module one

COLLECTING TIME-USE DATA

module 1

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Part I. Concepts and practices

Overview

- The collection of time-use data has been motivated essentially by "an interest in the conditions of human progress and a curiosity about social change" (Bittman, 1999), initially as small-scale case studies but increasingly as large-scale national statistical surveys.
- In developed countries, several national statistical offices began to undertake time-use surveys in the 1960s. Many more began these surveys in the 1970s. At least one official national time-use survey has been conducted in Australia, Canada, Japan and New Zealand as well as in virtually most Eastern and Western European countries.
- Until recently, time-use surveys were not undertaken by national statistical offices in developing countries. Time-use studies in those countries were mainly case studies of a single or a few localities undertaken by academic researchers. The limited scope and methods of those studies were attributed to difficulties in measuring time-use in a population not accustomed to being regulated by "clock time" nor experienced with filling in a questionnaire. Recent time-use surveys undertaken by more than 20 developing countries, however, show that national time-use data may be successfully collected in countries with an established statistical infrastructure.

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- The interest in national data collection on time-use has grown in recent years – largely due to a recognition of the importance of time-use data for improving the measurement and valuation of unpaid work and increasing the visibility of women's work both at home and in the labour market (United Nations, 1996). The preparation of international guidelines on time-use data collection is in progress, which will help facilitate work in many countries.

- As countries gain experience, international recommendations for data collection may be formulated. In October 2000, an expert group on methods for conducting time-use surveys was convened by the United Nations Statistics Division to initiate work in that area. A Guide to Producing Statistics on Time-use is currently being prepared, and an International Classification of Activities for Time-Use Statistics has been drafted and is being tested as part of the work.

Purposes of the Module

- To introduce concepts in time-use research.
- To enable understanding of the importance of time-use statistics in the measurement of unpaid work.
- To guide the selection of methods and approaches for collecting time-use data in independent surveys or as part of another survey.

What are time-use statistics?

Time-use statistics are quantitative summaries of how women and men "spend" or allocate their time over a specified period. Time-use statistics would ideally represent time allocation patterns of activities engaged in during a whole year. These summaries are generated from data collected from a sample of individuals – typically for only a 24-hour period but they may also cover all seven days of the week.

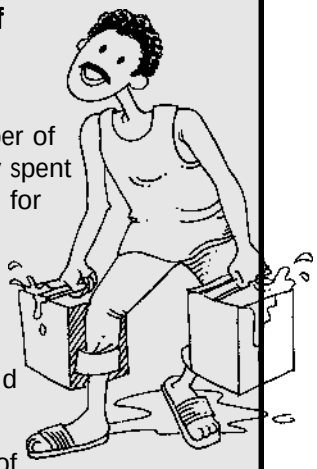
Time-use statistics pertain to a reference population (e.g., persons 10 years old and over; persons 15 to 65 years old) and are usually disaggregated by sex, age groups, rural/urban, and by other subgroups of interest to those analysing the statistics.

Time-use statistics are generated from data on:

- What individuals in the reference population do or the activities they engage in;
- How much time is spent doing each of those activities; and
- The context in which each activity takes place.

Eating, travelling (walking, driving or riding a motor vehicle and others), unpaid childcare (e.g., supervising, feeding), working in a formal sector job (whether as an employee or employer, in the public or private sector), doing unpaid economic work (e.g., fetching water, collecting firewood), driving a vehicle, waiting for a ride, smoking and "doing nothing" are examples of activities on which a person may spend time during the course of a day.

Examples of time-use statistics



- Average number of hours in a day spent fetching water for home use
- Total number of hours in a week spent working in paid employment
- Total number of hours in a weekday working in unpaid domestic work
- Average number of hours in a weekend spent on watching television
- Total number of hours in a day spent on childcare

Basic statistics on time-use are in the form of estimates of time spent on activities in an "average day" or an "average week". To arrive at that average or representative day or week, time-use data need to be comprehensive. Such data should cover not only the whole range of possible activities but also account for differences between weekends and weekdays, effects of special holidays, and variations in activities across seasons in a year and across areas or regions in a country.

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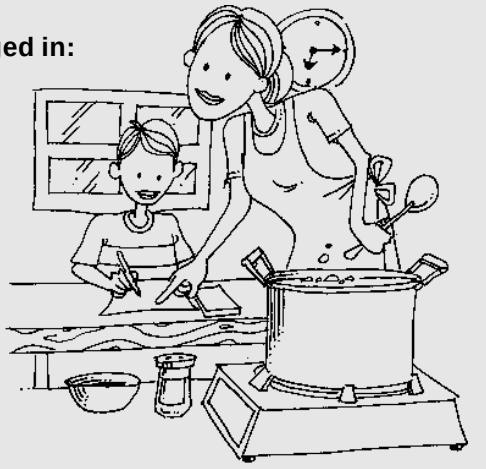
Time-use concepts

What individuals do or activities engaged in:



- **Single, main or primary** activity over an interval of time
- **Secondary or simultaneous** activity, or engaging in two or more activities

  Example:
  A woman preparing meals while supervising her child's homework.

How much time is spent on an activity

- **Episode** refers to one occurrence of an activity
- **Number of episodes or the frequency of occurrence of an activity**

  Examples:
  Number of episodes of cooking during a day
  Average duration per episode of cooking
  Average number of episodes of cooking in a week per woman.
- **Duration** refers to length of time of one episode of an activity measured in terms of minutes or hours.

Context in which the activity takes place

Contextual information typically obtained about an activity includes:

- Where the activity occurred or the location of an activity
- Other people present when the activity occurred ("with whom")
- Person(s) for whom the activity was done ("for whom")
- Any remuneration received for doing the activity (paid or unpaid)
- Purpose of the activity
- Temporal location (time of day, week, month or year an activity is undertaken)
- Activity sequence or relationship of an activity to any activity that precedes and follows.

How are time-use data collected ?

Relating objectives, design and resources

Data on time use are collected on a national scale through a household survey. The basic elements of design of a time-use survey involve the following components:

- Type of survey instrument – how activities are to be recorded. Generally a time diary or a stylized analogue;
- Mode of data collection – whether by interview, self-reporting or observation; and
- Type of household survey – whether as an independent or "stand-alone" survey or as a component or module of a multi-purpose survey.

Different combinations of these component options translate into a wide variety of methods. Table 1.1 summarizes the approaches adopted and methodologies employed by 19 countries in collecting time-use data from 1997 to 2000.

Arriving at an appropriate design for producing statistics on time use requires a balance of objectives and resources. This task could be a complex process. Money, people and their time, and infrastructure comprise resources. In practice, most survey designs are fitted within known cost constraints, that is, the amount of money allocated for the survey is fixed and all activities related to the survey must cost less than or equal to that fixed amount. More often than not, setting the ceiling for the survey is not based on survey design options and issues. The budget is often set on other priorities, with funding and political concerns as the main considerations.

