

# A Critical Review of Selected Time Use Surveys

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Gender and Development  
Programme Paper Number 2  
June 2007

United Nations  
Research Institute  
for Social Development



This United Nations Research Institute for Social Development (UNRISD) Programme Paper has been produced with the support of the International Development Research Centre (IDRC, Canada) and the Swiss Agency for Development and Cooperation (SDC). UNRISD also thanks the governments of Denmark, Finland, Mexico, Norway, Sweden, Switzerland and the United Kingdom for their core funding.

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## Acronyms

<b>AIDS</b>	acquired immunodeficiency syndrome
<b>BER</b>	Bureau of Economic Research
<b>ECOSIT</b>	Enquête sur la Consommation et le Secteur informel au Tchad ( <i>Chad National Survey on Consumption and Informal Sector</i> )
<b>ECV</b>	Encuesta de Calidad de Vida ( <i>Living Conditions Survey</i> )
<b>EDS</b>	Enquête Démographique et de Santé ( <i>Demographic and Health Survey</i> )
<b>MECES</b>	Enquête Malienne de Conjoncture Economique et Sociale ( <i>Malian Survey on Economic and Social Conjoncture</i> )
<b>EMNV</b>	Encuesta Nacional de Hogares sobre Medición de Niveles de Vida ( <i>Living Standards Measurement Survey</i> )
<b>ENIGH</b>	Encuesta Nacional de Ingresos y Gastos de los Hogares ( <i>National Household Income and Expenditure Survey</i> )
<b>ENUT</b>	Encuesta Nacional sobre Uso del Tiempo ( <i>National Survey on Time Use</i> )
<b>FIDEG</b>	Fundación Internacional para el Desafío Económico Global ( <i>International Foundation for the Global Economic Challenge</i> )
<b>GDP</b>	gross domestic product
<b>HIV</b>	human immunodeficiency virus
<b>IATUR</b>	International Association for Time Use Research
<b>ICATUS</b>	International Classification of Activities for Time Use Statistics
<b>ILFS</b>	integrated labour force survey
<b>ILO</b>	International Labour Organization
<b>INEC</b>	Instituto Nacional de Estadísticas y Censos ( <i>National Institute for Statistics and Census</i> )
<b>INEGI</b>	Instituto Nacional de Estadística, Geografía e Informática ( <i>National Institute of Statistics, Geography and Informatics</i> )
<b>INSAE</b>	Institut national de la statistique et de l'analyse économique ( <i>National Institute of Statistics and Economic Analysis</i> )
<b>KBS</b>	Korean Broadcasting System
<b>KTUS</b>	Korean Time Use Survey
<b>LFS</b>	labour force survey
<b>NBS</b>	National Bureau of Statistics
<b>PNAD</b>	Pesquisa Nacional por Amostra de Domicílios ( <i>National Household Sample Survey</i> )
<b>SNA</b>	System of National Accounts
<b>TAC</b>	technical advisory committee
<b>TGNP</b>	Tanzania Gender Networking Programme
<b>UN</b>	United Nations
<b>UNDP</b>	United Nations Development Programme
<b>UNRISD</b>	United Nations Research Institute for Social Development
<b>UNSD</b>	United Nations Statistics Division

## **Acknowledgements**

Thanks are due to many people who assisted with information and support during the writing of this paper. These included a range of time use researchers across the various countries being investigated, as well as staff of international institutions such as the United Nations Statistics Division (UNSD), the World Bank and the International Development Research Centre of Canada. Three people, in particular, deserve special mention. Kimberly Fisher of the International Association for Time Use Research (IATUR) was exceedingly patient and immediately responsive in providing information about time use research and researchers in particular countries, contact details for individuals and copies of available documents. Valeria Esquivel was equally generous in providing copies of documents relating to time use surveys conducted in Latin America and engaging in conversations to help me understand what had been done in that region. And Shahra Razavi of the United Nations Research Institute for Social Development (UNRISD) provided ongoing support, encouragement, feedback, questions and answers, which meant that the paper did not become a burden to be borne alone. Finally, Valeria Esquivel, Eivind Hoffmann, Marzia Fontana, James Heintz and an anonymous reviewer provided comments on earlier drafts that were very helpful in finalizing the paper.

## Summary/Résumé/Resumen

### **Summary**

This paper was prepared as part of the preparatory phase for the UNRISD research project on *Political and Social Economy of Care*. The overall aim of the project is to examine the way in which care is provided and allocated between the family/household, state, market and “community”, and its articulation with the commodity economy in different countries.

The country case studies being commissioned for the project will combine quantitative and qualitative research methods to analyse policy in this area; describe the institutional shape of the various “care regimes”; provide micro-level quantitative analysis of how women, men, girls and boys within households “take care” of other household members; and explore the implications of the findings for poverty and social exclusion.

The recent undertaking of a national time use survey was one of the criteria for the selection of countries for the UNRISD research project. Such surveys, also called time budget surveys, aim to provide information on people’s activities over a given time period (generally a day or a week) and the amount of time they spend on each of the specified activities.

This selection criterion was included because time use surveys are one of the few sources that can provide sound data on unpaid care work – the work, or “production”, that usually falls mainly on women’s shoulders and that includes housework; care at the household level for children, the elderly, sick people and those with disabilities; and voluntary community-oriented work.

The main purpose of this paper is, therefore, to critically review selected time use surveys conducted in countries from different regions of the world, in order to assess their quality. An additional purpose is to inform the design of the qualitative research to be undertaken by the project.

The paper presents the results of a desk-based study, as well as limited interaction with people knowledgeable about the surveys undertaken in countries included in the study: Argentina, Brazil, Mexico and Nicaragua (in Latin America); Bangladesh, India and the Republic of Korea (in Asia); and Chad, Mali, Tanzania and South Africa (in sub-Saharan Africa). The paper focuses on the following seven issues in reviewing the country experiences:

- assessing the design of the survey;
- delineating the scope of the survey and the information it contains;
- assessing the quality of the data obtained, with particular attention to data available on unpaid care work;
- identifying weaknesses in the data and survey design, especially with respect to unpaid care work;
- identifying countries most suitable for inclusion in the second phase of the project;
- identifying issues for exploration through qualitative research in the second phase of the project; and
- providing some recommendations, in terms of design/methodology, scope and training for fieldworkers, for future time use surveys.

The technical details covered in the case studies include the format of the questions, sample size, age group, number of members covered per household, and whether the time use survey was “stand-alone” or was carried out as part of a module for another survey. Where available, the descriptions include some findings that relate directly to the focus of the UNRISD research. The paper also notes, where possible, whether the raw data from the surveys are available to researchers.

Because of a widespread lack of knowledge about the nature and potential of time use surveys, the country case studies are preceded by a brief discussion of key concepts and issues to assist readers in understanding the significance of particular characteristics of the surveys highlighted later in the paper. The surveys conducted in developing countries over recent years have drawn heavily on other—mainly developed—countries' experience of conducting surveys. Although this is reflected in the discussion, the paper focuses on those aspects of most relevance for developing countries.

After presenting the country case studies, the paper suggests which countries could be included in the second phase of the UNRISD research project, possible areas of investigation for this phase, and some general recommendations in respect of future time use surveys in developing countries.

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### **Résumé**

Ce document s'inscrit dans la phase préparatoire du projet de recherche de l'UNRISD sur *L'économie politique et sociale des soins*. Le but général de ce projet est d'examiner dans divers pays la manière dont les soins sont dispensés et se répartissent entre la famille/le ménage, l'Etat, le marché et la "communauté", et leur articulation avec l'économie marchande.

Les études de cas nationales qui sont commandées pour le projet conjugueront des méthodes de recherche quantitatives et qualitatives pour analyser les politiques dans ce domaine; décrire les formes institutionnelles qui accompagnent les divers "régimes de soins"; fournir une analyse quantitative au micro-niveau de la façon dont les femmes et les hommes, les filles et les garçons "prennent soin" des autres membres de la famille; et dégager ce qu'impliquent les résultats pour la pauvreté et l'exclusion sociale.

L'existence d'une enquête nationale récente sur l'emploi du temps a été l'un des critères de sélection des pays pour le projet de recherche de l'UNRISD. Ces enquêtes, aussi appelées enquêtes (sur le) budget-temps, visent à renseigner sur les activités des gens sur une période donnée (généralement un jour ou une semaine) et le temps qu'ils consacrent à chacune des activités spécifiées.

Ce critère de sélection a été inclus parce que les enquêtes sur l'emploi du temps sont l'une des rares sources susceptibles de livrer des données saines sur les soins—le travail ou la "production"—non rémunérés, qui, le plus souvent, incombent principalement aux femmes et comprennent les travaux domestiques, les soins dispensés dans le ménage aux enfants, aux personnes âgées, aux malades et aux handicapés, et le travail bénévole pour la communauté.

Ce document a donc essentiellement pour propos d'analyser d'un œil critique une sélection d'enquêtes sur l'emploi du temps menées dans des pays de différentes régions du monde, afin d'en évaluer la qualité. Il a également pour but d'éclairer sur la forme que doit prendre la recherche qualitative du projet.

Le document présente les résultats d'une étude réalisée à distance, avec peu de contacts avec des personnes connaissant bien les enquêtes menées dans les pays étudiés—l'Argentine, le Brésil, le Mexique et le Nicaragua (pour l'Amérique latine), le Bangladesh, l'Inde et la République de Corée (pour l'Asie), et l'Afrique du Sud, le Mali, la Tanzanie et le Tchad (pour l'Afrique subsaharienne). En se penchant sur l'expérience des différents pays, l'auteur s'attarde sur sept questions et cherche à:

- évaluer la façon dont l'enquête a été conçue;
- délimiter le champ de l'enquête et les informations qu'elle donne;

- évaluer la qualité des données obtenues, en accordant une attention particulière aux données disponibles sur le travail non rémunéré;
- dégager les points faibles des données et de la conception de l'enquête, en particulier en ce qui concerne le travail non rémunéré;
- repérer les pays les plus aptes à faire partie de la deuxième phase du projet;
- sélectionner les questions à explorer en utilisant la recherche qualitative de la deuxième phase du projet; et
- formuler des recommandations sur la conception/la méthodologie d'enquêtes futures sur l'emploi du temps, les attributions et la formation des personnes qui travailleront sur le terrain.

Les études de cas donnent divers détails techniques, notamment sur la présentation des questions, la taille de l'échantillon, le groupe d'âge, le nombre de personnes interrogées par ménage et la question de savoir si l'enquête sur l'emploi du temps était menée de manière isolée ou s'insérait dans une autre enquête dont elle n'était qu'un module. Les descriptions, lorsqu'elles existent, révèlent des éléments directement liés au thème des recherches de l'UNRISD. L'auteur indique aussi, là où elle le peut, si les données brutes des enquêtes sont disponibles pour les chercheurs.

En raison d'une grande méconnaissance de la nature et du potentiel des enquêtes sur l'emploi du temps, les études de cas réalisées dans les différents pays sont précédées d'une brève introduction qui explique les principales notions et questions pour aider le lecteur à comprendre l'importance de certaines caractéristiques des enquêtes sur lesquelles l'auteur revient plus loin. Les enquêtes menées dans les pays en développement ces dernières années s'inspirent fortement de l'expérience acquise par d'autres pays – surtout développés – dans la conduite des enquêtes. Bien que cela se reflète dans son discours, le document se concentre sur les aspects qui intéressent le plus les pays en développement.

Après avoir présenté les études de cas menées dans les pays, l'auteur suggère quels pays pourraient participer à la deuxième phase du projet de l'UNRISD, sur quels domaines pourraient porter les investigations de cette phase, et fait quelques recommandations générales à l'intention de ceux qui seront amenés à l'avenir à enquêter sur l'emploi du temps dans des pays en développement.

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### **Resumen**

Este documento se elaboró durante la fase preparatoria del proyecto de investigación de UNRISD sobre *Economía política y social del cuidado*. El objetivo general del proyecto es examinar la manera en que el cuidado se presta y distribuye entre la unidad familiar o el hogar, el Estado, el mercado y la "comunidad", y la forma en que se articula con la economía de bienes en distintos países.

Los estudios de caso de país que se han solicitado para el proyecto combinarán métodos de investigación cuantitativos y cualitativos para (i) analizar la política en esta área, (ii) describir la conformación institucional de los diversos "regímenes de cuidado", (iii) realizar un análisis cuantitativo al nivel micro sobre la forma en que las mujeres, los hombres, las niñas y los niños del hogar "cuidan" de otros miembros de la familia y (iv) explorar las implicaciones de los resultados del análisis para la pobreza y la exclusión social.

La conducción reciente de encuestas nacionales sobre uso del tiempo fue uno de los criterios utilizados para seleccionar los países que se incluirían en el proyecto de investigación de

UNRISD. Estas encuestas, también llamadas encuestas de presupuestos de tiempo, tienen por objetivo brindar información sobre las actividades de las personas durante un determinado período (por lo general un día o una semana) y la cantidad de tiempo que invierten en cada una de las actividades especificadas.

Este criterio de selección se incluyó porque las encuestas de uso de tiempo constituyen una de las pocas fuentes de datos sólidos sobre el cuidado no remunerado, vale decir, el trabajo, o la “producción”, que a menudo recae en la mujer y que incluye las labores domésticas, el cuidado de los niños, personas mayores, enfermos y discapacitados en el hogar, además del trabajo comunitario voluntario.

El propósito principal de este documento consiste, por lo tanto, en examinar desde una perspectiva crítica determinadas encuestas de uso de tiempo que se realizaron en países de distintas regiones del mundo, con el fin de evaluar su calidad. Además, el documento se propone servir de insumo al diseño de la investigación cualitativa que ha de realizarse en el marco del proyecto.

El documento presenta los resultados de un estudio teórico e intercambios limitados con las personas familiarizadas con las encuestas conducidas en los países que forman parte del estudio: Argentina, Brasil, México y Nicaragua (en América Latina); Bangladesh, India y la República de Corea (en Asia); y Chad, Mali, Tanzania y Sudáfrica (en África Subsahariana). El documento se centra en los siete puntos siguientes para examinar las experiencias de los países:

- Evaluar el diseño de la encuesta;
- Delimitar el alcance de la encuesta y la información que contiene;
- Evaluar la calidad de los datos obtenidos, con especial atención a los datos disponibles sobre el trabajo de cuidado;
- Determinar las deficiencias de los datos y el diseño de las encuestas, sobre todo con relación al trabajo de cuidado no remunerado;
- Indicar los países más idóneos para participar en la segunda fase del proyecto;
- Señalar los aspectos que deberían analizarse por medio de una investigación cualitativa durante la segunda fase del proyecto;
- Formular algunas recomendaciones en cuanto a diseño y metodología, campo de acción y capacitación de los encuestadores, para futuras encuestas sobre uso de tiempo.

Los detalles técnicos cubiertos en los estudios de caso incluyen el formato de las preguntas, el tamaño de la muestra, el grupo de edad, el número de miembros cubiertos por hogar y si la encuesta sobre uso del tiempo era una encuesta “independiente” o si formaba parte de un módulo para otra encuesta. De estar disponibles, las descripciones incluyen algunos datos relacionados directamente con el objeto principal de la investigación de UNRISD. El documento también señala, en los casos donde ha sido posible hacerlo, si los datos básicos de las encuestas están a disposición de los investigadores.

Debido a la falta generalizada de conocimientos sobre la naturaleza y el potencial de las encuestas sobre uso de tiempo, los estudios de caso de los países vienen anteceditos de un breve análisis de los conceptos y temas clave a fin de ayudar a los lectores a comprender la importancia de determinadas características de las encuestas que se resaltan ulteriormente en el documento. Las encuestas realizadas en los países en desarrollo en los últimos años se han basado en gran medida en las experiencias de otros países—principalmente desarrollados—en la conducción de encuestas. Si bien esto se refleja en el análisis, el documento se centra en aquellos aspectos de mayor pertinencia para los países en desarrollo.

Tras la presentación de los estudios de caso, el documento sugiere qué países podrían incluirse en la segunda fase del proyecto de investigación de UNRISD, posibles áreas de investigación para dicha fase y algunas recomendaciones generales sobre futuras encuestas sobre uso del tiempo en países en desarrollo.

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## Introduction

### **Background**

The United Nations Research Institute for Social Development (UNRISD) is coordinating the multiyear research project, *Political and Social Economy of Care*. The overall aim of the project is to examine the ways in which care is provided and allocated between the family/household, state, market and community, and its articulation with the commodity economy.

The project will involve systematic analysis of selected dimensions of care for a number of countries. The country papers will utilize a combination of quantitative and qualitative research methods to analyse policy in this area, describe the institutional shape of the various “care regimes”, provide microlevel quantitative analysis on how women, men, girls and boys within households “take care” of other household members, and explore the implications of the findings for poverty and social exclusion.

This paper has been written in the preparatory stages of the project as part of the process of selecting countries for inclusion in the project. The purpose of the paper is to critically review a selected number of time use surveys conducted in countries from different regions in order to assess their quality and inform the design of the qualitative research to be undertaken by the project.

Time use surveys, sometimes called time budget surveys, aim to provide information on the activities people perform over a given time period—generally a day or a week—as well as how much time they spend on each of the different specified activities. While the scope and purpose of such surveys differ enormously, the most common aim of these surveys in developing countries is to provide better information on work performed by different categories of people (male and female, in particular). More specifically, the intention of many of the surveys is to highlight the time spent on unpaid activities, which is generally either underrecorded in surveys or not recorded at all. Furthermore, many unpaid activities are also not reflected in key economic indicators such as gross domestic product (GDP). Time use surveys, thus, can contribute to addressing what Elson (2000:21) has described as the problem of women’s activities: they are often not “counted” in statistics, not “accounted for” in representations of the economy and not “taken into account” in policy making.

