

Statistics Canada's Measurement and Valuation of Unpaid Work

Introduction:

Statistics Canada has long recognized the significance of the unpaid work done by Canadians. This acknowledgment is evident in the substantial amount of information already collected by the Agency and the ongoing series of published studies on this topic. In fact, for the last twenty-five years, the Agency has been a world leader in this field. Many of the Agency's early studies were truly pioneering and are still cited in the bibliographies of current analyses done in Canada and abroad.

Statistics Canada takes pride in keeping its output relevant to the expressed needs of data users. The need for data relating to the unpaid work done in Canadian households, and volunteer work done in the community, is well understood and the Agency is continually expanding its data development and publication efforts in this field.

This note is intended as a broad overview of the activities undertaken by Statistics Canada over the past several decades in the field of measuring and valuing unpaid work in all of its many forms. It was first prepared in the early 1990s when the Agency's accomplishments in the field of unpaid work were not as widely known as Statistics Canada would have liked. With each significant new achievement of the Agency, this note has been updated and further updates will be produced in step with the Agency's continuing outputs in this important area.

A Brief History of the Measurement of Unpaid Work by Statistics Canada:

Statistics Canada has for many years generated, in association with its System of National Accounts, estimates of the value of non-market activities performed in the home. The first estimates on the volume and value of household work were published in 1978, the second in

1985, the third in 1992 and the fourth was published in April 1994. This last article placed the 1992 value of household work at between 31% and 46% of Gross Domestic Product (GDP). Further information is available in *Estimating the Value of household work in Canada, 1971* (Statistics Canada, Catalogue 13-566, June 1978), *The Value of Household Work in Canada, 1981*, (Statistics Canada, Catalogue 11-003, March 1985), *The Value of Household Work in Canada, 1986* (Statistics Canada, Catalogue 11-010, June 1992) and *The Value of Household Work in Canada, 1992*, (Statistics Canada, Catalogue 13-001, April 1994).

More recent work within the System of National Accounts has refined the existing measures with a view to exploring changes over time in the volume and value of household work as well as formal and informal (voluntary) work. Further information is available in *Households' Unpaid Work: Measurement and Valuation*, System of National Accounts (Statistics Canada, Catalogue 13-603) No. 3 (December 1995).

During the 1980s, Statistics Canada conducted a number of specialized surveys dealing with particular aspects of unpaid work as supplements to the monthly Labour Force Survey. These surveys generated data on selected elements of unpaid work and enabled Statistics Canada to refine its measurement techniques and to build on the earlier work. The first of these, the Family History Survey, was conducted in 1984. In 1987, a very detailed 14-page survey, National Volunteer Activity Survey, was developed to find out more about the volunteer work undertaken by Canadians. This was followed in 1988 by a child care survey which had 93 pages of detailed questions. In 1997, the Agency, in cooperation with Volunteer Canada, Human Resources Development Canada, the Canadian Centre for Philanthropy, Canadian Heritage and the Non-Profit Sector Research Initiative, undertook the National Survey of Giving, Volunteering and Participating which explored the complex factors that motivate and sustain donors, volunteers and civic participators. Additional information on the latter three surveys is available in *Introductory report, Canadian National Child Care Study* (Catalogue 89-526, 1992), *Giving*

Freely (Catalogue 71-602, 1989) and *Caring Canadians, Involved Canadians: Highlights from the 1997 National Survey of Giving, Volunteering and Participating* (Catalogue 71-542-XPE).

