Explorations: Time-use surveys in the south

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Online Publication Date: 01 July 2008

To cite this Article: Esquivel, Valeria, Budlender, Debbie, Folbre, Nancy and Hirway, Indira (2008) 'Explorations: Time-use surveys in the south', Feminist Economics, 14:3, 107 — 152

URL: http://dx.doi.org/10.1080/13545700802075135

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EXPLORATIONS: TIME-USE SURVEYS IN THE SOUTH

Valeria Esquivel, Debbie Budlender, Nancy Folbre, and Indira Hirway

ABSTRACT

Time-use surveys show how individuals spend their time during the day or week, which provides evidence of the gendered division of labor within households and the interdependence of women’s and men’s paid and unpaid work. Time-use experts in the South face similar challenges to those working in other countries, but they also have to come to terms with the restrictions faced in less developed contexts – notably higher illiteracy rates and limited statistical budgets. These Explorations bring together contributions from three experts on time-use survey design and administration working in three diverse Southern regions to highlight the ongoing processes of learning-by-doing and of building local expertise in these regions. Their discussion of methodological and logistical issues holds particular relevance for developing countries moving toward the implementation of time-use surveys. It also bears on more general feminist concerns regarding the classification and measurement of unpaid care.

KEYWORDS

Survey research, time budget surveys, unpaid work

JEL Codes: C81, J22

INTRODUCTION

Valeria Esquivel and Nancy Folbre

Time-use surveys (TUS) show how women, men, girls, and boys spend their time in a given day or week, which allows researchers to measure all forms of work, particularly voluntary and unpaid care work (Martha Chen, Joann Vanek, Francie Lund, and James Heintz 2005: 24). These surveys, therefore, provide evidence of the gendered division of labor within households and the interdependence of women’s and men’s paid and unpaid work (United Nations Development Program [UNDP] 1995; Diane Elson 2000; Lourdes Benería 2003).

Since the Beijing Platform for Action appealed to countries to make visible the full extent of women’s contributions to economic development by “conduct[ing] regular time-use studies to measure, in quantitative
terms, unremunerated work” (United Nations, Fourth World Conference on Women 1995: 206.f), time-use data have been increasingly collected and analyzed in the South. Many feminist scholars, most of them women economists and sociologists, have been involved in this task. Time-use experts in the South face the usual challenges in mainstreaming gender-aware data collection – political resistance and lack of gender expertise among the most relevant (Annalise Moser 2007: 13). In addition, time-use experts in the South also have to come to terms with the restrictions faced in less developed contexts – notably higher illiteracy rates and limited statistical budgets. Yet in spite of these challenges, they have produced reasonably good-quality data through innovative methodological approaches in time-use data collection. The pieces included in these Explorations were written by experts from Africa, Latin America, and Asia who were involved in the design, collection, and analysis of time-use data. Their work exemplifies the variety and richness of the multiple attempts undertaken by Southern researchers.

As the contributions to these Explorations illustrate, not all TUS in the South are alike. Differences and commonalities relate both to the objectives and methods of the surveys. Although most TUS in the South aim to give full visibility to the contribution of women’s unpaid work to the economy, they also tackle issues of particular interest in national or regional contexts. The detailed measurement of care work for the sick – particularly in the wake of the HIV/AIDS pandemic in Africa – and child labor are priorities in some cases. In other cases, the key objectives are shedding light on the size and characteristics of the labor force and complementing information provided by regular labor force surveys. Many surveys make it possible to measure individuals’ total working time – be it paid or unpaid. Others show the effects of deficient social infrastructure (such as health and education) and physical infrastructure (such as availability of water and electricity) on the time devoted to unpaid care work, providing insights into aspects of development not yet fully explored.

Methodological approaches also vary greatly, as the Appendix, which summarizes all TUS covered by these Explorations, attests. Surveys often differ across regions and countries by type, sampling design, questionnaire design, population covered, and modes of data collection. Contributors to these Explorations acknowledge the difficult trade-offs involved in choosing among existing methodological approaches, and they explicitly address the tensions involved in the process of designing TUS and the compromises made. However, they are cautious not to offer unique answers or “one-size-fits-all” recommendations.