Time use surveys increase our understanding of the limitations of the System of National Accounts (SNA), which encompasses the rules that govern, among others, how countries should calculate GDP so as to produce internationally comparable estimates. The SNA states that GDP should be based on the value of activities that fall within a prescribed “production boundary”. Since 1993, this production boundary has included production of all goods, whether or not the work done in producing them is paid. In addition, it includes production of services, but only where such work is paid. The production boundary, thus, includes subsistence agriculture work and unpaid work by family members—often women and children—in small family businesses, but it excludes what we term “unpaid care work”, the work involved in housework, caring for members of the household and providing unpaid services to others in the community. Work that is included in the calculation of GDP is sometimes referred to as “economic” work.

The SNA defines work and production as all activities that fulfil the third person criterion whereby a person could, theoretically at least, hire someone else to do the work instead of doing it oneself. Thus, for example, it is possible to hire someone else to clean the house, look after your child and even to do the shopping. In contrast, it is not possible to hire someone else to learn for you, watch television, socialize, sleep or eat. The latter activities, thus, fail the third person test and are not regarded as work or production.

Unpaid care work is recognized as work that produces value and is included within the “extended” production boundary. It is, however, excluded from the national accounts that underlie GDP on the grounds that inclusion would be too complicated technically, would upset existing time series and would produce estimates that are difficult to interpret. Instead, the SNA suggests that countries should compile a parallel set of accounts to reflect household production or unpaid care work. The UNRISD project is designed to challenge the SNA approach on the grounds that estimates and descriptions of production in a particular country could well result in ill-thought-out policies if they do not take into account unpaid care work and its interactions with SNA production as well as its impact on the general well-being of the population.

As is so often the case when new concepts are introduced that challenge traditional ways of thinking, there are a range of questions that arise about exactly where particular activities are classified in terms of the work/non-work production boundary as defined, with further questions as to where to draw the boundary of “care”. Being clear about boundaries is important for the UNRISD project because observed fluctuations in GDP may be caused by shifts in certain production activities across GDP production boundaries, for example, care activities may be shifted between being unpaid and paid over a business cycle or over time as the scope of the market economy grows or declines.

The overall focus of the UNRISD research project is care work, which could be understood in various ways, some narrower than others. This paper discusses the extent to which time use surveys in various countries provide information about unpaid care work. As noted above, these are activities that are recognized as falling within the extended production boundary of the SNA, but are not included in national accounts and in calculations of GDP. Such activities include unpaid housework, care of children, care of elderly, disabled and ill members of the household and community and voluntary community-oriented work. These activities are generally not covered by labour force surveys (LFSs) and other similar surveys that aim to measure the labour force, which is technically defined as people engaged in, or wanting to engage in, activities that are included in national accounts.

Unfortunately, as is exemplified by the country case studies presented below, some time use studies have a narrower focus for unpaid care work than defined above. There are several ways in which the definition can be narrowed. In some cases, it is done consciously; in other cases, it is unconscious and even unintended. In yet further cases, the survey designers might intend one meaning, but fieldworkers and respondents might interpret terms and describe their activities differently.

The first type of narrowing occurs because, in the common meaning of the word, unpaid care work can be interpreted to relate only to the care of people. This interpretation would, therefore, focus on care of children, elderly, disabled and ill members of the household, and perhaps of the community more generally. It is quite probable that UNRISD research in some countries will focus mainly on this narrower interpretation. It is also probable that care work, for several reasons, might be more difficult to identify through surveys. The country discussions below, thus, pay particular attention to the way in which care work is identified.

A complication with respect to care of persons is that it is sometimes narrowly understood as only the time spent physically feeding a child or aged person, while excluding the time spent supervising or being responsible for them. It also might exclude the time spent on activities such as travelling connected with care. Ideally, we would want these activities to be included in our conception of unpaid care work.

An alternative narrow interpretation, and one which is commonly found in time use studies, is to focus only on “domestic work”. (For the most part, these investigations would not use the term care work, which has only fairly recently come into common usage.) This framing of the activity could implicitly or explicitly exclude activities such as childcare or care of other persons, and also exclude activities such as shopping or taking an ill household member to get

medical attention. Yet, both of these would usually be covered by our above definition of unpaid care work.

While these are narrow definitions of care, there are also definitions that go beyond the main focus of this paper. The wider interpretation of care work would include unpaid care work as well as similar activities when they are performed as part of the labour force. This would include, for example, paid domestic work, work as a nanny, teaching and nursing. This paper does not explore in detail the availability of data on these activities in the countries chosen for analysis. However, the research work that follows should look at the interaction between these forms of work and unpaid care work. Some information on paid work should be available for all countries, which will be most useful when it is a result of the time use survey itself as this will provide a direct link for the household-level microanalysis.

Another boundary question relates to collection of fuel and water, activities that are common – especially for rural women and children – in many developing countries. These two activities should, strictly speaking, be included in national accounts and GDP estimates. This is, however, rarely done. Even in Tanzania, where information on this activity is collected through the LFS and incorporated in employment estimates, it is not included in GDP calculations. Burkina Faso, in contrast, does include it in GDP calculations (Charmes 2006:41); however, fetching water accounted for only 1 per cent of GDP in the 1974 National Accounts of Burkina Faso (Charmes 2006:52), an estimation based on household consumption rather than time use. Collection of fuel and water is not, strictly speaking, part of unpaid care work. It might, nevertheless, be of particular interest in some of the country studies.

A final point to note is that unpaid care work is not identical to unpaid work since there are some types of unpaid work that are not care work and that are included in the SNA production boundary. Such activities include unpaid work in a family business and in subsistence agriculture. As with unpaid care work, other types of unpaid work are more commonly performed by women and children than by men.

### ***Methodology***

This paper reflects the results of a desk-based study as well as limited interaction with people knowledgeable about the surveys undertaken in particular countries.

Based on preliminary information from the International Association for Time Use Research (IATUR) about the availability of time use surveys in various countries, and with the aim of achieving regional balance, the following countries are covered in this review paper: Argentina, Brazil, Mexico and Nicaragua (Latin America); Bangladesh, India and the Republic of Korea (Asia); and Chad, Mali, South Africa and Tanzania (sub-Saharan Africa). The Web site of the United Nations Statistics Division (UNSD)<sup>1</sup> contains a section devoted to time use surveys, including information about India, Mexico, Nicaragua, the Republic of Korea and South Africa. For these countries, the Web site records summary information on context variables, method of data collection, stated purpose, reference population, response rate, sample unit, whether/how simultaneous activities are dealt with, survey coverage and reference period, type of survey, sample of time covered, ultimate sample size and activity classification used. In some cases, relevant documents, such as questionnaires and classifications, are also available. Unfortunately, the Web site does not include all of the information required for this paper and, in particular, it does not include the reports on the surveys or the data collected. It also does not include any information on training provided to fieldworkers.

For other countries, information was obtained through Web sites, Internet searches, contacts and IATUR papers. Inevitably, the coverage of countries is uneven, with information on some countries being particularly patchy. In addition, similar documents for different countries vary

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<sup>1</sup> <http://unstats.un.org/unsd/demographic/sconcerns/tuse/tu3.aspx>.

in their usefulness for such a review. The standard reports on the survey differ, for example, in the extent to which they provide technical details. Often these descriptions do not go much beyond describing sample selection and size. More importantly, the reports differ in the extent to which they discuss difficulties encountered and weaknesses. Fortunately, the instruments (questionnaires) were available for almost all of the surveys, at least for the part of the survey that involved time use measurement, and proved useful in providing information on a range of aspects.

This review was also informed by my personal experience and knowledge of surveys in different countries. During the period 1998–2001, I was responsible for coordinating the design, implementation and analysis phases of the South African survey described in this paper. At the time of writing, I am also serving in an advisory capacity for the Tanzania survey described below.

### ***Scope***

This paper focuses on the following seven issues in reviewing the country experiences:

- assessment of the design of the survey;
- delineation of the scope of the survey and information contained;
- assessment of the quality of the data obtained, with particular attention to the data available on unpaid care work;
- identification of the weaknesses in the data and survey design, especially with respect to unpaid care work;
- identification of the countries most suitable for inclusion in phase 2 of the project;
- identification of issues for exploration through qualitative research in phase 2 of the project; and
- provision of recommendations, in terms of design/methodology, scope and training for fieldworkers for future time use surveys.

The country discussions cover the first four aspects and attempt to cover all of the relevant basic technical details about each survey. The technical details covered in the country case studies include, for example, whether the time use survey was a “stand-alone” or conducted as an add-on module to another survey, the format of the questions, sample size, age group covered, number of members covered per household and so on. Where available, the descriptions include the findings that directly relate to the focus of UNRISD research. The paper also notes, where this information is available, whether the raw data from the various surveys are available to researchers so that they can generate their own analyses beyond those published by the agency undertaking the survey. Key issues relating to these four aspects for each of the surveys identified for the countries covered are summarized in the appendix.

The three remaining aspects are covered in the discussion that follows the country case studies.

### ***Selected issues***

In the survey descriptions, certain issues have been given particular attention. The general aspects of these issues are discussed in this introductory section to assist readers in understanding the significance of particular characteristics of the surveys in different countries. Surveys conducted in developing countries in recent years have naturally drawn heavily on other—mainly developed—countries’ experience of conducting surveys. Thus, the discussion here often reflects learnings from this long experience, however, this paper focuses on those aspects most relevant to developing countries.

A full explanation of issues that should be considered in conducting time use surveys can be found in the United Nations (UN) *Guide to Producing Statistics on Time Use: Measuring Paid and*

*Unpaid Work* (United Nations Statistics Division 2005). The issues are discussed in more or less logical order, beginning with a discussion of the concept of economic work followed by a discussion of the different methodological approaches to collecting information on time use. The section on methodology covers the type of survey, period of time and days covered, broad approach, coverage, whether and how simultaneous activities are dealt with and contextual variables. Other sections deal with questionnaire administration, classification of activities and reporting of findings.

### Economic work

Time use surveys are generally poor sources of information on time spent on *economic* work. Time use surveys in developed countries, including those that use the standardized Eurostat guidelines, generally regard this time as a “black box” during which only one or two activities are recorded—for example, “work” and “short break from work”. Hoffmann and Mata (1988) pointed out that estimates of time worked derived from this approach: (i) are dependent on the respondent’s perception of what constitutes work; and (ii) assume that all of the time spent at work is spent working. Some of the surveys described below go somewhat beyond this. In India, in particular, the time use survey provided detailed codes for economic work. Overall, however, solid analysis of the interplay of economic work and other activities requires data beyond time use variables. It will, for example, need to consider the extent of the burden of unpaid care work on women and men who are employed (that is, doing economic work), unemployed (that is, not doing economic work but looking for such work) and not economically active (that is, not engaged in economic work and not wanting to be so engaged). It will also need to understand the characteristics of economic work and how that might affect unpaid care work, for example, whether the work is for fixed or variable hours, which hours of the day and days of the week it occurs, whether it is likely to have benefits attached, where it is done and so on. In addition, it would be important to know something about the earnings of both the person being investigated and the other members of the household.

Kes and Swaminathan (2006:17), drawing on the work of Charmes (2006), stated that the “most critical” weakness of national-level time use surveys in Africa is that they do not provide “demographic and economic” information that would allow in-depth analysis. For the most part, this does not seem to be true of the surveys covered in this paper. Nevertheless, there might not be detailed information on all of the aspects that one might want to investigate, to the level of detail on each individual and each household provided in labour force, income and expenditure and other specialized surveys. While this paper does not thoroughly investigate the extent to which labour-related information is available about each respondent, all of the surveys do provide some socioeconomic information on the household as a whole as well as some basic (economic) work-related information on the respondents. It should be noted that at the household level, the questions might not always generate detailed information on income—whether from employment or other sources—and expenditure. The socioeconomic aspects covered might also differ across countries, rendering cross-country comparisons difficult. Nevertheless, within each country it should be possible to carry out some socioeconomic analysis of time use patterns.

A final point to note about economic work is that it includes work that can be considered as care work. These are, essentially, the unpaid care activities that, theoretically, people could purchase in order to avoid having to do the unpaid care work themselves. Included in this category would be paid domestic work (whether paid in cash or in kind), teaching and nursing. The availability of data on these types of work is not discussed in the country case studies below, but analysis of the interrelationships between economic care work and unpaid care work is likely to be a common theme across research in different countries during phase 2 of the UNRISD project.

## Type of surveys

The *method of asking about and recording time* will influence the extent to which unpaid care work is identified. Methodologically, time use surveys consist of two types:

- the stylized approach where respondents are given a pre-set list of activities and asked to state how much time they spend (or usually spend) on each activity during a given period; and
- the diary approach where respondents describe in their own words activities carried out at different times during a given period (usually a day at a time), with the activities later postcoded.

There are further distinctions within both categories. In the stylized approach, for example, some surveys attempt to cover all possible activities, while others ask only about activities of particular interest to the survey designers. Where all activities are covered, there also might be some controls, for example, checking that the times given add up to 24 hours for each day. However, such checks can become complicated, or even impossible, where the survey allows for recording simultaneous activities.

For the diary approach, some surveys provide a pre-defined set of activities from which the respondent must choose for every timeslot in the day. The United Nations guide for time use surveys refers to these as “light” or simplified diaries (United Nations Statistics Division 2005). Other surveys, described by the United Nations as “full time” diaries, ask that the respondent describe what they did for each part of the day and codes are assigned afterwards.

One drawback of the stylized approach is that it does not provide information on the time of the day that different activities are performed. This places limitations on, for example, analysis of the interaction between economic and unpaid care work. It also prevents the use of contextual variables (see the discussion below).

A further limitation of the stylized approach relates to the definition and boundaries of care work. Where respondents are asked, using the stylized approach, how much time they spend on a particular activity, their responses would depend on what they understand the activity includes. If, for example, they are asked how much time they spend looking after children, some might include the time spent travelling to take children to school, while others might not. Usually, it is not possible to know whether a particular person has included or excluded this time. With the diary approach, the person describes the activities in their own words and the coder can then decide whether or not the travel time should be counted as care work.

In terms of quality of information, the United Nations guide noted that stylized questions tend to have a high degree of error (United Nations Statistics Division 2005:58). This can occur because respondents tend to underreport activities that are considered less desirable or “important” (such as relaxing) and overreport activities that are considered desirable or “important” (such as housework for women). Respondents might also find it difficult to estimate the total time they spend on particular activities, especially if the activities concerned occur in intermittent spurts. Simultaneous activities are a further complication since some respondents might include them in their estimates, while others will only consider the “main” activity that they were doing when trying to add together the different parts of their day. Finally, the accuracy of responses to stylized questions depends on how respondents interpret the terms used to describe activities. Of particular concern for our purposes is that a term such as “household work” might be understood by some respondents to include caring for children, but by others to exclude it. However, given all of this, the attraction of the stylized approach is that it involves far fewer questions and requires less time than a diary and the data produced are also easier to analyse.

Kan (2006) compared estimates of time spent on housework derived from stylized questions and diaries using data collected from the same respondents in the national British Home On-Line Study of 1999–2001. Her results suggest systematic errors in estimates from the stylized questions. Overall, in line with other findings, the stylized estimates of time spent on particular activities tend to be higher than those from diaries. There is a smaller gap between the two types of estimates for women than for men, although the gap for women is related to the amount of time spent on housework as a secondary activity as well as the irregularity of housework. The presence of dependent children increases the gap for both women and men.

Kan (2006) referred to other work that shows that the size of the gap between the two estimates fluctuates by socioeconomic variables such as education. She also referred to analyses by others showing that the gap cannot be explained only by simultaneous tasks and poor memory, but is also affected by perceived social desirability of different people doing this work, which is likely to differ for women and men. Nevertheless, Kan (2006:3) concluded that the overall patterns in the two sets of estimates are “roughly similar” and stylized estimates could, for example, be used for multivariate analyses of the division of labour, where one calculates the extent to which different factors or characteristics explain the differences in activity patterns between individuals. She, thus, suggests that these “rich data” be used, but with caution when interpreting results.

Bonke (2002:1) similarly suggested that the stylized approach should be able to show “major differentials at least at an aggregate level” between the activity patterns of different groups although diary methods will be more reliable. This hypothesis was tested using the Danish Time Use Survey 2001, which also included both diary information and survey questions on paid and unpaid household work.

Bonke (2002) also found that the absolute gap between the two estimates is greater for women than men, but the relative gap is smaller with respect to household work. The difference between the two estimates is much larger for unpaid than paid work, which Bonke attributed to the fact that the latter is made up of many short-term tasks.

#### Period of time and days covered

Another issue to which particular attention is paid is the *period of time covered* by the various surveys. This relates, first, to the question of what part(s) of the year are covered. Especially in rural areas, where agriculture is a dominant activity, time use surveys conducted at different times of the year can be expected to lead to substantially different results. Wodon and Beegle (2006) used data from a nationally representative household survey conducted in Malawi in 2004 to investigate *seasonal effects*. They found strong effects with respect to agricultural work that would, in turn, determine the extent to which time pressure is put on household work. The seasonal differential in working hours is largest for those in the poorest consumption quintile (Wodon and Beegle 2006:102).

A second issue relates to the *type of days covered* for each respondent and the population as a whole. In developed countries, Fridays, Saturdays and Sundays have been found to have activity patterns substantially different from those for weekdays. The dominant religion in a country or area can be expected to affect these patterns, as can the degree of formality of the economy.

The *number of days covered per person* and the time lapse between those days and when the activities are recorded could affect the quality of the data in various ways. Covering a greater number of days might give a better picture of the “average” day for a particular person. It might, however, also induce respondent fatigue. And if the time lapse between the activity and recording is too great, there is likely to be more memory lapse.