The General Social Survey (GSS), launched in 1985 with the objective of providing information on a wide range of social issues and concerns, has provided the richest source of data on unpaid work. It is conducted annually, with a focus on a specific issue being repeated every few years as required with a view to measuring changes over time. In the 1985 GSS, the Health and Social Support module examined the relationship between the family and friend supports that people had and their health status. A similar enquiry, the Family and Friends survey, was conducted in the 1990 GSS and examined social support networks and the question of who people turn to for help under various circumstances. Both of these surveys broke new ground in the field of unpaid work by distinguishing between those exchanges of assistance which occurred within the same household and those which involved individuals in different households. The 1996 GSS included modules on both a social support and unpaid work. The social support module provided a first look at the help given or received during temporary difficult times or due to long-term health or physical limitations. Help given included childcare, meal preparation, house cleaning, household maintenance, grocery shopping, transportation, banking or bill paying or personal care. The unpaid work module provided another source for hours spent on unpaid housework, childcare and care to seniors as well as an opportunity to cross classify these data with giving and receiving help, the impact and feelings of giving help and health indicators. Additional information on these three cycles of the GSS is available in *Family and Friendship Ties Among Canada's Seniors: An Introductory Report of Findings from the General Social Survey* (Statistics Canada, Catalogue 89-508, 1988), *Caring Communities: Proceedings of the Symposium on Social Supports* (Statistics Canada, Catalogue 89-514, 1991) and "Canada's caregivers", *Canadian Social Trends* (Statistics Canada, Catalogue 11-008, Winter 1997).

Statistics Canada has also successfully generated, through the General Social Survey (GSS) program, estimates of the number of people who engage in the various components of unpaid household work and the number of hours they spend in specific activities. The

measurement of these components was the focus of the 1986 and 1992 Time Use Surveys. The 1992 Time Use Survey was conducted throughout the 12 months of 1992 and, for the first time, enabled the survey to reflect the seasonality of time-use in Canada. Additional information is available in *Where does time go?* (Statistics Canada, Catalogue 11-612, no.4, August 1991) and *As time goes by - time use of Canadians* (Statistics Canada, Catalogue 89-544, December 1995). The next GSS survey of time use was conducted in 1998 and results are expected to be available in 1999.

Several other studies have gathered information on unpaid work, even if that was not their primary objective. For example, the 1991 post-censal Health and Activity Limitation Survey collected data on the unpaid support given to, and provided by, disabled persons in Canada.

In April 1993, Statistics Canada organized an international conference on *The Measurement and Valuation of Unpaid Work*. This conference provided an excellent forum for discussion and analysis of conceptual, methodological and definitional issues by a broad selection of participants both from other countries as well as from groups and organizations here in Canada. The guidance obtained from this conference has and will continue to assist Statistics Canada in expanding the range of its output dealing with unpaid work. Additional information may be obtained from conference proceedings *International Conference on the Measurement and Valuation of Unpaid Work: Proceedings* (Statistics Canada, Catalogue 89-532, August 1994).

Much of Statistics Canada's early developmental research on unpaid work was published in scholarly papers. More recently, much more information on this topic has been released in analytical publications¹ which are designed to be easily readable and accessible to a

¹ "Household Chores", *Canadian Social Trends* (Statistics Canada, Catalogue 11-008, Spring 1990); "Time Use of the Elderly", *Canadian Social Trends* (Statistics Canada, Catalogue 11-008, Summer 1990) "The gift of time", *Perspectives on Labour and Income* (Statistics Canada, Catalogue 75-001, Summer 1990); "Who's looking after the kids? Child care arrangements of working mothers", *Perspectives on Labour and Income* (Statistics Canada, Catalogue 75-001, Summer 1991); "Caring for Children", *Canadian Social Trends* (Statistics Canada, Catalogue 11-008, Autumn 1991); *Women in the Workplace: Second Edition* (Statistics Canada, Catalogue 71-534); "Today's

very wide audience. The result has been more extensive media coverage which has served to better inform the general public on the volume and value of unpaid work activities in Canada.

Choosing the Most Suitable Data Collection Method:

Statistics Canada has one of the most comprehensive programs of any statistical agency in the world. To produce such a wide range of data it uses a variety of sources, including surveys of households, surveys of businesses, files from the administration of federal and provincial government programs, and the Census of Population. For any given topic, the choice of collection methods involves balancing the user community's need for precision and frequency with considerations of cost, timeliness, and respondent burden.