Contributors do not agree on all of the methodological issues at stake. Among contested issues worth noting, two of the authors discuss whether the (Trial) International Classification of Activities for Time-Use Statistics (ICATUS), which was developed by United Nations Statistics Division
(UNSD) in 1997, is applicable in developing countries and whether international harmonization (the building of a satisfactory common ground in terms of methods and activity classifications as a prerequisite for performing international comparisons) should take precedence over catering to specific local needs.

All three contributors express their concerns about the painstaking process of building political conditions that support TUS, the lengthy process by which these surveys finally come to light, and the limited impact their findings have had in informing public policy to date.

However, these shortcomings need not be discouraging. Indeed, TUS have accompanied the process of raising awareness of women’s contribution to the economy (both within and beyond System of National Accounts [SNA] boundaries), giving concrete numbers to aspects of daily life that women’s movements have emphasized for many years. They have also opened up the path for understanding more complex relationships, like the relationship between the gender division of labor within the household and broader dimensions of gender inequality. Gradually, they are also informing economic theorizing and giving flesh to the feminist economics project of stretching the limits of “the economic.” Giving wide publicity to TUS results and linking them to concrete spheres of policy action still constitute a major task ahead.

The pieces in these Explorations are intended neither to be a resource inventory nor to replace methodological manuals or technical publications. Rather, by opening up the “behind-the-scenes” of time-use data collection in the South, contributors highlight the ongoing processes of learning-by-doing and of building local expertise. Among the many lessons already derived from these experiences are that clear feminist agendas and feasible, context-sensitive methodologies have promoted success. Failure teaches as well: missing information, the incorrect treatment of simultaneous activities, excessive activity aggregation, and insufficient sample sizes, among other difficulties, show the path for future improvement.

Ultimately, these Explorations aim to contribute to bridging the gap between time-use data producers and users, encouraging the use of TUS by feminist scholars, and informing prospective collectors in the South of the many steps already taken and the road ahead.

TIME-USE IN SOUTH AFRICA

Debbie Budlender

These Explorations suggest a range of reasons why a country’s national statistics office might want to conduct a TUS; however, proposals for such a survey often encounter resistance. Opponents argue that the surveys are expensive and time-consuming and that they are intimidating for an institution that has not conducted them previously. The fact that Statistics
South Africa (Stats SA), South Africa’s official statistical agency, undertook the country’s first national TUS in 2000 in spite of these concerns was the result of a confluence of factors. I served as overall coordinator of the TUS, and this contribution is thus written from an insider’s perspective. It tells the story of South Africa’s TUS – the factors that prompted it, the approach adopted in terms of objectives, operational issues, and technical aspects such as classification and coding, and – finally – the survey’s impact and results. The insider perspective affords some insight into the story that others might not have, but it also suffers from blind spots – that must be borne in mind when reading this contribution.

The political and institutional antecedents

Apartheid officially ended in South Africa with the first democratic elections in 1994. Leading up to these elections, in the first years of the 1990s, organizations and individuals were preparing for the great change. For South African women, the establishment of the cross-party and cross-race Women’s National Coalition marked an important development. The main objective of this organization was to ensure that gender was adequately addressed in the negotiations that resulted in the country’s interim constitution. The coalition also spurred new interest in promoting women’s agendas.

A less well-known event around this time was a small international workshop on unpaid labor held in Johannesburg. The event was organized by Frene Ginwala, co-coordinator of the Women’s National Coalition and head of the Emancipation Commission of the African National Congress, the liberation party near-certain to win the majority of seats in the election. The workshop brought together a small group of less than twenty people, over a third of whom were from outside the country. The international participants included Diane Elson, Lourdes Benería, Isabella Bakker, and Maureen Mackintosh. For many of the South African participants who had not been in exile, this was the first meeting with these leading feminist thinkers. It was also the first event in the country to give serious thought to unpaid labor. The workshop did not immediately result in concrete outcomes, but by raising awareness of the issue of unpaid labor, it planted one of the seeds that later grew into the South African TUS.

Two other important factors for the South African TUS were the Fourth World Conference on Women, which was held in Beijing in 1995, and the corresponding Human Development Report (United Nations Development Programme [UNDP] 1995), which focused specifically on unpaid labor. Several South Africans who attended the conference in Beijing came back with a new interest in this topic. Another important factor was the establishment in 1995 of the Women’s Budget Initiative, a collaborative...
venture between women (and a few men) members of the Parliamentary Finance Committee and two policy-research non-governmental organizations (NGOs). This initiative is relevant for this story to the extent that, from the start, it was motivated by the need to count women – their situation, and the extent to which it was being addressed by government initiatives – and to account for their work. Indeed, in the then South African Minister of Finance’s presentation to the Parliamentary Finance Committee’s hearings in 1996, he committed himself to ensuring that women’s unpaid labor would be recorded – probably without fully recognizing what this entailed!