For diary-based methods, which use fixed divisions of the day, there also needs to be a decision as to the length of the *timeslot*. Diary-based time use surveys in Europe have generally used a timeslot of 10 or 15 minutes for recording activities. This might be possible when respondents complete the diaries, but it would result in extremely long and tedious interviews if used for an interview-based approach. It is also unlikely that respondents would be able to recall activities a day later to the degree of accuracy required by 10–15 minute slots, especially in countries where awareness of clock time is not highly developed. Most of the countries reviewed in this paper used longer timeslots for the diary approach, but allowed for more than one activity to be recorded for a particular timeslot. In some countries—the Indian questionnaire used this approach—the timeslots were not specified in advance. Instead, respondents were asked when they started and stopped doing a particular activity, thus, recording the duration of each activity “episode”.

### Simultaneous activities

One of the reasons why care work as more narrowly defined might be less clearly identified than other forms of unpaid work is that this type of work is often undertaken *simultaneously* with other activities. For example, a woman may cook at the same time that she cares for children. Or, she may sell fruit and vegetables on the roadside with her children nearby, needing constant supervision. Ironmonger (2003) referred to several studies that show that as little as 25 per cent of time spent on childcare is reported as a primary activity. (Simultaneous activities have often been recorded as “primary” and “secondary” or even “tertiary” in surveys undertaken in developed countries. The danger with this approach is the tendency to ignore all but the primary activities in analysis.) As will be seen, some time use surveys make no attempt to identify simultaneous activities, while others attempt to do so but often experience difficulties in obtaining accurate and comprehensive measures.

### Contextual variables

Other common areas of discussion in relation to time use surveys are *location* and other “contextual” variables, though limited attention is given to these issues in the discussions below. First, such contextual variables are only really possible with a diary-based survey, and relatively few of the surveys described below are of this type. Second, location is arguably of lesser interest in relation to care work than other activities. These areas are, nevertheless, potentially interesting. For example, the fact that much care work must be undertaken at home restricts the opportunities that the carer has for undertaking other activities, including income-earning ones. In addition, where care activities need to be undertaken elsewhere—for example, taking a child or ill or elderly person to receive health services—the accessibility of such services becomes an issue as well as any social restrictions that might be placed on the movement of the carers.

Related to the matter of location is the issue of *travel*. The main aspects here are whether travel should be recorded separately from the activity for which the travel is undertaken and where/how it is coded. As noted above, it is only possible to record contextual variables, including location, in studies that use the diary approach. This is unfortunate as it is in stylized questionnaires, in particular, that travel related to care is likely to either not be counted or be undercounted when reporting time spent on care. There can also be problems with the diary approach if the coding classification system does not reflect the purpose for which the travel was undertaken.

A commonly debated contextual factor is “who with” in relation to particular activities. For the South African survey, it was argued that this was not a useful variable as, especially in poor communities with overcrowded situations, people were almost always “with” several other people, but this did not necessarily have a bearing on understanding their activity patterns. One could argue that the “with” variable would be a way of identifying unrecorded care for children or even adults. It is likely, however, that a woman who neglects to record that she was caring for a child over a certain period might also neglect to note that the child was with her.

### Questionnaire administration

The *way in which data are collected* will influence the quality of the data and will be influenced by, among other aspects, the format of the questionnaire and literacy levels in the country. Fieldworkers are usually used to administer stylized type questions, and they need to have a good understanding of the scope of the prescribed activities as well as be able to communicate this to respondents.

Diary-type questionnaires have usually been self-administered in developed countries whereby respondents are given a copy of the diary and asked to fill it in during the day/s to be covered by the survey. One advantage of this approach is that the information should be more accurate since respondents fill in the activities as the day progresses, lessening the problem of recall. However, in practice, this might not be as advantageous as expected since many respondents would probably wait until the end of the day to fill in the diary. Another advantage of self-administration is that it is less personally intrusive than being asked to talk about personal activities.

The requirement that respondents complete the diary themselves almost certainly contributes to the relatively high non-response rates for time use surveys in developing countries. Even in Norway, for example, which is certainly not the worst performer in this respect, Haraldsen (1999) reported that the non-response rate for the 1990 survey was 36 per cent, of which 32 per cent of those contacted did not respond at all and a further 4 per cent did not want to complete the diary themselves. Non-response rates for earlier surveys were similar with 35 per cent in 1980 and 32 per cent in 1970. High non-response rates for time use surveys will almost certainly introduce bias into the findings since the characteristics that result in people not responding (such as being very busy) reflect aspects of how those particular people spend their time.

Self-completion of diaries is not possible for significant sections of the population in many developing countries because of low literacy rates. Virtually all countries discussed below rely primarily on *interviews* to collect information. The main exception is the Republic of Korea, where the overall educational levels are higher than in the other countries reviewed. However, even in the Republic of Korea interviews were found to be necessary with older and less educated respondents. All of the countries that used interviews conducted them face-to-face rather than by telephone as is done, for example, in Canada. The telephone would clearly not be a suitable method to obtain a representative sample in developing countries where many households do not have a telephone.

The third major option for data collection is through observation. One drawback of this method is labour intensity since fieldworkers must remain with the household for the full day. Furthermore, for observation to be conducted accurately, more than one fieldworker would need to be assigned to each household as household members are unlikely to remain together where they can be observed by a single person throughout the day. Of the countries discussed below, only Bangladesh used observation.

Surprisingly few countries specify in their documentation that the person who performed the activity must be the *respondent*. This is obviously unlikely in cases where the questions are asked about very young children. For the most part, however, we assume that the intention is that the person concerned described their own day rather than someone else doing activities for them.

### Classification of activities

The *activity classification system* is an important indicator of the type of information that will be available for analysis. This paper, thus, pays particular attention to the codes allocated to the narrow definition of care work as described above as well as to the overall number of codes in the system. A larger number of different codes should give more finely tuned information about activities. However, a system with too many codes could overwhelm respondents (and fieldworkers) if each activity needs to be prompted for a response. Where activities are

postcoded, the open-ended descriptions of activities provided by respondents might not be detailed enough to determine which detailed code is the correct one.

The country descriptions below pay particular attention to the number and nature of codes with respect to the narrow definition of care work. Thus, there is considerable variation in the number of codes allocated, and sometimes no separate code at all. Only one country, Tanzania, seems to clearly distinguish between time spent caring for elderly adults, those who are ill and those who are disabled. This is a potential weakness, especially in regions where HIV prevalence is significant. Charmes (2006:59–60) noted that although the time recorded for caring for adults is “remarkably low” in South Africa, it is three times as long as in the other countries to which he compares it. He suggested that this reflects the HIV/AIDS pandemic. Kes and Swaminathan (2006) noted the paucity of literature on the impact of serious illness on time allocation patterns of women (and men, for that matter). They referred to a 1999 study by Bollinger, Stover and Seyoum in Ethiopia, which reported that women in AIDS-affected households spent only between 11.6 and 16.4 hours per week on agriculture, compared to 33.6 hours for women in households not affected by AIDS. Women in the affected households also spent somewhere between 1.9 and 13.1 hours per week on childcare, compared to 25.7 hours for those in non-affected households. Home nursing accounted for 50.2 hours per week on average. One could, however, imagine that it might sometimes be difficult to know whether to classify a particular “care” as only taking care of ill, disabled or elderly people if they fit more than one of these categories.

The approach chosen for the survey in terms of diary or stylized and full-time or light diary has a strong influence on the level of detail that can be included in the activity classification system. Stylized surveys tend to have fewer categories than diary approaches because of the tedium and complexity involved in prompting for a large number of different activities. Full-time diaries can usually accommodate a greater level of detail as it is only the coders, and not the respondents and fieldworkers, who need to understand the complete range of possibilities.

### Reporting time use

There is also a range of issues to consider in relation to *how activities are reported*. Results from time use surveys are often reported as mean hours or minutes spent on particular activities by particular subgroups of the population, for example, male and female. These averages can be calculated in two different ways, which can give different results. First, the average can be calculated based on all members of the particular subgroup, whether or not all individuals in that subgroup have spent time on the activity in question. Second, the average can be calculated based on only those members of the subgroup who actually performed the particular activity during the time period under consideration. The difference between the two estimates would be virtually non-existent with respect to activities such as sleeping and eating, where we can expect almost all individuals to spend some time on the activity during any given day. In contrast, the difference can be significant for activities where only a small proportion of the population—and a different proportion for different subgroups—engages in the activity. The latter is likely to be the case for some care activities such as caring for people who are ill or have disabilities. Both ways of presenting information are correct; it is their meaning that differs.

As noted above, one focus of the proposed country-level research is *microanalysis at the household level*. At least two issues are relevant in this respect. The first is the number of members covered per household. Where a survey covers all members of the household (or all above a certain age), it is possible to analyse the interactions between the activities of different household members. Such analysis has typically been carried out with respect to activity patterns of husbands and wives, but could be extended beyond this, for example, to the activity patterns of children, mothers and fathers. Where surveys do not cover all or the majority of members, microanalysis would need to rely on comparing time usage patterns of different “types” of people such as married women, married men, women with children, for example, rather than household groupings. Another possibility, illustrated in some of the country discussions below, is to

compare individuals from different household types, for example, those with or without married couples, those with or without children and those spanning one, two or three generations.

The second issue is whether the survey records relationships. This aspect is often not clear from the available material, especially where surveys are conducted as an add-on module to another survey rather than as a stand-alone if, as for some countries, only the module was available. Even where relationships are recorded, if these are only in relation to the household head, there will be difficulties in analysis when discussing two (or more) individuals if none of them is the head.

### ***Structure of the report***

The main body of this paper is structured according to country. The country descriptions cover the first four issues specified above, namely: survey design; scope and information covered; quality of data (especially in relation to unpaid care work); and weaknesses in data and survey design. The descriptions are written to facilitate comparisons across countries, and highlight aspects that are important in deciding which countries would be appropriate for inclusion in phase 2 of the project. However, the desire for comparability has not been allowed to stand in the way of discussion of aspects of a particular country's survey that are specific and not relevant to other countries. In addition, significant differences between countries as to the amount and type of information available made it difficult, if not impossible, to adopt the same structure in describing each country—for example, for some countries full questionnaires, manuals and even training materials were available, while for others only short extracts of the questionnaires were at hand. Similarly, analytical reports were available for some countries that drew on time use survey data, while for other countries there were only the standard reports of the statistical agencies.

The countries are described in regional blocks. The sources for each country follow the description; more general references are listed in the bibliography at the end of the report. After the country descriptions, there are recommendations on country selection, issues to explore in qualitative analysis and methodology.

## **The Countries**

### ***Latin America***

#### **Argentina**

For Argentina, there are two possible sources of data. Data from the 2001 Encuesta de Calidad de Vida (ECV/Living Conditions Survey) are available, while data from the time use module included in the larger 2005 Encuesta Annual de Hogares Ciudad de Buenos Aires (Buenos Aires Annual Household Survey), conducted by the Directorate-General of Statistics and Census of the City Government, was not available at the time of writing.

Esquivel (2006) has successfully used the ECV-2001 data to investigate the impact of the economic crisis on participation in housework and childcare. Her findings refute the idea that women serve as a "buffer" labour force that enters the labour market when the economy is booming and in need of more labour. Instead, she found that women enter the labour force at a time of economic crisis when there are high rates of unemployment and poverty, thus adding an economic work burden to their existing unpaid care work burden.

The ECV-2001 used a stylized approach to collect information from a national sample of 26,000 urban dwellings. Useable data were collected from 19,605 households and 50,714 individuals over 14 years of age. The sample was representative of the nearly 30 million people living in

towns of 5,000 inhabitants or more, which accounts for 90 per cent of the population in Argentina. The data from the survey are in the public domain.

The module of interest to the UNRISD project included exploratory questions on a set of domestic tasks and the time devoted to them measured in hours per day for weekdays and weekends. Respondents were given a list of pre-defined tasks and asked to indicate whether they had engaged in the particular activities. The list included six tasks related to domestic chores: (i) laundry and ironing; (ii) minor repairs; (iii) cooking; (iv) cleaning; (v) washing dishes; and (vi) shopping, and two tasks related to care: (i) childcare; and (ii) care of the elderly or sick. For example, the question on childcare asked for a yes/no answer to the following:

During last week, did you take care of children (like feeding/bathing/dressing them, taking them to the playground, etc.)?

The care questions included care for household members as well as non-members. After going through the list, respondents were asked:

In the reference week, how much time did you give per day to these tasks from Monday to Friday? On the weekend?

Respondents were not asked how long they spent on each of the pre-defined domestic tasks, but only how much time they spent on all activities combined. Those who spent only a few minutes were, thus, ranked equally with those who spent several hours. The questionnaire did not ask specifically about simultaneous activities, and the fact that the question asked about total time spent would mean that the time spent on different activities conducted simultaneously would be counted only once, but also that all activities should have been reported as having been undertaken. A total of 6.5 per cent of male respondents and 31.7 per cent of female respondents reported that they had performed activities not specified on the list, suggesting that the list was not comprehensive.

The ECV-2001 also included a section on children up to four years old that asked about the main care provider for each child. Esquivel used this information in her analysis of the gender distribution of childcare of very young children, which included a category for households that could be helpful in other countries where the nuclear household is not the norm. The category provided for subtypes of “non-family” and “family” households as follows:

- non-family households:
  - unattached individuals: one individual; and
  - other non-family arrangements: one or more individuals with no family relation with the household head.
- family households:
  - married couples without children: household head and spouse without children or grandchildren; other relatives might live in the household as well;
  - two-parent families: household head and spouse, with at least one son or daughter and no grandchildren;
  - other relatives might live in the household as well, except for the household head’s mother, father, mother-in-law or father-in-law;
  - lone-parent families: household head without spouse, with at least one son or daughter; other relatives might live in the household as well, except for the household head’s mother, father, mother-in-law or father-in-law;
  - tri-generational families: household head with spouse, sons/daughters and/or grandchildren; household head, sons/daughters and the household head’s parents or parents-in-law; and
  - other family arrangements: household head’s relatives living together other than the above-mentioned types.

As noted above, new time use data are not yet available from the 2005 Encuesta Annual de Hogares Ciudad de Buenos Aires, which contains the time use module. The city of Buenos Aires accounts for 8 per cent of Argentina's population according to the 2001 population census. The non-response rate for the time use module was 18 per cent. The survey and analysis are being conducted under a cooperation agreement between the Statistical Office and the Universidad Nacional de General Sarmiento. Valeria Esquivel of the university has acted as coordinator and is fully documenting the experience. Fieldwork was conducted in November and December 2005 and, at the time of writing, data had been entered and cleaned, and the analysis programmes had been written. The only hindrance was the estimation of weights; the method used drew heavily on the South African approach (see below), with some exceptions, including:

- only one randomly selected person per household was surveyed (rather than the two selected in South Africa) between the ages of 15 and 74 (rather than all persons aged 10 years or more);
- fieldworkers asked respondents to specifically describe when they woke up and when they went to sleep so as to frame the day in a way that they might normally think about it—this would avoid the tendency in countries without this question for respondents to say that they woke up in the first timeslot of the diary, even when that timeslot was 04:00-04:30; and
- fieldworkers asked respondents the beginning and ending times of economic/market-related work; a separate set of subquestions was then asked with respect to the intervening period to determine whether any other activities were performed.

A number of changes were also introduced to the South African classification system, which, in turn, had been based on the trial classification developed by UNSD. The trial classification has 10 major categories of activities: (i) three fall within the SNA production boundary (employment for establishments, primary production activities not for establishments, services for income and other production of goods not for establishments); (ii) three cover unpaid care work (household maintenance, management and shopping for own household; care for children and for ill, elderly and disabled people for own household; community services and help to other households); and (iv) four cover non-productive activities (learning; social and cultural activities; mass media use; personal care and maintenance). The South African case study below lists all codes relating to the three categories of unpaid care work.

For our purposes, the most important differences introduced in Buenos Aires from the South African activity classification system are the following:

- All "economic" work activities were consolidated into a single category using codes 100-190, rather than distinguishing three separate groups: work for establishments; primary work not for establishments; and secondary and tertiary work not for establishments. The subcategories of the single category for economic work distinguished between work in the first job and work in other jobs rather than distinguishing activity by status of employment (for example, wage/salary worker, outworker, unpaid worker, self-employed/employer). In this respect, the Buenos Aires approach reverted to the original suggestion by UNSD, while the South African version represented a limited attempt at unpacking the black box of economic work. The Buenos Aires questionnaire also had questions relating to the first and secondary jobs, including the amount of time spent on each, which would make the two-fold first job versus other jobs distinction meaningful and useful for analytical purposes.
- In category 5 (care for children and for sick, elderly and disabled people for own household), a separate category for supervision (passive care) of adults in own households was added.
- In category 6 (community services and help to other households), the category of community work such as cooking for collective celebration was omitted.

- In category 6, a category of informally assisting other households with meals, cleaning, washing, etc. was added.
- In category 6, the category of participation in meetings and involvement in civil responsibilities was omitted.
- In category 9 (mass media use), there was a separation of activities with respect to: (i) receiving care from medical professionals (even if family members); (ii) receiving other personal care services not connected with own work; and (iii) receiving non-professional care from members or non-members of households.

As in South Africa, there was an attempt to obtain an equal spread over all days of the week, Monday to Sunday, but without specifying the exact day to be covered for each household. Also similar to South Africa, fieldworkers were expected to code the activities on the day of the interview.

The level of documentation suggests that the Buenos Aires study was planned with great care. Conducting a pilot survey also testifies to a level of preparation that might not be evident in all of the other studies.

In relation to simultaneous activities, the fieldworker's manual included detailed instructions as to what fieldworkers should do where more than three activities were named for a particular half hour—for example, they were expected to group similar activities into a single activity, and then to prioritize the activities that took the longest time. These detailed instructions were reportedly rarely needed as respondents seldom named more than three activities.

The fieldworker's manual also contained detailed instructions in relation to childcare, emphasizing that supervision and being on call should be regarded as activities, and specified how to deal with childcare performed simultaneously with other activities over several timeslots. As in South Africa, there was a prompt question after completion of the diary to check that all childcare had been recorded, and different codes were used to distinguish between prompted and unprompted mentions. A similar prompt was used to check whether all paid work had been identified as such. This was intended, for example, to establish whether a reported activity such as cooking had been part of unpaid care work or paid work.