Recent experience of both developing and developed countries shows this situation holds for time-use surveys. For example, while some political backing has been given to time-use surveys in response to the Beijing Platform for Action, it has generally been in the form of funding for a single ad hoc survey. In some

Checklist for evaluating available resources for a time-use survey

- ✔ Cost of utilizing existing staff including any increase in workload
- ✔ Cost of utilizing existing infrastructure and facilities for data collection, programming, analysis and reporting
- ✔ Additional costs including wages for interviewers and data encoders in addition to regular workforce, and travel costs for training and supervision
- ✔ Provision of incentives to respondents
- ✔ Fees of consultants

Table 1.1. Design components of recent time-use surveys by selected countries

Country	Survey	Type of survey	Survey instrument	Mode of data collection
Australia	Time-Use Survey, 1997	Independent	Full diary; open interval	Self-reporting; two diary days
Benin	Time-Use Survey, 1998	Module of survey on labour, income and social indicators	Simplified diary; 62 activities; 15-minute intervals	Face-to-face recall interview; one diary day
Canada	General Social Survey Cycle 12-Time-Use Survey, 1998	Independent	Full diary; open	Computer-assisted telephone recall interview; one diary day
Dominican Republic	National Time-Use Survey, 1995	Independent	Full diary; 15-minute intervals	Face-to-face recall interview and observation; one diary day
Finland	Time-Use Survey, 1999/2000	Independent	Full diary; 10-minute intervals	Computer-assisted face-to-face recall interview; two diary days
Guatemala	Guatemala 2000 National Survey of Living Conditions	Module of survey on living conditions	Simplified diary; 22 activities	Face-to-face recall interview; one diary day
India	Time-Use Survey, 1998	Independent	Full diary; 60 minute intervals	Face-to-face recall interview; three diary days
Lao People's Democratic Republic	Expenditure and Consumption Survey: Time-Use Module, 1998	Module of expenditure and consumption survey	Simplified diary; 21 activities; 30-minute time intervals	Face-to-face recall interview; one diary day
Mexico	Survey on Time-Use, 1998	Independent	Full diary; open interval	Face-to-face recall interview; one diary day
Mongolia	Time-Use Survey, 2000	Independent	Full diary; 10-minute intervals	Self-reporting and face-to-face recall interview; two to three diary days
Morocco	National Survey on Women's Time Budget, 1997/1998	Independent	Full diary; open interval	Face-to-face recall interview; one diary day

Table 1.1. *(continued)*

Country	Survey	Type of survey	Survey instrument	Mode of data collection
Nepal	Labour Force Survey, 1998/2000	Module of labour force survey	Stylized questions for selected activites within labour force questionnaire	Face-to-face recall interview; total hours spent on activities in last seven days
New Zealand	Time-Use Survey, 1998-1999	Independent	Full diary; 5-minute intervals	Self-reporting; two diary days
Nicaragua	Living Standards Measurements Study Survey, 1998	Module of LSMS	Simplified diary; 22 activities	Face-to-face recall interview; one diary day
Oman	Overall Monitoring of Annual National Indicators Survey, 1999	Module of house-hold expenditure and income survey	Simplified diary; 23 actiivities; 15-minute intervals	Face-to-face recall interview and self-reporting; one diary day
Palestine	Time-Use Survey, 1999-2000	Independent	Full diary; 30-minute intervals	Self-reporting; one diary day
Republic of Korea	Time-Use Survey, 1999	Independent	Full diary; 10-minute intervals	Self-reporting; two diary days
South Africa	Time-Use Survey, 2000	Independent	Full diary; 30-minute intervals	Face-to-face recall interview; one diary day
Sweden	Swedish Time-Use 2000	Independent	Full diary; 10-minute intervals	Self-reporting; two diary days

developing countries, an international or bilateral aid or development agency can fund a time-use survey conducted as an ad hoc activity. Institutionalization into the national statistical system is not usually a primary consideration. Possibly due to this view, many developing countries undertaking their first time-use survey have opted to implement an independent survey to obtain a comprehensive database for analysis in order to increase its usability over a long period of time.

Mounting a time-use survey, especially for the first time, will have an effect on the operations of the regular surveys of the statistical office. For regular staff, even with the addition of new interviewers or data encoders, the increased workload will mean having to prioritize time and attention, and a possible loss in quality of existing statistics.

High response rates may be viewed as a measure of efficient use of resources. Achieving high response rates is one of the most difficult issues in the design of time-use surveys. Some of the solutions, such as the provision of incentives to respondents or more follow-up visits by enumerators, are relatively costly. On the other hand, cost-effective solutions such as using a “light” diary (or precoding of activities) as opposed to a full diary (or aftercoding of activities) or computer-assisted telephone interviews as opposed to a face-to-face interview, may limit scope and coverage.

Integrating time-use surveys into the regular programme of household surveys of a country is an efficient approach to developing a framework for a sound, continuing database and time series for time-use data. Since start-up costs are usually large, partly due to the need for engaging consultancy services for new types of surveys, unrelated ad hoc surveys tend to be costly. Irregular operations make it difficult to accumulate and absorb the knowledge and experience necessary to achieve efficient and reliable survey results. They also limit the opportunity to develop an adequate technical and field staff well trained in time-use methods.

Basic components of time-use surveys

1. Survey instruments

The types of survey instruments used to obtain data on activities and their duration over a specified period of time may be classified into two general groups: 24-hour time diaries and stylized analogues of these diaries.

Time diary

The basic objective of a time diary is to enable respondents to report all activities undertaken over a prescribed period of time including the beginning and ending time for each activity, a description of the activity and the contextual information required for analysis.

A diary may be a full-time diary and a "light" or simplified time diary.

In the basic format of the full-time diary:

(a) The respondent reports each activity undertaken successively from the time of waking including the time that one activity began and ended throughout the 24 hours of the day;

(b) The interval of time within which an activity is reported may be fixed; that is, the 24 hours in a day are subdivided into intervals of 10- or 15-30- or 60-minute intervals. Alternatively, the interval of time is left open and the respondent reports the beginning and ending times of each activity.

Of the 13 countries that used full-time diaries (table 1.1), Australia, Canada, Mexico and Morocco used open-time intervals.

With the "light" time diary:

(a) Respondents report the time at which each activity in an exhaustive list occurs, i.e., the 24 hours of the day are accounted for in terms of a pre-identified comprehensive list of activity categories;

(b) The exhaustive list of activity categories may consist of a small number of broadly-described activity groups such as paid employment, education, personal needs, domestic work, maintenance and leisure;

(c) Alternatively, the exhaustive list may contain a longer list of more detailed activity tasks such as meal preparation, cooking, washing dishes; laundry, ironing, cleaning, sewing; shopping; and paid work including travel.

In the country surveys (table 1.1), Benin, Guatemala, the Lao People's Democratic Republic, Nicaragua and Oman used simplified time diaries. While most of these activity lists had 21-23 categories, Benin used a list of 62 activities.

In designing the time diary, decisions must be made on specific interrelated elements including:

- Whether the diary will use an open-time interval or a fixed interval of time within which to report activities;
- Whether data on single or multiple activities per time interval will be collected and, if multiple, whether only one column or two columns will be used and whether simultaneously-done activities will be prioritized as primary and secondary;
- Which context variables will be included in the description of the activity and how the diary format will reflect these variables; and
- The mode of data collection.

Examples of time diaries are shown in Annex II. The diaries used in the surveys of India, Mongolia and South Africa are full-time diaries while the diary is a light-time diary.