About this time, Mark Orkin was appointed to head Stats SA. Mark was the founder and director of the Community Agency for Social Enquiry, the non-governmental social policy research organization for which I work. His task at Stats SA, similar to that of many new managers brought into government agencies at that time, was to institute the substantial changes necessary to enable the statistical agency to serve the new South Africa. In the statistics field, developing the capacity for household-level surveys was seen as one of the more important tasks. At that point there were no regular household surveys in South Africa, and previous censuses and surveys had omitted large parts of the country that were classified as independent black homelands and had given only cursory attention to informal settlements outside of major towns.

Many donors were willing to assist with the task of transformation in Stats SA as in other sectors. Sweden, in particular, was keen to assist with gender statistics as it had in many other developing countries. Norway, one of the few countries to have conducted three national TUS, came forward with an offer of financial and technical assistance for establishing a gender unit within Stats SA and conducting a TUS. The offer was accepted, and I was asked to join Stats SA on a part-time basis for three years (which expanded to five) to coordinate this work.

Overall objectives

TUS can be conducted for many different reasons. For South Africa, we saw the survey as having two primary objectives: First, we hoped that our efforts would improve the conception, methodology, and measurement of all types of work and work-related activities. Our concept of work included both paid and unpaid economic work as defined within the narrow production boundary of the SNA and unpaid care work (housework, care for people) that around the world is largely the burden of women. Second, we planned to feed the information gathered into more gender-responsive policy-making. We were less interested in issues such as leisure that have been more of a focus in some developed countries.
The first objective reflected our recognition that the work of South African women, and of poor black women in particular, was almost certainly being undercounted. Unpaid care work – in the form of housework; caring for children, the elderly, the disabled, and the sick; and community care – was not being counted at all. This approach was in line with international guidelines on how to compute the Gross Domestic Product (GDP), which do not locate these activities within the production boundary of the SNA that defines the GDP. Other forms of work – such as work in the informal sector, subsistence work, or unpaid work in a family business – were, we were sure, being severely undercounted, even though they lay within the official production boundary. The TUS, by recording all activities done by individuals, would expose this undercount, give some idea of its seriousness, and encourage improvements.

**Adapting the approach for South Africa**

When we embarked on the planning for South Africa’s TUS, we faced major challenges because there were few examples in developing countries upon which we could draw. A further challenge and simultaneous opportunity was the situation in which we were operating: there was a concerted effort across all of government and beyond to do things differently from how they had been done before. In retrospect, many would agree that the new government expected to be able to make too many radical changes too quickly. The general feeling at the time, however, was that we must question all conventional wisdoms. We therefore read widely on TUS conducted in other countries in order to prepare for the TUS but did not assume that what had worked elsewhere would work in South Africa. Our questioning stance did not make it easy for the Norwegian advisors!

During the first visit of a Norwegian team from Statistics Norway, we organized three regional workshops through which we could share our plans and get feedback from people involved in women’s organizations, academics, and government officials on what they thought would work and would not work. The workshops also helped raise awareness of, and interest in, the topic. Those who attended the workshops would, however, have to wait several years for the results, given that our survey spanned a year with close on a full year prior to that for planning.

From the start, we were eager to use a diary approach, as the literature seemed clear that this generally produced the best results. Because we realized very early on that self-administered questionnaires were not an option for the majority of South Africans, given prevailing literacy levels, we then had to decide how a diary questionnaire could be designed for an interview approach.

Preparations involved testing a range of different approaches. In addition to a full-scale pilot, we had a series of focus groups and also observed
questionnaires being administered “behind the glass” to representatives of particular groupings with whom we felt there might be difficulties. These included children, people with low levels of literacy, and rural people who might have a less clock-oriented sense of time. On the basis of these tests, we felt that we would be able to get reliable data from children aged 10 and above. We found to our relief that rural people were better able to estimate time than we had thought they would be. They told us that they used regular daily events, such as when the train went past or when children came out of school, to mark the passage of time.