### *Sources*

Encuesta Anual de Hogares Ciudad de Buenos Aires. 2005. *Manual del encuestador modulo de uso del tiempo 2005* (Survey Manual for the Time Use Module 2005). Dirección General de Estadística y Censos, Secretaría de Hacienda y Finanzas, City Government of Buenos Aires, Buenos Aires.

Esquivel, V. 2006. *What Else Do We Have to Cope With? Gender, Paid and Unpaid Work during Argentina's Last Crisis*. Working Paper 06–6. The International Working Group on Gender, Macroeconomics and International Economics, University of Utah, Salt Lake City. [www.genderandmacro.org](http://www.genderandmacro.org), accessed on 16 March 2007.

### **Brazil**

Brazil has not had a full-scale survey or module on time use. Since 1992, however, the Pesquisa Nacional por Amostra de Domicílios (PNAD) has included a question about household tasks. And since 2001, the question has been supplemented by a further question asking for the number of hours spent on these tasks. Thus, the 2004 questionnaire<sup>2</sup> included the following questions for persons aged 10 years or more:

Q121: In the week of 19–25 September 2004, did XXX take care of domestic tasks? (If NO, skip the next question.)

Q121a: How many hours does...normally spend on domestic tasks per week?

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<sup>2</sup> [www.ibge.gov.br/questionnaire/download\\_questpnad2004.pdf](http://www.ibge.gov.br/questionnaire/download_questpnad2004.pdf), accessed in December 2006.

Dedecca (2005:13) noted that the average hours for domestic tasks revealed by this survey are among the highest recorded in the world, especially for women. (Unfortunately, Dedecca's results are presented in graphs, which do not indicate the exact size of the estimates.) Nevertheless, because average hours spent on economic work were also high, the ratio of hours spent on "social reproduction" to hours spent on economic work was the lowest of all other countries for which the comparison was made (Dedecca 2005:14). As in other countries, women with children had a higher average of total working hours than other groups. Women in rural areas and isolated settlements also tended to work longer on these tasks than others. There are, however, reportedly no significant differences on time spent on these activities by women of different races. Among men, contrary to Dedecca's expectation, time spent on household tasks decreased in higher-income households.

Dedecca (2005:18–19) identified the following limitations to the approach that was adopted to assess time use in the PNAD:

- the broadness of the concept of household tasks;
- the difficulty in determining the "scope" of the data in terms of which activities it covers;
- the fear that, in a society with a significant subsistence agriculture sector, the questionnaire is unlikely to provide an adequate picture of either this work or unpaid care work; and
- the complexity of the survey as a whole, which prevents more detail on household tasks from being collected.

The plus side of the complexity of the survey is that there are many other variables that can be brought into the analysis. Furthermore, the raw data are available.

Aguiar (1999) provided a history of time use studies conducted in Brazil until the end of the twentieth century. She noted at the outset that most studies conducted until that time had been small-scale local studies and had been undertaken by sociologists investigating the time spent on household work—for example, a 1984 study focused on 72 peasant households using a nine-category system for classifying activities, a 1981 study collected information on 45 female-headed households for one week using an 11-category classification, a 1987 study focused on 15 households with children under 14 years of age in the city of São Paulo, and a 1987 study focused on 28 married women with children in the city of Salvador. These studies, unfortunately, do not provide the sort of data envisaged for the UNRISD country analyses.

A study by de Souza in Rio de Janeiro in 1973 was the first to attempt to obtain a representative sample (Aguiar 1999). The sample consisted of 225 individuals (still very small compared to other studies described in this paper) and used a similar approach to the 1964 Multinational Comparative Time-Budget Research Project that covered 12 countries spanning both market and centrally planned economies. The coding system was also similar to that used in analysing the 1964 data, with 37 categories organized into nine major groups, namely: paid work; domestic work; shopping; childcare; personal care; travel; studying and participation in social activities; access to media; and leisure activities. Information was collected on the duration of all activities in minutes, the starting time of any simultaneous activities and location.

The de Souza study recorded that an average of 10.7 per cent of the day was spent on domestic work, 2.5 per cent on shopping and 2.4 per cent on childcare (Aguiar 1999:21). While the heading of the related table states that the estimates represent minutes, the total for the different activities totals 100, which suggests that they are percentages. Unfortunately, the estimates are not disaggregated by sex or in any other way.

Aguiar (1999) conducted a multiphase time use survey in a sugarcane plantation community in the Campos region north of Rio de Janeiro. Unfortunately, the report does not give the sample

size, but the description of the method suggests that it must have been relatively small. A seven-category coding system was used:

- activities related to preparing food for the household
- cleaning rooms, sewing and repairing clothes
- looking after children – breast feeding, bottle feeding, feeding by mouth, dressing, washing and cleaning
- remunerated work
- shopping
- sleeping
- leisure

These categories were based on those used in earlier studies, but adapted after an observation stage. Subsequently, a specially designed diary was used to collect information on these categories by asking respondents about activities of all members of their households. Then, a subsample was selected and time diaries were obtained from all residents. One respondent was selected for each household and given a digital watch and a set of coloured pencils, with one colour allocated to each household member. Respondents were shown drawings of each of the different pre-defined activities and asked to indicate the beginning and ending times of each activity. Five local people were hired and trained to work as supervisors, who visited the households twice a day to check the schedules, collect the completed schedules from the previous day and deliver the schedules for the next day. The method was tested three times: an initial pre-research test; during training; and during a pilot survey. Aguiar noted that further work of this kind might need to use a longer list of activities. Unfortunately, she did not present any of her results in the paper.

### *Sources*

Aguiar, N. 1999. *Time Use Analysis in Brazil: How Far Will Time Use Studies Have Advanced in Brazil by the Year 2000?* Paper presented at the Conference of the International Association for Time Use Research, Colchester, 6–8 October.

Dedecca, C.S. 2005. *On Times and Gender in Brazilian Society*. Paper presented at the Conference of the International Association for Time Use Research, Tours, 18–23 July.

### **Mexico**

Mexico has had several time use surveys. In 1996 and 1998, the Instituto Nacional de Estadística, Geografía e Informática (INEGI), the official statistical agency, conducted the time use survey Encuesta Nacional de Uso del Tiempo (ENUT), as a module of the household income and expenditure survey, Encuesta Nacional de Ingresos y Gastos de los Hogares (ENIGH). The official name of the 1996 survey was Encuesta Nacional de Trabajo, Aportaciones y Uso de Tiempo 1996 (National Survey of Work, Allocation and Time Use 1996). The survey covered 12,000 households and was intended to be representative of the population as a whole. Brunnich et al. (2005) stated that the sample size was 5,000 households. Including the module in the larger survey allowed tabulation by demographic characteristics, occupation, income, costs and household characteristics. Data collected allowed for analysis of income and time use internal to the household by sex, age, family structure and level of income.

For the time use aspect, household members aged eight years or more were interviewed about the previous week's activities, using closed questions, for example, as follows:

During the past week, did you do...? (Yes/No)

How much time did you spend on it during the week?

An inter-institutional group developed the list of 27 possible activities. Activities included as “informal” were broken down into five broad categories:

- household chores
- care services (of children and sick and elderly people)
- family activities
- community
- other services

Household chores included cleaning the home, washing dishes and clothes, ironing, meal preparation, rubbish disposal, collecting water and fetching firewood. Family activities included knitting, embroidering, making garments and transporting household members. Community services included volunteer activities beneficial to the community, and other services included activities such as paying bills, bank transactions, household shopping, upkeep of land and household repairs. The questionnaire did not ask about secondary activities.

In 1998, a light diary was used that required respondents to specify the activities performed during each timeslot of the day, choosing from a list of activities. This approach was adopted so as to include more activities than specified in 1996. The activity coding schedule was organized into 14 major groups and 68 subgroups, using the trial classification of UNSD as a basis.<sup>3</sup> Unlike the earlier survey, the 1998 module provided for the identification of simultaneous activities and included a location variable. The format was a matrix showing all of the activities. The following instructions were given:

Indicate all the activities that you did yesterday from when you woke up until you went to sleep.

How much time did you spend on this activity?

What other activities did you do at the same time?

How much time did you spend?

Where did you do the activities?

With whom did you do these activities?

Time spent?

Little further information is available about the 1998 survey, and some later research ignored it completely. This suggests that there might have been quality or other problems with the 1998 venture.

INEGI conducted a further survey entitled the Encuesta Nacional sobre Uso del Tiempo 2002 (ENUT-2002), which was conducted as part of the Encuesta Nacional de Ingresos y Gastos de los Hogares 2002 (ENIGH-2002). The methodology and conceptual framework for the survey were agreed by the Instituto Nacional de las Mujeres (National Women’s Institute of Mexico), the United Nations Development Fund for Women, the United Nations Development Programme (UNDP) and INEGI. The survey reverted to a stylized list of activities that asked for total time spent on activities rather than using the diary approach that asked what activities were performed at particular times of the day.

The ENUT-2002 aimed for a sample size of 6,126 households, with a realized sample of 4,783 households. A total of 6,288 dwellings were in the original sample for the main survey, of which 5,445 were reached. Reasons for incomplete coverage included dwellings not found and migration. While the 1998 survey had included children aged eight years or more, in the 2002

<sup>3</sup> <http://unstats.un.org/unsd/demographic/sconcerns/tuse/profile.aspx?id=3>, accessed in December 2006.

survey only children aged 12 years or more were included. The time use module was administered after the main part of the ENIGH had been completed, but to the same households. The time lapse between collection of information for the main part of the survey and the time use sections means that direct comparisons of information from both sections should be treated cautiously as changes in the situation of individuals, or even households, could have occurred in the weeks that elapsed between the two interviews. The published final tabulations provide information on error margins and confidence intervals and indicate that the non-response rate was 15 per cent or less. INEGI estimates that the results are accurate within a 90 per cent confidence interval.

A similar approach to data collection was used, with fieldworkers asking about the previous week's activities. However, the questionnaires enquired about far more activities than in 1998 – more than 80 activities were added. The ENUT-2002 also enquired about activities undertaken by non-household members present in the household. Data collection for the 2002 survey took place during winter – between 18 November and 13 December 2002 – and does not provide for a rural/urban breakdown. The raw data from the survey are available to researchers from INEGI.

In 2002, as in 1996, the reference period was one week, which was chosen to avoid difficulties in organizing fieldwork to obtain a balanced distribution of days of the week. In 2002, there was, however, a further distinction since respondents were asked how much time they spent on the specified activities from Monday to Friday and on the weekend. Sample questions were as follows:

- In this week, .... (Yes/No)
- How much time from Monday to Friday?
- How much time on Saturday and Sunday?

Activities were organized into 16 groups. Two of the groups are of particular interest for UNRISD purposes, namely: (i) support and care of people with physical or mental disabilities; and (ii) support and care of children and other members of the household.

Under support and care for people with physical or mental disabilities, there were questions relating to the following subcategories:

- feeding or helping to eat
- bathing, cleaning, etc. or assisting to do this
- helping to go to the toilet and changing diapers
- giving any special therapy, including talking to the person
- being responsible for/looking after this person while you do other things
- transporting or accompanying the person to medical services, therapy or to do errands

Under support and care of children and other members of the household, there were 10 subcategories:

- feeding a small child
- changing the diaper of a small child
- playing with a child
- giving any special therapy
- being responsible for/looking after a child while you do other things

- taking any member of the household to school, daycare centre, work centre, medical visit, hospital, etc.
- helping or supervising school tasks for a child or youth of the household
- caring for a sick member of the household or taking them to hospital
- attending school or daycare meetings, festivals, etc. or activities to support a school that household members attend
- accompanying a household member any place

Brunnich et al. (2005) noted “well documented” problems in relation to the ENUT-2002, including issues with recall over the full week and difficulties in recording simultaneous activities. The questionnaire did not include a check as to whether all activities totalled 24 hours times seven days. Where the total exceeded this, one could assume that this reflected simultaneous activities. However, there was also no check on cases where fewer than 24 hours times seven days of activities were reported. The tabulation report notes that there was a comprehensive validation exercise to avoid inconsistencies in the data, although estimates for care of ill and disabled people are likely to be unreliable because only a small proportion of the population reported performing these activities, resulting in a small subsample. The report further notes that the two items with respect to supervision are activities that can be performed simultaneously with other activities. Brunnich et al. (2005) also noted Luna’s findings that the results of the 1996 time use survey and ENUT-2002 are similar with respect to unpaid work. For example, the earlier survey found that women carried out 81.6 per cent of unpaid household work compared to 82.5 per cent in the ENUT-2002.

Table 1 presents further results from the ENUT-2002. It shows the percentage of males and females aged 12 years or more who performed specified activities as well as the average time spent on these activities. As expected, the time spent by women who perform each activity is noticeably longer than that spent by men for all activities except for care of ill people. The male/female gap is especially wide with respect to supervision of children and people with disabilities.

**Table 1: Participation rates and average time spent on care activities by sex, ENUT-2002**

Activity	Male		Female	
	Per cent	Hours: Minutes	Per cent	Hours: Minutes
Care of children and support to other household members	30.6	7:18	49.3	13:24
Care of ill people	1.6	7:54	3.2	6:54
Care of disabled people	1.6	5:00	2.4	9:09
Supervising children	9.8	7:36	25.0	17:01
Supervising disabled people	1.2	11:12	1.9	20:08

**Source:** INEGI 2005:27.

Luna (2005) provided estimates averaged across all people aged 12 years or more and reported the total for time spent caring for children and other members of household at 4.9 hours per week for men and 3.3 hours for women.

The final tabulations in chapter four of the ENUT-2002 focus on help received by households from non-members. For this section, there were prompts with respect to the following eight activities:

- cooking, preparing or serving food
- cleaning and general tidying of house

- washing and ironing clothes
- buying food, cleaning utensils, etc.
- paying for household services, such as electricity, light and telephone
- doing or supervising electrical, plumbing, repairs, etc.
- helping members of the household (children, elderly, ill, disabled, etc.)
- transporting members of the household to school, daycare centre, hospital, medical visit, etc.

There are also four tables in chapter four of the ENUT-2002 that provide the following data:

- households that receive help in domestic activities by type of domestic activity and relation of the helper to the head of household;
- hours per week that households receive help with domestic activities by type of domestic activity and relation of the helper to the head of household;
- percentage distribution of hours of the week that households receive help with domestic activities by type of activity and relationship to head of household; and
- mean hours per week per household of households that receive assistance with domestic activities by type of activity and relationship to head of household.

The tables distinguish the relationship of the “helper” to the head of household between resident domestic employees, non-resident domestic employees and non-resident relatives and friends.

Nigenda and Matarazzo (2005) used data from the ENUT-2002 survey to investigate household health care in more detail, with a particular focus on care of the elderly. They followed this with a qualitative study in six states and the federal district, which incorporated 13 focus groups (with 93 women and 10 men), 13 in-depth interviews with focus group women and 29 interviews with institutional health representatives. The authors noted that the structure of the survey and the breadth of the information did not allow deepening of the topic because: (i) the reference period for collecting information was one week; (ii) the survey did not take into account those receiving care outside the family; (iii) they could not tell if the care was related to chronic or shorter-term episodes; (iv) fieldwork suggested that people have difficulty estimating time spent on particular activities; and (v) sociocultural reasons result in people underestimating the time spent on health care. They, therefore, proposed refining the questions on care and adding this sort of question to surveys on health.

Luna (2005) used time use data from the surveys in both 1996 and 2002 together with data from the ENIGH to construct satellite health care accounts, which included both household care and care provided by non-profit institutions.

### *Sources*

- Brunnich B., P. Druce, M. Ghissassi, M. Johnson, N. Majidi, A.L. Radas, P.R. Riccheri, C. Camille de Sentenac and D. Vacarr. 2005. *Three Case Studies of Time Use Survey Application in Lower and Middle-Income Countries*. Report commissioned by the Gender Unit, Bureau for Development Policy, United Nations Development Programme, prepared by the Institute of Political Studies of Paris (Sciences-Po), Paris.
- Instituto Nacional de Estadística, Geografía e Informática (INEGI). 2005. *Encuesta Nacional sobre Uso del Tiempo 2002: Tabulados Básicos Definitivos* (National Survey on Time Use: Basic Tabulations). INEGI, Aguascalientes.
- \_\_\_\_\_. 2002. *Encuesta Nacional sobre Uso del Tiempo 2002* (National Survey on Time Use 2002). INEGI, Aguascalientes.
- Luna, M.E.G. 2005. *Cuenta Satélite de Salud en los Hogares* (Satellite Account for Household Health). Paper presented at the Reunión Regional las Encuestas de Uso del Tiempo (Regional Meeting on Time Use Surveys), INEGI, Santiago de Chile, 21–23 November.

Nigenda, G. and C. Matarazzo. 2005. *La encuesta del uso del tiempo y el cuidado de la salud en el hogar en México* (Time Use Survey and Household-Based Health Care in Mexico). Presentation at the Reunión Regional las Encuestas de Uso del Tiempo (Regional Meeting on Time Use Surveys), INEGI, Santiago de Chile, 21–23 November.

## Nicaragua

In Nicaragua, there have been two surveys of interest. The first was conducted by the non-governmental organization, Fundación Internacional para el Desafío Económico Global (FIDEG), in 1995–1996. The second was conducted in 1998 by the Instituto Nacional de Estadísticas y Censos (INEC), the official government statistical agency, as a module of the Encuesta Nacional de Hogares sobre Medición de Niveles de Vida (EMNV). The foundational hypothesis for the survey was that the gender division of labour is more marked among the poor and in rural areas.

