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A Critical Review of Selected Time Use Surveys

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Acronyms

VER	Bureau of Economic Research
CSO	Central Statistical Organisation
ECOSIT	Enquête sur la Consommation et le Secteur informel au Tchad
ECV	Encuesta de Calidad de Vida
EDS	Enquête Démographique et de Santé
EMNV	Encuesta Nacional de Hogares sobre Medición de Niveles de Vida
ENIGH	Encuesta Nacional de Ingreso – Gasto en Hogares
ENUT	Encuesta Nacional sobre Uso del Tiempo
IATUR	International Association of Time Use Researchers
ICATUS	International Classification of Activities for Time Use Surveys
ILFS	Integrated Labour Force Survey
ILO	Internacional Labour Organisation/Office
INEC	Instituto Nacional de Estadísticas y Censos
INEGI	Instituto Nacional de Estadística, Geografía e Informática
INMUJERES	Instituto Nacional de las Mujeres
INSAE	National Institute of Statistics and Economic Analysis
KBS	Korean Broadcasting System
KTUS	Korean Time Use Survey
NBS	National Bureau of Statistics
NSSO	Nacional Sample Survey Organisation
OECD	Organisation for Economic Cooperation and Development
PNAD	Pesquisa Nacional por Amostra de Domicílios
SNA	System of National Accounts
TAC	Technical Advisory Comité
TGNP	Tanzania Gender Networking Programme
UNIFEM	United Nations Development Fund for Women
UNRISD	United Nations Research Institute for Social Development
UNSD	United Nations Statistics Division

Introduction

Background

The United Nations Research Institute for Social Development (UNRISD) is coordinating a multi-year research project on the 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.

The project will involve systematic analysis of selected dimensions of care for a number of countries. The country papers will utilise a combination of 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.

This paper has been written in the preparatory stages of the project, as part of the process of selecting countries for inclusion in the study. The purpose of the paper is to review critically 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 what activities people do 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 aims for these surveys in developing countries have been to provide better information on the work done by different categories of people (male and female, in particular). More specifically, many of the surveys are interested in highlighting the time spent on unpaid activities that are generally either under-recorded in other surveys or not recorded at all, and many of which are not reflected in key economic indicators such as the gross domestic product (GDP). Time use surveys thus have a contribution to make in addressing what Elson (2000: 21) has described as the problem that women's activities 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). The SNA encompasses the rules that govern, among others, how countries should calculate their GDP so as to produce internationally comparable estimates. It states that GDP should be based on the value of activities that fall within a prescribed 'production boundary'. Since 1993, this production boundary includes 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 the work in producing services is paid. The production boundary thus includes subsistence work in agriculture and unpaid work done by family members (often women and children) in small family businesses. 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 that one 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, to watch television, to socialise, or to sleep and eat. The latter activities thus fail the third person test and are not regarded as work or production.

Unpaid care work is recognised as work that produces value and is included within the 'extended' production boundary. It is, however, excluded from the national accounts that underlie the 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 can 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 account of unpaid care work and its interactions with SNA production as well as the general well-being of the population.

As so often 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. There are 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 the GDP may be caused by shifts in certain production activities across the GDP production boundaries, e.g. '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 is on 'care work'. This can be understood in various ways, some narrower than the other. 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 recognised as falling within the extended production boundary of the SNA, but that are not included in national accounts and in calculations of GDP. Such activities include unpaid housework, care of children, 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 and other similar surveys that aim to measure the labour force as the latter is technically defined as people engaged in, or wanting to engage in, activities that are included in national accounts.

Unfortunately, as will be exemplified by the country case studies presented below, some time use studies have a narrower focus than unpaid care work as defined above. There are several ways in which the definition can be narrowed. In some cases this narrowing 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 '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 the UNRISD research in some countries will focus mainly on this narrower interpretation. It is also this work that, for several reasons, might be more difficult to identify through surveys. The country discussions below thus pay particular attention to the way in which this work is captured.

A complication in respect of care of persons is that it is sometimes understood narrowly as the time spent physically feeding the child or aged person. This excludes, on the one hand, time during which one is supervising or responsible for the other person. 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 can implicitly or explicitly exclude activities such as child care 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 will usually be covered by our definition of unpaid care work above.

The above paragraphs describe 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 done 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 the availability of data on these activities in the chosen countries in detail. The research work that follows would, however, often want to look at the interaction between these forms of work and unpaid care work. Some information on paid work should be available in all countries, but will be most useful when it is available from the time use survey itself as this will allow direct linking for the household-level micro-analysis.

A further boundary question relates to collection of fuel, an activity that is very 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 labour force survey and incorporated in employment estimates, it is not included in GDP calculations. Burkina Faso, in contrast, does include it in the GDP calculations (Charmes, 2006: 41). However, fetching water accounted for only 1% 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 especial interest in some of the country studies.

A final point to note is that unpaid care work is not identical with unpaid work in that there are some types of unpaid work that are not care work and that are include in the SNA production boundary. Such activities include unpaid work in a family business, as well as unpaid work 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

The 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 of Time Use Research about the availability of time use surveys in various countries, and with the aim of having regional balance, the following countries are covered in the present review paper: Argentina, Brazil, Mexico and Nicaragua (in Latin America); Bangladesh, India and Republic of Korea (in Asia); Chad, Mali, Tanzania and South Africa (in sub-Saharan Africa). The web-site of the United Nations Statistics Division (UNSD) contains a section devoted to time use surveys[1]. Of the countries chosen for the review, Mexico, Nicaragua, India, Republic of Korea, and South Africa are covered by the UNSD site. For these countries the site records summary information on context variables, the method of data collection, the stated purpose, the 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 the information required for this paper. In particular, it does not include the reports on the surveys or the data. It also does not include any information on training provided to fieldworkers.

For other countries information was obtained through websites and internet searches, contacts, and IATUR papers. Inevitably the coverage of different countries is uneven, with information on some countries being particularly patchy. In addition, similar documents for different countries differ in their usefulness for such a review. The standard reports on the survey differ, for example, in the extent to which they give technical details. Often these descriptions do not go much beyond describing sample selection and size. Importantly, the reports also differ in the extent to which they discuss difficulties encountered and weaknesses. Fortunately, the instruments (questionnaires) were available for almost all the surveys, at least for the part of the survey which involved time use measurement. These were useful in providing information on a range of aspects.

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

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[1] http://unstats.un.org/unsd/demographic/sconcerns/tuse/tu3.aspx

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Scope

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

- Assessment of the design of the survey/s;
- Delineation of the scope of the survey/s 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 the second phase of the project;
- Identification of issues for exploration through qualitative research in phase 2 of the project:; and
- Provision of some recommendations, in terms of design/methodology, scope, and training for fieldworkers for future time use surveys.

The country discussions below cover the first four aspects and attempt, among others, to cover all the relevant basic technical details about each survey. The three remaining aspects are covered in the discussion that follows the country case studies.

The technical details covered in the case studies include, for example, whether the time use survey was stand-alone or done as an add-on module to another survey, the format of the questions, sample size, age group covered, number of members covered per household, etc. Where available, the descriptions include some findings that relate directly to the focus of the 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 tables beyond those published by the agency undertaking the survey. Key issues relating to each of the four aspects for each of the surveys identified for the countries are summarised in a table in the appendix.

Selected issues

In the descriptions, certain issues have been given particular attention. The general aspects of these issues are discussed in this introductory section to assist readers in grasping the significance of particular characteristics of the surveys in different countries. The surveys conducted in developing countries over recent years have naturally drawn heavily on other, mainly developed, countries' experience of conducting surveys. The discussion below thus often reflects learnings from this long experience. The paper focuses, however, on those aspects of most relevance for developing countries and, more particularly, for the UNRISD research. A full exposition of issues to be considered in conducting time use surveys can be found in the recently produced United Nations' (UN) *Guide to Producing Statistics on Time Use* (UN, 2005).

The issues are discussed in more or less logical order. The section begins with further discussion of the concept of 'economic' work. This is followed by discussion of the different approaches that can be taken methodologically to collect information on time use. The discussion 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. The final three sub-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 in **'economic'** work. Time use surveys in developed countries, including those which use the standardised Eurostat guidelines, generally regard this time as a 'black box' during which only one or two activities are recorded (e.g. 'work' and 'short break from work'). Hoffmann & Mata (1988) point out that estimates of time worked derived from this approach (a) are dependent on the respondent's perception of what constitutes 'work', and (b) assume that all 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 had detailed codes for 'economic' work. Overall, however, solid analysis of the interplay of 'economic' work and other activities will require data beyond the time use variables. It will, for example, need to include consideration of the extent of the burden of unpaid care work on women and men who are employed (i.e. doing economic work), unemployed (i.e. not doing economic work but looking for such work), and not economically active (not engaged in economic work and not wanting to be so engaged). It will also need to understand characteristics of the 'economic' work done and how that might affect unpaid care work, for example whether the work is for fixed hours or variable, which hours of the day and days of the week it occurs, whether it is likely to have benefits attached, where the work is done, and so on. One will want to know something about the earnings of both the person being investigated and other members of the household.

Kes & Swaminathan (2006), drawing on Charmes' work, state 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 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 specialised surveys. While the paper does not investigate carefully the extent to which labour-related information is available about each respondent, all surveys seem to have some socio-economic information on the household as a whole as well as some basic (economic) work-related information on the respondents. At the household level, the questions might not always provide detailed information on income (whether from employment or other sources) and expenditure. The socio-economic aspects covered might also differ across countries, rendering cross-country comparisons difficult. Nevertheless, within each country it should be possible to do some socio-economic 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 activities that, theoretically, the person who does unpaid care work could purchase to avoid having to do 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 inter-relationships between economic care work and unpaid care work is likely to be a

common theme across research in different countries during the second phase 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 captured. Methodologically, time use surveys consist of two types:

- ▪ 'Stylised' approaches where respondents are given a pre-set list of activities and must state how long they spent (or usually spend) on each over a given period;
- ▪ 'Diary' approach where respondents describe the activities carried out at different times over a given period (usually a day at a time) in their own words and the activities are later post-coded.

Within each of the two categories there are further distinctions. For stylised approaches, for example, there are some surveys that attempt to provide for all possible activities, while others ask only about activities of particular interest to the survey designers. Where all activities are covered, there might also be some controls, for example checking that the times given add up to 24 hours. Such checks can become complicated, or impossible, where the survey allows for recording of simultaneous activities.

For diary approaches, some surveys provide a pre-defined set of activities from which the respondent must choose for every timeslot in the day. The UN's guide for time use surveys (2005) refers to these as 'lite' diaries. Other surveys, described by the UN as 'full' diaries, ask that the respondent describes what they did for each part of the day and codes are assigned afterwards.

One drawback of stylised approaches is that they do not provide information on the time of the day that different activities are done. 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 discussion below).