Stylized analogues of time diaries

In the stylized version of diaries, respondents are asked to recall the amount of time they allocate, or have allocated, to specified activities over a specified period such as a day, week or year. It is different from a diary because the respondent does not report the specific time of the day that the activity is performed – rather, the respondent reports the total time spent on the activity.

Stylized questions are typically of the form:

"Yesterday (or last week), how much time did you spend on activity x?"

or

"How many hours per day (or per week) do you usually spend on activity x?"

In using questions such as these, the stylized analogue of a diary:

- Collects information on the frequency and duration of time spent on a pre-specified set of activities;
- Asks respondents whether or not they participated in each activity in the previous day or on the day before that or in the past week;
- Follows up respondents who answer "yes" to the above query on how many hours they have spent on that activity during that day or the past week; and
- Lists activities that may be exhaustive or selective.

Nepal used stylized questions for collecting data on time use. The questions were part of the labour force survey and referred to only a selected set of activities covering unpaid domestic work. Annex II includes the questionnaire on time use integrated into the Nepal labour force survey.

2. Mode of data collection

Time-use data can be collected by participant observation, by self-reporting, or by interview. All these modes have their advantages and disadvantages relative to the reliability of data obtained, the effect on response rate and the cost. These need to be assessed and evaluated relative to the objectives and resources of the survey. To maximize the response rate and increase reliability, the various methodologies have been used in combination in a survey such as in the Dominican Republic, Mongolia and Oman.

Participant observation

In this method, the time use of the respondent is observed and recorded by the survey enumerator. Observation can be on a continuous basis or on a random spot basis. For continuous observation, the enumerator observes the respondent throughout the recording

period. In random spot observations, the enumerator observes the respondent only at randomly chosen points in time during the recording period.

Self-reporting

The respondents may report their own time use by recording activities done in a time diary designed for the purpose. One way of doing this is by asking the respondent to record the activity as or just after it occurs; this is referred to as the "tomorrow", "current", or "left-behind" diary approach.

Another way of doing this is by asking the respondent to recall and record activities performed over a specified recall period – usually the previous day or over the past week; this is referred to as the "yesterday" or retrospective diary approach.

Although not as common, a third approach is the "experience sampling method" (ESM) or "beeper" studies approach in which

Activities of Women and Children in Nepal

An example of improved statistical measurement

The 1998-1999 Nepal Labour Force Survey collected data on the period of time spent in a survey reference week on both SNA and non-SNA economic activities. It therefore provides an example of an improved method of measuring the total economic activities of women and children. The approach has been recommended to other Asian countries and might serve as a "best practice" for collecting statistics on this topic.

Introduction

The total economic activity of men, women and children is usually under-reported in statistical surveys. In Pakistan, unadjusted results of the 1994-1995 Labour Force Survey showed a labour force participation rate of 12.7 per cent for women aged 15 years or more as compared with 82.3 per cent for men of the same age group. (*ILO*, *1998*). In the case of Pakistan, this under-reporting may be partly attributable to cultural and operational reasons, but it also reflects a more general phenomenon that interviewers and respondents do not understand the concept of "work" or "economic activity".

In particular, it is often unclear to interviewers and respondents which work and economic activities are included within the SNA production boundary of the market economy, and which fall outside that boundary but within the general production boundary of the non-market economy.

Under the System of National Accounts 1993, the boundary for the production of goods and services was amended. As a result, some economic activities that had previously been treated as outside the narrow SNA boundary were included as SNA economic activities. These include "water carrying" and "wood collection" (activities which are traditionally undertaken by women and children in less developed countries), as well as the processing of primary products solely for own final consumption (milling of grain, basket weaving, home tailoring etc), all of which are traditionally undertaken by women.

Nepal Labour Force Survey

In 1997, ILO implemented a UNDP-funded project to assist the Nepal Central Bureau of Statistics in designing and implementing a large-scale, household-based Labour Force Survey. Data collection for this survey started in mid-May 1998 and ended in early May 1999. The sample of over 14,000 households covered both urban and rural areas of Nepal. The first results were published in 1999.

respondents are prompted by a beeper to record specified objective information, and possibly subjective information as well, on what they were doing at the time the beeper sounded. Beeper signals are sent at random times during the recording period for a day or a week.

Interview

Time-use surveys often use the interview as the mode of data collection. The personal or face-to-face interview is most commonly used. The computer-aided telephone interview is an option that is increasingly being used in household surveys on a variety of topics but so far has been applied to the collection of time-use data only in Canada.

The interview method may be used with both forms of retrospective time diaries or their stylized analogues.

The main aim of the survey was to measure employment, unemployment and under-employment in Nepal's market economy. However, the survey designers were concerned that interviewers and respondents might incorrectly consider market economy work to comprise only those activities that produce an income (in cash or kind), and would not appreciate that market economy work included many unpaid activities which were part of normal household duties in Nepal. Consequently, special attention was given to designing the questionnaire to minimize the under-reporting of those activities. Special attention was also given to enforcing those points during interviewer training.

Labour force surveys in many countries measure current market economic activity with simple questions such as whether the respondent "did any work for pay, profit or family gain during the past week?". This simple approach is likely to result in under-reporting because the respondent does not understand the concept of market economy work. Other countries have tried to improve this understanding by providing a prompt list of market economy activities to guide interviewers and respondents. If any of these market economy activities have been undertaken in the reference period, then the person is considered to have worked in the market economy in that period.

In Nepal, it was decided to take this approach a little further and to ask about the number of hours spent separately on each SNA economic activity as shown in Annex II. It was a minor extension to then add a similar question on the time spent on selected non-SNA economic activities (Annex II). For simultaneous activities, interviewers were instructed to avoid duplication when recording hours. Priority was given (a) to SNA economic activities over non-SNA economic activities such as planting rice while caring for children, and (b) to the first-mentioned activity in each list such as cooking food while also child-minding.[1]

[1] In the Pakistan Labour Force Survey, the question on "work" had a prompt which reminds respondents that "work" included (a) the production and processing of primary products, (b) the production of other goods and services for the market and the corresponding production for own consumption, and (c) own account construction. This is similar to the traditional approach mentioned above. However, the Pakistan questionnaire also had a separate module addressed only to women who were classified as inactive and engaged in housekeeping. These women were asked detailed questions on the time spent in the reference week on various types of SNA and non-SNA economic activities. Consequently, Pakistan was able to adjust the crude labour market participation rates mentioned in the opening paragraph to obtain an improved female labour force participation rate of just over 50 per cent. This approach is similar to that recommended in this article but does not go far enough. It is recommended tha all respondents should be asked these detailed questions. In other words, the detailed questions should be part of the main questionnaire and not given in a separate module.

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During interviewer training for the Nepal Labour Force Survey, special attention was given to the gender perspective in measuring market work by highlighting those SNA economic activities that might have been overlooked or under-reported. The training went further than this and also highlighted gender issues generally. This was not done as a separate "gender item" but it was an integral part of the training, particularly during the sessions dealing with paid and unpaid activities, home-based work etc. As a result, the field staff were perhaps better prepared for, and more sensitized to, gender issues related to "work" and "economic activity".