The FIDEG study was entitled *La Esperanza Tiene Nombre de Mujer: La Economía Nicaragüense desde una Perspectiva de Género* (Hope Has a Woman's Name: The Nicaraguan Economy from a Gender Perspective) and covered 6,028 households—3,015 urban and 3,013 rural. The data were representative at the departmental level, with 17 divisions. The survey was complemented by documentary review and interviews with key respondents. Activities were recorded based on a typical day and the number of minutes spent on different activities were collected from all members of the household. For rural areas, the survey distinguished between a typical day for harvest and non-harvest seasons.

As defined, domestic work included preparing food, caring for children, collecting water, clearing the house, washing, collecting fuel, shopping, mending clothes and taking food to labourers in the field. The survey did not include all activities; for example, it omitted community and social activities, recreation and leisure and personal activities such as sleeping, eating and personal care. On average, the survey found that males spent 15.0 minutes of a typical day on reproductive work compared to 84.9 minutes spent by females.

INEC collected time use data from 50 per cent of all households in the selected sample for the EMNV, with a total coverage of 2,325 households—1,200 urban and 1,125 rural. (The World Bank Web site<sup>4</sup> states that the total sample was 4,209 households, suggesting that more than 50 per cent were covered by the time use module. The difference in survey size between the two sources could reflect a variation between the planned and realized sample.) The data, which were collected between April and August 1998, were representative at the macroregional level with seven divisions. INEC has made the raw data from the survey available to researchers who wish to undertake further analysis.<sup>5</sup>

The questionnaire focused on the day prior to the interview, and asked for the number of minutes spent on specified activities by members of the household aged six years or more. Questions were asked with respect to work, education, household maintenance and personal and social activities. Work was subdivided into the categories of agriculture, independent non-agricultural business of the household, salaried work, unpaid work and looking for work. Reproductive work included cooking, washing dishes, mending, ironing, cleaning the house, maintaining the house and garden, collecting fuel and water, buying food, clothes and articles for the house and care of children and disabled and elderly people.

The EMNV survey as a whole covered education, health, economic activity, housing, consumption, household enterprise and agro-pastoral activities as well as time use. The section of the questionnaire dealing with time use noted that activities related to the household included time spent on relevant travel. There were 22 questions about specific activities similar to the following form:

<sup>4</sup> [www.worldbank.org/LSMS/country/ni98/ni98home.html](http://www.worldbank.org/LSMS/country/ni98/ni98home.html), accessed in December 2006.

<sup>5</sup> [www.inec.gob.ni](http://www.inec.gob.ni), accessed in December 2006.

- Did the person spend time on family or commercial agriculture? (Yes/No)
- If yes, how much time (in hours and minutes)?

After the 22 questions, the following questions were asked:

Did the person spend time on other activities different to those mentioned?

If yes, how much time (in hours and minutes)?

This was followed by an instruction to total the hours and minutes from all of the questions to check that they added up to 24 hours.

Subsequently, two further double-barrelled questions were asked:

Did the person spend time on caring for children at the same time as other activities?

If yes, how much time?

Did the person spend time on other simultaneous activities? (Yes/No)

If yes, how much time?

Space for “observations” was included on the last page. Unfortunately, this method of asking about simultaneous activities does not identify which other activities were combined with childcare or other simultaneous activities.

A long report on the survey is also available on the INEC Web site, which provides a comprehensive set of standardized tables listing all activities and using several different disaggregations. Sex and residential area (urban/rural) are used as central axes of analysis and are complemented with life cycle, educational level, marital status and employment status.

The fourth chapter of the report uses a household typology that follows the proposal of Mexico’s INEGI recommended in the publication entitled *Uso del tiempo y aportaciones en los hogares mexicanos* (Use of Time and Contributions in Mexican Homes). The typology distinguishes between traditional households (41 per cent), modern households (23 per cent) and single parent households with female heads (21 per cent). It further delineates time spent by: (i) spouses (where relevant); (ii) children; and (iii) other members.

The INEC Web site provides a variety of relevant documentation to the survey, including the questionnaire, report, data files and metadata describing the format of the data. It also includes a 240-page fieldworker’s manual and although only just over four pages directly relate to time use issues the section clarifies that mothers can report on activities of children under 10 years of age. Regarding the check question, it explains that if the recorded hours do not total 24 hours, then fieldworkers must work through the activities with respondents until the total is correct.

Renzi (2003) noted the importance of taking the dates/timing of the survey into account and recommended that the approach to simultaneous activities be refined to address difficulties experienced in identifying, processing and analysing these data. Renzi also questioned whether surveys should attempt to interview all members of households or only randomly selected members.

### *Source*

Renzi, M.R. 2003. *Nicaragua: Encuestas de Uso del Tiempo: Dos Experiencias: Sociedad Civil y Gobierno* (Nicaragua: Two Experiences with Time-Use Surveys–Civil Society and the Government). Presentation at the Informe de la Reunión de Expertos: Encuestas sobre Uso del Tiempo, Economic Commission for Latin America and the Caribbean, Santiago de Chile, 11–12 December.

## **Asia**

### **Bangladesh**

The IATUR table of time use surveys suggests that surveys were carried out in Bangladesh in 1974 and 1976. No further information was found on these surveys and, in any case, they are probably too old to be of use for the UNRISD project, which will focus on current patterns of social provision of care.

Fontana and Wobst (2001) noted that time use data in Bangladesh are “sparse”. They referred to two ad hoc surveys that relate only to specified rural districts. They observed that the 1990–1991 LFS recorded information on the number of hours per week spent on household activities, but this information was not collected for the 1995–1996 LFS. In addition, it was not clear how the activities were classified. The International Labour Organization (ILO 2006) noted that the 1984–1985 LFS included a module on time use. The Bangladesh Bureau of Statistics reportedly felt that the quality of the data collected was not adequate and, therefore, neither reported on the data nor repeated the exercise.

Thus, the only survey of potential interest for the UNRISD project was conducted under the auspices of the Bureau of Economic Research (BER) of Dhaka University, with support from Canada’s International Development Research Centre though, at the time of writing, it had not been finalized.

The main focus of the BER survey was on intrahousehold distribution and inequality. Using a total planned sample of 1,000 households, from both rural and urban areas, the aim was to use anthropological methods to collect data on the distribution of consumption expenditure among household members. The project abstract describes the venture as:

an intensive process of field data collection by enumerators, anthropological investigations on intra-household distributional processes coupled with social and gender analysis, as well as secondary source data collection (BER 2004).

The main reason for including the time use element seems to have been to record the nature of physical activities undertaken by each member of the household and, thus, estimate their energy requirements so that this could be compared with consumption of that household member. The researchers’ overall conclusion in this respect was that when total calorie intake is considered, the differences in “activity levels” are reflected in differences in calorie intake. They, thus, concluded that “inequality is averse in health outcomes of its members” (Khondker forthcoming), that is, that the distribution of calories within the household is equitable if one takes the physical requirements of activities of different members into account.

The BER instrument was 51 pages long and consisted of 15 sections (some with subsections); time use was covered in section 8: “Time allocation/use by members (three day observation)”. Time use was recorded in a separate matrix for each of the three days, which vertically listed 30 activities, divided into five groups:

- production/occupation-related activities (17 activities)
- domestic/household activities (five activities)
- leisure activities (four activities)
- social activities (three activities)
- other activities (only prayer time was included)

Horizontally, there was a column for each household member where the number of hours spent by each person on each activity was recorded. The domestic/household activities were as follows:

- buying/shopping
- cooking/baking
- regular household activities (house cleaning, feeding animals, operating a tubewell, chopping firewood)
- washing (laundry), cleaning, washing dishes
- care of other children/adults/elderly

The combination of care of different categories of people into a single category limits the analysis that would be possible using these data.

The final row of the table indicated 24 hours, suggesting that all of the time amounts should total to a single day, and implying that simultaneous activities are not be recorded.

Other sections of the questionnaire included heavy schedules relating to daily food consumption, prices of food items, intrahousehold food allocation observed for three days, and weekly, monthly and yearly expenditure items. Dietary intake was measured by weighing food items consumed by each member as well as by recording all ingredients used in food preparation so as to be able to assess nutrient intake. The study was conducted for three days in order to minimize biases that could have been caused by observation.

Specially trained enumerators were used for the investigation, which included females recruited from the region where the survey was undertaken and with experience in participatory research.

### *Sources*

Bureau of Economic Research (BER). 2004. *Capturing Intra-Household Distribution and Poverty Incidence: A Study on Bangladesh: Questionnaire*. BER, Dhaka University, Dhaka.

Fontana, M. and P. Wobst. 2001. *A Gendered 1993–1994 Social Accounting Matrix for Bangladesh*. Discussion Paper No. 74, Trade and Macroeconomics Division, International Food Policy Research Institute, Washington, DC.

International Labour Organization (ILO). 2006. *Measuring Gender Dimensions of the World of Work in Bangladesh: A Training Guide*. ILO, Geneva.

Khondker, B.H. Forthcoming. *Capturing Intra-Household Distribution and Poverty Incidence: An Overview*. Bureau of Economic Research, Dhaka University, Dhaka.

### India

In 1998–1999, India's Ministry of Statistics and Programme Implementation conducted a time use study that was categorized as a pilot, but was much larger than many other countries' full-scale surveys. The survey was conducted as a stand-alone exercise and covered six states that were selected to be as representative as possible of the different regions of the country: Gujarat, Haryana, Madhya Pradesh, Meghalaya, Orissa and Tamil Nadu. The survey was administered over four quarters so as to cover the full year. Diaries were completed for all household members in the selected households for three days during the reference week: normal day, abnormal day and weekly variant. A total of 18,591 (of a planned 18,628) households were covered with approximately 75,000 individuals. The raw data are available to researchers both inside and outside the country.<sup>6</sup>

The survey planners felt that no existing activity classification met Indian needs and, therefore, developed their own. The classification developed was informed by the developing trial classification of UNSD as well as proposals made by Eivind Hoffmann and Adriana Mata of the ILO, resulting in 176 activities classified into nine major categories and 16 two-digit subgroups (Hoffmann and Mata 1998). The nine categories were as follows:

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<sup>6</sup> Details and the order form are available at [http://mospi.nic.in/mospi\\_data\\_time\\_user\\_survey.htm](http://mospi.nic.in/mospi_data_time_user_survey.htm), accessed in December 2006.

- I primary production activities
- II secondary activities
- III trade, business and services
- IV household maintenance, management and shopping for own household
- V care for children, the sick, elderly and disabled for own household
- VI community services and help to other households
- VII learning
- VIII social and cultural activities, mass media, etc.
- IX personal care and self-maintenance

Primary production activities accounted for one and a half pages of the nearly six-page listing of codes; secondary activities accounted for almost one page. An idea of the unusual level of detail provided with respect to “ordinary” work is demonstrated by the following subcategories for crop farming, kitchen gardening, and so on:

- 111 ploughing, preparing land, cleaning of land
- 112 sowing, planting, transplanting
- 113 application of manure, fertilizer, pesticides and watering, preparing organic manure, harvesting, threshing, picking, winnowing
- 114 weeding
- 115 supervision of work
- 116 kitchen gardening – backyard cultivation
- 117 stocking, transporting to home, guarding or protecting crops
- 118 sale-related and purchase-related activities
- 119 travel to work

This level of detail represents a way of unpacking the “black box” of “economic” work. It entailed extra work for respondents and fieldworkers in order to specify exactly what was being done at a particular time of the day.

Somewhat less detailed disaggregations were provided with respect to unpaid care work, but even here the disaggregation goes beyond what is found in most stylized surveys. For example, the subcodes for category V: Care for children, the sick, elderly and disabled for own household are as follows:

- 511 physical care of children: washing, dressing, feeding
- 521 teaching, training and instruction of own children
- 531 accompanying children to places: school, sports, lessons/primary health care/doctor
- 541 physical care of sick, disabled, elderly household members; washing, dressing, feeding, helping
- 551 accompanying adults to receive personal care services such as the hairdresser, therapy sessions, temple, religious places, etc.
- 561 supervising children, needing care with or without other activity
- 562 supervising adults, needing care with or without other activity
- 571 travel related to care of children
- 572 travel related to care of adults and others
- 581 taking care of guests/visitors

591 any other activity not mentioned above

Rajivan (1999) reported average time spent with respect to the key codes for care of children and adults (see table 2). The averages were calculated for those actually reporting a particular category rather than for the total population of males or females. Generally, the time spent reported for females was longer than that for males, with the exception of supervising adults and (marginally) the time spent accompanying adults to receive personal care services. The latter activity might reflect restrictions on the mobility of women. Information, which can be calculated from the raw data, on the proportion of men and women actually engaged in each of the activities would further assist in understanding the patterns and the relative burdens borne by them. Rajivan (1999) noted that, overall, more than twice as many female as male respondents (2,618 versus 1,296) spent time on care of children and ill and elderly people.

**Table 2: Average time (hours:minutes) per week spent on unpaid care activities by males and females**

Activity	Male	Female
511 Physical care of children	4:21	10:37
521 Teaching, training of children	5:49	7:06
531 Accompanying children	3:82	4:94
541 Physical care of sick, disabled, elderly	3:88	5:40
551 Accompanying adults	3:29	3:20
561 Supervising children	5:89	8:49
562 Supervising adults	5:46	4:21
571 Travel for care of children	2:48	3:20
572 Travel for care of adults	1:79	2:76

Source: Rajivan 1999:20.

The household section of the questionnaire recorded total and per capita household consumption, "means of livelihood, area of land owned and area of land possessed". It also provided for one industry and occupational code for the household as a whole, presumably referring to the head of the household. There was also a "type" classification of the household, which combined industry, occupation and employment status, resulting in five categories for rural areas and five for urban areas.

The individual section of the questionnaire included marital status, usual principal activity and usual subsidiary activity status. The activity status, industry and enterprise status (similar to formal/informal) were also requested. The latter was intended to compensate for the lack of distinction between formal and informal in the activity classification. The individual section of the questionnaire also enquired about participation in household decision making, but the questionnaire did not specify what type of decisions.

The diary section was open-ended in terms of both describing the activities and giving beginning and ending times, with each activity identified as multiple (simultaneous) or not. It was also required to indicate the location and whether the activity was paid. Options for mode of payment were: paid (presumably in cash), payable in kind, unpaid, and other. Another contextual variable distinguished activities performed "inside" and "outside", which Hirway (2000) explained was intended to distinguish work performed at home from other work.

The Indian survey was effected through state-level statistical organizations. Pandey (no date) described some of the efforts that went into ensuring the success of the exercise. These included a five-day training of trainers programme for all states organized by the Central Statistical Organisation, during which sampling design, field scrutiny, data entry formats and each question of the questionnaire were explained in detail, and hands-on training on the data entry package was given. Field training was also organized in one rural and one urban area to test the

questionnaire and identify possible difficulties that fieldworkers might encounter. A detailed instruction manual described how to fill in the questionnaire. Hirway (2000) described subsequent efforts to ensure good performance by fieldworkers, including supervision, field visits by experts, frequent meetings of fieldworkers and retraining.

A technical advisory committee (TAC) was formed and presided over by Indira Hirway of the Centre for Development Alternatives in Ahmedabad as chair. The TAC included activists and academics alongside government officials held meetings to finalize the questionnaire, sampling design, tabulation plan and so on. Members of the TAC also visited the field to observe the quality of the fieldwork. State-level TACs were organized with non-governmental representation. Each state was also asked to submit regular progress reports.

Respondents were interviewed rather than asked to complete diaries. The fieldwork team consisted of a male/female pair to ensure that women would be interviewed by women. When women were not available, local auxiliary nurse midwives or *anganwadi*<sup>7</sup> workers were used. Fieldworkers stayed in the area they were investigating for a period of nine days: the first two days for listing and the sample section; the third day for collecting information on the pattern of the type of days for selected households; and the remaining days for data collection. The information for each of the three daily variants was collected on the following day. The focus on weekly variants caused some problems as they tended to cluster on the weekends, leading to work overload for fieldworkers on Sundays and Mondays.

For simultaneous activities, fieldworkers were asked to determine which was the main activity and distribute the total time spent according to the relative importance of the activities. Where activities were seen as being of equal importance, the time was distributed equally between them.

Documentation on the Indian survey is refreshingly candid about the problems that were encountered, which included:

- difficulties for many respondents in stating the exact amount of time spent on different activities due to limited use of clocks and other timepieces;
- possible reluctance on the part of women in acknowledging that they engaged in economic activities because of the low esteem accorded to “working” women;
- lack of recognition by both fieldworkers and the women concerned that what they do constitutes “work”;
- reluctance of urban people to make time available to be interviewed; and
- the level of skill needed for fieldworkers.

Hirway (2000) provided a full account as to how and why various methodological decisions were made. In terms of pre-coding and postcoding, the former was chosen to facilitate responding. (In practice, it seems that fieldworkers were more likely to choose the codes rather than respondents so this was not pure pre-coding.) In order to avoid some of the disadvantages of this approach, the full three-digit schedule was tested to assure that it included all activities, and a stock-taking exercise was conducted at the end of the first round to see what changes might be necessary. Activities added at this point included collecting flowers or leaves for *pooja* (prayer), resting due to illness and forced leisure. The latter was added to distinguish between leisure time spent through choice and forced leisure through lack of available work opportunities. (In countries where this distinction is not made, a possible method of analysis would be to compare the time spent on leisure and the type of leisure activities performed between employed, unemployed and not economically active people. It would be among the

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<sup>7</sup> *Anganwadi* is the popular name for the Integrated Child Development Services programme launched by the Indian government in 1975. *Anganwadis* are childcare centres in villages or slums and deliver services such as supplementary nutrition, education, immunizations and preventive medicine at the community level to children below six years of age, adolescent girls, pregnant women and nursing mothers.

unemployed—that is, those not doing economic work but wanting to do so—that one would look for signs of forced leisure.)

During the interview, fieldworkers were also required to check the entire list of activities with respondents to ensure that no activities were omitted. Finally, an “other” code was added to each subgroup at the three-digit level.