The importance of a given topic to government policy development and other uses does not, by itself, determine the vehicle for gathering information on that topic. For example, to meet the need for very frequent and very timely estimates on the topic of employment and unemployment, Statistics Canada makes use of the monthly Labour Force Survey based on a sample of about one half of one percent of the population. Similarly, when an abundance of information is required on a given topic, the limitations on the size and complexity of the Census

Extended Families”, *Canadian Social Trends* (Statistics Canada, Catalogue 11-008, Winter, 1992); *Canadian National Child Care Study, Introductory Report* (Statistics Canada, Catalogue 89-526, February 1992); “Parental Work Patterns and Child Care Needs”, *Canadian National Child Care Study* (Statistics Canada, Catalogue 89-529, July 1992); “Where are the Children? An Overview of Child Care Arrangements in Canada”, *Canadian National Child Care Study* (Statistics Canada, Catalogue 89-527, March 1993), “Women in the Workplace”, *Canadian Social Trends* (Statistics Canada, Catalogue 11-008, Spring 1993); “Seniors 75+, Lifestyles”, *Canadian Social Trends* (Statistics Canada, Catalogue 11-008, Autumn 1993); “The decline of unpaid family work in Canada”, *Labour Analytic report* (Statistics Canada, Catalogue 71-535) No. 2; “Time Use of Canadians in 1992”, *Canadian Social Trends* (Statistics Canada, Catalogue 11-008, Autumn 1993); “Workplace Benefits and Flexibility”, *Canadian National Child Care Study* (Statistics Canada, Catalogue 89-530, December 1993); “Dual Earners - Who’s responsible for housework”, *Canadian Social Trends* (Statistics Canada, Catalogue 11-008, Winter 1993); *Women in Canada: a statistical report* (Statistics Canada, Catalogue 89-503 E/F) 3rd Edition (August 1995); “Measuring and Valuing Households’ Unpaid Work”, *Canadian Social Trends* (Statistics Canada, Catalogue 11-008, Autumn 1996).

questionnaire preclude asking all of the questions which are necessary to generate the sought after data. For example, to collect the information required to describe the complexities of the 1988 child care arrangements used by Canadians, Statistics Canada employed a 93-page questionnaire in the Survey of Child Care Arrangements.

In cases where people are not accustomed to reporting information in the categories sought by data users, it is necessary to split the questions into more easily understood components. For example, to measure unpaid work and other activities, respondents were asked to complete a 24 hour diary listing all their activities of the previous day. However, this approach cannot be used in a census given the fact that complex questions cannot be simplified to the extent suitable for a questionnaire completed by respondents on their own, that is, without the assistance of thoroughly trained interviewers.

Statistics Canada faces a similar situation when it comes to collecting data on persons with disabilities. Because disability is a complicated issue, it was not possible to accommodate the number of questions necessary both to accurately identify persons with disabilities and to measure all of the important aspects of disability on the census questionnaire. Instead, the Agency put a "screening" question on the 1986, 1991 and 1996 Censuses to identify persons who most likely would be classified as having a disability. A substantial sample of people who responded positively to this question, along with a sample of those who responded negatively, were then interviewed in a separately funded post-censal survey (the Health and Activity Limitation Survey) in 1986 and 1991 which focussed on the nature and severity of their disabilities. Such a survey provided far more complete and detailed information than could possibly have been obtained from a census, from administrative records or from a general-purpose household survey. Additional information is available in *Highlights: Disabled Persons in Canada, The Health and Activity Limitation Survey* (Statistics Canada, Catalogue 82-602) and *Selected Characteristics of Persons with Disabilities Residing in Household, 1991 Health and Activity Limitation Survey* (Statistics Canada, Catalogue 82-555).

The Census takes place only once every five years, and must satisfy the demands for data for which it is uniquely qualified, that is, data for small areas and for groups which make up only a small percentage of the population. For some of these data (such as ethnic origin and detailed occupation), the Census is the only practical source in Canada. In fact, all of the questions on the Census are designed to meet important information requirements that cannot be satisfied from any other source. Each and every potential additional question on a Census competes for space, since both cost and respondent burden limit the overall size and complexity of the questionnaire.