With this approach, the Nepal Labour Force Survey provides detailed and more reliable information on the extent to which men, women and children are engaged in the various SNA and non-SNA economic activities. It is possible to cross-classify the responses according to demographic and economic characteristics (such as age, education level, geographic location, whether employed in the market economy, unemployed or inactive in the market economy and, if employed, occupation, industry, status in employment etc). It therefore provides answers to questions such as:

- To what relative extent are men, women and children engaged in housekeeping duties, care of the sick and elderly etc?
- Do rural women spend more time on average in these activities than do urban women?
- To what lesser extent is the time spent by market employed people on housekeeping duties, care of the sick and elderly etc., than those who are unemployed or inactive in the market?
- How much time do children attending school (as opposed to those not at school) spend in SNA and non-SNA economic activities of differing types?

Progressive reviews of the Nepal Survey suggest that the approach has been successful. In particular, it is believed that the concept of SNA economic activity is more accurately measured and that useful and interesting data on selected non-SNA economic activities have also been obtained, which are not available in labour force surveys using traditional simple methods. Consequently, other countries are being encouraged to include similar questions in their labour force surveys.

Types of survey

Most of the household surveys designed to collect data on time use may be classified into two basic types – independent or "stand-alone" time-use surveys and multi-purpose or multi-subject household surveys with a time-use component or module.

1. Independent time-use survey

This is a household survey concerned with the single subject of time use. In this type, the survey scope and coverage, questionnaires, sample design and selection, training plans, field operational procedures and data processing systems are configured for this one purpose. Being able to plan for, design and implement a single-subject survey is important for a subject as complex as time use. Thus, countries conducting a time-use survey for the first time have usually opted for an independent survey.

Of the 13 countries listed in table 1.1 that implemented independent surveys, seven conducted the survey for the first time. Those countries were: the Dominican Republic, India, Mongolia, Morocco, Palestine, Republic of Korea and South Africa.

2. Time-use component in a multi-purpose survey

Two approaches to collect data on time use through a component in a multi-purpose household survey are a modular approach, where the time-use component is a separate module, and an integrated approach, where the time-use component is included along with all other components in a single module.

The common form of the modular approach involving a time-use component is one where:

- There is a core module such as a labour force survey or an income and expenditure survey, and one or more additional or "rider" modules. A time-use module is included as a rider module.
- The core module primarily guides the requirements including population coverage, sample design and selection of households, and major aspects of survey operations such as operational schedules, listing procedures and enumerator workload.
- Usually, the enumerator first completes the data collection on the core topic before introducing the time-use or other modules.
- The time-use module would cover a separate set of survey instruments, in the form of a time diary or a stylized analogue, plus a background questionnaire.
- The time-use component is fielded at the same time as the core survey and employs the same set of interviewers.

Some degree of flexibility in terms of selection of respondents for the time-use module and scheduling of call-backs is possible. To the extent of that flexibility, the modular approach can almost be considered an independent survey. The surveys of Benin, Guatemala, the Lao People's Democratic Republic, Nicaragua and Oman used the modular approach.

In the integrated approach:

- A single questionnaire is used to cover all topics, and specific items on time use are incorporated in the questionnaire.
- Typically, the questions are in the form of stylized questions on time use.

As mentioned above, Nepal included stylized questions on time use in unpaid domestic work in their 1999 Labour Force Survey.

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Classification of activities for time-use statistics

The nomenclature and classification of activities form an important part of the planning, collection and analysis of time-use data. A statistical classification provides "a set of discrete values which can be assigned to specific variables which are to be measured in a statistical survey, … which will be used as basis for the production of statistics". Classification systems attempt to reflect meaningful distinctions between specific activities for the purpose of tabulation and also try to prioritize those distinctions to provide a conceptual basis for the analytical framework (Horrigan, et al., 1999).

Time-use data are about people's activities. A detailed, comprehensive and systematic listing of activities needs to be available as a basis for assessing completeness of coverage of activities. This listing is used as a guide in the design of survey instruments and selection of methods. It is also the interviewer's guide for eliciting from the respondent the level of detail required by the survey objectives. It serves as the basis for developing coding rules and indexes.

Existing activity classifications are hierarchical in nature. Their structures are determined by the number of detailed description of activities and the number of broad groups and subgroups into which activities are categorized as well as the bases for categorizing these activities. Codes, usually numerical, are assigned at a one-digit level to major groups, two-digit level to the first level of subgroups within a major group. The most detailed description of activities have the highest-digit level codes. The one- or two-digit levels are typically used as analytical and tabulation categories in surveys that use the full-time diary.

In simplified time diaries, pre-listed activities comprise the activity classification for the survey. The pre-listed activities are typically also the analytical and tabulation categories, although a smaller set of broader groups of activities can be used for purposes of tabulation and analysis. Consistent with the prevailing analytical themes of time use studies when these were constructed (e.g., leisure or domestic work), the activity classifications focused on detailed lists of unpaid work and leisure activities – housework, care-giving, socialization, recreation, learning and mass media. The activity classification developed in 1965 by the Multinational Comparative Time-Budget Research Project, with its full 99-activity code, or summary 37-activity code, sets the initial standard for most of the national classifications of developed countries.

In recent years, new activity classifications, both in developed and developing countries, have addressed the expanded use of time-use data to assess national labour inputs into the production of all goods and types of services, and in the compilation of household satellite accounts consistent with the system of national accounts. Listings of activities have included greater detail for SNA economic activities. These have also considered means for differentiating activities relative to the production boundary of the SNA such as non-market work from other non-market activities, providing care for others and self-care, and intra-household transfers from inter-household transfers.

In addition, analyses that measure changes in time use and provide cross-national comparisons require an activity classification that is closely linked with the activity classifications used in other time-use studies within a country, among similar groups of countries and

globally. The Eurostat harmonized time-use project developed a time-use classification that is intended to serve as a standard for the region. A United Nations International Classification of Activities for Time-Use Statistics is being developed as a standard classification at the global level. A unique component of this classification, detailed in Annex III and discussed later in this document, is a comprehensive categorization of activities associated with household production of goods for own final use and informal sector activities. As such, the classification provides analysts with a means of classifying activities as productive or non-productive, and within productive activities as paid or unpaid.

What are the basic survey specifications for measuring time spent on unpaid work ?

To influence policy-making in areas of gender equality and women's economic empowerment, nationally representative data on time use can be analysed and used by:

- Describing differences in time-use allocation for all activities and specifically unpaid work by sex, area, age groups and labour force status; and
- Constructing satellite accounts on household production that incorporate the valuation of unpaid work.

Some of the data requirements for these survey objectives are:

- Data on all activities and their duration over a 24-hour period to describe time-use patterns of the population and subgroups of the population;
- Data to measure and value unpaid domestic and volunteer work, and develop household production accounts to augment standard national accounts;
- Data to analyse policy implications of development planning issues for ongoing programmes or to assess current policies; and
- Data to improve estimates of standard labour market statistics including time spent on informal sector activities and unpaid activities within the SNA production boundary.

