to recognize the prominent role surveys and related activities will play in the process. Indeed, it is to the SSP that new survey initiatives generated by the Policy will be directed. It is, to a large degree, in the SSP that the survey capacities and expertise exist to allow the opportunity for the achievement of prudence, probity and value for money. As with all statistical services, it is anticipated that some significant portion of the demand for surveys and related services will be generated as a result of a conscious effort to adhere to the spirit of the Common Service initiative. While not supplanting word of mouth, internal referrals and return business, a bureau common service program will serve to compliment these various 'ad hoc' processes. The Section which follows briefly describes the survey capacities and procedures used by the SSP in carrying out survey requests. Within the context of this description, an attempt is made to demonstrate the economies and efficiencies inherent in certain of these capacities.

Section 3 - Survey Capacities and Procedures

The SSP uses several survey capacities ranging from totally independent frames designed from scratch to meet specific needs to existing sample frames such as the Labour Force Survey (LFS). Surveys have been carried out using a wide range of methodologies and collection formats which have included personal visits, telephone interviews, mail-out/mail-back and drop-off/pick-up procedures as well as various combinations of the above.

For several reasons, including the size and range of possible sample, the relative cost-efficiency and the availability of socio-economic and demographic data, the use of the LFS sample frame and its survey options provides the SSP's richest capacity. The monthly Labour Force Survey is widely known for the wealth of data which it generates on employment and unemployment in Canada and the provinces. What is perhaps not widely recognized is that the Labour Force Survey also provides a vehicle for conducting what are known as supplementary surveys. While the Labour Force Survey uses the same questionnaire each month, the content of the supplementary survey

changes. These supplementary surveys represent an extremely cost-effective method of generating data on a variety of topics since they can take advantage of the survey structure required to conduct the Labour Force Survey. By doing so, the supplementaries incur only the incremental costs of additional interviewer time and the expenses associated with data processing.

In addition, the use of this capacity serves to reduce overall respondent burden. Since the individual supplementary survey questionnaires are linked to the corresponding Labour Force Survey documents, information such as the respondent's demographic characteristics and current labour market activities need only be collected once.

Each dwelling is retained in the LFS sample for six consecutive months. A rotation of dwellings in the sample is carried out so that one-sixth of the sample is changed each month, i.e., one-sixth of the dwellings are replaced by others in the same or similar area. The six-month rotation period provides major operational and statistical advantages, particularly in terms of survey costs and timeliness, and has a definite statistical impact as well. It is, therefore, possible to conduct representative supplementary surveys on from one to six rotation groups depending on the cost/sample size trade-off involved in satisfying statistical data requirements. Provincial LFS samples are also structured so as to produce representative estimates for provincial characteristics. The amount of data capable of being produced is a function both of the sub-populations being measured and the provincial sampling ratios. It should also be noted that response rates of 95% or better can be expected for personal interview supplements done at the time of the ongoing LFS.

Depending on the length and complexity of the survey request, one of several data collection methodologies can be employed. The most common method is a personal interview completed at the time of the regular labour force survey enumeration. Generally, one 8½" x 14" page of additional questions can be accommodated using this approach. Surveys of this type must be simple, straight-forward and therefore capable of bearing the approximately 55 percent proxy response associated with the main vehicle. In this way, only marginal costs are charged for questionnaire completion. Since the labour force is conducted to a large extent on the telephone, supplements which utilize this methodology must be of such a nature as not to require direct, personal contact for successful completion.

When surveys are large and complex and require self-enumeration (i.e., are not capable of bearing the proxy response inherent in the main frame), a separate multi-page questionnaire is prepared for drop-off to respondents at the time of the regular labour force interview.

For telephone respondent households, arrangements are made for the enumerator to deliver the documents personally or send them via the mails. Documents are then picked up or returned by mail. Response rates of over 85% can be expected on most respondent-completed surveys.

While the ongoing LFS provides a cost-

efficient capacity for many surveys, there are certain topics or certain survey designs that cannot be addressed using this methodology.

In order to fill this gap, the SSP is currently developing a system for drawing representative samples using the technique of Random Digit Dialing (RDD). The universal coverage of the telephone for personal use (about 98% of households in urban areas and 95% in rural areas) makes it possible to draw efficient samples which can represent all or any of the geographic areas of Canada. As well as its use as a sampling frame, the telephone has been effectively used as a data collection technique providing reliable data at reasonable cost. During 1982 a major survey of crime was carried out using this technique. For survey designs aimed at producing data for select sub-populations and where general area sampling frames like the LFS and RDD are not efficient, the SSP has used other sources such as administrative lists or the census to draw special samples.

Complimenting these survey capacities described above, the SSP is able to take advantage of the related survey services available through Statistics Canada's national network of eight regional offices coordinated by a central core of collection experts at Statistics Canada in Ottawa. Through this network, some 1,200 experienced interviewers are employed throughout Canada. Each regional office is equipped with sophisticated data collection facilities including large scale data capture operations, mini-computers and data transmittal capacities. Such a network has allowed the SSP to derive major economies of scale, making it a forerunner in the conduct of large national-scale survey programs.