The pilot also helped us decide on the number of days that would be covered by the diary. Our initial plan was to cover two days per person. This would achieve some economies of scale because background questions on each household and individual would need to be asked less often. For the pilot, the fieldworker visited a household on a particular day and administered the diary part of the questionnaire about the previous day. The respondent was then given a blank diary and asked to keep notes – or get someone to assist them to do so – for activities during the day that followed. Data collection for the second day was much less successful than the first. Fieldworkers reported that respondents told them that doing the exercise was interesting the first day but boring the second day because their activities on both days were generally similar. Some fieldworkers reported that respondents ran away when they saw them returning! We therefore agreed on collecting only one day’s information per person. If we had persisted with two days, we would almost certainly not have achieved the very high response rate that we did.

The pilot gave us confidence that respondents would be able to respond to a diary made up of half-hour intervals. An area of some contention was how to deal with simultaneous activities. The literature provided evidence that this was an area where many surveys performed badly. The literature also suggested that activities such as caring for children were most likely to be under-recorded if simultaneous activities were not well captured. We were uncomfortable with the approach commonly used in developed countries, which recognized only primary and secondary activities. First, we were concerned that analysts would be tempted to focus only on the primary activities, and second we worried that the distinction between primary and secondary activities would reflect social prejudice rather than objective reality. We therefore provided for up to three activities to be recorded for any half-hour period, with a clear indication as to which were performed simultaneously and which were not. There was no distinction between “primary” and “secondary” activities as in TUS in other countries.

Our decision presented a challenge for the analysis of the TUS, as any individual reporting simultaneous activities could be seen as having more than twenty-four hours in their day. We addressed this problem by assigning two measures to each activity. First, the twenty-four-hour measure divided
the half-hour equally among the simultaneous activities recorded in the interval. Calculations using this measure therefore summed to the traditional twenty-four hours and could be compared with results from other countries. Second, the “full” measure assigned the full half-hour period over which an activity was performed to that activity. This measure allowed us to report, for example, that a particular category of women spent an average of X minutes per day on childcare.

A further question related to the time of the year to be covered by the survey. South Africa has marked seasonal variations, and we suspected that, particularly in rural areas, there might be significant differences in time-use between the seasons. Our solution to this challenge was to conduct the survey in three rounds across the year: February, June, and October. In each of these rounds, we covered a third of the sample.

**Operational issues**

The South African TUS was coordinated from the small, newly-established gender unit of Stats SA. This consisted, at its peak, of two and a half people. I was joined during the planning year by Yandiswa Mpetsheni, who bore the primary responsibility for fieldwork and other operational issues. During the fieldwork year, we were joined by the third member of our team, Ntebaleng Chobokoane, who focused mainly on the analysis side.

Having a study coordinated from outside the household surveys section of the organization could have been a disaster, but it was not. We enjoyed excellent cooperation, no doubt aided by the fact that everyone was aware of the head of the agency’s support for the initiative. Our location outside the other line functions also enabled us, once data became available, to interact with other parts of the organization. For example, we drew heavily on the expertise of the national accounts team when doing the valuation of unpaid care work. They seemed fascinated by the exercise and cooperated willingly. Within each of the nine provincial offices, a survey manager was assigned special responsibility for the TUS. They took this responsibility seriously, thus contributing to the success of the venture.

The TUS was a small undertaking for Stats SA compared to other surveys, in terms of sample size. The realized sample was 14,553 individuals aged 10 years and above from 8,564 households. Nevertheless, it spanned rural and urban areas of all nine provinces of what is a geographically vast country so as to provide nationally representative results. We calculated that, to be able to conduct fieldwork over a reasonable period and pay adequate attention to every questionnaire, we would need a fieldwork team of just over 100 fieldworkers.

Stats SA does not have a permanent fieldwork team. Instead, fieldworkers are recruited for each survey. By the time we undertook the TUS, Stats SA had established a database of fieldworkers across the country that it used on...
a regular basis. These fieldworkers were recruited from among unemployed young South Africans with matriculation certificates, and their employment was seen as a small contribution to addressing the country's serious unemployment problem.