Therefore, before each Census, Statistics Canada undertakes an extensive program of consultation on the topics to be covered. For the 1996 Census, the Agency received 166 written submissions from data users and interested individuals across Canada and organized more than 50 meetings with major data users and community and national organizations. Among other things, these consultation indicated a demand for the inclusion of question on unpaid work in the Census.

The Search for Potential Unpaid Work Questions for the Census:

Statistics Canada first tested a question on unpaid work in the mid 1970s for possible inclusion in the 1981 Census. As well, a limited number of questions on household labour, child care and volunteer work were tested prior to the 1991 Census. (The 1986 Census operated under strict financial constraints which precluded the cost of testing questions not successfully used in previous Censuses.) These questions were not included in either the 1981 or 1991 Censuses because the test surveys showed that given the questions tested, respondents were uncertain as to which of their activities were to be included when reporting the time that they devoted to child care and housework. In frustration, excessive numbers of respondents left these questions blank and many of those who did report seemed to be unable to accurately report the number of hours they devoted to these activities.

In preparation for the only test survey prior to the 1996 Census, the Agency invested more heavily than ever before in the development of unpaid work questions. From the very start, before any research was undertaken, Statistics Canada enlisted the assistance of an interdepartmental committee to help in the formulation of possible questions. The departments and agencies consulted included Status of Women Canada, the Canadian Advisory Council on the Status of Women, the Farm Women's Bureau of Agriculture Canada, the Voluntary Action Secretariat of Multiculturalism and Citizenship Canada and the National Advisory Council on Aging from Health and Welfare. To check the feasibility of the question sets that it had developed, the interdepartmental committee observed eleven focus groups² composed of a sample of the general public who will be completing the 1996 Census questionnaire. These focus groups proved to be very instructive and showed some of the reasons why previous attempts to formulate questions had failed. For example, it was found that just the appearance of the word "work" in the questions, or in the instructions, resulted in a serious downward bias in the number of unpaid hours reported. It turned out that many people could not associate the word "work" with some of their child care, volunteer or other care-giving activities where they found these activities to be intrinsically pleasurable. The result was that they failed to report these hours even though they were instructed to include them. Although most focus group respondents were glad to see an unpaid work question on the Census, most indicated that they were very unsure of how to answer it.

The questions which emerged from the work of the interdepartmental committee, covering unpaid work in the home, child and elder care giving and volunteer work, were included in the 32 page National Census Test questionnaire. This questionnaire was distributed to a representative sample of 14,700 households in November 1993. The purpose of the test was to determine if the respondents understood the intent of the questions, if the respondents could provide answers to the questions as they understood them, and if the resulting estimates were

² In these focus group sessions, groups of people, who were representative of future Census respondents, were given draft Census questionnaires containing the unpaid work questions and were asked to complete them. After they had done so, there was a general discussion on the experience. This process was unobtrusively observed by Statistics Canada and interdepartmental committee personnel.

reasonably consistent with the data gathered from other sources. Of the five unpaid work questions on the NCT, the question on housework and home maintenance, the question on unpaid child care, and the question on volunteer work seemed to have largely met these objectives. The quality of the data from the question on unpaid elder care was less clear, in part because of the absence of directly comparable data from other sources. The quality of the data on unpaid care of others (i.e., not children or seniors) was even more uncertain, particularly in light of the lack of variation, in comparison to the other questions, when the results of this question were tabulated by age, sex and marital status. When NCT respondents were specifically asked about their experience in completing the questionnaire, the unpaid work questions ranked third in terms of difficulty and respondent objections out of the 48 questions on the NCT.

In addition to a rigorous testing, consultation and review process, census content options must also be approved by Cabinet and the questions prescribed by the Governor in Council and published in the *Canada Gazette Volume 1*. The 1996 Census contained new questions on unpaid work which covered housework and home maintenance, unpaid child care and care and assistance to elders. This question appeared only on the long-form questionnaire which is completed by 20% of households.