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

In terms of quality of information, the UN guide (2005: 58) notes that stylised questions tend to have a high degree of error. This can occur, firstly, because respondents tend to under-report activities that are considered less desirable or 'important' (such as relaxing) and over-report activities that are considered desirable or 'important' (such as time spent doing housework for women). Respondents might also find it difficult to estimate how long they spend on particular activities in total, especially when the activity concerned occurs in intermittent spurts. Simultaneous activities add a further complication in that some respondents might include them in

their estimates while others will think only of the 'main' activity that they were doing in trying to add together the different bits of their day. Finally, the accuracy of responses to stylised 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. The attraction of stylised approaches is that they involve far fewer questions and require less time than a diary. The data produced are also easier to analyse.

Kan (2006) compares estimates of time spent on housework derived from stylised 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 stylised questions. Overall, in line with other findings, the stylised 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 men. The gap for women is, however, related to the amount of time spent on housework as a secondary activity as well as the irregularity of housework. Presence of dependent children increases the gap for both women and men.

Kan refers to other work that shows that the size of the gap varies by socio-economic variables such as education. She refers, also, to analysis by others showing that the gap between the two estimates 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 concludes that the overall patterns in the two sets of estimates are 'roughly similar' (Kan, 2006: 3) and stylised estimates can thus be used for multi-variate analyses, for example 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), similarly, suggests that stylised approaches 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 is tested using the Danish Time Use Survey 2001, which again included both diary information and survey questions on paid and unpaid household work.

Bonke also finds that the absolute gap between the two estimates is greater for women than men, but the relative gap is smaller in respect of household work. The difference between the two estimates is much larger for unpaid than paid work, which Bonke attributes 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, firstly, 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 give substantially different results. Wood & Beegle (2006) use data from a nationally representative household survey conducted in Malawi in 2004 to investigate **seasonal effects**. The authors find strong effects in respect of agricultural work which would, in turn,

determine the extent to which there is time pressure in respect of household work. The seasonal differential in working hours is largest for those in the poorest consumption quintile (Wood & Beegle, 2006: 102).

A second issue relates to the **type of days covered** for each informant 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 the other 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 the days and when the activity is recorded could affect the quality of the data in various ways. Covering a larger number of days might give a better picture of the 'average' day for a particular person. It might, however, also induce fatigue in the respondent. 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 the diary is completed by the respondent. It would result in extremely long and tedious interviews if used for an interview-based approach. It is also unlikely that respondents will be able to recall activities a day later to the degree of accuracy required by 10-15 minute slots, especially in countries were awareness of clock time is not highly developed. Most of the countries described above thus use longer timeslots for the diary approach, but allow for more than one activity to be recorded for a particular slot. In some countries (the Indian questionnaire seems to use this approach) the time slots are not specified in advance. Instead respondents are asked when they began and stopped doing a particular activity, i.e. the duration of each activity 'episode' is recorded.

Simultaneous activities
One of the reasons why care as defined more narrowly might be less well captured than other forms of unpaid care work is that these activities are often undertaken **simultaneously** with other activities. For example, a woman may cook at the same time as she cares for children. Or she may sell fruit and vegetables at the road-side while having her children alongside, needing constant supervision. Ironmonger (2003) refers to several studies that show that as little as 25% 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 do not attempt at all to capture simultaneous activities. Others attempt to do so but often experience difficulties in obtaining accurate and comprehensive measures.

Contextual variables
Another common area of discussion in relation to time use surveys is **location** and other 'contextual' variables. Limited attention is given to these issues in the discussions below. Firstly, such contextual variables are only really possible with a diary-based survey, and relatively few of the surveys described below are of this sort.

Secondly, location is arguably of lesser interest in relation to care work than some other activities. They 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. Secondly, where care activities need to be undertaken elsewhere – for example, when taking a child, ill or elderly person to receive health services – the accessibility of such services becomes an issue, as well as any restrictions that might be placed socially on the movement of the carers.

The other 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 living in over-crowded 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 capturing un-recorded 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.

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

Questionnaire administration
The **way in which data are collected** will influence the quality of the data and will be influenced by, among others, the format of the questionnaire and literacy levels in the country. Stylised type questions will usually be administered by fieldworkers. With stylised questions, fieldworkers need to have a good understanding of the scope of the prescribed activities, and communicate this to informants.

Diary type questionnaires have usually been self-administered in developed countries in that respondents are given a copy of the diary and asked to fill it in during the day/s to be covered by the survey. Advantages proposed for this approach are that the information should be more accurate as the respondent fills in the activities as the day progresses and there is thus less of a problem of recall, and that it is less personally intrusive than being asked to talk about personal activities. In practice, the first advantage might not be as great as thought as many respondents probably leave filling in of the diary until the end of the day.

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. In Norway, for example, which is certainly not the worst performer in this respect, Haraldsen (1999) reports that the non-response rate for the 1990 survey was 36% in that 32% of those contacted did not respond at all and a further 4% did not want to complete the diary themselves. Non-response rates for earlier surveys were similar, at 35% in 1980 and 32% in 1970. High non-response

rates for time use surveys will almost certainly introduce bias in the findings in that 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 levels of literacy. Virtually all countries discussed below rely primarily on **interviews** to collect the information. The main exception is the Republic of Korea, where the overall educational levels are higher than in other countries. However, even in Korea interviews were found to be necessary with older and less educated respondents. In all countries reviewed, interviews were conducted face-to-face rather than telephonically as is done, for example, in Canada. 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. The drawbacks here are the labour intensity in that fieldworkers must be with the household for the full day. If observation is to be done 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 whether the person who did 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 this for them.

Classification of activities
The **activity classification system** is an important indicator of the type of information that will be available for analysis. The paper thus pays particular attention to the codes allocated for the narrow form of care work defined above, as well as to the overall number of codes in the system. A large number of different codes should give more finely-grained information about activities. However, a system with too many codes could overwhelm the respondent (and fieldworker) if each activity needs to be prompted for. Where activities are post-coded, 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 presented below pay particular attention to the number and nature of codes in respect of the narrow definition of 'care for persons' discussed above. As will be seen, there is considerable variation in the number of codes allocated, and sometimes no separate code at all. Only one country, Tanzania, seems to distinguish clearly 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) notes that although the time recorded for caring for adults is 'remarkably low' in South Africa, it is three times as long as the other countries to which he compares it. He suggests that this reflects the HIV/AIDS pandemic. Kes & Swaminathan (2006) note the paucity of literature on the impact of serious illness on time allocation patterns of women (and men, for that

matter). They refer to a 1999 study by Bollinger, Stover & 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 can, however, imagine that it might sometimes be difficult to know whether to classify a particular 'caree' as only one of ill, disabled or elderly if they fit more than one of these categories.

The approach chosen for the survey in terms of diary or stylised, and 'full' or 'lite' diary, has a strong influence on the level of detail that can be included in the activity classification system. Stylised 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' diaries can usually accommodate a greater level of detail as it is only the coders, and not the informants and fieldworkers, who need to understand the full 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 survey are often reported as mean hours or minutes spent on particular activities by particular sub-groups of the population e.g. male and female. These averages can be calculated in two different ways which can give very different results. Firstly, the average can be calculated over all members of the particular sub-group, whether or not all individuals in that sub-group have spent time on the activity in question. Secondly, the average can be calculated over only those members of the sub-group who actually did the particular activity in the time period under consideration. The difference between the two estimates will be virtually non-existent in respect of activities such as sleeping and eating, where we can expect almost all individuals to spend some time on the activity during any day. In contrast, the difference can be significant for activities were only a small proportion of the population – and a different proportion for different sub-groups – 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 **micro-analysis 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 done in respect of activity patterns of husbands and wives but could be extended beyond this, for example the activity patterns of children, mothers and fathers. Where surveys do not cover all/the majority of members, micro-analysis will need to rely on comparing time usage patterns of different 'types' of people, such as married women, married men, women with children, etc 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 and 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 done as an add-on module to another survey rather than as a stand-alone as for some countries only the module was available. Even where relationships are recorded, if these are only in relation to the household head, it will cause difficulties in analysis when discussing two (or more) individuals none of whom is the head.

Structure of report
The main body of the paper below 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 up in a way that hopefully facilitates comparisons across countries, and highlights aspects that are important in deciding which countries would be appropriate for inclusion in the second phase of the study. However, the desire for comparability has not been allowed to stand in the way of discussions of aspects of a particular country's survey that are specific and not relevant for 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. Thus, for example, for some countries full questionnaires, manuals and even training materials were available, while for others only short extracts of the questionnaire were at hand. Similarly, analytical reports were available for some countries which 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 references for a specific country are listed under that country's description. More general references are listed at the end of the report.

After the country descriptions, the paper provides 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 already available, while data from a time use module included in the 2005 Buenos Aires Encuesta Annual de Hogares (Annual Household Survey) should be available in the near future.

Esquivel (2006) has successfully used the 2001 ECV 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 finds that women entered the labour force at a time of economic crisis when there were high

rates of unemployment and poverty, thus adding an 'economic' work burden to their existing unpaid care work burden.

ECV-2001 collected 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. These account for 90% of the population in Argentina. The data from the survey are in the public domain.

The module of interest to us included exploratory questions on a set of domestic tasks and the time devoted to them measured in hours per day during week days and weekends. Respondents were presented with a list of pre-defined tasks for which they had to indicate whether they had engaged in the particular activity. The list included six tasks related to domestic chores ((i) doing the laundry and ironing, (ii) minor repairs, (iii) cooking, (iv) cleaning, (v) washing dishes and (vi) doing the shopping), and two related to care ((i) childcare and (ii) elder or sick care). 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 include care for household members as well as non-members.

The survey uses a stylised approach. 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 the time spent on different activities conducted simultaneously would be counted only once, but that all activities should have been reported as having been undertaken. A total of 6.5% of male respondents and 31.7% of female respondents said that they had done activities not specified in the list, suggesting that the list was not comprehensive.

ECV-2001 also included a section on children aged 0-4 years, which 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.

For her analysis, Esquivel developed a categorisation for households which could be helpful in other countries where the nuclear household is not the norm. The categorisation provided for sub-types of 'non-family' and 'family' households as follows:
- Non-family households:
  - Unattached individuals: one individual.
  - Other non-family arrangements: one or more individuals with no family relation with the household head.
- Families:

- 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.
- Other family arrangements: household head's relatives living together other than the above mentioned types.

As noted above, new time use data should soon be available from a large household survey conducted in Buenos Aires in 2005. The Buenos Aires Encuesta Annual de Hogares (Annual Household Survey), which contained the time use module, was conducted by the Directorate-General of Statistics and Census of the City Government. Buenos Aires City accounts for 8% of Argentina's population according to the 2001 population census. The non-response rate for the time use module was 18%.