Translating these data requirements into time-use survey specifications requires decisions on survey content, population coverage, time coverage, activity classification, sample design and selection, and field operation procedures. Relevant issues are discussed below. Illustrations of country practices are provided in Annex I, which describes specifications of selected time-use surveys in developing countries.

1

Survey content

In determining the scope of a time-use survey, the following issues need to be considered:

1. Level of detail in which activities will be recorded and coded, and groupings for analysis and tabulation

The level of detail at which descriptions of activities are to be recorded is determined by the analytical objectives of the survey, as well as concerns about coding and respondent burden, among others. This is also related to the selection of the survey instrument. Activities may be recorded in as much detail as a full-time diary allows or may be delimited by the pre-listed activities in a simplified-time diary.

Depending on the level of detail decided on, an appropriate activity list or classification will need to be developed for coding purposes. This detailed list would then need to be condensed to provide suitable analytical and tabulation categories. (See discussion under classifications.)

2. Recording of simultaneous activities

Recording simultaneous activities is important in identifying specific types of activities – usually those that are often done as "background" or "pervasive" activities. For example, care-giving activities are often done in parallel with other activities such as housework, but respondents often will report the care-giving activity as a secondary activity. Much of time spent in childcare may not appear in survey estimates when only primary activities are covered.

The ability to collect data on simultaneous activities depends on the survey method (e.g., it is difficult to do so through a telephone interview) and the design of the survey instrument (e.g., the length of the time interval used in the survey instrument needs to be considered). A decision also needs to be made as to whether the activities are to be prioritized into primary, secondary and others and, if so, whether the prioritization is to be done by the respondent or by the analyst.

3. Inclusion of contextual information – where, with whom, for whom, whether paid or unpaid, and level of detail

The inclusion of context variables to further describe an activity is closely related to the analytical objectives of the data collection. To be able to distinguish paid and unpaid activities, for example, a context variable would be needed. A "for whom" context variable is useful to identify volunteer work, unpaid work within the household, and unpaid work outside of the household.

4. Inclusion of background variables

Survey instruments include both household and individual questionnaires. These are used to collect background information on respondents that are considered basic to the analytical plan of the time-use survey. A minimum list of variables would include sex, age, marital status and work situation of the individual and the household composition (United Nations, 2000). Depending on the analytical objectives, additional variables may have to be included. For example, information on household durables is needed to explain time-use patterns of activities that are related to their presence or absence in the household. Whether to collect information about wage rates and/or household income or expenditure or simply indicators of wealth and circumstances also depends on the objectives of the survey (United Nations, 2000).

5. Recording of information on temporal location and/or activity sequence

Information on temporal location of an activity, or the time of day, week, month or year an activity is undertaken, is useful in understanding the time constraints within which time allocation decisions are made. The activity sequence or the relationship of an activity to the activity that precedes and follows it, provides information on how individuals organize their day. Both require data on the beginning and ending times of activities and a chronological reporting of activities, and would thus preclude the use of stylized questions or stylized activity lists.

Population coverage

In addition to the standard issues on population coverage that are addressed in household surveys such as institutional population, population in special situations, *de jure* versus *de facto* approaches (United Nations, 1984), deciding on the reference population for the time-use survey includes consideration of the following:

1. Geographic coverage

Will the analysis require comparison of urban and rural lifestyles or differences in the time allocation patterns among regions within the country? For example, for purposes of developing satellite accounts, national-level data without the geographical disaggregation may suffice. Users may be interested in making regional comparisons that will generally require a larger sample size and hence increased costs compared to the need only for national data.

2. Age limits

Studies on paid and unpaid work invariably need information on children's activities, both as doers of work activities and as recipients of unpaid work. Therefore, should the survey cover children, given the possible difficulty in collecting time-use information from them? A related question is: should the survey exclude those older than the maximum working age limit?

3. Individuals or households

Do the analytical objectives require data from individuals only or couples or families within households? From a conceptual standpoint, one argument for collecting time-use information from multiple persons in a household is to provide a basis for understanding intra-household resource and time allocation. For example, with data only on individuals, it is possible to determine the effects of marriage or an additional child on an individual's personal use of time. However, it will not be possible to determine their effects on the household, as an economic unit (Bittman, 2000).

4. Coverage of time

The duration and frequency of time spent on an activity may vary depending on the time of day, the day of the week or the season of the year. Personal care activities such as eating and sleeping, and housework such as preparing meals typically happen every day. Some activities such as house repair or buying a refrigerator occur much less frequently. Some people have regular working hours or are in school from Monday to Friday, have week-ends off or take summer vacation during the same months each year. Many informal sector workers do not have regularity in working hours. Planting and harvesting of crops are seasonal as are home-based crafts for which raw materials are seasonal. Other activities such as worship are often organized on a weekly basis and predominantly occur on a particular day.

Based on survey objectives, decisions will have to be made on the following:

- Unit of time to be observed – Should this be time intervals of minutes or hours within a day or a time interval defined in terms of a whole week?
- Days of the week – Should all days of the week be covered? If so, should this be done for each day or is it sufficient to distinguish between weekdays and weekends only?
- Season – Should time-use data collected take into account seasonal variations in activities?

Survey method

In terms of coverage, the data on time-use of individuals may be either:

- Exhaustive, where all activities that a person engages in during the course of a specified continuum or block of time (e.g., 12-hour period, 24-hour day, 7-day week) is recorded; or
- Selective, where time spent is recorded for only a selected activity or sets of activities within a specified period.

Given the analytical objectives, the corresponding requirements of content, population, period or time coverage, and the available resources, how should the time-use survey be designed?

Deciding on the method for data collection involves decisions on what type of survey, in combination with what mode of data collection and survey instruments would best fit the survey conditions. As described above, there are different ways in which these three components may be combined. Two factors that need to be considered in deciding which combination will work best are the literacy level of the survey population and measuring time "without a clock".

Literacy levels in the population influence the choice of mode of data collection and survey instruments. For example, if the literacy rate of the survey population is low, a recall interview would be a better option than a "leave-behind" self-completed diary. If the literacy rates vary among population subgroups (e.g., ethnic groups) or areas, it is possible to have a combination of self-reporting for the literate respondents and recall interview or even participant observation for the non-literate respondents.

Some societies may not relate their activities to "clock time" or to hours as they appear on a clock face. For example, the sense of time may be related to fluctuations of nature, religion, geographic conditions, productive activities and tradition. In order to collect time-use data in such societies, survey designers need to give special attention to translating the local perception of time into a standard 24-hour timetable.

The survey design must take into account and reflect the mores and traditions of the group to be surveyed. In this case, it is necessary to understand how the community defines the hours of the day and how they calculate the amount of time it takes them to perform an activity (Harvey and Taylor, 2000).

Sampling design and selection

For time-use surveys, there are three types of sampling units: the household, household members and time (hours, days and seasons). Generally, considerations for sampling households do not differ from those of typical household surveys. Considerations in sampling household members and design of the time sample are, however, unique features of time-use surveys.

An important sample design decision is whether or not to include all household members belonging to the reference population. The decision as to whether there is a need to include more than one household member in the sample depends on the analytical objectives. If the analytical objective calls for more than one household member, how many? One option is to include all household members. If the sampling of household members is decided on, how should they be selected?