We recruited a special team of fieldworkers for the TUS. In addition to the standard requirement of a matriculation certificate, we required that applicants for the team complete a specially designed competency test that tested key skills related to tasks that they would be doing in the survey. The team remained relatively constant over the three rounds of the surveys, although there were some changes as a result of pregnancy and people finding other, permanent jobs.

Fieldworkers were recruited from many different areas of the country. This achieved the dual objectives of having a spread of language abilities and cutting down on transport and accommodation costs. South Africa has eleven official languages. In a new survey such as this, where understanding exactly what was said was especially important, we were determined to tackle head-on the language challenges. Apart from the population census, Stats SA generally produces only English questionnaires. Fieldworkers are then expected to translate the questions into the local language while interviewing respondents.

For our TUS, we used the same approach, but with some adaptations. To train the fieldworkers for the first round, we brought the full team of fieldworkers, plus those who would supervise them, to Stats SA's head office in Pretoria. We then divided them into five language-based groups, which were taken through a standard, specially designed training program. One of the first sessions of the workshop involved going through the questionnaire item by item. We asked the groups to agree on the best translation of each question into the relevant language/s for that group. The agreed-upon translations were then typed and given to fieldworkers to take with them to the interviews. In practice, most fieldworkers probably did not use these “prompt notes,” but we felt that the sometimes-long discussions (and arguments) about the appropriate translation of each question would have left every fieldworker with a good understanding of what we were looking for.

**Classification and coding**

For open-ended diaries such as the ones we used in this survey, the decisions as to what classification system to use and how to code the responses are particularly important. With respect to the classification systems, we were fortunate that the UNSD had developed ICATUS. Particularly pleasing was that the draft classification reflected the divisions of the SNA. There were thus three major categories relating to activities within the SNA production boundary purposes, three major categories
relating to unpaid care work, and four major categories relating to non-productive activities. The ICATUS approach therefore matched the overall objectives of our survey. An added bonus was that Marge Guerrero, the UNSD person with overall responsibility for this work, was always available by e-mail for advice and encouragement. Stats SA thus served as one of the countries that tested the draft ICATUS, and we subsequently re-tested the revised version by re-coding a portion of our data.

Generally, a specialized team in Stats SA’s office codes open-ended questions, such as occupation and industry; however, for the TUS, we decided that coding of activities would be done by the fieldworkers rather than by the specialized team. Although this decision went against standard practice for Stats SA, and indeed for most statistical offices, we had four reasons for this decision. First, the head office team had no experience in the field of TUS. Second, we reasoned that if the fieldworkers knew that they had to find appropriate codes for each activity, they would ensure that they received sufficient information from respondents to be able to do the coding. Third, we felt that the fieldworkers would have a better sense than head-office coders of what the respondents’ description of their activity meant because they had interacted directly with the respondent. Finally, we required that fieldworkers do the coding on the evening of the day on which the interview was conducted. This meant that their memory of the interview was still fresh, and if necessary, they could return to the household to clarify entries on reported activities.

The decision that the fieldworkers should code turned out to be a good one. The fieldworkers seemed proud of being given this responsibility and rose to the occasion. Already during the training, they would walk around referring to their own activities with codes. The codes became a secret language, which, together with the t-shirts they were given and the specially designed logo that appeared on the t-shirt and manual, made them feel part of a “special” and important endeavor. We did not, however, underestimate the difficulties of the task we had assigned them. Team supervisors were given the responsibility of checking the questionnaires, including the coding, each day. In the refresher training that preceded the second and third rounds, we devoted extended sessions to exercises on difficult aspects of coding. The gender unit team members also made themselves available on their mobiles to answer queries that arose in the field, with our own back-up check being Marge in New York.

After the survey

The launch of the time-use report (Debbie Budlender, Ntebaleng Chobokoane, and Yandiswa Mpetheni 2001) was co-hosted by South Africa’s Commission on Gender Equality, the Office on the Status of Women in the Office of the President, and the South African Parliament’s
Joint Monitoring Committee on the Qualify of Life and Status of Women. The Minister of Finance, under whom Stats SA falls, was the main guest, and a large crowd attended the launch. The minister was clearly not pleased when the speaker from the Commission on Gender Equality announced that they expected GDP estimates to be revised on the basis of the findings. He – correctly – pointed out that South Africa could not revise its GDP estimates unless the international guidelines changed.