The survey and analysis are being done under a cooperation agreement between the Statistical Office and Universidad Nacional de General Sarmiento. Valeria Esquivel of the university has acted as coordinator and is fully documenting the experience. Fieldwork was conducted during November and December 2005. As at the time of writing, data had been entered and cleaned, and analysis programmes written. The only hold-up was the estimation of weights.

The method used in the 2005 survey in Buenos Aires drew heavily on the South African approach (see below). Divergences from the South African approach included the following:
- Only one randomly selected person per household was selected (rather than the two selected in South Africa), between the ages of 15 and 74 years (rather than all people aged 10 years and above);
- Fieldworkers were required to ask the respondent explicitly when they work up and when they went to sleep, so as to frame the day in a way that the respondent might normally think about it. This would avoid the tendency in countries without this question for respondents to say they woke up in the first timeslot of the diary, even when that time-slot if 04h00-04h30 am;
- Fieldworkers asked the respondent the time of beginning and ending economic/market-related work. A separate set of sub-questions was then asked in respect of 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 provides for ten major categories of activities, three of which fall within the SNA production boundary (employment for establishments, primary production activities not for establishments, and services for income and other production of goods not for establishments); three of which cover unpaid care work (household maintenance, management and shopping for own household; care for children, the sick, elderly and disabled for own household; and community services and help to other households); and four for non-productive activities (learning; social and cultural activities; mass media use; and 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 are consolidated into a single category using codes 100-190, rather than distinguishing three groups – work for establishments, primary work not for establishments and secondary and tertiary work not for establishments. The sub-categories of the single category for 'economic' work distinguish between work in the first job and work in other jobs rather than distinguishing activity by status in employment (e.g. wage/salary worker, outworker, unpaid worker, self-employed/employer). In this respect the Buenos Aires approach reverts to the original suggestion by UNSD, while the South African version represented a limited attempt at unpacking the 'black box' of economic work. Elsewhere in the Buenos Aires questionnaire there are questions relating to the first and secondary jobs, including the amount of time spent on each, which would make the two-fold first vs other jobs distinction meaningful and useful for analytical purposes.;
- In category 5 (care for children, the sick, elderly and disabled for own household), a separate category for supervision (passive care) of adults in own households is added;
- In category 6 (community services and help to other households), the category of community work such as cooking for collective celebration is omitted;
- In category 6, a category of informally assisting other households with meals, cleaning, washing, etc is added;
- In category 6, the category of participation in meetings and involvement in civil responsibilities is omitted;
- In category 9 (mass media use), there is separation of activities in respect of (a) receiving care from medical professionals (even if family members), (b) receiving other personal care services not connected with own work and (c) receiving non-professional care from members or non-members of households.

As in South Africa, there was an attempt to get an equal spread over all days of the week, but without specifying the exact day to be covered for each household. Also similar to South Africa, the fieldworker was 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. The conducting of a pilot survey also testifies to a level of preparation that might not be evident in all other studies.

In relation to simultaneous activities, the fieldworker's manual includes detailed instructions as to what the fieldworker should do where more than three activities were named for a particular half-hour. They were, for example, asked to group together similar activities into a single activity, and then to prioritise the activities said to take the longest time. These detailed instructions were reportedly rarely needed as respondents seldom named more than three activities.

The fieldworker's manual also contains detailed instructions in relation to childcare. These emphasise that supervision and being on call should be regarded as activities. They also specify how to deal with childcare done simultaneous to other activities over several time slots. 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 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 was done for pay.

Sources:
Clasificador de Actividades de Uso del Tiempo CABA
Encuesta Anual de Hogares Ciudad de Buenos Aires. Manual del encuestador modulo
    de uso del tiempo 2005. Dirección General de Estadística y Censos – Secretaría
    de Hacienda y Finanzas–Gobierno de la Ciudad de Buenos Aires
Esquivel V. '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.
    www.genderandmacro.org

Brazil

Brazil has not had a full-scale survey or module on time use. Since 1992, however, the the Pesquisa Nacional por Amostra de Domicílios (PNAD), a household-based survey, has included a question about household tasks. 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 includes the following questions for persons aged 10 years and above:
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?

Dedecca (2005: 13) notes 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 the form of graphs which do not indicate the exact size of the estimates.) Nevertheless, because average hours spent on economic work are also high, the ratio of hours spent on 'social reproduction' to hours spent on economic work is the lowest of all other countries for which the comparison is made (2005: 14). As in other countries, women with children have a higher average of total working hours than other groups. Women in rural areas and isolated settlements also tend to spend 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: 18-9) identifies the following limitations to the approach adopted to 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;
- The complexity of the survey as a whole, which prevents more detail on household tasks being collected.

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

Aguiar (1999) provides a history of time use studies conducted in Brazil up to the end of the previous century. She notes at the outset that most studies conducted up until that time had been small-scale local studies. Most had been conducted by sociologists investigating the time spent on household work. Thus a 1984 study focused on 72 peasant households using a nine-category system for classifying activities; a 1981 study collected information on 45 women-headed households over a week using an eleven-category classification; a 1987 study focused on 15 households with children under 14 years old in the city of São Paulo; and a second 1987 study focused on 28 married women with children in the city of Salvador. These studies will, unfortunately, not provide the sort of data envisaged for the UNRISD country explorations.

A study by de Souza in Rio de Janeiro in 1973 was the first to attempt to obtain a representative sample. The sample consisted of 225 individuals (i.e. still very small compared to other studies described in this paper) and used a similar approach to that used for the 1964 Multinational Comparative Time-Budget Research Project which covered twelve countries spanning both 'market' and centrally planned economies. The coding system was also similar to that used in analyzing the 1964 data, with 37 categories organized into nine major groups, namely paid work, domestic work, shopping, child care, 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 an average of 10.7% of the day being spent on domestic work, 2.5% on shopping, and 2.4% on child care (Aguiar, 1999: 21. The table heading states that the estimates represent minutes, but the total for the different activities adds to 100, which suggests that these are percentages.) Unfortunately, the estimates are not disaggregated by sex or in any other way.

Aguiar herself conducted a multi-phase time use survey in a sugar cane plantation community Region of Campos north of Rio de Janeiro. Unfortunately the paper 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, as follows: (1) activities related with preparing food for the household; (2) cleaning rooms, sewing and repairing clothes; (3) looking after children - breast feeding, bottle-feeding, feeding in the mouth, dressing, washing and cleaning; (4) remunerated work; (5) shopping; (6) sleeping; and (7) 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 the above categories. In a final step, women were asked about activities of all members of their households. Finally, a sub-sample was selected and time diaries obtained from all residents. An informant was selected for each household and given a digital watch and a set of coloured pencils, with one colour allocated for each household member. Five local people were hired and trained to work as supervisors. The supervisors 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, in an initial pre-research test, during training, and during a pilot. Informants were shown drawings of each of the different pre-defined activities and asked to indicate the starting and the ending time of each activity. Aguiar notes that further work of this kind might need to use a longer list of activities. Unfortunately, she does 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? International Association of Time Use Research: Colchester

Dedecca CS. 2005. On times and gender in Brazilian society. International Association of Time Use Research Conference: Tours

http://www.ibge.gov.br/: Questionnaire download questpnad2004.pdf

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 Encuesta Nacional de Uso del Tiempo (National Survey on Time use) as a module of the Encuesta Nacional de Ingreso – Gasto en Hogares (ENIGH) (National Household Income and Expenditure Survey). The official name of the 1996 survey was Encuesta Nacional de Trabajo, Aportaciones y Uso de Tiempo 1996. The survey as a whole covers 12,000 households and is intended to be representative of the population as a whole. (Brunnich et al state that the sample size is 5,000 households.) Inclusion of the module in this 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 and over were interviewed about the previous week's activities, using closed questions, 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, the sick and the elderly), family activities, community and other services. Household chores include cleaning the home, washing dishes and clothes, ironing, meal preparation, rubbish disposal, collecting water and fetching firewood. Family activities involve activities such as 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 'lite' diary was used which required each informant to specify the activities done during each timeslot of the day choosing from a list of prescribed activities. This approach was adopted so as to include more activities than specified in 1996. The activity coding schedule was organised according to 14 major groups with 68 sub-groups, using the trial classification of the UNSD as basis. Unlike the earlier survey, the 1998 module provided for capture of simultaneous activities and included a location variable. The format was a matrix showing all the activities using the trial classification of the UNSD. 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?'

Very little further information is available on the 1998 survey, and some later works ignore it completely. This suggests that there might have been quality or other problems with the 1998 venture.

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

The ENUT-02 aimed at a sample size of 6,126 households, with a realized sample of 4,783 households. INEGI estimates that the results are accurate within a 90% confidence interval. While the earlier survey had included children from eight years, in 2002 only children aged 12 years and above were included. The publication containing the final tabulations provides information on error margins and confidence intervals. It states that the non-response rate was 15% or less. A total of 6,288 dwellings were in the original sample for the main survey, of which 5,445 were reached. Reasons for non-complete coverage included dwellings not found, migration, etc. As noted above, time use information was obtained from 4,783 households. The

time use module was administered after the main part of 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 the two 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 approach to data collection was similar, with a fieldworker asking about the previous week's activities. However, the questionnaires enquired about far more activities than in 1998 – more than 80. The ENUT-02 also enquired about activities undertaken by non-household members present in the household. Data collection for the 2002 survey took place between 18 November and 13 December 2002, during winter. The data do 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 a week. The week-long coverage was chosen so as to avoid difficulties in organising fieldwork that obtained a balanced distribution of days of the week. In 2002 there was, however, a further distinction in that respondents were asked how much time they spent on the specified activities from Monday to Friday and on the weekend. 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 organised into 16 groups. Two of the groups are of particular interest for UNRISD purposes, namely (a) support and care of people with physical or mental disabilities; and (b) support and care of children and other members of the household.

Under support and care for people with physical or mental disabilities, the following sub-categories are enquired about:
- Feeding or helping to eat;
- Bathing, cleaning, etc or assisting to do this;
- Helping to go to the toilet and changing diaper;
- Giving any special therapy, including talking to him/her;
- Being responsible for/looking after this person while you do other things; and
- 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 are ten sub-categories as follows:
- Feeding a small child;
- Changing the nappy 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, day-care 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 day-care meetings, festivals, etc or activities to support a school that household members attend; and
- Accompanying a household member any place.

Brunnich et al (2005) note 'well documented' problems in relation to ENUT-2002, including problems with recall over the full week and difficulties in recording simultaneous activities. The questionnaire did not include any check as to whether all activities summed to 24 x 7 hours. Where the total exceeded this, one could assume that this reflected simultaneous activities. However, there was also no check on cases where less than 24 x 7 hours' activity was reported. The tabulation report notes that there was a comprehensive validation exercise to avoid having inconsistencies in the data. Brunnich et al also note Gómez Luna's findings that the results of the TUS 1996 and ENUT-02 are very similar in respect of unpaid work. For example, the earlier survey finds that women carry out 81.6% of unpaid household work compared to 82.5% in ENUT-02.