Section 4 - Organization and Management Structure of the SSP

The success of the work carried out by the Special Surveys Program depends upon, as in any other project, the establishment of an appropriate management structure. In choosing this structure, special consideration was given to the following unique features of the services provided by the SSP: (1) the surveys conducted and the related services provided are generally of an 'ad hoc' or one-time nature; (2) there is a specific sponsor (or a group of sponsors) for the work; (3) the work requires several types of expertise; (4) it is done on a cost-recovery basis; and (5) covers a wide range of subject matters. As well, the management structure must be consistent with the overall organization of the bureau. Because of the above factors, an interdivisional, multi-disciplinary project team approach (matrix management) was chosen as the framework within which to manage special survey projects.

Under such a system, the acceptance of a survey project results in the establishment of a project team consisting of:

1. a project manager from the Special Surveys Division;
2. a methodologist from the Special Surveys Methodology Sub-division;
3. a subject matter expert from the appropriate bureau division;
4. a representative from the sponsor of the project;

5. a field operations expert from the Regional Operations Division; and
6. a data processing expert from the Special Surveys Division.

Additional support for the project team may come, if needed, from other areas of expertise within the bureau or from outside on a continuous or as-required basis. Membership is generally restricted to seven members. The project manager is responsible for overall direction of the project. The methodologist is responsible for methodological development and planning while the field operations expert coordinates head office and regional office personnel. The bureau subject-matter experts along with the client representative are generally responsible for ensuring that the data requirements are met. All project members are free to call upon additional resources and expertise from their own line divisions as required. At the same time, each member of the team shares responsibility for the success of the project operating within the principles of consensus decision-making and collective responsibility. In this way, team members gain insight into each other's work, accumulate experience as a group and develop a variety of technical and interpersonal skills.

The participation of the sponsor representative on a continuous basis ensures that client objectives are properly transmitted to the project team. As well, it provides an opportunity for the sponsor to participate directly in decision-making and to keep abreast with project progress.

A steering committee is established for each project to which the project team is directly responsible. The steering committee consists of senior staff members of the areas from which the team participants are drawn. The Director of the Special Surveys Division, in most situations, acts as a chairperson of the committee.

Generally, a senior official from the sponsor organization is also a member of the steering committee. The client representative is called upon to participate in committee meetings when issues related to project objectives or overall policy are discussed.

The main role of the steering committee is to monitor progress and direct the project team towards achieving project objectives and goals. In addition, the Committee ensures the standards and the quality of the work and serving as a link to the overall organization of the bureau, guarantees that Statistics Canada policies are respected. It also acts as a committee of arbitrators to resolve any problems or differences of opinion that may occur at the project team level.

To develop an efficient working relationship among project team participants, it is important that the classification and levels of the team members be compatible and at the same time, high enough that each may provide the requisite expertise and knowledge needed for the success of the project. The success of the management structure also depends upon developing a close, congenial relationship among both project team and steering committee members. Within the SSP, such an atmosphere is in part fostered by the collocation of key survey disciplines. For example, since the establishment of the Program, the Special Surveys Division and the Special Surveys Methodology Sub-division have

shared a common work area. From time to time when the need arises, other project team members may also collocate for either all or some part of the life of a project.

Generally, special surveys conducted in the SSP are large and national in scope. They cover a wide range of subject matters and, in most cases, it is the first time such statistics are collected. Often there is little or no past experience to guide the development of the surveys or the field operations. This, coupled with the random nature of requests and the availability of only short development times has dictated a special process for negotiating survey costs and content. The process is carried out in two phases. In the first, a project feasibility study is launched for the purpose of investigating survey methodology alternatives, including enumeration methods, and estimating the associated cost and timings of each alternative. In most cases, an attempt is made to make recommendations among alternatives.

The cost and time required to carry out such a feasibility study depends upon the nature of the survey. Typically, the cost starts at \$10,000. and the time taken to complete the study runs from one month to three months. A formal project team and steering committee are established to conduct the feasibility study. Results of this feasibility work are compiled in a formal report. On the basis of this report, the sponsor is able to choose an alternative (including a decision not to do the survey) and the project team is in a better position to make time commitments and prepare cost estimates for full implementation.

In the second phase (assuming a decision to proceed), a formal contract is prepared for the SSP to undertake the project. It should be noted that at this stage, the sponsor has the option to contract the work out to any other survey organization on the basis of the study results, or to contract out any component(s) of the survey to the SSP. Once the contract is negotiated and signed by the sponsor, the same project team and steering committee involved with the feasibility study is assigned to the implementation phase.

At the end of each survey project, magnetic tapes of micro-data (with control tabulations) are provided to the sponsors. Typically sponsors are responsible for the analysis and the dissemination of the survey results. However, in some cases, on the request of the client, survey data is analysed and published by the SSP.

In the case of statistical and other consultative services, the process involved in undertaking the work depends upon the nature and the type of the expertise required.

While the SSP depends to a great extent on the resources committed (person years, EDP, etc.) by Statistics Canada, it can, when the situation requires, contract out for specific services or resources. In the same way, if the subject matter knowledge needed for the work is not resident within the bureau, outside expertise is brought in on a contract basis.

In concluding this section it should be noted that while the organizational make-up of the SSP is currently as described above, the process is both dynamic and evolutionary. As is true for most successful operations, the structure is continuously modified and fine-tuned in the light of an environment of ever-changing information and technology.