Several days later, the minister expressed further dissatisfaction with an early-morning radio broadcast about the survey. In particular, two of Stats SA’s findings that were reported in that broadcast attracted his displeasure, and as a result, he forbade Stats SA from making further “political” statements about the findings. The first finding, and our related explanation, that caused his unhappiness was the low percentage of time spent, on average, by women and men in South Africa on work falling within the SNA production boundary. The survey specifically found that, averaged over all respondents, men spent an average of 13 percent of their day on this work, while women spent 8 percent. We explained that these low percentages reflected the country’s high unemployment rates, which the Labour Force Survey of September 2000 had put at 23 percent for men aged 15 years and older and 28 percent for women in the same age group, with employment rates of 49 percent and 36 percent respectively. Because the time-use data were averaged over the full population, whether employed or not employed, the time spent on work within the SNA production boundary by those who were employed was spread over more than double the number of people who actually did the work. The second finding that displeased him was the statement that the time spent on care would include time spent caring for people with HIV/AIDS. This was a particularly sensitive issue at that time as South Africa’s president was strongly denying the severity and nature of the pandemic in the country.

The media showed a strong interest in the release of the findings and carried front-page stories (including one that said that South Africans were “slobs,” which had prompted the contested radio discussion about levels of work). In an attempt to reach beyond the usual readership of Stats SA reports, we produced bright yellow posters giving the key findings through graphs. The posters were produced in multiple languages and could be folded up into a pocket-sized pamphlet. We also produced a discussion paper – the first to be placed on Stats SA’s website – on the valuation of unpaid work (Debbie Budlender and Ann Lisbet Brathaug 2002).

In spite of the widespread media attention and our efforts to promote the project, the survey results have not been used much for policy-making purposes. One reason is that the survey did not show anything very surprising. In many respects, it merely confirmed what should have been widely known, such as the long hours spent by many women and children collecting fuel and water. However, the results have been used to elaborate
the national Child Labour Programme of Action. The data were used, in particular, to explore issues of fetching fuel and water, domestic work and domestic chores, and school attendance. Stats SA has also drawn on findings from the data to design improvements in the labor force survey, thus meeting one of the original objectives of the TUS.

Stats SA makes the raw data available to researchers, and a small, but pleasing, number of researchers have tackled the challenge of analyzing the data set. These include some who have used it for policy-related processes and several students who used it for masters in economics theses. The data have proved to be remarkably robust in that they seem to produce sensible results even when focusing on quite small groups or activity groupings. For example, a paper by Martin Wittenberg (2005) uses the data to explore punctuality and absenteeism among school pupils and finds these problems to be particularly severe for pupils from poor households. The paper finds, unsurprisingly, that these same learners – and particularly the girls – spend large amounts of time on household chores.

The lack of widespread use of the data can be partly explained by the limited number of people who have the skills to analyze large data sets with such a complicated structure. These skills are particularly scarce among gender experts and advocates.

**Regional developments**

After completing the survey, in November 2001 Stats SA organized a week-long regional workshop in Pretoria that was attended by staff of the official statistical agencies in virtually all countries making up the Southern African Development Community. The workshop took the form of practical hands-on exercises that went through every stage of designing, conducting, and analyzing a TUS. Several years later this workshop had a concrete outcome when the UNDP agreed to support the Central Statistical Office in Mauritius in conducting a TUS as an add-on to the annual general household survey of 2002. One of the workshop participants coordinated the survey, and the method used was very similar to that used in South Africa. One important difference was that the South African TUS was designed as a stand-alone or independent survey with the intention that it could later be conducted as an add-on module. The success of the Mauritian survey proved that this was feasible.

At the time of writing, a survey based on the South African approach is being conducted in Tanzania, as an add-on to their year-long labor force survey. The Tanzanian survey is the result of a concerted advocacy effort by the Tanzania Gender Networking Programme, which sees time-use data as necessary for supporting their activities in relation to gender-responsive budgeting as well as their work in the area of HIV/AIDS. This NGO’s advocacy, directed primarily at the Planning Commission and National
Bureau of Statistics, resulted in a decision by the Tanzanian government that they would themselves fund the time-use add-on.