Table 1 presents further results from the 2002 survey. It shows the percentage of males and females aged 12 years or more undertaking specified activities, and the average number of hours and minutes spent by those reporting on these activities. The report notes that the estimates for care of the ill and disabled are likely to be unreliable because only a small proportion of the population reports doing these activities, and the sub-sample is very small as a result. The report notes further that the two items in respect of supervision are activities that can be done simultaneously with other activities. The table shows, as expected, that for all activities women are more likely than men to spend some time. In addition, the time spent by women who doe each activity is noticeably longer than that spent by men for all activities except care of the ill. The male:female gap is especially wide in respect of supervision of children and people with disabilities.

Table 1 Participation rates and average hours:minutes spent on care activities by sex, 2002

	Male		Female	
Activity	%	Hours	%	Hours
Care of children & support to other household members	30.6	7:18	49.3	13.24
Care of ill	1.6	7:54	3.2	6:54
Care of disabled	1.6	5:00	2.4	9:09
Supervising children	9.8	7:36	25.0	17.01
Supervising disabled	1.2	11:12	1.9	20.08

Source: Instituto Nacional de Estadística, Geografía e Informática, 2005: 27

The estimates above reflect average time spent by people who do a particular activity. Luna (2005) provides estimates averaged across all people aged 12 years. She reports a 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.

Chapter four of the final tabulations focuses on help received by households from non-members. For this section there are prompts in respect of only eight activities, as follows:
- 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, telephone;
- Doing or supervising any electrical, plumbing, repairs etc;
- Helping any member of the household (children, elderly, ill, disabled, etc); and
- Transporting any member of the household to school, day-care centre, hospital, medical visit, etc.

There are four tables in chapter four, namely:
- 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 in 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 in 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 in terms of relationship of the 'helper' to the head of household between resident domestic employees, non-resident domestic employees, and non-resident relatives and friends.

The data from ENUT-2002 survey were used by Nigenda and Matarazzo to investigate household health care in more detail, with a particular focus on care of the elderly. They followed this up 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 etc people. The authors note that the structure of the survey and the breadth of the information did not allow deepening of the topic because (a) the reference period for collecting information was one week; (b) the survey did not take account of those receiving care outside the family; (c) they could not tell if the care related to chronic or shorter-term episodes; (d) fieldwork suggested that people have difficulty estimating time devoted to particular activities; and (e) socio-cultural reasons result in people under-estimating 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 (2002) used time use data from the surveys of both 1996 and 2002 together with other data from the ENIGH to construct satellite health care accounts. The accounts include both household care and care provided by non-profit institutions.

Sources

http://unstats.un.org/unsd/demographic/sconcerns/tuse/profile.aspx?id=3

Brunnich B, Druce P, Ghissassi M, Johnson M, Majidi N, Radas AL, Riccheri PR, Camille de Sentenac C & Vacarr D. June 2005. Three Case Studies of Time Use Survey Application in Lower and Middle-Income Countries. A Report Commissioned by the Gender unit in the Bureau for development policy at The United Nations Development Programme. Prepared by the Institute of Political Studies of Paris (Sciences-Po), Paris, France

Comision Economica Para America Latina y el Caribe – CEPAL. 2004. Informe de la Reunion de Expertos: Encuestas sobre uso del Tiempo. Santiago de Chile, 11 y 12 diciembre de 2003. http://www.inegi.gob.mx/est/default.asp?c=5436

Instituto Nacional de Estadística, Geografía e Informática. 2002. Encuesta Nacional Sobre Uso Del Tiempo 2002: Questionnaire

Instituto Nacional de Estadística, Geografía e Informática. 2005. Encuesta Nacaional sobre Uso del Tiempo 2002: Tabulos Basicos Definitivos

Instituto Nacional De Estadisticas Y Censos. 1998. Encuesta Nacional De Hogares Sobre Medicion De Niveles De Vida: Manual Del Encuestador. Documento EMNV98

Lopez, M de la Paz. 2003. Encuestas de uso del tiempo. Powerpoint presentation. Comision Economica Para America Latina y el Caribe – CEPAL. 2004. Informe de la Reunion de Expertos: Encuestas sobre uso del Tiempo. 11-12 December 2003: Santiago de Chile

Luna MEG. 2005. Cuenta Satélite de Salud en los Hogares. INEGI. Reunión Regional Las Encuestas de Uso del Tiempo y la Cuenta Satélite de Salud en los Hogares. 21-23 November 2005: Santiago de Chile

Luna MEG. 2003. El Trabajo No Remunerado En El Sistema De Cuentas Nacionales. Una Aplicación De La Encuesta De Uso Del Tiempo. El Caso De Mexico. Reunión De Expertos En Encuestas Sobre Uso Del Tiempo. 11-12 December 2003: Santiago de Chile

Nigenda G & Matarazzo C. 2005. La encuesta del uso del tiempo y el cuidado de la salud en el hogar en México. Powerpoint presentation. Las encuestas del uso del tiempo: Su diseño y aplicación. 21-23 November 2005: Santiago de Chile

Nicaragua

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

The FIDEG study bore the title: '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). The study covered 6,028 households – 3,015 urban and 3,013 rural. The data are representative at the departmental level, where there are 17 divisions. The survey was complemented by documentary review and interviews with key informants. Activities were recorded in respect of a typical day, and the number of minutes spent on different activities were collected in respect of all members of the household. For rural areas, the survey distinguished between a typical day for harvest and non-harvest seasons.

Domestic work was defined to include: 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 men (males?) spent 15.0 minutes of a typical day on reproductive work as opposed to the 84.9 minutes spent by women (females).

INEC collected its time use data from 50% of all households in the selected sample for the EMNV, giving a total coverage of 2,325 households – 1,200 urban and 1,125 rural. (A World Bank website states that the total sample was 4,209 households, suggesting that more than 50% were covered by the time use module. The difference in survey size between the two sources could reflect variation between the planned and realised sample.) The data are representative at the macro-regional level, where there are seven divisions. Data were collected between April and August. INEC makes the raw data from the survey available to researchers who wish to undertake further analysis.

The questionnaire focused on the day prior to the interview, and asked about the number of minutes spent on different specified activities by members of the household aged six years or more. Questions were asked in respect of work, education, household maintenance, personal and social activities. Work was sub-divided into 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, care of children or the disabled, care of elderly.

The EMNV survey as a whole covers education, health, economic activity, housing, consumption, household enterprise, and agro-pastoral activities as well as time use. The INEC website (www.inec.gob.ni) contains a variety of relevant documentation, including questionnaire, fieldworker manual, report, data files and metadata describing the format of the data.

The section of the questionnaire dealing with time use notes at the top that activities related to household include time spent on travel related to this. There are 22 questions related to specific activities of the form: '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 question is asked: 'Did the person spend time on other activities different to those mentioned?' 'If yes, how much time (in hours and minutes)?' This is followed by an instruction to sum the hours and minutes from questions 1 to 23 to check that they add up to 24 hours.

Subsequently, there are two further double-barrelled questions: 'Did the person spend time on caring for children at the same time as other activities?' 'If yes, how much time?' and 'Did the person spend time on other simultaneous activities? Yes/No', 'If yes, how much time?' Space for 'observations' is included on the last page. Unfortunately, this way of asking about simultaneous activities does not identify which other activities were combined with child care or the other simultaneous activities.

A long report is available on the survey. The report provides a comprehensive set of standardised tables listing all activities and using different disaggregations. Sex and

residential area (urban/rural) are used as central axes of analysis. These are complemented with life cycle, educational level, marital status, and employment status.

The fourth chapter of the report uses a household typology which follows the proposal of Mexico's INEGI in 'Uso del tiempo y aportaciones en los hogares mexicanos'. The typology distinguishes between traditional households (41%), modern households (23%), and single parent households with female heads (21%). The chapter discusses the time spent by (a) spouses (where relevant) (b) children (c) and other members.

The web-site gives access to a range of documents relating to the survey, including a 240-page fieldworker's manual. Of the 240 pages, just over four pages relate directly to the time use section. This section notes that mothers can report on activities of children under ten years of age. In respect of the check question, the manual notes that if the recorded hours do not sum to 24 hours, the fieldworker must work through the activities with the respondent until the sum is correct.

In reflecting on the survey, Renzi (2003) notes the importance of taking the dates/timing of the survey into account. She also recommends that the approach to simultaneous activities be refined to address difficulties experienced in capturing, processing and analysing these. She questions whether surveys should attempt to interview all members of households or only random selected members.

Sources

http://www.worldbank.org/LSMS/country/ni98/ni98home.html
www.inec.gob.ni
Aguilar Ml & Espinoza I. Instituto Nacional De Estadisticas Y Censos. Estudio Uso Del Tiempo De Los Y Nicaragüenses. Gobierno De La Republica De Nicaragua.
Renzi MR. 2003. Nicaragua: Encuestas de uso del tiempo: Dos experiencias: sociedad civil y gobierno. Powerpoint presentation. Informe de la Reunion de Expertos: Encuestas sobre uso del tiempo. 11-2 December 2003: Santiago de Chile

ASIA

Bangladesh

IATUR's 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 they are, in any case, probably too old to be of use for the UNRISD project which will focus on current patterns of social provision of care.

Fontana & Wobst (2001) note that time use data in Bangladesh are 'sparse'. They refer to two ad hoc surveys but note that both relate only to specified rural districts. They note that the 1990-91 labour force survey recorded information on hours per week spent on household activity, but this information was not collected in the 1995-96 labour force survey. In addition, it was not clear how the activities were classified. The International Labour Office (ILO) (2006) notes that the 1984/5 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 is the one recently conducted under the auspices of the Bureau of Economic Research (BER) of Dhaka University, with support from Canada's International Development Research Centre (IDRC). At the time of writing, the report on this survey had not yet been finalised.

The main focus of the BER's work is on intra-household distribution and inequality. Using a total planned sample of 1000 households, from both rural and urban areas, the aim was to use anthropological methods within a survey to capture data on distribution of consumption expenditure among household members. The project abstract describes the venture as follows: '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.'

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 is that when total calorie intake is considered, the differences in 'activity levels' are reflected in differences in calorie intake. They thus conclude that 'is inequality averse in health outcomes of its members' (Khondker, forthcoming) i.e. 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 is 51 pages long. It consists of 15 sections (some with sub-sections) of which section 8 covers time use. The title of this section is 'Time allocation/use by members (three day observation)'. Time use is recorded in a separate matrix for each of the three days. Vertically the matrix lists 30 activities, divided into the five groups of production/occupation related activities (17 activities), domestic/household activities (5 activities), leisure activities (4 activities), social activities (3 activities) and other activities (only prayer time is included here). Horizontally there is a column for each household member in which the number of hours spent by each on every activity is to be recorded.