1996 Census results for this question released on March 17, 1998, in *The Daily* (Statistics Canada, Catalogue 11-001E, March 17, 1998) revealed that overall 90% of respondents reported that they did some form of unpaid work in the week prior to the Census. Some 89% reported that they did unpaid housework or home maintenance, 38% reported caring for children and 17% spent time caring for a senior. These figures varied significantly between men and women and between those working full-time for pay and those with no paid employment. It is expected that these new data will provide information relevant to a number of labour market and social issues as well as respond to the concerns of several women's organizations. The March 17th issue of *The Daily* is available on the Statistics Canada web site (www.statcan.ca) under the Daily news module. Free tables are also available in the Census module under the

Nation Series and in the Canadian statistics module under People/Families, households and housing.

Future Data on Unpaid Work from Household Surveys:

In preparation for the 2001 Census, the Agency initiated a consultation and testing process similar to that carried out prior to the 1996 Census. More than 1,600 submissions were received from data users in the federal, provincial and territorial governments and from a wide variety of interest groups. Approximately 7% of these submissions (115 submissions) contained reference to unpaid work. Many indicated that the “situation of those spending very long hours in unpaid work, especially care to children and care to seniors, was not adequately represented by the answer categories. For housework and childcare the largest category was “60 hours or more” while for elder care it was “10 hours or more”. Given that the testing leading up to the 1996 Census clearly indicated that respondents could not be precise in reporting their hours of unpaid work, the answer categories were made as broad as possible while at the same time collecting meaningful data. The Agency was also asked to include a question on volunteer work.”

The questions to be tested on the National Census Test on October 20, 1998 are essentially the same as those used in the 1996 Census. However, as a result of the comments made on the answer categories during consultation and qualitative testing, two different versions of the unpaid work question will be tested to address the issue of insufficient detail at the upper end of the hours distribution. Specifically, one version will ask respondents to provide an exact number of hours spent doing the activity while the other version will provide specific answer categories with increased upper limits for care to children and care to seniors.

A question on volunteer work is not being tested in the 1998 National Census Test since the 2001 Census questionnaire could conceivably accommodate only one question which would ask respondents to report all hours spent on all types of volunteer work. The resulting data would not have been useful in light of the heterogeneity of volunteer work, in terms of both

the kind of work done (coaching little league and raising money for medical research) and the type of organization through which it is done (ranging from the Humane Society to churches).

Without knowing the type of volunteer work done, little use could be seen for data on undifferentiated hours of volunteer work.

In addition, unlike housework, childcare and elder care, volunteer work is episodic. Surveys in 1987 and 1997 showed that many people who volunteered at some time during the year, did not volunteer throughout the year. Thus, while using a one week reference week gives a misleading picture of the breadth of participation, using more than one week creates response problems for respondents and interpretation problems for data users.

Sample surveys have proven to be a better vehicle for collecting this type of information and in 1997 Statistics Canada conducted a follow-up to the 1987 survey on volunteer work. This National Survey of Giving, Volunteering and Participating asked Canadians aged 15 and over if, between November 1, 1996 and October 31, 1997, they gave money and/or other resources to individuals and to organizations, if they participated in the practices of active citizenship and if they volunteered time to help others and to enhance their communities. The survey asked 200 questions, 25 of which concerned volunteer activities.

In respect to the work carried out by the General Social Survey, Time Use will remain part of the GSS although sample size may be increased for future surveys.

Future Data on Unpaid Work from Other Sources:

Further work will also be undertaken within the Systems of National Accounts to refine the capital and material inputs to household production so that estimates of the value of household production (not just household work) can be developed. This work will draw on the results of the 1998 General Social Survey on Time Use, the 1996 Census, the Family Expenditure Survey, the Household Facilities and Equipment Survey as well as the national accounts. More

information on what is involved in these refinements is available in *The Value of Household Production in Canada, 1981, 1986*, Discussion Paper, National Accounts and Environment Division, April 1993, pp 24-45. This area of work is an essential step towards the development of a set of annual accounts which will closely parallel the existing System of National Accounts.