TIME-USE SURVEYS IN LATIN AMERICA

Valeria Esquivel


Most of these TUS have been collected by national statistical offices, though only Cuba and Mexico seem to have successfully mainstreamed time-use data collection in their statistical programming up to now, with plans for repeating and/or extending their TUS. Some of the Latin American surveys have been carried out by non-governmental research centers (Nicaragua 1996) or academic institutions (Montevideo 2003), and many have resulted from the combined efforts of national statistical offices, international agencies, and local academics. More often than not, well-placed statisticians and committed researchers helped squeeze time-use questions or modules into existing household surveys. Indeed, with the exception of Cuba, all of the most recent TUS in Latin America collected by statistical offices have taken the form of modules attached to ongoing household surveys exploring living conditions, labor force, income, and/or expenditure issues.

Approaches to data collection have varied greatly. Questionnaires themselves have taken many forms, from activity diaries (self-administered in the Cuban case or filled-in by fieldworkers in the Dominican Republic [1995] and Buenos Aires [2005]), to exhaustive activity lists (Mexico 2002; Ecuador 2005), short tasks lists (Nicaragua 1996; Argentina 2001; Bolivia 2001; Montevideo 2003; Ecuador 2004), and stylized diaries (Nicaragua 1998; Guatemala 2000; Costa Rica 2004; El Salvador 2004), all of which are explained in more detail later in this contribution. Diversity is also evident in coverage (national/urban/city or group of cities), reference period (yesterday/previous week), sample unit (household/individual), reference population (respondent’s minimum and maximum age), and the inclusion and recording of simultaneous activities (see Appendix).

The following discussion addresses these different methodological approaches emphasizing the richness of the institutional and political framework that supported the collection of TUS, and the implicit or explicit restrictions with which each TUS has coped.
Different approaches to time-use data collection in Latin America

Short tasks lists

Short tasks lists, which are survey instruments based on stylized questions that target specific tasks, aim to obtain data on the time spent performing these tasks (UNSD 2005: 57). What differentiates this approach from others is not so much the length of the list – which in some cases can be fairly long – but the fact that the lists are never exhaustive: when focusing on unpaid care work they exclude personal care (particularly sleeping time) and leisure and therefore never sum to twenty-four hours a day. Examples of this approach include Mexico (1996), Argentina (2001), Bolivia (2001), Montevideo (2003), and Ecuador (2004). Reference periods are either “yesterday,” “last working day,” “last week,” or an “average week day/weekend day” during the last week.

In the case of Bolivia (2001), the list included seven tasks, five of them unpaid domestic work tasks (taking care of children; cooking and cleaning; food shopping; laundering and ironing; and minor repairing) and two others that fall within the SNA production boundary (production for self-consumption and wood and water collection). Yes/no questions were formulated for each task, so participation rates can be calculated. However, average “hours per week” result from combining the daily frequency and the average time a day devoted to these activities as a whole. A similar approach was followed in the “daily life module” collected with the Argentine Living Conditions Survey 2001, though SNA activities were not included in the list.

In the case of Montevideo, the TUS sought to identify the total workload (paid and unpaid work) by certain demographic characteristics and calculate how household time was distributed across members. The survey’s respondent was the household member who considered herself/himself “the main person in charge of” unpaid domestic work (Rosario Aguirre and Karina Batthyány 2005). In all of the other Latin American short tasks list surveys, respondents were all household members above a certain age (see Appendix).

Though the least expensive of all time-use data collection methods, this approach is prone to reporting errors. In an analysis of five of the Latin American cases – Nicaragua (1998), Guatemala (2000), Bolivia (2001), Mexico (2002), and Ecuador (2004) – Vivian Milosavljevic (2006) shows that the longer the tasks list, the longer the time women report devoting to unpaid work, meaning that as the prompting questions become more detailed, respondents produce more accurate accounts as their recall improves. This, in turn, means that time-use estimations are affected by the length and detail of the tasks list. Among the many reasons for this are that list items are necessarily broad, making respondents “add up” all activities comprised under a general heading and inevitably miss some. Problems of
activity wording – what the respondent understands by “housework” or “childcare,” for example – also affect survey responses. In addition, as this approach does not capture simultaneous activities, short tasks lists show a tendency to underreport activities that are frequently performed simultaneously, such as care work, when compared to activity diaries.

On top of this, it should be noted that short tasks lists that are too concise do not allow for a detailed analysis of particular activities, a sensitive issue when time-use data feed modeling exercises.