The domestic/household activities are as follows:
- Buying/shopping;
- Cooking/baking;
- Regular household activities (house cleaning, feeding animals, operating tubewell, chopping firewood);
- Washing (laundry), cleaning, do the dishes; and
- Care of other children/ adults/ elderly.
The combination of care of different types of people into a single category limits the analysis that will be possible using these data.

The final row of the table indicates 24 hours, suggesting that all the other time amounts should sum to a single day. This has the implicit result that simultaneous activities will not be recorded.

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

Specially trained enumerators were used for the investigation. These included female enumerators recruited from the region where the survey was undertaken and with experience of participatory research.

Sources
Bureau of Economic Research. September 2004. Capturing Intra-Household Distribution and Poverty Incidence: A Study on Bangladesh: Questionnaire
Fontana M & Wobst P. April 2001. A Gendered 1993-94 Social Accounting Matrix For Bangladesh. Tmd Discussion Paper No. 74. Trade and Macroeconomics Division, International Food Policy Research Institute: Washington DC.
International Labour Organisation. 2006. Measuring Gender Dimensions of the World of Work in Bangladesh: A Training Guide. International Labour Office: Geneva
Khondker BH. Forthcoming. 'Capturing Intra-Household Distribution and Poverty Incidence: An Overview'. Chapter 1.

India

In 1998/99 India's Ministry of Statistics and Programme Implementation conducted a time use study which was categorised 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 (Haryana, Madhya Pradesh, Gujarat, Orissa, Tamil Nadu and Meghalaya) selected to be as representative as possible of the different regions of the countries. The survey was administered in four quarters so as to cover the full year. Diaries were completed for all household members in the selected households in respect of three days during the reference week – a 'normal' day, 'abnormal' day, and 'weekly-variant'. These were found to account for 6.51, 0.55 and 0.44 of the seven days of a week respectively. A total of 18,591 (of a planned 18,628) households were covered, giving a total of approximately 75,000 individuals. The raw data are made available to researchers both inside and outside the country. (Details and order form available at http://mospi.nic.in/mospi_data_time_user_survey.htm.)

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 the UNSD as well as proposals made by Eivind Hoffmann and Adriana Mata (Hoffmann & Mata, 1998) of the ILO. The resultant classification provided for 176 activities grouped into nine major groups and 16 two-digit sub-groups. The nine groups were as follows:
I Primary production activities
II Secondary activities
III Trade, business and services

IV Household maintenance, management and shopping for own households
V Care for children, the sick, elderly and disabled for own households
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 account for one and a half pages of the nearly six-page listing of codes. Secondary activities account for almost a page. An idea of the unusual level of detail provided in respect of 'ordinary' work is given by the following sub-categories for crop farming, kitchen gardening, etc:
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 protection of crops
118 Sale and purchase related activities
119 Travel to the work
This level of detail represents a way of unpacking the 'black box' of 'economic' work. It entails extra work for the respondent and fieldworker in specifying exactly what was being done at a particular time of the day.

Somewhat less detailed disaggregations are provided in respect of unpaid care work, but even here the disaggregation goes beyond what is found in most stylised surveys. Thus the sub-codes 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, etc. /PHC/doctor
541 Physical care of sick, disabled, elderly household members; washing, dressing, feeding, helping
551 Accompanying adults to receive personal care services such as hairdresser's 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) reports the estimates show in Table 2 in respect of the key codes for care of children and adults. The averages are calculated for those actually reporting a particular category rather than for the total population of male or females. Generally, the time reported for females is longer than that for males. The two supervisory activities are, however, exceptions in this respect, as is (marginally) the time spent accompanying adults to receive personal care services. The exception in respect of the latter activity might reflect restrictions on mobility of women. Information 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 women and men. These should be able to be calculated from the raw data. Rajivan notes that overall, more than twice as many female as male respondents (2,618 vs 1,296) spent time on care of children, sick people and elderly people.

Table 2 Average time per week spent by those doing unpaid care activities by sex

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 records total and per capita household consumption, 'means of livelihood', area of land owned and area of land possessed. It also provides for one industry and occupational code for the household as a whole, presumably referring to the head. There is also a 'type' classification of the household which combines industry, occupation and employment status to arrive at five categories for rural areas and five for urban areas.

The individual section of the questionnaire includes marital status, usual principal activity, and usual subsidiary activity status. The activity status, industry and enterprise status (similar to formal /informal) are also recorded. 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 does not specify what type of decisions.

The diary section is open-ended in terms of both describing the activity and giving start and end times. It provides for an indication of whether each activity is multiple (simultaneous) or not. Location and whether the activity was paid for must also be indicated. Options for mode of payment are paid (presumably in cash), payable in kind, unpaid and other. A further contextual variable distinguished activities performed 'inside' and 'outside'. Hirway (2000) explains that this was intended to distinguish work done at home.

The exercise was effected through the state-level statistical organizations. Pandy (nd) describes some of the efforts that went into ensuring the success of the exercise. These included a five-day training of trainers for all states organized by Central Statistical Organisation (CSO), 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 given. Field training was also organised in one rural and one urban area to test the questionnaire and experience possible difficulties that fieldworkers might encounter. A detailed instruction manual described

how to fill in the questionnaire. Hirway (2000) writes about subsequent efforts to ensure good performance by fieldworkers. These included supervision, field visits by experts, frequent meetings of fieldworkers, and retraining.

A Technical Advisory Committee (TAC) was constituted under the chairpersonship of Indira Hirway of the Centre for Development Alternatives, Ahmedabad. The committee included activists and academics alongside government officials. The TAC held meetings to finalise the questionnaire, sampling design, tabulation plan etc. Members of the TAC also visited the field to see the quality of field work. State-level Technical Advisory Committees were also constituted with non-governmental representation. Each state was also asked to submit regular progress reports.

Respondents were interviewed rather than completing diaries themselves. The fieldworker team consisted of a woman-man pair to ensure that women could be interviewed by women. When women were not available, local Auxiliary Nurse Midwives or Anganwadi workers were used. Fieldworkers stayed in the area they were investigating for a period of nine days. The first two days were used for listing and sample section. The third day was used to collect information on the pattern of type of days for selected households. The remaining days were used 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 these tended to cluster on the weekends, leading to work overload for fieldworkers on Sundays and Mondays.

For simultaneous activities, fieldworkers were asked to determine 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 to be distributed equally between them.

Documentation on the Indian survey is refreshingly honest about the problems encountered. These included:
▪ Difficulties for many respondents in stating the exact amount of time spent on different activities due to limited use of clocks;
▪ Possible reluctance on the part of women in acknowledging that they engaged in economic activities because of the low esteem accorded '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 on the part of the fieldworker.

Hirway (2000) provides a full account as to how and why various methodological decisions were made. In terms of pre- and post-coding, the former was chosen as facilitating responses. (In practice, it seems that it was probably the fieldworker who would choose the code rather than the respondent so this is not pure pre-coding.) In order to avoid some of the disadvantages of this approach, the full three-digit schedule was tested to see whether it included all activities, and a stock-taking exercise was done at the end of the first round to see what changes might be necessary. Additions at this point included collecting flowers/leaves for pooja (meditation), resting due to sickness, and forced leisure. The latter was added to distinguish between leisure time spent through choice and leisure 'forced' through lack of available work

opportunities. (In countries where this distinction is not made, a possible way of analyzing this distinction would be to compare the time spent on leisure and the type of leisure activities done between employed, unemployed and not economically active people. It would be among the unemployed (i.e. 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 the activities with respondents to ensure that no activities were omitted. Finally, an 'other' code was added to each sub-group 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%) than recorded by the National Sample Survey Organisation (NSSO) (6.1%) in another survey. Less surprising, across different categories, women generally spent twice as much time as men on taking care of children, sick 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 about 42 of the 168 hours in the 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. Further, within the SNA activities, 51% of female activities were unpaid, compared to 33% of male SNA activities.

Sources
Brunnich B, Druce P, Ghissassi M, Johnson M, Majidi N, Radas AL, Riccheri PR, Camille de Sentenac C & Vacarr D. June 2005. Three Case Studies of Time Use Survey Application in Lower and Middle-Income Countries. A Report Commissioned by the Gender unit in the Bureau for development policy at The United Nations Development Programme. Prepared by the Institute of Political Studies of Paris (Sciences-Po), Paris, France
Hirway, Indira. 2000. Time Use Surveys: Concept, Classification and Related Issues Lessons From the Indian Pilot Time Use Survey, http://www.unescap.org/stat/meet/rrg3/twsa-09.pdf
Pandey RN. No date. Operational Issues in Conducting The Pilot Time Use Survey in India. Central Statistical Organisation, Ministry Of Statistics And Programme Implementation, New Delhi [downloaded from UNSD website]
Rajivan AK. 1999. Policy Implication for Gender Equity: The India time use survey, 1998-1999. International Seminar on Time Use Surveys 7-10 December 1999: Ahmedabad
Source.ind (from UNSD website)
Time Use Survey (July, 1998 - June, 1999): Brief Details and Important Findings of the Survey http://mospi.nic.in/stat_act_t5_2.htm

Republic of Korea

Between 1981 and 2001, the Korean Broadcasting System (KBS) conducted seven national surveys. KBS is the country's largest radio/TV broadcasting public corporation. 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 midnight and 4am each day. The 1987 survey aimed to provide information on changes in time-use patterns after the reinstatement of daylight saving. (Daylight saving was introduced for a period of approximately a year on the occasion of the Seoul Olympic Games of 1988.) While Shon (1999) correctly refers 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 is to collect information on media usage. The KBS therefore largely follows the model used by NHK, the largest public broadcasting corporation in Japan. While KBS provides the funds for the survey, the survey and analysis are carried out by the Institute of Communication Research at Seoul National University. (Fieldwork, at least for the 2000 survey, was sub-contracted to a professional opinion poll company).

A total of 3,500 respondents aged 10 years or over are selected using a stratified quota sampling approach to ensure adequate representation of different types of respondents. Selection of the 100 sampling points takes account of both province and type of community. Within each sampling point, 35 respondents are selected to represent their sex, age and occupational group.

The instrument measures activities in terms of 15-minute intervals. Three days are covered. Up until 1995, Fridays were used to represent weekday patterns. From 2000, Monday was substituted for Friday as it was felt that Friday patterns had begun to resemble those of the weekend and differ from the patterns found for Monday to Thursday. Interviewers visit the selected households, taking with them a covering letter, diary for three days, instructions, and questionnaire covering socio-economic characteristics.