The Statistics Canada Total Work Accounts System (TWAS) is a new resource that integrates data concerning the paid and unpaid work done by individuals in order to support analyses in various fields of public concern. The TWAS is a network comprised of a microdata file, concepts, linked statistical tables, and statistical indicators. The microdata file is based on time use data gathered in the General Social Survey. More information is available from *The Statistics Canada Total Work Accounts System, 1996* (Statistics Canada, Catalogue 89-549-XPE).

A wide array of issues in areas of corporate and government policy-making point to the need for a data resource concerning productive work whose focus is broader than labour inputs in the market sector. Pertinent fields of concern include the economic status of women and related links between market and non-market production, the supply of unpaid community-support work, the tension that exists between the demands of paid jobs and those of familial obligations and the accessibility of opportunities for training and education for those who have both kinds of obligations to a high degree, the function of unpaid community-support work in creating a legitimate basis for claims upon government assistance, the supply of vitally important caring work oriented towards children and the needy elderly, use of time for self-care and other health promotional activities, intergroup differences regarding time spent in acquiring new skills and knowledge, time use at the job site, and unpaid productive work done by the unemployed and others with low levels of participation in paid labour markets.

In all of these topic areas pertinent information can be obtained by extracting data from the TWAS through special tabulations or subsets of records in machine-readable media from its micro-level database. That information can be developed by applying statistical analysis

routines to those record segments, or by inspection of the data patterns in the tabulations. Many statistical indicators of groups' work activities and of related time pressures can be derived from the TWAS database.

The TWAS is the only national labour accounting system in Canada, and perhaps one of the few in the world, that allows work-related issues to be explored when full account is taken of persons' obligations to provide unpaid work outputs in support of their families and communities.

Dimensions of job-family tensions (Statistics Canada, Catalogue 89-540, December 1994), draws upon several of Statistics Canada's national surveys and the TWAS. Among the findings of this study are results that point to three areas in which current employer policies may need to be reviewed. First, men's stake in, and their significant contributions to, family caring work need greater recognition. Second, there is important family caring work beyond child care that needs to be more fully acknowledged. Third, links between work for pay or profit and family caring work among persons who currently do not have paid employment needs to be better understood. For, example, some people have quit jobs, while others are reluctant to search diligently for employments, because of their family responsibilities.

Statistics Canada cannot advance on all types of unpaid work statistics simultaneously. A great deal of developmental work remains to be done and resources are limited. Attempting to move uniformly on all fronts will only result in making slow progress everywhere rather than making a breakthrough in some areas. Progress will move more rapidly in those areas where external resources are made available to complement the resources allocated by Statistics Canada. In terms of priority, those areas that show the most statistical, methodological and definitional reliability will be put on the top of the list.

Since estimates of the value of unpaid work are still under development, this will result in estimates being revised, possibly substantially, as more refined estimation techniques are developed and adapted. This, however, is no different from our practices with other outputs of

long standing. For example, the System of National Accounts evolved over a period of many years and current estimates are revised several times as more complete data become available.

Summary:

Statistics Canada is a world leader in the field of measuring the volume and value of unpaid work done in the home and in the community. Given the intellectual capital that it has invested in this field in the form of a solid methodology base, and given the commitments that it has made to expand this program in the future, the Agency is likely to retain this leadership position for many years to come. This is being accomplished in an environment of fiscal restraint, which means that continued progress can only be achieved by judiciously selecting the most suitable and cost effective data collection methods. The objective is to ensure that frequent, credible and meaningful data are made available, both to guide government policy formulation, and to further the goals of members of the public and their organizations who wish to influence the direction that such policies take.

Statistics Canada's program of statistics on unpaid work will continue in its present course to break new ground and disseminate information which will provide an ever more complete picture of the productive activities of all Canadians.

This note was prepared by Ian Macredie and Dale Sewell.