In terms of results, one surprising finding was that the time use survey recorded a lower prevalence of child labour (4.5 per cent) than recorded by the National Sample Survey Organisation (6.1 per cent) in another survey. Less surprising, across different categories, women generally spent twice as much time as men taking care of children, and ill and elderly people. Women spent 3.16 hours per week taking care of children compared to 0.32 hours for men. At a broader level of analysis, male respondents spent an average of 42 of the 168 hours in a week on SNA activities compared to 19 hours for female respondents. For unpaid care work, in contrast, male respondents spent only 3.6 hours compared to 34.6 hours for females. Furthermore, for the SNA activities, 51 per cent of female activities were unpaid, compared to 33 per cent of male SNA activities.

### *Sources*

Hirway, Indira. 2000. *Time Use Surveys: Concept, Classification and Related Issues Lessons from the Indian Pilot Time Use Survey*. Paper presented at the United Nations Economic and Social Commission for Asia and the Pacific Training Workshop on Statistical Aspects of Integrating Unpaid Work into National Policies, Bangkok, 11–15 September. [www.unescap.org/stat/meet/rrg3.asp](http://www.unescap.org/stat/meet/rrg3.asp), accessed on 16 March 2007.

Pandey, R.N. No date. *Operational Issues in Conducting the Pilot Time Use Survey in India*. Central Statistical Organisation, Ministry Of Statistics and Programme Implementation, Government of India, New Delhi. <http://unece.org/stat/gender/timeuse/papers/htm>, accessed on 16 March 2007.

Rajivan, A.K. 1999. *Policy Implication for Gender Equity: The India Time Use Survey, 1998–1999*. Paper presented at the International Seminar on Time Use Studies, United Nations Economic and Social Commission for Asia and the Pacific, Ahmedabad, 7–10 December.

Ministry of Statistics and Programme Implementation. 1999. *Time Use Survey (July 1998–June 1999): Brief Details and Important Findings of the Survey*. Government of India, New Delhi. [http://mospi.nic.in/stat\\_act\\_t5\\_2.htm](http://mospi.nic.in/stat_act_t5_2.htm), accessed on 16 March 2007.

### Republic of Korea

Between 1981 and 2001, the Korean Broadcasting System (KBS), the country’s largest radio/television broadcasting public corporation, conducted seven national surveys. Standard surveys were conducted in 1981, 1985, 1990, 1995 and 2000; additional surveys, with different purposes, were conducted in 1983 and 1987. The 1983 survey was intended to investigate changes in activities after the abolition of the national curfew, which prevented movement between 24:00 and 04:00. The 1987 survey aimed to provide information on changes in time use patterns after the reinstatement of daylight saving time. (Daylight saving time was introduced for approximately one year due to the Seoul Olympic Games of 1988.) While Shon (1999) correctly referred to the KBS surveys as small scale and focusing primarily on leisure and use of free time, their attraction is that they span several decades.

The main purpose of the KBS surveys was to collect information on media usage. The KBS, therefore, largely followed the model used by the NHK, the largest public broadcasting corporation in Japan. While the KBS provided the funds for the surveys, the surveys and analyses were carried out by the Institute of Communication Research at Seoul National University. (Fieldwork, at least for the 2000 survey, was subcontracted to a professional opinion poll company.)

A total of 3,500 respondents aged 10 years or more were selected using a stratified quota sampling approach to ensure adequate representation of different types of respondents. In addition, the selection of the 100 sampling points took into account the various provinces and

types of communities. Within each sampling point, 35 respondents were selected representative of sex, age and occupational group.

The instrument measured activities in 15-minute intervals during a three-day period. Until 1995, Fridays represented weekday patterns. From 2000, Monday was substituted for Friday since Friday patterns had begun to resemble those of the weekend and differed from the patterns found for Monday to Thursday. Interviewers visited the selected households, taking with them a cover letter, diary for three days, instructions and questionnaire covering socioeconomic characteristics.

The diary included the following activity categories:

- sleep
- meals
- personal care
- work
- school work
- domestic work
- socializing
- rest and recuperating
- free time activities
- moving (travel)
- new media use (computers, Internet, etc.)

Within domestic work, the following activities were specified as:

- cooking
- cleaning
- laundry
- shopping
- knitting/sewing
- childcare
- miscellaneous chores

The categories, thus, do not seem to provide for care of adults.

Simultaneous activities were coded and analysed because of the difficulty in identifying the main activity and because of the KBS's interest in activities that might often be seen as secondary.

In terms of quality, in 2000, only about 60 of the 3,500 diaries could not be analysed because of lack of, or problems with, data.

Trend analysis suggested that there had been a substantial increase in domestic work between 1995 and 2000 (Choo 2001). For the period from 1980 to 2000, in contrast, Choo found a sharp decline in domestic work performed during the weekends. For example, the time spent fell by 26 minutes for Saturdays and 47 minutes for Sunday. For women, time spent on Sunday on household tasks fell by one hour and four minutes. (To give some idea of the relative size of the decrease, by 2000, the average time for Sunday was one hour and 35 minutes.) Choo suggested

that the two underlying factors were: (i) women were spending less time on household chores; and (ii) widespread availability of household appliances.

In 1999, the Korean Time Use Survey (KTUS) became the first survey to use a time diary method in the Republic of Korea. A further survey was conducted in 2004, and according to the National Statistical Office will be conducted every five years. People living in the Republic of Korea can purchase the KTUS data, but they are not accessible outside the country.

The KTUS largely followed the Eurostat guidelines. This was appropriate for the Republic of Korea, which in many respects (including literacy levels) has begun to resemble “developed” countries, whereas it would not be equally appropriate for most of the other countries covered in this review. The sample frame was generated from the multipurpose household sample drawn from the 1995 Population and Housing Census. The survey collected time use information from 42,973 individuals aged 10 years or more in nearly 17,000 households. The method allowed examination of intrahousehold allocation of time. Both household and individual response rates were high, at 96.4 per cent and 94.7 per cent, respectively. Yoon (2005) argued that the clustering and stratification in sampling contributed to the high response rate because it meant that supervisors were responsible for monitoring completion of diaries collected in relatively confined geographical areas.

The KTUS included questions on household characteristics, including the presence of preschool children and types and costs of paid care. For respondents, it included questions on sex, age, education, marital status, employment status, occupation, weekly working time, location of workplaces and subjective evaluation of and reasons for time pressure and fatigue. The diary was designed to be filled in for two designated consecutive days and was organized into 10-minute intervals, with space for both primary and secondary activities. Diary days were distributed to collect more than proportional numbers of diaries for Friday, Saturday and Sunday, given previous research in other countries that suggests that activities on weekdays tend to be relatively similar to each other.

Respondents were required to fill in the diaries themselves; however, a trained fieldworker visited every household the day before the designated diary days to explain the purpose and contents of the survey and to administer the household questionnaire and individual questionnaire. A total of 850 part-time fieldworkers were hired for the survey, and each was assigned 20 households. Interviewers revisited the households on the second day to help respondents fill in the diary and check that they had done so properly; where it was not done correctly, fieldworkers interviewed the person about their activities to assure collecting as much data as possible.

The classification as a whole used three digits, and was divided into nine broad categories as follows:

1. personal care activities
2. employment-related activities
3. education activities
4. domestic activities
5. family care
6. voluntary work and community participation
7. social life/recreation and leisure
8. travel (by purpose)
9. other

The activity classification drew heavily on Eurostat guidelines as well as the UNSD proposal. It, thus, followed the SNA conceptual framework. As in India and Buenos Aires, however, the concept of “establishments” for classification purposes in the UNSD proposal was considered too unclear and, thus, not used. Instead, activities falling within the SNA production boundary were classified under major group 2: employment, which included four subdivisions: employment for establishments; second jobs; self-employed work (agriculture, forestry and fishing); and unpaid family work.

The three-digit codes for family care were as follows:

- 51 preschool childcare
- 511 physical care of preschool children
- 512 reading or playing
- 519 preschool childcare not elsewhere classified
- 52 school childcare
- 521 physical care of school children (e.g., preparing children for school)
- 522 teaching the child (e.g., helping with homework, guiding and playing)
- 523 visiting school (e.g., attending parent-teacher meetings)
- 529 school childcare not elsewhere classified
- 53 spouse care
- 530 spouse care (e.g., massaging, mental or physical help)
- 54 parents care
- 540 parents care (e.g., physical care, washing, accompanying parents to doctor)
- 55 family care not elsewhere classified
- 550 family care not elsewhere classified (e.g., relatives care)

As with many other classifications, there was, thus, limited disaggregation of care with respect to adults. The voluntary work and community participation grouping included the following activities, among others, with respect to people outside the household:

- 642 voluntary work for school or kindergarten children
- 643 voluntary work for the handicapped or the aged, etc.

In her analysis, Yoon (2005) categorized unpaid work into two areas: domestic work and childcare. The emphasis on childcare rather than care of elderly or ill people reflects her particular focus, namely the work of married couples and especially mothers. The childcare category included voluntary participation in school activities of children such as classroom cleaning, school lunch programme, traffic safety guidance, library management, special education and so on. Ordinarily this activity would have been classified as voluntary activity rather than childcare, however, Yoon convincingly proposed that it can be seen as part of the efforts made by the married women to care for children.

Table 3 shows the average number of hours spent on different types of work on different days of the week by husbands and wives. Overall, husbands spent 49.9 hours on economic work (called “paid work” by Yoon), while wives spent 19.0 hours. In contrast, husbands spent only 3.2 hours on unpaid care work (called “unpaid work” by Yoon), while wives spent 36.8 hours. Thus, overall, wives spent slightly longer working each week on average than their husbands. The gender gap with respect to overall work is non-existent on weekdays, but equal to 2.3 hours on Sundays.

Yoon's (2005) more detailed analysis investigated how the patterns differed according to whether the wife was working full-time, part-time or not at all. She found that women in traditional male breadwinner households were better off in terms of their unpaid care work burden, while households where women were working full-time had the largest gap. Thus, wives in dual full-time earner households spent 13 more hours per week working than their husbands, and spent almost half as much time doing unpaid care work as women who were not employed.

**Table 3: Hours spent on work by sex, day of the week and type of work**

Type of work	Weekday		Saturday		Sunday	
	Husband	Wife	Husband	Wife	Husband	Wife
Economic	8.1	3.1	6.6	2.3	2.9	1.2
Unpaid care	0.3	5.3	0.5	5.3	1.0	5.0
Domestic	0.2	3.7	0.3	4.0	0.6	3.9
Childcare	0.2	1.6	0.2	1.4	0.4	1.2
Total work	8.4	8.4	7.1	7.6	3.9	6.2

**Source:** Adapted from Yoon 2005:25.

Fieldwork for the KTUS was carried out in September 1999, after a thorough preparation period that began in 1997 and included three pilot surveys and a "dress rehearsal". After these tests, a two-day postcoded time diary was used. As in most other stand-alone surveys, there were three questionnaires: household; individual; and diary.

The pilot surveys tested pre-coded versus postcoded approaches. It was suspected that the relative conservatism of Koreans would make many people wary of describing their life to others and that pre-coded self-completed diaries would, thus, be preferable. The first pilot survey suggested that older people and those who were very busy perceived the diary approach as an unnecessary burden because, in essence, it asked them to do the data processing. It was also felt that respondents were likely to make more mistakes than experienced coders in choosing the correct code. In addition, fieldworkers preferred the postcoded diary as it facilitated checking.

The Republic of Korea has four seasons, and pilot surveys were, therefore, conducted in spring, summer and autumn to test for possible seasonal effects. As a result, informal productive activities were found to be the most affected. Since it was considered too difficult to spread a survey over the entire year, the National Statistical Office decided to conduct a survey either in spring or autumn, based on research in Norway that suggested that this provided an acceptable average for the year.

The survey included a primary and one secondary activity, with some editing of primary activities. For example, if the respondent wrote "napping" as the primary activity and "travel by train" as the secondary activity, the two activities were swapped around. With respect to caring for children and other activities performed at the same time, the respondent's ranking of the two activities was accepted. For each primary activity, the questionnaire required coding of spatial location, indoors or outdoors and mode of transport.

The classification distinguished between three types of travel: related to work; related to school; and unspecified travel. In retrospect, Shon (1999) suggested that it would have been better to use the UNSD approach of classifying travel according to the category of the activity for which the travel was undertaken.

### *Sources*

Choo, K.Y. 2001. *Changes in Korean People's Use of Time during 1981–2000*. Paper presented at the Conference of the International Association for Time Use Research, Oslo, 3–5 October.

Shon, A. 1999. *Methodological and Operational Dimensions on Time Use Survey in the Republic of Korea*. Proceedings of the IATUR Seminar on Time Use Survey, Stockholm, 7–10 December. [http://unstats.un.org/unsd/methods/timeuse/tusresource\\_papers/rokorea.pdf](http://unstats.un.org/unsd/methods/timeuse/tusresource_papers/rokorea.pdf), accessed in May 2007.

Yoon, J. 2005. *The Distribution of Total Work and Gender Equality in Married Couples: Evidence from the Korean Time Use Survey 1999*, September. [www.nso.go.kr/eng2006/emain/index.html](http://www.nso.go.kr/eng2006/emain/index.html), accessed on 17 March 2007.

## **Africa**

### **Chad and Mali**

It is not clear whether Chad and Mali have, in fact, conducted time use surveys or have any time use data. Both countries are identified on the IATUR list as having conducted surveys in 1995; however, IATUR confirmed that they do not have further information or contacts about them, but found that the surveys can be found on the Internet or from other sources. A United Nations mid-term report<sup>8</sup> on progress in implementing the Dakar and Beijing declarations suggested that both Chad and Mali had been part of a nine-country comparative study investigating male and female participation in the labour force. However, this probably would not have included unpaid care work. The report also noted that Benin and Chad had been among eight countries for which the contribution of the informal sector to GDP was estimated in 1996/1997. Again, however, this probably would not have taken unpaid care work into account.

The United Nations Statistics Division (1999:1) has conducted national time use surveys, but does not give further information on them. Charmes (1999) specified Algeria (1998), Chad (1996) and Mali (1994–1995) as three countries that included specific, simple and light time use sections in multipurpose surveys to justify administering questions relating to economic activity to women who declared themselves as inactive when they had, in fact, engaged in economic activity.

The World Bank household survey Web site<sup>9</sup> includes two surveys for each of the countries from this period. For both countries there is an Enquête Démographique et de Santé (EDS): 1996 for Chad and 1995 for Mali. For Mali, there is also the 1994 economic survey Enquête Malienne de Conjoncture Economique et Sociale (EMCES) and for Chad the 1995–1996 consumption and informal sector survey Enquête sur la Consommation et le Secteur informel au Tchad (ECOSIT). Neither the EDS nor EMCES included any time use questions except those related to time taken by the household to access various facilities. Unfortunately, the ECOSIT questionnaire is not available on the World Bank household survey database.

The above suggests that neither Chad nor Mali is appropriate for the UNRISD project. Instead, this report includes information on a time use survey conducted in Benin as well as references to possible time use data in other African countries.

### **Source**

Charmes, J. 1999. *Results and Lessons of a National Time Use Survey in Benin, and Consequences on Re-estimation of Women's Participation in the Labour Force and Contribution to GDP*. Paper presented at the Conference of the International Association for Time Use Research, Colchester, 6–8 October.

### **South Africa**

The only existing national time use study in South Africa was conducted in 2000 by Statistics South Africa, the official statistical agency. The survey was stand-alone, and an open-ended diary with half-hour timeslots was used for collecting information on time use. Up to three activities could be recorded for every half hour, with at least one activity for each half hour compulsory. Data were collected through face-to-face interviews with the person who had

<sup>8</sup> The mid-term report does not indicate the author, but it seems likely that it emanates from some part of the UN system.

<sup>9</sup> [www.internationalsurveynetwork.org/home](http://www.internationalsurveynetwork.org/home), accessed in December 2006.

performed the activities, and focused on the 24 hours between 04:00 the previous day and 04:00 the day of the interview. The dataset is available from Statistics South Africa.

Information was collected for persons aged 10 years or more. The planned sample was 10,800 dwelling units (households), with two respondents per household (or only one if there was only one household member aged 10 years or more). The realized sample was 8,564 households and 14,553 respondents. The main reason for the undercount was unoccupied dwelling units and dwelling units that were on the map but could not be found. The response rate from randomly selected individuals in the dwelling units that could be found was 94 per cent. The data were weighted before analysis to reflect the correct proportions in terms of province, sex, population group (that is, race) and age group. The undercount should, thus, not have seriously affected the representativeness of the data. The survey was conducted in three “tranches” so as to cover possible seasonal variations, with different households covered in each tranche.

In addition to the diary section, the questionnaire included a household section that collected information such as access to equipment and services that might affect activities, as well as basic questions on income sources and the overall level of income. The questionnaire also included, for each person for whom a diary was collected, a series of questions similar to those used in South Africa’s LFS, including personal earned income. One of the purposes of the survey was to provide improved information on both the less well-understood economic activities (such as informal, subsistence and other more marginal forms of work) and unpaid care work. The inclusion of LFS-type questions allowed comparison of labour force patterns, revealed by these questions, with those suggested by the time use diary.

The United Nations draft International Classification of Activities for Time Use Statistics (ICATUS), devised under the leadership of UNSD, was used with minor modifications. As noted above in the discussion on Argentina, ICATUS at the time consisted of 10 major divisions, three corresponding to activities within the SNA production boundary, three to activities outside the SNA production boundary but, nevertheless, recognized as work (that is, unpaid care work) and four corresponding to non-productive activity, that is, activities that do not fulfil the third person criterion and, thus, fall outside the extended production boundary of the SNA.