The diary provides for the following activity categories:
- Sleep
- Meals
- Personal care
- Work
- School work
- Domestic work
- Socialising
- Rest & recuperating
- Free time activities
- Moving (Travel?)
- New media use (PC, internet, etc)

Within domestic work, the following activities are recorded:
- cooking
- cleaning
- laundry
- shopping
- knitting/sewing
- child care
- miscellaneous chores

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

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

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

Trend analysis (Choo, 2001) suggested that there had been a substantial increase in domestic work between 1995 and 2000. For the period 1980 to 2000, in contrast, Choo found a sharp decline in domestic work performed over the weekends. For example, the time spent fell by 26 minutes for Saturdays and 47 minutes for Sunday. (To give some idea of the relative size of the decrease, by 2000 the average time for Sunday was 1 hour and 35 minutes.) Choo suggests that the two underlying factors are (a) that women were spending less time on household chores, and (b) widespread availability of household appliances. For women, time spent on a Sunday on households tasks fell by 1 hour and 4 minutes.

In 1999 the Korean Time Use Survey (KTUS) became the first survey to use a time diary method in South Korea. A further survey was conducted in 2004, and the National Statistics Office website (www.nso.go.kr) states that the survey will be conducted on a five-yearly basis. (The web page describing the KTUS records that there is a 2005 report on the 2004 survey, but the publications page refers only to the report on the 1999 survey.) The KTUS data can be purchased by people living in Korea. It is not accessible to those outside the country.

The survey largely followed the Eurostat guidelines. This was appropriate for Korea, which in many respects (including literacy levels) has begun to resemble 'developed' countries, whereas it would not be equally appropriate for most other countries covered in this review. The sample frame was generated from the multi-purpose household sample drawn from the 1995 Population and Housing Census. The survey collected time use information from 42,973 individuals aged 10 years and above in close to 17,000 households. The method allows examination of intra-household allocation of time. Both household and individual response rates were high, at 96.4% and 94.7% respectively. Yoon (2005) argues that the clustering and stratification in sampling contributed to the high response rate because it meant that supervisors were responsible for monitoring of 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 to be filled in for two designated consecutive days. It was organised according to 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 the other 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 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. The interviewer revisited the household on the second day to help respondents fill in the diary and check that they had done so properly. Where this had not happened, the fieldworker interviewed the person about their activities to improve the quality of data on activities.

The classification as a whole uses three digits, and is 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 Others

The activity classification drew heavily on Eurostat guidelines and UNSD's proposal. It thus followed the SNA conceptual framework. As in India and Buenos Aires, however, the concept of 'establishments' as used 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 in major group 2, 'employment.' The group 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 are as follows:
51   Preschool child care
511   Physical care of preschool children
512   Reading or playing
519   Preschool child care not elsewhere classified
52   School child care
521   Physical care of school children (e.g. Preparing children for school.)
522   Teaching the child (e.g. Helping with homework, guiding and playing, etc.)
523   Visiting school (e.g. Attending parent-teacher meetings, etc.)
529   School child care 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 is thus limited disaggregation of care in respect of adults. The voluntary work and community participation grouping includes, among others, the following activities in respect of 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) categorises unpaid work into two categories: domestic work and childcare. The emphasis on childcare rather than care of elderly or ill reflects her particular focus, namely the work of married couples and especially mothers. The childcare category includes voluntary participation in school activities of children, such as classroom cleaning, a school lunch program, a traffic safety guidance, library management, special education, etc. Ordinarily this activity would have been classified as voluntary activity rather than child care. Yoon proposes, convincingly, that it can be seen as part of the efforts made by the married women whom she was examining 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 spend 49.9 hours on economic work (called 'paid work' by Yoon), while wives spend 19.0 hours. In contrast, husbands spend only 3.2 hours on unpaid care work (Yoon's 'unpaid work') while wives spend 36.8 hours. Overall, then, wives spend slightly longer working each week on average than their husbands. The gender gap in respect of overall work is non-existent on weekdays, but equal to 2.3 hours on Sundays.

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

	Weekday		Saturday		Sunday	
Type of work	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: Yoon J, 2005: 25

Yoon's more detailed analysis investigates how the patterns differ according to whether the wife is working full-time, part-time or not at all. She finds that women in traditional male breadwinner households are better off in terms of their unpaid care work burden, while those where the woman is working full-time have the largest gap. Thus wives in dual full-time earner households spend 13 more hours per week working than their husbands, and spend almost half as much time doing unpaid care work as women who are not employed.

Fieldwork for the Korean time use survey was carried out in September 1999, after a very thorough preparation period that began in 1997 and included three pilots and a 'dress rehearsal'. After these tests, a two-day post-coded time diary was used. As in most other stand-alone surveys, there were three questionnaires – for the household, individual and diary.

The pilots tested pre- vs post-coded approaches. The suspicion was that Koreans' relative conservatism 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 the diary approach was perceived as an unnecessary burden by older people and those who were very busy, in essence asking 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. Fieldworkers were also found to prefer the after-coded diary as it facilitated checking.

Korea has four seasons, and pilots were therefore conducted in spring, summer and autumn to test for possible seasonal effects. Informal productive activities were found to be most affected. It was, however, considered too difficult to have a survey spread over the entire year. It was therefore decided that the survey should be conducted in either spring or autumn on the basis of research in Norway that suggested that this provided an acceptable average for the year.

The survey provided for a primary and one secondary activity. There was 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. In respect of caring for children and other activities done at the same time, the respondent's own ranking of the two activities was accepted. For each primary activity, the questionnaire required coding of spatial location, indoors or outdoors or mode of transport.

The classification distinguished between three types of travel: related to work, related to school, and unspecified travel. In retrospect, Shon (1999) suggests 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 is undertaken.

Sources
Choo KY. 2001. Changes in Korean People's Use of Time during 1981-2000. International Association of Time Use Research: Oslo
Choo KY. 2002. Korean People's Leisure Time Change during 1981-2000. International Association of Time Use Research: Lisbon
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, 7 - 10 December 1999
Yoon J. September 2005. The Distribution of Total Work and Gender Equality in Married Couples: An Evidence from the Korean Time Use Survey 1999
http://www.nso.go.kr/eng/surveys/surveys.html?num=42&category=2

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. The two countries are listed on the IATUR list as having had surveys in 1995. However, IATUR confirmed that they did not have further information or contacts about these but had picked up that surveys existed from the web or other sources. A mid-term report[2] on progress in implementing the Dakar and Beijing declarations suggests that both Mali and Chad had been part of a nine-country comparative study investigating male and female participation in the labour force.

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[2] The mid-term report does not indicate the author, but it seems likely that it emanates from some part of the UN system.

This would not, however, probably have included unpaid care work. The report also notes that Benin and Chad had been among eight countries for which the contribution of the informal sector to GDP was estimated in 1996/97. Again, however, this would probably not have taken unpaid care work into account.

Guerrero (United Nations Secretariat Statistics Division, 1999: 1) names Chad and Mali as being among six countries in Africa that have 'initiated work or undertaken' national time use surveys but does not give further information on these two countries. Charmes (1999) names Chad (1996), Mali (1994-5) and Algeria (1998) 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 website[3] has two surveys for each of the countries at around 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 (EMCES) and for Chad the 1995-6 consumption and informal sector survey (Enquête sur la Consommation et le Secteur informel au Tchad) (ECOSIT). Neither of the EDS's nor the EMCES have any time use questions except those related to time taken by the household to access various facilities. The ECOSIT questionnaire is, unfortunately, 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
Sixième conférence régionale africaine sur les femmes. Revue à mi-parcours de la mise en œuvre des plateformes d'action de Dakar et de Beijing. 22-26 November 1999, Addis-Abeba (Ethiopie). Sommaire du rapport d'évaluation préliminaire. Domaine critique : L'élaboration et l'utilisation généralisées de données détaillées par sexe

South Africa

The only existing national time use study in South Africa was conducted by Statistics South Africa, the official statistical agency, in 2000. The survey was stand-alone. An open-ended diary with half-hour slots was use for collection of 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 was collected through face-to-face interviews with the person who had done the activities, and focused on the 24 hours between 4am the previous day and 4am the day of the interview. The dataset is available from Statistics South Africa.

Information was collected in respect of persons aged 10 years and above. The planned sample was 10 800 dwelling units (households), with two informants per household

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[3] http://www.internationalsurveynetwork.org/home/

(or only one if there was only one household member aged ten years and above). The realised sample was 8 564 households and 14 553 respondents. The main reason for the under-count 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%. The data were weighted before analysis to reflect the correct proportions in terms of province, sex, population group (i.e. race) and age group. The under-count should thus not have seriously affected the representivity of the data. The survey was done in three 'tranches' so as to catch possible seasonal variations. Different households were 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 labour force survey, 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 draft international classification of activities for time use surveys (ICATUS) devised under the leadership of the UNSD was used, with minor modifications. As noted above in the discussion of Argentina, ICATUS at the time consisted of ten major divisions, three corresponding to activities within the SNA production boundary, three to activities outside the SNA production boundary but nevertheless recognised as work (i.e. unpaid care work), and four corresponding to non-productive activity, i.e. 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 whom 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 do interviews. For the time use survey a completely new team was recruited. The selection process included aptitude tests that aimed to test skills that would be needed in the fieldwork. Training for the first tranche was provided at 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 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 for all three tranches. There were, however, some changes, for example when fieldworkers obtained other employment or became pregnant.

In standard surveys coding of open-ended information such as that on occupation and industry is done by coders in Statistics South Africa's head office. For the time use

survey, the usual approach was followed for occupation and industry. Coding of all diary activities, however, was done by fieldworkers in the evening after completing the interview. This approach was adopted on the grounds that fieldworkers would have a better understanding, from having done the interview, of the actual nature of the activity recorded. 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 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 difference between the different 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.

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

As noted above, the ICATUS activity coding scheme is organised according to the SNA categories. This allows easy identification of unpaid care work if the coding was done correctly. The relevant codes in respect of care narrowly defined are 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 hairdresser's, 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

The provision of separate codes for care activities mentioned spontaneously and mentioned only after prompting was introduced to monitor a methodological innovation intended to counteract the reported tendency for respondents to under-report care activities, particularly of children. After completion of the diary questions, the fieldworker asked a check question in respect of child care as follows: 'Did you spend any time during the day looking after children?' This was introduced to take into account that research indicates that child care, in particular, tends to be under-reported. If the respondent said they had spent some time on child care, they were 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 sub-codes for activities 'not mentioned spontaneously' to allow separate analysis of child care with and without prompting.

In addition to the codes above for activities where the respondent is providing care, there are also three sub-codes in the personal care and self-maintenance main group (i.e. part of non-productive activity) which reflect time spent by the recipient of care in respect of medical and personal care (b) from professionals, (b) from household members, and (c) from non-household members.

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

A difference from some other time use activity classifications is that collection of fuel and water is classified as an economic activity. This is correct according to the SNA rules, but many other classifications regard this as part of household (unpaid care) work. The fact that the activities have separate codes allows for them to be 'reclassified' in analysis of the South African data if one wants to compare findings with those from other countries.