Should the survey cover every day of the year, all seasons of the year? If so, how should the sample be designed? One basic option is to conduct the survey on a periodic or continuous basis over the entire year and to spread the total sample of households over each survey period. If resources are not available to do this, are there alternatives that can be explored in combination with a single period survey? Another option is to conduct a single period survey and acknowledge the analytical limitations of such an approach.

If the unit of time is the day rather than the week, two decisions that will need to be made are: How many diary days should be sampled per household member? Are all days of the week to be represented in the sample? If so, will this be an equal or non-equal representation? How will the diary days per household member be selected to achieve the desired representation? One technique is to ensure that there is an equal representation of days of the week.

To illustrate some of the issues that may arise: if, as in the most recent Australian survey, 7,000 people have each completed a two-day diary, this provides a final, effective sample of 14,000 diary-days. With equal representation of days of the week this translates into a sample of 2,000 Sundays, 2,000 Mondays, 2,000 Tuesdays, 2,000 Wednesdays, 2,000 Thursdays, 2,000 Fridays, and 2,000 Saturdays. If an activity that typically occurs on a particular day of the week – such as paid work on Sunday – is of analytical interest, the effective sample is 2,000 diary days.

As might be needed by the analysis, breaking down the data by industry or broad occupational groupings for each sex or ethnicity, or educational attainment grouping of those working on Sunday, rapidly runs up against the limits imposed by small cell size. Survey designers should consider the minimum number of a particular day of the week that will produce tolerable standard errors given specific analytical objectives (Bittman, 2000).

Field operations

For a specific survey method, that is, the combination of type of survey, survey instrument and mode of data collection, field procedures will have to be designed appropriately. The key decisions to be made with respect to field operational procedures are:

1. Sequence of questionnaires

Time diaries or stylized analogues and a “background” questionnaire generally comprise the survey instruments for time-use surveys. The content of such a questionnaire is often as critical to the interpretation and analysis of time use as the diary itself. The survey procedure should define the sequence in which these instruments are to be administered to the respondent, particularly for surveys using the interview method.

1

The field procedures may become more complicated if the time-use survey is a module of a larger survey, where there are additional questionnaires to coordinate and sequence.

2. Assigning diary days

What procedure should be used in allocating diary days to respondents? Should enumerators select the days? Or, should respondents do this? Or, should these be predetermined at the sample selection stage, assigning designated diary days to each household or respondent?

Ideally, diary days should be randomly selected and designated days assigned to respondents. Experience shows however, that this is generally not achievable but may be approximated. At a minimum, operational procedures should ensure that the selection of diary days is not left to the discretion of either the interviewer or respondent.

3. Quality control techniques

Quality control techniques aim to minimize non-sampling errors. Of particular concern in time-use surveys is minimizing non-response. One way in which this has been addressed is to provide some form of incentive to respondents. This has been possible mostly in first-time surveys where resources are available for the purpose. Some statistical offices, however, are concerned that such a practice may have a negative effect on the response rate for other regular surveys in programmes that do not provide incentives.

Depending on the survey method adopted, concerns arise about interviewer and respondent effects on response quality. What techniques specific to collecting data on time use should interviewers/ enumerators learn and use to minimize such effects?

How do data recorded in individual diaries become useful summaries in statistical tables ?

While data collection may be completed within the time schedule of a survey operation, data processing and analysis may become a bottleneck in generating the results. Time-use data have been described as “unwieldy” to analyse because of their multidimensional character. These include time data for individuals and households in terms of type of activities, frequency, duration, location, intensity, sequence and others, and which can be aggregated by activity, households, individuals by sex or age, and others (Asia Society, 1978). In addition, these are typically correlated with household as well as individual characteristics. Transforming thousands of individual diaries into useful summaries and statistical tables needs to be carefully mapped out. The main issues to consider are described below.

Tabulation plan

Developing the tabulation plan serves to:

- Confirm that the survey content specifications meet the analytical requirements;
- Ensure that the level of detail of the cross-classification variables in statistical tables required for the analyses are specified correctly; and
- Guide the determination of sample size required for the survey and provide reliable estimates for the basic cross-tabulation cells defining the domains of analysis of the survey.

The tabulation plan should specify the main cross-classification variables. For most survey objectives, sex is a standard cross-classification variable. In addition, a decision will need to be made on the following:

- Should these variables include rural/urban?
- What age groupings are relevant?
- What level of activity groupings are needed?

Another main issue has to do with the analysis of simultaneous activities.

If simultaneous activities are covered in the survey:

- How should time spent on simultaneous activities be counted?
- How will the data on simultaneous activities be presented in a table?

Key time-use indices

Most of the analyses of time-use data can be based on six types of time-use indices. These indices are defined in terms of their numerators and denominators shown in table 1.2. These measures are essentially means or proportions. In interpreting the indices, it is important to make the distinction between two divisors or totals. The first type of divisor is the (estimated) total number of persons in the survey population. The second type of divisor is the (estimated) total number of persons in the survey population who engaged in the activity during the course of the day (doers or participants). The total number in the population remains constant while the total number of participants changes depending on the activity. Measures 11 and 14 are thus interpreted differently – 11 refers to mean duration of activity per person in the population while 14 refers

Table 1.2. Six time-use indices

Denominator of index	Numerator of index		
	Total duration of activity	**Total number of episodes of activity**	**Total number of persons doing activity**
Total number of persons (population)	(11) Duration / All persons	(12) Episodes / All persons	(13) Doers / All persons
Total number of persons doing activity (doers/participants)	(14) Duration / Doers	(15) Episodes / Doers	
Total number of episodes of activity	(16) Duration / Episodes		

to mean duration of activity per participant/doer. Similarly, measures 12 and 15 refer to mean occurrences per person and per doer, respectively. The proportion of participants to total population (13) is also referred to as the participation rate for the activity.

The indices could be used in relation to primary activities, secondary activities and combinations of simultaneous activities. In addition, "activity" may be defined in terms of the one-, two-digit or more detailed levels of the classification used, or as broader groups of activities as may be appropriate to the analysis.

The indices can refer to different temporal units such as an "average" day in a week, an "average" week in a year, an "average" weekday, an "average" weekend; averages may also pertain to a week, season/quarter or a year depending on the time, sample and estimation objectives of the survey.

Table 1.3 shows how these time-use measures may appear in an analysis table. In this table, the survey population are persons 15 years old and over. For "paid work and related activities" for females, 11 equals 2.8 hours per day while 14 equals 7.7 hours per day.

Basic tabulation plan for analysing time-use data

1. Specifications for analysis and classification variables

In addition to the type of time-use index, basic tables for analysis are specified in terms of (a) analysis variables and (b) classification variables.