Statistics South Africa does not have a permanent fieldwork force, although it does have a roster of contract fieldworkers that it uses on a regular basis. The policy of the agency is to give this work to unemployed young people who have passed their matriculation examinations and who come from the province in which they conduct interviews. For the time use survey, a completely new team was recruited. The selection process included aptitude tests to assess skills that would be needed in fieldwork. Training for the first tranche was provided at the head office so as to provide some consistency given the novelty of the endeavour. Thus, while the fieldworkers were divided into five language groupings for training purposes, each of the groups followed the same “syllabus” and the trainers met regularly to discuss problems encountered.

For subsequent tranches, the provincial supervisors were brought to the head office for training, and then provided with a standard syllabus and materials to use for refresher training for fieldworkers in the province. For the most part, the same fieldworkers worked on all three tranches. There were, however, some changes, for example, when fieldworkers obtained other employment or became pregnant.

In standard surveys, coders in the head office of Statistics South Africa are responsible for coding open-ended information such as that on occupation and industry. For the time use survey, the usual approach was followed for occupation and industry. Fieldworkers, however, coded all diary activities in the evening after completing the interview. This approach was adopted on the grounds that fieldworkers would have a better understanding of the actual nature of the recorded activities from having conducted the interview. It was also felt that if fieldworkers knew that they were responsible for coding, and understood the way the codes

worked, they would ensure that they obtained sufficient information about each activity to be able to apply the relevant code. Finally, it was felt there would be little advantage gained from using head office coders as they had no prior experience of this particular coding scheme. Significant time was spent on coding and on clarifying the differences between the broad categories during initial and refresher training. The fieldworker's manual included both the numerical listing of codes and an alphabetical listing of codes for all activities recorded in the pilot survey.

South Africa has 11 official languages. Particular languages are mostly confined to certain areas of the country, but each area commonly uses more than one language. Though the questionnaire was printed only in English, the training included an extensive section where each language group went through all of the questions one at a time, agreeing on the best translation. This approach served the additional purpose of checking that everyone understood the English questions in the same way, which was important as English would have been the home language for only a very small proportion of the fieldworkers. The translations were then prepared and distributed to fieldworkers working in the relevant areas.

As noted above, the ICATUS activity coding scheme was organized according to the SNA categories, which allowed easy identification of unpaid care work if the coding was done correctly. The relevant codes regarding care as narrowly defined were as follows:

*5. Care for children, the sick, elderly and disabled for own household*

Time used for:

- 511 physical care of children: washing, dressing, feeding – mentioned spontaneously
- 512 physical care of children: washing, dressing, feeding – not mentioned spontaneously
- 521 teaching, training and instruction of household's children – mentioned spontaneously
- 522 teaching, training and instruction of household's children – not mentioned spontaneously
- 531 accompanying children to places: school, sports, lessons, etc. – mentioned spontaneously
- 532 accompanying children to places: school, sports, lessons, etc. – not mentioned spontaneously
- 540 physical care of the sick, disabled, elderly household members: washing, dressing, feeding, helping
- 550 accompanying adults to receive personal care services: such as the hairdresser, therapy sessions, etc.
- 561 supervising children and adults needing care – mentioned spontaneously
- 562 supervising children and adults needing care – not mentioned spontaneously
- 580 travel related to care of children, the sick, elderly and disabled in the household
- 590 care of children, the sick, elderly and disabled in the household not elsewhere classified

*6. Community services and help to other households*

Time used for:

- 671 caring for non-household children – mentioned spontaneously
- 672 caring for non-household children – not mentioned spontaneously
- 673 caring for non-household adults

Separate codes were provided for care activities that were mentioned spontaneously and those mentioned only after prompting to monitor a methodological innovation intended to counteract the tendency of respondents to underreport care activities, particularly of children. After completion of the diary questions, fieldworkers asked a check question regarding childcare as follows:

Did you spend any time during the day looking after children?

If respondents said that they had spent some time on childcare, they were then asked whether they had reported all relevant activities when giving information for the diary. If not, they were asked to provide the missing information. The added activities were marked with an asterisk and given the relevant subcodes for activities “not mentioned spontaneously” to allow for separate analysis of childcare with and without prompting.

In addition to the codes listed above for activities where respondents provide care, there also were three subcodes in the personal care and self-maintenance main group (that is, part of non-productive activity), which reflected time spent by the recipient of medical and personal care: (i) from professionals; (ii) from household members; and (iii) from non-household members.

One of the weaknesses of the South African approach is that care for non-children was not disaggregated to the same extent as care for children. For example, there was no distinction between care for people who are elderly, disabled or ill. In addition, the coding schema did not distinguish between passive care (“supervision”) for adults and children.

One difference from other time use activity classifications is that collection of fuel and water was classified as an economic activity. This followed the SNA rules, but many other classifications regarded this as part of household (unpaid care) work. The fact that the activities had separate codes allowed them to be “reclassified” in the analysis of the South African data if one wants to compare findings with those from other countries.

The allowance for simultaneous activity should encourage compiling care activity. Furthermore, the data set contained two measures of time for each activity. The first reflected the full duration of the particular activity, and the second apportioned the available time equally between simultaneous activities where these occur. The second measure totalled 24 hours and, thus, produces statistics that can be compared with those produced in other countries. The second measure provided a better sense of true duration.

The fact that only two people per household were interviewed about their use of time makes analysis of intrahousehold distribution of tasks difficult, if not impossible. While in some cases the two selected individuals might have been spouses or partners, South African household composition and relationship patterns are sufficiently diverse that this would not be the case for many households. Many household surveys in developing countries use an approach where, in listing household members, fieldworkers first record the head of household, and then ask about and record every other person’s relationship to the head. One of the problems with this approach is that it does not always result in unambiguous information about the relationship between two members who are not the head. For example, if one person is the child of the head and another the grandchild of the head, it is not necessarily the case that the second person is the child of the first person. To circumvent this problem in the South African time use survey, after the two people to be interviewed had been selected, the questionnaire asked for the relationship of every other member of the household to each of the selected persons. This provided the necessary information that would allow analysis of time use for specified categories such as partnered women with children and/or a partner living with them or young girls living in households without adult females, for example, even where one does not have information about the child or partner’s activities.

Table 4 shows selected results with respect to time spent in minutes on unpaid care work activities by male and female respondents. The table lists the averages for the population as a whole as well as only for those who actually engaged in the activities (“actors”), illustrating the importance of distinguishing between the two measures. For example, for care of persons, the average time was only four minutes per day if all males over the age of 10 were included, but increased to 63 minutes if only men who performed this activity were considered. For women, the comparable time was 32 minutes across the population as a whole and 110 for the actors.

The greater relative gap between the two measures for men was explained by the fact that only 6 per cent of male respondents reported giving any care of persons compared to 29 per cent of female respondents.

**Table 4: Mean minutes per day spent on unpaid care work activities by sex**

	Full sample		Actors	
	Male	Female	Male	Female
Household maintenance	74	181	107	199
Care of persons	4	32	63	110
Community service	5	3	145	98
Unpaid care	83	216	117	235

Source: Budlender et al. 2001.

#### Source

Budlender, D., N. Chobokoane and Y. Mpetsheni. 2001. *A Survey of Time Use: How South African Women and Men Spend Their Time*. Statistics South Africa, Pretoria.

#### Tanzania

Tanzania's National Bureau of Statistics (NBS) conducted a time use survey as an add-on module to the integrated labour force survey (ILFS), which was carried out in 2006. The time use module was the outcome of several years of advocacy and research led by the Tanzania Gender Networking Programme (TGNP) (2006), resulting in the government agreeing to fund the module. The TGNP appointed a local consultant to serve on the technical committee for the survey. The consultant and along with a TGNP staff member have participated in some of the training and monitoring activities.

The time use module was conducted in every fifth household selected for the ILFS. The methodology drew fairly heavily on the South African approach (see above), with the following differences:

- a one-hour timeslot, with space for up to five activities;
- all members aged five years or more interviewed in selected households;
- individuals interviewed each day for seven days about activities performed on the previous day (necessitating an extra activity code to reflect time spent on being interviewed); and
- a column for each activity indicating whether it is paid or not (the payment code is discussed further below).

There have also been some changes to the codes, including disaggregation of all care activities with respect to adults into: (i) care for elderly people; (ii) care for ill people; and (iii) care for people with disabilities. These changes reflect one of the primary motivations for the survey, which is to increase knowledge of the time spent on caring as a result of the HIV/AIDS pandemic. The questions at the end of the diary also prompt for missed adult care activities in addition to missed time spent on caring for children.

The NBS (2005) conducted a pilot test in September 2005 to test the methodology, which confirmed the need for sufficient space for five activities to be reported for each one-hour timeslot. Since current fieldwork has demonstrated that there were sometimes more than five activities, fieldworkers have been instructed to fill these in on the back of the questionnaire. It is not yet clear how the additional activities will be dealt with in data collection and analysis.

The coding is being handled by the NBS. A workshop of NBS staff involved in different aspects of the survey at the end of the first quarter discovered some serious quality problems in diaries completed during this period, including no activities for some timeslots as well as activities that were insufficiently described to allow coding. The NBS group collectively drew up guidelines for fieldworkers, supervisors and data processors to address the identified problems. The checklist was distributed during the second quarter of fieldwork, accompanied by some refresher training and further monitoring in order to improve the quality of future data collection.

Unfortunately, the seven-day hourly record in the main ILFS part of the questionnaire is not useful for direct comparison purposes. The standard LFS-type questions about economic activities undertaken “during the past seven days” were asked in the initial interview with each household. The information for the time use diaries was collected over the seven days following the interview during which fieldworkers made daily visits to the household. It was further agreed at the post-first quarter workshop that processors should not adjust one part of the questionnaire on the basis of responses in another part as one of the purposes of the time use survey is to identify the extent to which the ILFS is fully recording all economic activity.

As mentioned above, the payment code indicating whether an activity is paid or not distinguishes between the following options:

- no payment
- monthly payment only
- salary and transport allowance
- food and allowance (cash payment)
- cash payment for services/sales
- food, accommodation and other needs
- allowance and all needs (cash payment)
- other (specify)
- not applicable

At the post-first quarter workshop, it was agreed that some of the aspects that were intended to be identified by the payment column would be automatically identified by the coding classification. For example, all activities in categories 4–6 are automatically unpaid, while payment is not applicable to categories 7–10. It is, therefore, only categories 1–3 might provide additional information by using the payment column. Nevertheless, it was agreed that this question should be retained as an experiment and used for lessons learned evaluations after the survey. In addition, the information recorded in this column could be useful to coders in understanding activities when they are not fully described due to the limited space available on the questionnaire. At the training workshop, it was stressed that the relevant payments are only those that were paid to respondents for their work or time. However, it was emphasized that an activity should be coded as “paid” even if payment did not occur during the particular hour to which the activity was assigned. For example, a street seller might not earn money during every hour spent selling, but all of the time spent selling is coded as paid because the time is spent for the purpose of earning.

According to the workplan, the final report on the ILFS should be completed by the end of March 2007. There will, however, almost certainly be further analysis, and a separate more comprehensive report for the time use module.

### Sources

National Bureau of Statistics (NBS) and Department of Employment. 2005. *Integrated Labour Force Survey 2005/2006: Questionnaire*. Government of Tanzania, Dar es Salaam.

Tanzania Gender Networking Programme (TGNP). 2006. *Report on Time Use Training 9–11 May*. TGNP, Dar es Salaam.

### Benin

In 1998, Benin's Institut national de la statistique et de l'analyse économique (INSAE) conducted the Enquête Emploi du Temps au Bénin (Benin Time Use Survey). The exercise, carried out with UNDP support, included a time use survey as a module of the annual—or twice a year, according to Charmes (1999)—urban survey on labour, income and social indicators that has been conducted since 1990 in the five main cities of the country: Abomey, Bohicon, Cotonou, Parakou and Porto Noveo. (Charmes stated that only four cities were covered by the urban survey on labour, income and social indicators.) These cities together account for just over half of the country's urban population. Data on time use and education were also collected with a rural survey using the method and framework of the 1995 Survey on the Living Conditions of Rural Households.<sup>10</sup> The survey was conducted in April in urban areas and between mid-March and mid-April in rural areas, which corresponds to the season when limited agricultural work is done. Charmes (2006:45), nevertheless, claimed that, despite being conducted in the agricultural off-season, the Benin results "seem coherent with the results of other surveys". (See, for example, the comparison with Ghana below.)

Clusters of 20 households in urban areas and 15 households in rural areas were used in sampling, and all household members between the ages of 6 and 65 were covered. Information was collected for a total of 5,834 individuals in 1,787 urban households, and 6,770 individuals in 1,419 rural households. The results were not aggregated at the national level, given that the samples were drawn and weighted separately.

Unlike the other schemes described in this paper, Benin's activity classification system listed activities in the order in which they were most likely to be performed during the day, from the moment of waking to the moment of going to sleep. It, thus, starts with sleeping, followed by resting/doing nothing and then by personal hygiene/dressing. There were 63 activities classified into nine categories as follows:

1. economic activities for the market
2. non-market economic activities
3. domestic activities
4. social activities
5. social activities of ceremonial type, and other social activities
6. transport, travelling
7. leisure
8. studying and education
9. other

The activity list included separate codes for taking care of children (code 19) and taking care of elderly, sick, etc. (code 20). Market-related economic activity was separated into four codes: main activity; secondary activity 1; secondary activity 2; and looking for a job. For the first three activities, a further occupation code was to be filled in. Non-market-related economic activity included a range of alternatives with "agriculture" alongside several other activities that could

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<sup>10</sup> The UNSD Web site at [http://unstats.un.org/unsd/methods/timeuse/tusresource\\_country/benin.htm](http://unstats.un.org/unsd/methods/timeuse/tusresource_country/benin.htm) identifies it as a "module of semestral household survey on labour, income and social indicators in rural areas; independent survey on time use and education in urban areas".

be regarded as agriculture (for example, breeding cattle, little livestock, livestock). "Other" was code 63.

The questionnaire listed activities in 15-minute blocks, starting at 04:00. Interviewers were required to record primary activities with an "X" in the appropriate 15-minute block, and simultaneous (secondary) activities with a circle. The survey data were analysed by totalling the number of X's for each of the listed activities. Overall, urban women were found to spend 3.24 hours on domestic activities compared to 1.04 hours for men. In rural areas, the averages were similar at 3.27 for women and 1.07 for men.

Each respondent was covered for one day. Fieldworkers distributed the work across all days of the week, which was carefully monitored. They visited the households the day prior to the day to be recorded to explain what was needed. In urban areas, the respondents were asked to fill in as much information as they could. Fieldworkers then revisited after the specified day and interviewed the respondents about their activities.

Interviewers paid special attention to eliciting secondary activities, yet, in the documentation on methodology this was identified as the main problem encountered.<sup>11</sup> Charmes (2006:45) compared the results from Benin and Ghana with respect to housekeeping. (The Ghana survey does not ask about care of persons, thus the estimate used for Benin for this comparison presumably also excluded care of persons.) He found that the ratio of female to male time was similar for both countries, but the levels in Ghana were much higher than those for Benin (for example, five hours and 42 minutes and one hour and 49 minutes, respectively). He suggested that this shows that the Ghanaian approach tended to overestimate the time spent on these activities or, "more likely", included identifying simultaneous activities. He further suggested that overestimation was particularly likely for men (Charmes 2006:56), although it is not clear how this statement tallies with the similar ratios found in Benin and Ghana. Charmes (1999) stated that in future surveys that adopt Benin's approach the activities most likely to be undertaken simultaneously should be pre-listed so that fieldworkers can prompt responses. This could, however, result in bias and underenumeration of other simultaneous activities.

The relative length of the list of activities increased the likelihood of some timeslots being missed. Fieldworkers, thus, connected the activities for each timeslot with a vertical line and as a result some adjustments could be made with respect to missing information. However, an average of only 23 hours and 59 minutes was recorded for urban areas and only 24 hours and one minute for rural hours, even after including simultaneous activities. Again, this suggests serious underenumeration of simultaneous activities.

The available documentation claims that the survey did not encounter any serious difficulties, and that the response rate was good. Indeed, Charmes (1999:11) stated that "no difficulty was encountered during the fieldwork as well as during data processing and analysis". Unfortunately, no hard statistics are provided, for example, on the response rate, and further information on the survey does not seem to be readily available. For example, the questionnaire is not included on the World Bank household survey database.

### *Source*

Charmes, J. 1999. *Results and Lessons of a National Time Use Survey in Benin, and Consequences on Re-estimation of Women's Participation in the Labour Force and Contribution to GDP*. Paper presented at the Conference of the International Association for Time Use Research, Colchester, 6-8 October.

### Other African countries

Kes and Swaminathan (2006:33-34) provided a table that claims to be an inventory of "all cross section and panel time use data sources in sub-Saharan African countries". However, the table

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<sup>11</sup> See the UNSD Web site at <http://unstats.un.org/unsd/demographic/sconcerns/tuse/tu3.aspx>.

does not include listings for Chad or Mali and the only surveys identified as having sample sizes of 1,000 households or more are:

- Benin, 1998 survey, 1,787 households (see above).
- Côte d'Ivoire, module in living standard surveys of 1985–1988, approximately 1,600 households each year, members aged 7 years or more.
- Ghana, 1991–1992 and 1998–1999 “short and incomplete” module in continuous living standards measurement survey, 5,998 households (presumably for the latest date), members aged seven years or more. Charmes (2006) noted that these cover only the main domestic or non-market activities – a total of four activities.
- Madagascar, 2001, parallel sample attached to permanent survey, 2,663 households, members aged 6–65.
- Mauritius, 2003 module of continuous multipurpose household survey, 6,480 households, members aged 10 or more.
- South Africa, 2000, stand-alone survey, 8,564 households (see above).
- Uganda, 1993, 9,929 households (no further information).

The survey in Mauritius was an add-on to the annual multipurpose household survey and drew heavily on the South African approach. Among the differences were that all members of the household aged 10 years or more were interviewed rather than only two, and coding was handled by the Central Statistical Organisation rather than by fieldworkers.