The allowance for simultaneous activity should encourage capture of care activity. Further, the data set contains two measures of time for each activity. The first reflects the full duration of the particular activity. The second apportions the available time equally between simultaneous activities where these occur. The second measure sums to 24 hours and thus produces statistics which are comparable with those produced in other countries. The second measure provides a better sense of true duration.

The fact that only two people were interviewed per household about their use of time makes analysis of intra-household 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 will not be the case for many households. Many household surveys in developing countries use an approach where, in listing household members, the fieldworker first records the 'head of household, and then asks about and records every other person's relationship to the head. One of the problems with this approach is that it does not always provide 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 provides the necessary information that would allow analysis of time use for specified categories such as partnered women with children and/or partner living with them, young girls living in households without adult females, etc., even where one does not have information about the child or partner's activities.

Table 4 shows selected results in respect of time spent on unpaid care work activities by male and female respondents. The table gives the averages for the population as a whole, as well as only for those who actually engaged in the said activity ('actors'). The table illustrates the importance of distinguishing between the two measures. For example, with care of persons the average time is only four minutes per day if one includes all males over the age of 10, but increases to 63 minutes if one looks only at those men who do this activity. For women, the comparable estimates are 32 minutes across the population as a whole and 110 for the 'actors'. The greater relative gap between the two estimates for men is explained by the fact that only 6% of male respondents reported doing any care of persons compared to 29% 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

Sources
Budlender D, Chobokoane N & Mpetsheni Y. 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) is conducting a time use survey as an add-on module to the integrated labour force survey (ILFS) which is being conducted over the course of 2006. The time use module is the result of several years of advocacy and research led by Tanzania Gender Networking Programme (TGNP). This resulted in government agreeing to fund the module. TGNP has appointed a local

consultant who serves on the technical committee for the survey. She and one of the TGNP staff have participated in some of the training and monitoring activities.

The time use module is being applied in every fifth household selected for the ILFS.

The methodology draws fairly heavily on the South African approach (see above). Some of the differences are as follows:
- A one-hour time slot is being used, with space for up to five activities;
- All members aged five years and above in selected households are being interviewed;
- Individuals are being interviewed each day for seven days about activities done on the previous day. (This necessitated an extra activity code being added 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. These include disaggregation of all care activities in respect of adults into (a) care for elderly people, (b) care for ill people, and (c) care for people with disabilities. This change reflects one of the primary motivations for the survey, which is to increase knowledge on 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 conducted a pilot test in September 2005 to test the method. This confirmed the need for space for five activities to be reported for each hour timeslot. Current fieldwork has demonstrated that there are 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 capture and analysis.

The coding is being done 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 quarter. The problems included no activities for some time slots as well as activities that were insufficiently clearly described to allow coding. The NBS group collectively drew up guidelines for fieldworkers and supervisors as well as for 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. It is hoped that these will improve the quality of the remaining quarters.

Unfortunately, the seven-day hourly record in the main ILFS part of the questionnaire is not directly useful for 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 the fieldworker made daily visits to the household. It was further agreed at the post-first quarter workshop that processors should not correct one part of the questionnaire on the basis of responses in the other 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.

The payment code 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 which were intended to be captured by the payment column would be automatically captured by the coding classification. For example, all activities in categories 4-6 are automatically 'unpaid' while payment is 'not applicable' for categories 7-10. It is therefore only categories 1-3 for which the column might add information. Nevertheless, it was agreed that this question should be retained as an experiment that should afterwards be written up in terms of the lessons learnt. 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 workshop it was stressed that the relevant payments are only those that are paid to the respondent for their work or time. However, an activity should be coded as 'paid' even if payment does not occur in the particular hour to which the activity is assigned. For example, a street-seller might not earn money every hour that s/he sells, but all the time spent selling is coded as paid because the time is spent for the purposes of earning.

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

Source
National Bureau of Statistics and Department of Employment. 2005. Integrated Labour Force Survey 2005/2006. Questionnaire.
Tanzania Gender Networking Programme. 2006. Report on Time Use Training 9-11 May 2006. Dar es Salaam

Benin

In 1998 Benin's National Institute of Statistics and Economic Analysis (INSAE) conducted the Enquête Emploi du Temps au Bénin, 1998 (Benin Time Use Survey). The exercise, conducted with UNDP support, involved a time use survey as a module of the annual (or bi-annual, according to Charmes, 1999) urban survey on labour, income and social indicators (ELAM) conducted in the five main cities of the country (Cotonou, Porto Noveo. Parakou, Abomey, Bohicon) since 1990. (Charmes 1999 states that four cities are covered by the ELAM). These cities together account for just over half of the country's urban population. Questions on time use and education were also asked in a rural survey, using the method and framework of the 1995 Survey on

the Living Conditions of Rural Households of 1995.[4] The survey was conducted in April in urban areas and between mid-March and mid-April in the rural areas. The latter corresponds to a season in which limited agricultural work is done. Charmes (2006: 45) nevertheless claims 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. All household members between the aged of 6 and 65 years were covered. Information was collected for a total of 5,834 individuals belonging to 1,787 urban households, and 6,770 individuals belonging to 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 scheme is listed in the order in which the activities are most likely to be performed during the day, from the moment of waking to the moment of going to bed. It thus starts with sleeping, followed by resting/doing nothing, and then by personal hygiene/dressing. There are 63 activities in total, which can be classified into eight categories, namely: (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 [sic], (6) Transport, travelling, (7) Leisure, (8) Studying and education, (9) Other.

The activity list includes separate codes for taking care of children (19) and taking care of elderly, sick, etc. (20). Market-related economic activity is coded into four codes – main activity, secondary activity 1 and 2, and looking for a job. For the first three of these, a further occupation code is to be filled in. Non-market related economic activity includes a range of alternatives with 'agriculture' alongside several other activities that could be regarded as agriculture (e.g. breeding cattle, little livestock, livestock). Code 63 is 'other'.

The questionnaire consists of a listing of different activities, in 15-minute blocks, starting at 4 o'clock in the morning. The interviewer was 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 summing the total number of crosses 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 very similar at 3.27 for women and 1.07 for men.

One day was covered for each respondent. The fieldworkers were asked to distribute the work across all days of the week, and this aspect was monitored. The fieldworker visited the household the day prior to the day to be recorded to explain what was needed. In urban areas, they were asked to fill in as much information as they could. The fieldworker then re-visited after the specified day and interviewed the respondent about their activities.

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[4] The UNSD website says: Module of semestral household survey on labour, income and social indicators in rural areas; independent survey on time use and education in urban areas.

Interviewers were asked to pay special attention to eliciting secondary activities, but this is noted in the documentation on methodology as having constituted the main problem encountered. Charmes (2006:45) compares the results from Ghana and Benin in respect of housekeeping. (The Ghana survey does not ask about care of persons, and the estimate used for Benin for this comparison thus presumably also excludes care of persons.) He finds that the ratio of female to male time is similar for the two countries, but the Ghana levels are much higher than those for Benin (e.g. 5 hours 42 minutes and 1.81 hours respectively). He suggests that this shows that the Ghana approach tends to overestimate the time spent on these activities or, 'more likely', includes capture of simultaneous activities. He suggests that over-estimation is 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) suggests that in future in surveys that adopt Benin's approach the activities most likely to be undertaken simultaneously should be pre-listed so that the fieldworker can prompt. This could, however, result in bias and under-enumeration of other simultaneous activities.

The relative length of the list of activities increased the likelihood of some time-slots being missed. Fieldworkers were thus asked to connect up the activities for each time-slot with a vertical line. Some corrections were made in respect of missing information. However, an average of only 23 hours and 59 minutes was recorded for urban areas and 24 hours and 1 minute for rural hours even after including simultaneous activities. Again, this suggests serious under-enumeration 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) states 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 in the World Bank household survey database.

Sources

Brunnich B, Druce P, Ghissassi M, Johnson M, Majidi N, Radas AL, Riccheri PR, Camille de Sentenac C & Vacarr D. June 2005. Three Case Studies of Time Use Survey Application in Lower and Middle-Income Countries. A Report Commissioned by the Gender unit in the Bureau for development policy at The United Nations Development Programme. Prepared by the Institute of Political Studies of Paris (Sciences-Po), Paris, France

Charmes J. October 1999. Results and lessons of a national time-use survey in Benin, and consequences on re-estimation of women's participation to the labour force and contribution to GDP. International Association of Time Use Research Conference: Colchester

Untitled document on methodology. Downloaded from UNSD website.

Other Africa

Kes & Swaminathan (2006: 33-34) include a table which claims to be an inventory of 'all cross section and panel time use data sources in sub-Saharan African countries'. The table contains no listings for Chad or Mali. The only surveys said to have sample sizes of 1 000 households or more are:

- Benin, 1998 survey, covering 1,787 households (see above);
- Ivory Coast, module in living standard surveys of 1985-88, covering approximately 1,600 households each year, members aged 7 years and above;
- Ghana, 1991-2 and 1998-9 'short and incomplete' module in continuous living standards measurement survey, 5,998 households (presumably for the latest date), members aged 7 years and above. Charmes (2006) notes that these cover only the main domestic or non-market activities – a total of four activities in all;
- Madagascar, 2001, parallel sample attached to permanent survey, 2,663 households, members aged 6-65 years;
- Mauritius, 2003 module of continuous multi-purpose household survey, 6,480 households;
- South Africa, 2000, stand-alone survey, 8,564 households (see above); and
- Uganda, 1993, 9,929 households (no further information).

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

In addition to the surveys listed above, Charmes (2006: 65) reports a time use survey being conducted in Tunisia in 2005 as a subsample of the Budget-Consumption household survey. Bardasi & Wodon (2006) report time use modules within LSMS-type surveys in Guinea in 2002–03, Malawi in 2004, Mauritania in 2000, and Sierra Leone in 2003.

In Guinea, the 2002-03 Enquête Intégrée de base pour l'évaluation de la pauvreté (EIBEP) asks for each individual aged 6 and over 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) and in a farm or family business (Bardasi & Wood, 2006: 121). There was, however, no mention of caring for household or community members. Simultaneous activities were not counted. Bardasi & Wood (2006: 122) write in this respect 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 Malawi survey covered a total of 11,280 households and more than 52,000 individuals, with the time use questions asked in respect of all individuals aged four years or above (Wood & Beegle, 2006). The instrument asks about seven different types of activity: (a) cooking and related, (b) collecting fuel, (c) household agriculture or fishing, (d) wage or similar work, (e) casual or part-time labour, (f) help in household's non-agricultural business, and (g) running household's non-agricultural business. Care of persons is again not mentioned in any of these activities, as (a) specifies only cooking, doing laundry, cleaning your house, 'and the like'.