The type of activity is the key analysis variable in all tabulations. One decision that needs to be made in relation to the type of activity is the level of aggregation or disaggregation to be used. In this regard, it is suggested that initially the most detailed level of classification be used in coding the activities. Broader aggregations may be needed for analysis, which can be derived by grouping the appropriate detailed activities. The Aas' framework, for example, has been traditionally used in general analyses of time-use patterns as well as analyses that focus on free time. The tabulation categories of the proposed United Nations International Classification of Activities for Time-Use Statistics, on the other hand, is useful for analyses involving paid and

Table 1.3. Average time spent on various activities for the population 15 years old and over and participants showing participation rate by sex, Canada, 1998

Activity group	Population 15+			Participants			Participation rate		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	Hours per day			Hours per day			(Per cent)		
Total work	7.8	7.8	7.8	8.0	8.0	7.9	98	97	99
Paid work and related activities	3.6	4.5	2.8	8.3	8.8	7.7	44	51	36
Unpaid work	3.6	2.7	4.4	3.9	3.2	4.6	91	87	96
Parsonal Care	10.4	10.2	10.6	10.4	10.2	10.6	100	100	100
Free time	5.8	6.0	5.6	5.9	6.1	5.7	97	97.0	97

Source: Table 1 in "Overview of the Time Use of Canadians in 1998." Statistics Canada, catalogue no. 12F0080XIE.

unpaid work. Final published tables may have to be in terms of less detailed activity descriptions either due to logistics or due to considerations of precision of estimates.

Activity may be defined in terms of primary, secondary or simultaneous activities. Most standard statistical reports on time use present tables on time spent in each activity category, regardless of whether the activity is primary or secondary. Separate tables for primary and secondary activities may also be prepared. The preparation of working tables integrating primary and simultaneous activities is suggested and discussed later in this section.

Context variables (location of activity, "with whom", "for whom", paid/unpaid) are also typically analysed in combination with duration and activity – for example, time spent together by parents and children or by spouses, time spent in the house or time spent on unpaid household work.

Classification variables are used to define the domains of study. These variables may be at the person level or at the household/family level. Relevant variables are expected to differ substantially with regard to the use of time and also with policy relevance. The Expert Group Meeting on Methods for Conducting Time-Use Surveys recommends the following minimum list of classification variables at the person level: age, sex, marital status and work situation (employment status, class of worker).

Sex and age are two essential classification variables in analysing time-use data; thus, sex by age groupings should comprise basic domains of study. While there is no international standard classification for age groups, data on age are most commonly tabulated and published in five-year age groups (0-4, 5-9, 10-14 etc.). These five-year groupings are considered appropriate for indicators known to exhibit patterns associated with life-cycle variations. Other groupings are useful depending on the analysis, and can be derived from the basic groups.

For some types of analysis (e.g., studies on intra-household allocation), household-related variables such as the presence of children, family type (or household composition) and household income are important. Information on household durables is needed for explaining time-use patterns of activities that are related to their presence or absence in the household.

2. Table specifications

In this discussion it is useful to distinguish three types of tables: working tables, simultaneous activity tables and thematic tables.

Working tables

Working tables constitute the core tabulations. They report the duration or proportion of time spent in each category of a comprehensive list of activities. Duration can be expressed in terms of total time or average time. It is suggested that at a minimum, these tables use the sex-age cross-classification as the basic domain of study. Measures based on the total population are interpreted differently from those based on participants/doers; thus, tables referring to the survey population and participants/doers should be prepared separately.

Figure 1.1 illustrates the format of a core working table with activity as the analysis variable. A series of tabulations with this format can be generated for various classification variables, both person and household, including demographic and employment characteristics. Working tables using other analysis variables (e.g., context variables: location, with whom, for what purpose) can have a similar format, but where categories of the context or other analysis variables replace the activity list.

It is noted that such a format suggests that time use for activities done alone are to be tabulated separately from all simultaneously-done activities. The advantage of this type of table is that all hours in a week, weekday or weekend are accounted for, and time spent in multiple activities is not counted in multiple categories. Typical basic tabulations on time use, however, do not tabulate simultaneously-done activities in this manner. The statistical tables are so designed that time spent in sole activities and simultaneous activities are added up and accounted for in each activity category. For this approach to be valid for analytical purposes, it is essential that the total time spent in all activities equals a 24-hour day. The issue then is how to divide up the time between simultaneously-done activities?

Simultaneous activity tables

A simultaneous activity table would have a detailed breakdown of time spent doing simultaneous activities. This table would show which activities are typically done together. Figure 1.2 is a format for a cross-tabulation of primary and secondary activities. At a minimum, the table can show the most often occurring pair of activities. A series of tabulations with this format can be produced using sex, age and other classification variables.

Thematic tables

Thematic tables would focus on specific activities of interest such as SNA work, unpaid housework, childcare, travelling, waiting time and others. For example, a thematic table on childcare (see figure 1.3) sums up time spent in childcare activities by adding time spent on childcare as a sole activity and time spent on childcare in combination with any other activities. Since thematic tables would count all time spent on an activity even when other activities are done simultaneously, multiple thematic tables cannot be added together to compute total time, as some time will be double counted.

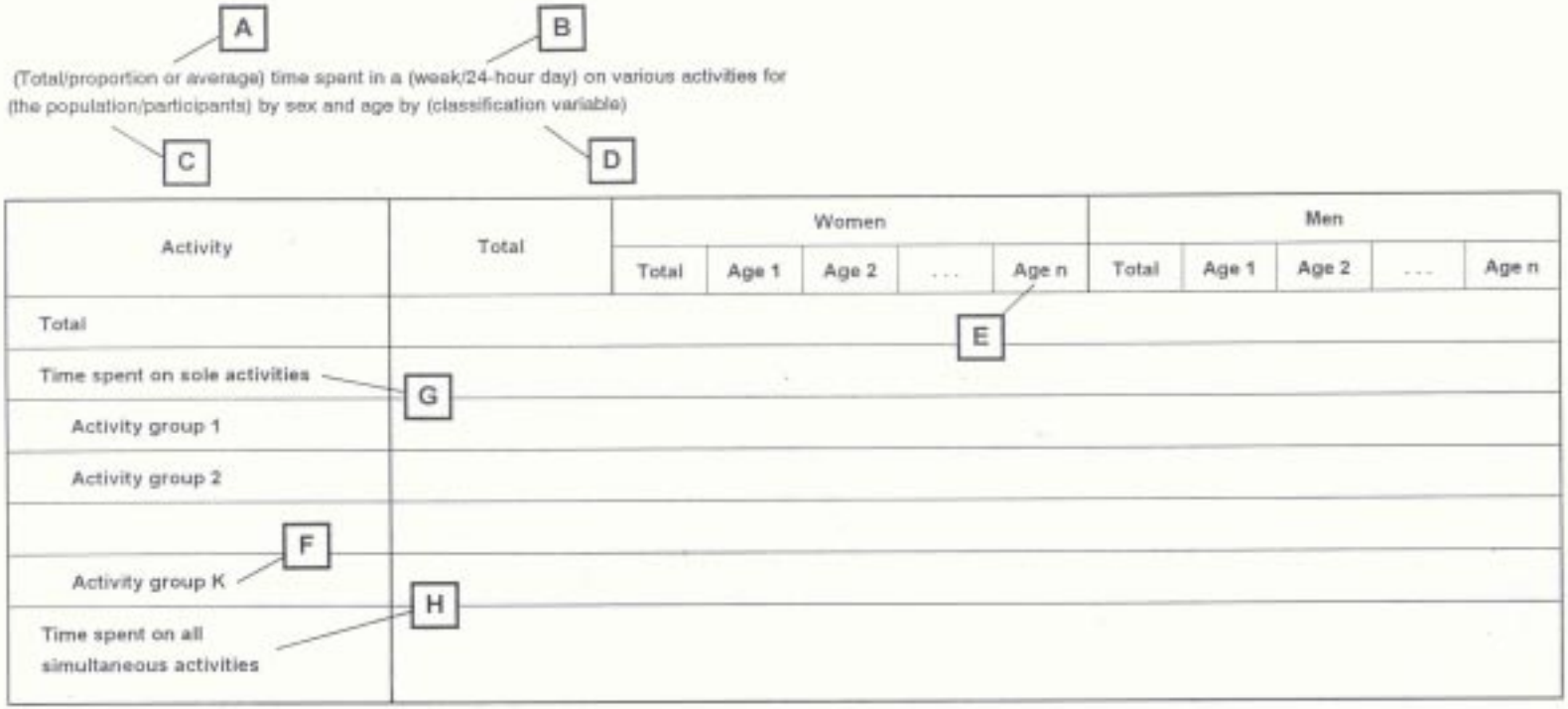
The number of tables on time-use data can become quite voluminous. A decision has to be made on the basic tabulations that should be produced and disseminated first. A production schedule may be helpful in prioritizing outputs to ensure timeliness of the release of results.