In addition to the surveys listed above, Charmes (2006:65) reported a time use survey that was conducted in Tunisia in 2005 as a subsample of the Budget-Consumption Household Survey. Bardasi and Wodon (2006) reported time use modules within LSMS-type surveys in Guinea in 2002–2003, Malawi in 2004, Mauritania in 2000 and Sierra Leone in 2003.

In Guinea, the 2002–2003 Enquête Intégrée de Base pour L'évaluation de la Pauvreté (Integrated Core Survey for Poverty Assessment) asked each individual aged six or more about the time spent in the previous week on domestic tasks, fetching water, fetching wood, helping other households and involvement in community activities. There were also questions about time “spent working in the labour market, for a wage (as an employee) or in a farm or family business” (Bardasi and Wodon 2006:121). There was, however, no mention of caring for household or community members and simultaneous activities were not counted. Bardasi and Wodon (2006:122) reported that we can probably assume that “these [caring] activities are in large part usually performed as a ‘secondary activity’ in combination with one of the other activities recorded in the questionnaire”.

The 2004 Malawi survey covered a total of 11,280 households and more than 52,000 individuals, with the time use questions asked of all individuals aged four years or more (Wodon and Beegle 2006). The instrument included questions about seven types of activity:

- cooking and related
- collecting fuel
- household agriculture or fishing
- wage or similar work
- casual or part-time labour
- help in household's non-agricultural business
- running household's non-agricultural business

Again, care of persons was not mentioned in any of these activities and the first category (cooking and related) specified only cooking, doing laundry, cleaning your house “and the like”.

A time use survey was conducted in Morocco in 1998, but it only recorded information on women and is, thus, not useful for the purpose of this paper.

## **Recommendations**

Three issues are addressed regarding recommendations:

- suggestions as to countries to be included in phase 2 of the UNRISD study;
- suggestions as to possible areas of investigation for phase 2; and
- recommendations for future time use surveys.

### ***Selection of countries***

The project proposal states that ideally two countries would be covered in each of the three regions—Latin America, Asia and Africa—one country with a relatively more developed welfare/care infrastructure and one with a less developed one. Beyond this, a key criterion is that time use data should be available for each of the countries.

In terms of countries with more developed welfare/care infrastructures, the descriptions above suggest that the best choices are Argentina for Latin America, the Republic of Korea for Asia and South Africa for Africa. In addition, each of these countries has solid time use data. Argentina and the Republic of Korea provide two different types of survey data—diary based and stylized—although the diary-based data for Argentina only cover Buenos Aires. The raw data for both types of surveys should be accessible to UNRISD researchers. South Africa has only diary-based survey data available, but there is no other suitable option besides Mauritius, which is a much smaller country and in other respects even more atypical than South Africa when compared to the rest of Africa. South African data are also readily available and fully documented and have been successfully analysed by a number of academics and non-governmental researchers.

The choices are not always as simple with respect to countries with less developed welfare/care infrastructure. For Latin America, both Mexico and Nicaragua are possibilities. Both countries have more than one possible survey data source, although all of the sources use a stylized approach except the 1996 Mexico survey, about which all sources are worryingly silent. In both countries, researchers have conducted data analyses. An argument for favouring Nicaragua over Mexico is that the latter’s welfare/care infrastructure might be at a level too similar to that of Argentina, while the welfare/care infrastructure of Nicaragua would more clearly qualify as “less developed”. Both countries have made the raw data from the major studies available to researchers.

For Asia, India is almost certainly the best choice as the Bangladesh survey is relatively small in terms of sample size and did not focus much attention on care-related activities. It also did not cover simultaneous activities, while the Indian survey attempted to do so. The raw data are made available to researchers from both countries.

For Africa, the choice seems to be between Benin and Tanzania. One challenge for Benin might be access to information and, in particular, it might not be possible to obtain access to the raw data from the survey. Concerns with respect to Tanzania include timing—the fieldwork was only scheduled to be completed by the end of 2006—and possible quality issues.

### ***Areas to explore***

The intention of the UNRISD project is that while all countries would focus on the same broad area of care, each country would be free to develop particular areas of relevance to their society. There would, thus, be some issues that would be explored across all countries where the specified analysis was possible so as to allow for cross-country comparisons and analysis. In addition, there are likely to be issues that are covered only in a few countries, but which are, nevertheless, interesting enough to merit inclusion in the study.

The actual issues to be covered were included in proposals prepared by country teams and then developed through discussions at a workshop that was planned for late 2006. The following ideas are, thus, simply some that could hopefully stimulate thought by the country teams as well as at the workshop.

A first obvious area of investigation would be the impact of the presence of children or ill or elderly people on the amount of care undertaken by other household members as well as the implications of their presence for the carers' access to income-earning opportunities. A fair amount of such analysis already exists in developed countries with respect to children. The findings and method of approach might, however, need to differ in countries with diverse societal and household arrangements rather than being confined, as is often the case, to the impact on mothers and fathers. There are few data on childcare carried out by non-parents, yet this could well play an important role in many of the countries under discussion. This would, for example, be an interesting area to investigate for a country such as South Africa, where significant numbers of children live with grandparents rather than parents. It would also be relevant for countries with high numbers of orphans, for example, as a result of HIV or AIDS.

Much less research has been done with respect to care of elderly people and, especially, care of those who are ill. As noted above, this issue is particularly pressing in countries that have been badly hit by the AIDS pandemic. The country descriptions above suggest that recording of care of persons is likely to be poor in many of the surveys, particularly those that do not record simultaneous activities. This topic, in particular, will, thus, need to supplement the time use data substantially through qualitative research.

A related issue is how household "shape" in terms of composition and the relationship of members to each other affects both the absolute and relative burden of (especially care) activities of different categories of people. For several of the countries, the paper describes classifications that have been used for tabulation and analysis, which in turn could be discussed and further developed. In addition, in some of these studies, and certainly for those in developed countries, analysis is confined to married men and women. The UNRISD project needs to move beyond this limitation.

The UNRISD project is also interested in how unpaid care work intersects with other public and private sources of care within the market economy. It would be useful, if possible, to determine a sense of when and why people choose to obtain care from different sources. In some cases, the time use data will provide clues in this respect, for example, some surveys include distance from various facilities and some include codes in the classification system that would allow analysis of receipt of different forms of care.

This paper focuses on the time use data that are available in each country, though some country descriptions refer to the availability of "socioeconomic" information beyond time use within the time use surveys themselves. Such additional data should be available both in dedicated time use surveys, where background information is asked about the household and the individuals and—even more so—when the time use is investigated through a module in a larger survey. Exactly what additional information is available for each of the surveys would need to be investigated at an early stage by the researchers for each country, as this will determine the types of analyses that can be done. It is also important to explore what other survey data are available for the country so as to explore possible ways of combining or supplementing the data

from the time use survey with information on aspects that are not covered by the time use survey, or covered only in a cursory fashion.

The time use surveys, combined with data from other sources such as the LFSs, could also form the basis for estimations of the total value of different types of care emanating from different sources within the economy and society. For example, the imputed value of care provided to children in the home could be compared to the economic value of care provided in schools and crèches. Similarly, the imputed value of unpaid care work performed for ill people in the home and community could be compared to the economic value of care provided through the public and private health care systems. If these calculations are attempted, they should cover the economy and society as a whole; they should not be conducted at the household level, where they might be interpreted as implying that households where care is provided for no pay by family members are as rich as those families that buy care almost entirely from the market once the real value is included in the calculation. Whether or not such economy-wide calculations are attempted, qualitative research will need to play a principal role regarding the issue of how unpaid care work intersects with other public and private market sources of care.

Time use surveys are sometimes touted as a source of information on child work and child labour. This should probably not be a primary focus of UNRISD research, even though children are undoubtedly responsible for some of the unpaid care work performed in all countries. The differences in the age groups covered by surveys in different countries and, in particular, differences in the lower age cut-off point, will make cross-country comparisons difficult.

The introduction to this paper discusses the different definitions and interpretations of care work. The country case studies describe how various surveys ask questions about care work and, thus, implicitly or explicitly, define what they consider to be covered by this term. The questionnaires cannot, however, tell us the full story about what data are collected in each country. The UNRISD study could contribute to a clearer understanding of the different characterizations of care work and how survey designers, fieldworkers, respondents and analysts interpret them. This, in turn, will lay the basis for more meaningful comparisons between countries. It could also provide the foundation for better policy making.

### ***Time use methodology***

In 2005, UNSD published a comprehensive manual on time use surveys (UNSD 2005). It is, therefore, somewhat presumptuous at the end of this short study to make recommendations for future time use surveys. Nevertheless, a few points have emerged from the country discussions that require attention.

The first relates to recording simultaneous activities. These must be recorded and analysed in order to obtain accurate records of unpaid care work and, in particular, to more narrowly define care work. Current methods, even where provision is made for simultaneous activities, almost certainly produce less than comprehensive results. This area needs more research and experimentation.

Many classification systems tend to neglect more narrowly defined care work. In some cases, it is not explicitly differentiated at all and in others it is expected to be covered under housework. However, if this is not made clear to respondents, it is unlikely that care work will be reported. Ideally, care work should be disaggregated into active and passive areas, and also by the type of person receiving the care. The extent to which this can be done, however, must be informed by the overall method. With the stylized approach, there must inevitably come a point where the number of activities for which respondents are prompted results in fatigue for respondents as well as for fieldworkers and, thus, in poor quality data.

Training is clearly essential for time use studies, especially where they have only recently been introduced in a country or institution. Good backup materials, such as manuals, are also likely

to improve quality. Probably even more important is a solid fieldwork supervisory and support structure that allows fieldworkers who encounter difficulties or have queries to get rapid resolutions and responses.

Given the relative novelty of these investigations in developing countries, studies should be fully documented regarding both what worked and what did not work well. It is only by learning from the mistakes as well as the successes that work in this area will improve.

Finally, we need to find ways of encouraging more analysis of the data that are already available for a range of developing countries. As indicated above, often the agencies producing this information are prepared to make the raw data available to researchers—although sometimes at relatively high prices that will exclude many. In some countries, researchers have taken advantage of this opportunity. At the 2005 IATUR conference, for example, there were three papers based on the South African data by researchers from outside Statistics South Africa. Nevertheless, the data from all countries have been underutilized. One obstacle might be the limited number of people who feel confident in manipulating large datasets. The task can be particularly intimidating with time use surveys, and especially those based on diaries, because of the mass of information and relatively complicated file formats. The problem is exacerbated by the fact that many researchers who focus on gender issues prefer qualitative to quantitative approaches. The agencies producing the data can assist to some extent by providing clear metadata describing the different aspects of the datasets. They could also advertise the availability of the data more widely, and perhaps encourage academic institutions to use the data in their teaching.

Encouraging use of available time use data would be directly useful in the countries concerned. In addition, it would also raise awareness of the potential of time use work beyond these countries, and so motivate statistical agencies in other countries to conduct such surveys.

## Appendix: Summary of characteristics of available surveys by country and criterion

	Design	Scope and information	Quality	Weaknesses
<b>Argentina</b>	<i>ECV-2001:</i> Stylized In household survey	<i>ECV-2001:</i> 19,605 households 50,714 individuals 14+ years Urban only (90 per cent of population) Six domestic task activities Two-person care activities	<i>ECV-2001:</i> Yes/No for past week with no indication of time Separate week/weekend	<i>ECV-2001:</i> No indication of duration No check possible on full reporting
	<i>Buenos Aires 2005:</i> Full-time 24-hour diary Module in household survey	<i>Buenos Aires 2005:</i> 15–74 years	<i>Buenos Aires 2005:</i> Non-response 18 per cent Detailed codes for care Attention to simultaneous activities	<i>Buenos Aires 2005:</i> Only one city One person per household
<b>Brazil</b>	<i>PNAD:</i> In household survey	<i>PNAD:</i> National survey Conducted at regular intervals Single question on “domestic tasks”	<i>PNAD:</i> No distinction between different types of care work	<i>PNAD:</i> Person care may not be identified at all Time series but with questions changed over time Samples too small
	Individual researchers: Range of small surveys			
<b>Mexico</b>	<i>1996:</i> Stylized In household survey	<i>1996:</i> 12,000 households 8+ years Selected specified activities	<i>1996:</i> Small number of person care activities	<i>1996:</i> No indication of simultaneous activities
	<i>2002:</i> Stylized Module in household survey	<i>2002:</i> 4,783 households 12+ years Full coverage of all activities (80+ categories) Covers help from non-members	<i>2002:</i> Separate week, Saturday, Sunday Detailed codes for care	<i>2002:</i> Difficulties with simultaneous activities Large number of activities could affect quality
<b>Nicaragua</b>	<i>FIDEG 1995–1996:</i> Stylized Module in “gender” survey	<i>FIDEG:</i> 6,028 households Selected specified activities	<i>FIDEG:</i> Qualitative supplement	<i>FIDEG:</i> Availability of data and other information uncertain
	<i>EMNV 1998:</i> Stylized In household survey	<i>EMNV:</i> 2,325 households 6+ years Full coverage of all activities (22 categories)	<i>EMNV:</i> Simultaneous activities asked separately Relatively few codes for person care	<i>EMNV:</i> Difficulties with simultaneous activities

	<b>Design</b>	<b>Scope and information</b>	<b>Quality</b>	<b>Weaknesses</b>
<b>Bangladesh</b>	<i>BER 2005:</i> Stylized Module in household survey	1,000 households	Only one category for person care	Length of questionnaire might have compromised time use data quality No simultaneous activities
<b>India</b>	1998–1999 “pilot” Full-time 24-hour diary Stand-alone	Six representative states 18,591 households 75,000 individuals Normal, abnormal and “weekly variant” day	Detailed codes for care	High response rate Difficulties with simultaneous activities Limited background information
<b>Republic of Korea</b>	<i>KBS 1981 onwards:</i> Stylized Stand-alone  <i>KTUS 1999:</i> Full-time 24-hour diary Stand-alone Repeated in 2004	<i>KBS:</i> 3,500 individuals 10+ years Quota sampling by person  <i>KTUS:</i> 17,000 households 42,973 individuals 10+ years	<i>KBS:</i> Care not central focus Nothing on person care Time series data  <i>KTUS:</i> Detailed codes for care High response rate	<i>KBS:</i> Not fully representative Care not a focus  <i>KTUS:</i> 2004 data not mentioned
<b>South Africa</b>	<i>Statistics South Africa 2000:</i> Full-time 24-hour diary Stand-alone	8,564 households 14,553 individuals 10+ years	Detailed codes for care Attention to simultaneous activities Response rate 94 per cent	Two people per household
<b>Tanzania</b>	<i>NBS 2006:</i> Full-time 24-hour diary Module in household survey	Every fifth household of LFS sample 5+ years	Detailed codes for care Attention to simultaneous activities	Separation of care for children, ill, elderly, disabled Burden of all household members times seven days may affect quality
<b>Benin</b>	<i>INSAE 1998:</i> Stand-alone Light 24-hour diary	3,206 households 12,604 individuals 6–65 years	Limited disaggregation of person care codes	Limited information available about survey Difficulties with simultaneous activities Rural and urban separate samples Could be seasonal bias

Source: Author’s analysis.

## Bibliography

- Bardasi, E. and Q. Wodon. 2006. "Poverty reduction from full employment: A time use approach." In C.M. Blackden and Q. Wodon (eds.), *Gender, Time Use and Poverty in Sub-Saharan Africa*. Working Paper No. 73. World Bank, Washington, DC.
- Bonke, J. 2002. *Paid Work and Unpaid Work: Diary Information versus Questionnaire Information*. Paper presented at the Conference of the International Association for Time Use Research, Lisbon, 16–18 October.
- Charmes, J. 2006. "A review of empirical evidence on time use in Africa from UN-sponsored surveys." In C.M. Blackden and Q. Wodon (eds.), *Gender, Time Use and Poverty in Sub-Saharan Africa*. Working Paper No. 73. World Bank, Washington, DC.
- Eelson, D. 2000. *Progress of the World's Women 2000*. Biennial Report. United Nations Development Fund for Women, New York.
- Haraldsen, G. 1999. *The Design of Time Use Surveys in Developed and Developing Countries*. Paper presented at the Conference of the International Association for Time Use Research, Colchester, 6–8 October.
- Hoffmann, E. and A. Mata. 1998. "Measuring working time: An alternative approach to classifying time use." *Bulletin of Labour Statistics*, No. 1998–3. ILO, Geneva.
- Ironmonger, D. 2003. *There Are Only 24 Hours in a Day! Solving the Problematic of Simultaneous Time*. Paper presented at the Conference of the International Association for Time Use Research, Brussels, 17–19 September.
- Kan, M.Y. 2006. *Measuring Housework Participation: The Gap between "Stylised" Questionnaire Estimates and Diary-Based Estimates*. Working Paper 2006–11, Institute for Social and Economic Research, University of Essex, Colchester.
- Kes, A. and H. Swaminathan. 2006. "Gender and time poverty in sub-Saharan Africa." In C.M. Blackden and Q. Wodon (eds.), *Gender, Time Use and Poverty in Sub-Saharan Africa*. Working Paper No. 73. World Bank, Washington, DC.
- United Nations Statistics Division (UNSD). 2005. *Guide to Producing Statistics on Time Use: Measuring Paid and Unpaid Work*. Series F, No. 93. Department of Economic and Social Affairs, United Nations, New York.
- . 1999. *Towards International Guidelines in Time-Use Surveys: Objectives and Methods of National Time Use Surveys in Developing Countries*. Paper presented at the International Seminar on Time Use Studies, United Nations Economic and Social Commission for Asia and the Pacific, Ahmedabad, 7–10 December.
- Wodon, Q. and K. Beegle. 2006. "Labor shortages despite underemployment? Seasonality in time use in Malawi." In C.M. Blackden and Q. Wodon (eds.), *Gender, Time Use and Poverty in Sub-Saharan Africa*. Working Paper No. 73. World Bank, Washington, DC.

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