In 1998, a time use survey was conducted in Morocco. It only, however, records information on women and is thus not useful for our purpose.

Recommendations

Three issues will be addressed here:
- 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 two countries will ideally be covered in each of the three regions – one 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 Argentina for Latin America, South Korea for Asia, and South Africa for Africa. Each of these countries has solid time use data. Argentina and South Korea have two different types of data – diary-based and stylised, although the diary-based for Argentina only cover Buenos Aires. The raw data for both these surveys should be accessible to UNRISD researchers. South Africa has only diary-based data available, but there is no other easy option besides Mauritius. The latter 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 in respect of countries with less developed welfare/care infrastructure. For Latin America both Mexico and Nicaragua are possibilities. Both have more than one possible data source, although all the sources use a stylised approach except the 1996 Mexico survey on which all sources are worryingly silent. In both countries there are researchers who have done analysis of the data. An argument for favouring Nicaragua over Mexico is that the latter's welfare/care infrastructure might be at too similar a level to that of Argentina, while the welfare/care infrastructure of Nicaragua would more clearly qualify as 'less developed'. In both countries, the raw data for the major studies are made available to researchers.

For Asia, India is almost certainly the right 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.

For Africa, the choice seems to be between Benin and Tanzania. One challenge for Benin might be access to information. In particular, it might not be possible to obtain access to the raw data from the survey. Concerns in respect of Tanzania include

timing (the fieldwork is only scheduled to be completed by end 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 that 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 will be developed in proposals prepared by country teams and then through discussions at a workshop planned for late 2006. The following ideas are thus simply some ideas that can hopefully stimulate thought by the country teams as well as at the workshop.

A first obvious area of investigation would be the impact of presence of children, sick people, or elderly on the amount of care undertaken by other household members, as well as implications of their presence for the carers' access to income-earning opportunities. A fair amount of such analysis already exists in developed countries in respect of children. The findings and method of approach might, however, need to differ in countries with diverse societal and household setups rather than being confined, as is often the case, to the impact on mothers and fathers. There is very little on childcare done by non-parents, yet the latter 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 rates of orphanhood, for example as a result of HIV and AIDS.

Much less work has been done in respect of care of elderly and, especially, care of those who are ill. As noted above, this issue is particularly pressing in countries which 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 that of how household 'shape' in terms of composition and relationship of members to each other affects both the absolute and relative burden of (especially care) activities of different types of people. In respect of several of the countries, the paper describes classifications that have been used for tabulation and analysis purpose. These could be discussed and further developed. In addition, sometimes in these studies, and certainly in studies in developed countries, analysis is again often 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. Here one would be interested, if possible, in getting a sense of when and why people choose to get care from different sources. In some cases, the time use data will provide some clues in this respect. Some surveys include, for example, distance from various facilities. Some include in the classification system codes that would allow analysis of receipt of different forms of care.

This paper's focus is on what data are available on time use in each country. The country descriptions refer at some points to the availability of 'socio-economic' 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 will 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. Also important will be to explore what other survey data are available for the country, so as to explore possibly ways of combining or supplementing the data from the time use survey with information from elsewhere on aspects that are not covered by the time use survey, or covered only in cursory fashion.

The time use surveys, combined with data from other sources such as labour force surveys, 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 done 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 be restricted to the economy and society as a whole. They should not be done at a 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 large role on 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 the UNRISD research. Children are undoubtedly responsible for some of the unpaid care work done in all countries. The difference in the age groups covered by surveys in different countries and, in particular, differences in the lower cut-off point, will make cross-country comparisons very difficult.

The introduction to this paper discusses the different definitions and interpretations of 'care work'. The country case studies describe how different surveys ask questions about care work and thus, implicitly or explicitly, define what they consider as covered by this term. The questionnaires cannot, however, tell us the full story about what is captured in each country. The UNRISD study could contribute to a clearer

understanding of the different understandings of care work and how this is understood by survey designers, fieldworkers, respondents and analysts. 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. There are, nevertheless, a few points that emerge from the country discussions as requiring attention.

The first relates to recording of simultaneous activities. These must be recorded and analysed if one is to have accurate records of unpaid care work and, in particular, care work more narrowly defined. 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 care work more narrowly defined. In some cases it is not explicit at all and is perhaps expected to be covered under housework. However, if this is not made clear to respondents, it is unlikely to be reported. Ideally, one would want further disaggregation of care work into active and passive, and also by the type of person receiving the care. The extent to which this can be done must, however, be informed by the overall method. With stylised approaches, there must inevitably come a point where the number of activities for which the respondent is prompted results in fatigue on the part of respondent and fieldworker, and thus poor quality data.

Training is clearly essential for time use studies, especially where they are newly 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 supervision and support structure that allows fieldworkers who encounter difficulties or have queries to get rapid responses.

Given the relative novelty of these investigations in developing countries, studies should be fully documented both as to what worked and what did not work very successfully. 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 stimulating more analysis of the data that are already available for a range of developing countries. As indicated above, often the agencies producing these data are prepared to make the raw data available for 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 has been under-utilised. One obstacle might be the limited number of people who feel confident in manipulating large data-sets. The task can be particularly intimidating with time use surveys, and especially those based on diaries, because of

the mass on information and relatively complicated file formats. The problem is aggravated 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. Hopefully it would also raise awareness of the potential of time use work beyond these countries, and so stimulate statistical agencies in further countries to conduct these surveys.

General references

Bardasi E & Wodon Q. 2006. Measuring Time Poverty and Analyzing Its Determinants: Concepts and Application to Guinea in Blackden & Wood (eds) Gender, time use and poverty in sub-Saharan Africa: 75-95.

Bardasi E & Wood Q. 2006. Poverty Reduction from Full Employment: A Time Use Approach in Blackden & Wood (eds) Gender, time use and poverty in sub-Saharan Africa: 118-134.

Kan MY. 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.

Blackden CM & Wood Q (eds). 2006. Gender, time use and poverty in sub-Saharan Africa. World Bank Working Paper No. 73. Washington DC.

Bonke J. 2002. Paid work and unpaid work - diary information versus questionnaire information. International Association of Time Use Research Conference: Lisbon.

Charmes J. 2006. A Review of Empirical Evidence on Time Use in Africa from UN-Sponsored Surveys in Blacken & Wood (eds) Gender, time use and poverty in sub-Saharan Africa: 39-72.

Elson D. 2000. Progress of the World's Women 2000. UNIFEM Biennial Report. United Nations Development Fund for Women, New York.

Haraldsen G. 1999. The Design of Time Use Surveys in Developed and Developing Countries. International Association of Time Use Researchers Conference. Colchester.

Hoffmann E. & Mata A. 1998. Measuring working time: An alternative approach to classifying time use in Bulletin of Labour Statistics, 1998-3.

Ironmonger D. 2003. There are only 24 Hours in a Day! Solving the problematic of simultaneous time. International Association of Time Use Research Conference: Brussels.

Kes A & Swaminathan H. 2006. Gender and Time Poverty in Sub-Saharan Africa in Blackden & Wood (eds) Gender, time use and poverty in sub-Saharan Africa: 13-38.

United Nations Secretariat Statistics Division. 1999. Towards International Guidelines in Time-Use Surveys: Objectives and methods of national time-use surveys in developing countries. Economic and Social Commission for Asia and the Pacific Seminar on Time Use Surveys, 7-10 December 1999: Ahmedabad.

United Nations Statistics Division. 2005. Guide to Producing Statistics on Time Use: Measuring paid and unpaid work. Department of Economic and Social Affairs: New York.

Wood Q & Beegle K. 2006. Labor Shortages Despite Underemployment? Seasonality in Time Use in Malawi in Blackden & Wood (eds) Gender, time use and poverty in sub-Saharan Africa: 97-116.

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

	Design	Scope & information	Quality	Weaknesses
Argentina	ECV 2001: Stylised In household survey	ECV 2001: 19,605 households, 50,714 individuals 14+ years Only urban (90% of pop) 6 domestic task activities 2 person care activities	ECV 2001: Yes/no for past week with no indication of time Separate week/weekend	ECV 2001: No indication of duration No check possible on full reporting
	Buenos Aires 2005: Full 24-hour diary Module in household survey	Buenos Aires 2005: 15-74 years	Buenos Aires 2005: Non-response 18% Detailed codes for care Attention to simultaneous	Buenos Aires 2005: Only one city One person per household
Brazil	PNAD: In household survey Range of smaller surveys	PNAD: National survey Conducted at regular intervals Single question on 'domestic tasks'	PNAD: No distinction different types of care work	PNAD: Person care may not be captured at all Time series but questions changed over time Samples too small
Mexico	1996: Stylised In household survey	1996: 12,000 households 8+ years Selected specified activities	1996: Small number of person care activities	1996: No indication of simultaneity
	2002: Stylised Module in household survey	2002: 4,783 households 12+ years	2002: Separate week, Saturday, Sunday	2002: Difficulties with simultaneous activities

		Full coverage of all activities (80+ categories) Covers help from non-members	Detailed codes for care	Large number of activities could have affected quality
Nicaragua	FIDEG 1995-6: Stylised Module in 'gender' survey	FIDEG: 6,028 households Selected specified activities	FIDEG: Qualitative supplement	FIDEG: Availability of data & other information uncertain
	EMNV 1998: Stylised In household survey	EMNV: 2,325 households 6+ years Full coverage of all activities (22 categories)	EMNV: Simultaneous asked separately Relatively few codes for person care	EMNV: Difficulties with simultaneous activities
Bangladesh	BER 2005: Stylised 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
India	1998/99 'pilot' Full 24-hour diary Stand-alone	6 representative states 18,591 households 75,000 individuals Normal, abnormal & 'weekly variant' day	Detailed codes for care	Very high response rate Difficulties with simultaneous activities Limited background info
Korea	KBS 1981 onwards: Stylised Stand-alone	KBS: 3,500 individuals 10+ years Quota sampling by person	KBS: Care not central focus Nothing on person care Time series data	KBS: Not fully representative Care not a focus
	KTUS 1999: Full 24-hour diary Stand-alone	KTUS: 17,000 households 42,973 individuals	KTUS: Detailed codes for care High response rate	KTUS: 2004 data not mentioned

	Repeated in 2004?			
South Africa	Statistics South Africa 2000: Full 24-hour diary Stand-alone	10+ years 8 564 households 14 553 individuals 10+ years	Detailed codes for care Attention to simultaneous Response rate 94%	2 people per household
Tanzania	National Bureau of Statistics 2006: Full 24-hour diary Module in household survey	Every fifth household of LFS sample 5+ years	Detailed codes for care Attention to simultaneous	Separation of care for child, ill, elderly, disabled Burden of all household members x 7 days may affect quality
Benin	INSAE 1998 Stand-alone Lite 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 & urban separate samples Could be seasonal bias