Data processing

The data processing cycle involves many interdependent activities. The major ones are: coding, data capture, quality assurance and editing, and validation. The inputs into the processing cycle are the survey forms (household and personal questionnaires) and time-use dairies. The basic outputs are the data files and basic tabulations. These, in turn, provide an input into the dissemination phase of the survey.

While data collection constitutes the most critical phase from the standpoint of accuracy, the ability to obtain survey

Figure 1.1. Illustration of basic working table



A. Time-use measure or index.
B. Temporal unit. Some other types of temporal units are specific days of the week (e.g., Sunday, Friday), weekday, weekend.
C. The table should specify whether the time use is measured for the survey population or only for participants/doers.
D. Classification variables include other demographic variables, employment characteristics and household or family-related variables.
E. Age groupings should exhaust the entire age range covered by the survey population.
F. The listing of activities should exhaust all activity categories.
G. Sole activities are activities where the person did not report doing something else at the same time. Duration of all activities reported as having been done simultaneously are not included in the activity list that follows.
H. Time spent in all simultaneous activities covers time allocated to all simultaneous activities regardless of the combination of activities.

Figure 1.2. Format of simultaneous activities table

(Total/proportion or average) time spent in a (week/24-hour day) on simultaneous activities by primary and secondary activity by classification variable.

Primary activity	No simultaneous activity	Primary activity						
		1	2	3	4	5	6	7
TOTAL								
1-								
2-								
3-								
4-								
5-								
6-								
7-								
8-								
9-								

Figure 1.3. Format of thematic table

(Total/proportion or average) time spent in a (week/24-hour day) on caring for children as the sole activity and simultaneous with other activities by sex and classification variable.

Hours spent	Total	Women	Men
TOTAL			
Time spent (caring for children)			
As sole activity			
Simultaneous with other activities			
Activity 1			
Activity 2			
Activity J			

results within a reasonable time period rests even more on the efficiency of the data processing system. The development of an efficient data processing system for a new and non-standard survey can be a relatively complex task needing coordinated efforts of survey statisticians, subject-matter analysts and users, and information technology staff. It may even be more complicated for time use than other surveys because of the unique processing issues related to time diaries.

Strategic directions for the processing phase need to be established early on during planning. A key factor in expediting data processing is the early completion of tabulation plans. When this is done, planning can proceed with the preparation of instructions for necessary clerical and other manual operations including: receipt and control of survey forms; manual editing and coding; specifications for data capture; computer-assisted coding and editing; imputation procedures; and specifications for statistical table formats.

The principal aspects of planning for data processing include the areas discussed below.

1. Editing

There is a consensus among time-use experts that primary activities must add up to 1,440 minutes per day and the consistent arithmetic for week and year should follow. This increases the accuracy and completeness of reporting very significantly, because it provides a check as to whether the estimates of the duration of each activity are accurate or whether some activities have been omitted.

In general, standard editing specifications and quality indicators for evaluating diary data need to be specified. The issues to be addressed in relation to this and related editing are:

- What editing is to be done manually and to what extent should manual editing be done?
- At what stage of the survey should editing be done – at the interview stage? For self-completed diaries, should this be when the diaries are collected?

2. Coding

Coding can be one of the most time-consuming tasks in time-use surveys. Data processing experts need to work with subject matter analysts in formulating coding rules and constructing coding indices, and fit these into the processing procedures and system.

Coding rules are especially needed when processing the information on time-use activities in diaries to deal with situations that are common causes of confusion and ambiguity such as overriding and pervasive activities (Users' Guide, 1992).

The coding of diaries may be performed either in the field by interviewers or at a central site by coders. The optimal choice will depend on having appropriate coding tools and procedures. The development of a coding index for activities and contextual information included in the time-use diary is one such tool. This has to be provided for in the survey timetable.

3. Preparation of outputs

Defining data entry and computer editing specifications are standard processes for any survey, which have to be considered as early as the planning stage.

Especially critical for time-use surveys are defining file structures from time diaries and identifying derived variables that can

facilitate the production of tables and the presentation of results. Implementing the estimation procedure for the survey – including weighting and non-response adjustments – and generating the tables prescribed in the tabulation plan require the preparation and review of computer programmes and table formats.

A decision has to be made on which data entry and editing software to use in developing the computer programs for these. Unlike some specialized household surveys that have benefited from statistical packages, there is no standard package for time-use diaries. In addition, survey planners need to decide on developing a database and the data dissemination products.

Dissemination strategy

If time-use data are to be used to inform policy makers, it will need to be packaged and made available in forms understandable by as wide an audience as possible, yet targeted and focused enough to serve as advocacy tools. Specific interest groups or individuals and organizations need to be identified and included in the consultative process early on in planning in order to determine the types of products needed as well as the modes of dissemination.

Time-use statistics may eventually be used for purposes other than the original basis for planning and designing the survey that produced them. For example, additional analytical issues may emerge after the initial results have been studied. The tabulation plan for the survey will not necessarily meet the requirements for them. Decisions to be made at the planning stage in relation to identifying a procedure for accommodating specialized or emerging data needs, include whether or not to release microdata and, if so decided, in what form. If not, what kind of system will enable the statistical office and key partners of the survey to respond to special data requests at a time when needed?

In summary, country experiences have shown that time-use surveys can be planned and organized either as an independent study or as part of a multi-purpose survey. In both cases, the design elements remain the same. Resources including the basic statistical infrastructure are a prime consideration. The global attention to the importance of time-use data in improving the situation, particularly of the unremunerated sector, has led to efforts to refine the tools for analysis. Furthermore, an international standard for activity classification has been developed. These initiatives are helping to increase the contribution of usable data and statistics for policy decision-making. As countries begin to share the lessons learned in collecting and analysing data, time-use surveys will become established parts of national statistical systems. A key aspect of analysing time-use data is the valuation of time spent on unpaid productive activities that usually have not been counted as an economic resource.

1

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