**Stylized diaries**

The stylized diary approach was followed by Nicaragua (1998), Guatemala (2000), Costa Rica (2004), and El Salvador (2004). In solving the difficult trade-off between respecting the twenty-four-hour cap and keeping the interview short, this approach resorts to a short but comprehensive list of activities (which in many cases correspond to the one-digit ICATUS).\(^7\)

Respondents provide information on the time spent on these broad activities during “yesterday”, except in the case of El Salvador, where the question opening the diary was “How much time do you devote to the following activities in a given day?” without specifying a particular day.\(^8\)

Some countries using this approach to TUS still encountered methodological challenges. While in the Nicaraguan TUS (1998) a specific check was included in order to verify that all activities added up to twenty-four hours, serious problems arose when analyzing the 2004 Costa Rican time-use data, since given times did not always add up to twenty-four hours. If the reported hours exceed twenty-four, it can be inferred that some activities are simultaneously performed with others, but nothing can be inferred if time adds up to less than twenty-four hours. In anticipation of this problem, the Costa Rican questionnaire differentiates between time devoted exclusively to care – which is one of the fifteen activity types asked for – and time devoted to care “at the same time” as another activity, asked for separately. However, these two questions did not always work well: sometimes, respondents declared total time devoted to care without really considering whether it was “exclusive” or not and became confused when prompted to differentiate the two; in other cases, when chronic patients were present in the household, answers to time devoted to care in combination with other activities were twenty-four hours, meaning being constantly on call (Irma Sandoval 2005). In Guatemala, the TUS also included a final question asking the respondent to identify which activities were performed simultaneously, but this did not work well either, as any one activity can be performed at the same time as many others, in different episodes along a given day.

Interestingly, published reports of the 1996 Mexican short tasks list treated it as a stylized analog of time diaries by estimating average time devoted to personal care activities (sixty-three hours a week) – which were
not asked for – and adjusting all registries that accounted for more than 105 hours a week. Time was adjusted by keeping the distribution among activities fixed and shrinking it to fit 105 hours, in an attempt to “normalize” activities that might have been performed simultaneously (Instituto Nacional de Estadística, Geografía e Informática [INEGI] 2002: 9).

It follows that the inclusion of simultaneous activities within this approach is still problematic, particularly because emphasis is given to “exclusive” time while prompting the respondent to indicate the time spent on each activity type. Indeed, this approach only works well if respondents are forced to think of activities not performed at the same time as others.

**Exhaustive activity lists**

Dissatisfaction with built-in list aggregation and the difficulties of unpacking this information have prompted an effort to refine task data collection with the use of an “exhaustive” activity list, which was applied by Mexico (2002) and Ecuador (2005) (INEGI 2005; Mercedes Pedrero 2005; Consejo Nacional de las Mujeres, Presidencia de la República [CONAMU] 2006). These lists are similar to stylized diaries in the sense that they are comprehensive (including time devoted to personal care, paid work, leisure time, education, etc.), but they resemble short tasks lists in that they emphasize capturing unpaid care work. Like some short tasks lists, the reference period is the previous week. The twenty-four-hour-per-day/168-hours-per-week cap is neither respected nor checked for, and there is no explicit provision for capturing simultaneous activities.

A distinct feature of this approach is the extent of the activity list; for example, Mexico (2002) included eighty-six activities and Ecuador (2005) included 110. This allowed for the inclusion of very detailed activities (for example, “preparation of home-made medicines”) that would not be included in stylized approaches. The wide reference period (last Monday to Friday and last weekend) also allowed for capturing less frequent/extraordinary activities (for example, “attending funerals”).

But the advantage of this approach also represents a weakness. There is no such thing as a completely exhaustive activity list: problems of wording and omitted activities still arise, as is evident from the “other activities” residual category. Differing activity frequencies might lead to respondents reporting “averages” and not actual time-use. For example, “washing the dishes” takes place many times a day, so respondents have to multiply to answer according to reference period; while “attending a party” takes place in very specific days and contexts. Respondent fatigue (and concomitant list-ordering biases) can also arise because each questionnaire is extensive and because it is applied to each and every family member (above a certain age).
Activity diaries

Activity diaries are twenty-four-hour schedules, divided in fixed time slots (ten, fifteen, or thirty minutes long) with room for one, two, or three activities in each of them. In contrast to short task lists and exhaustive tasks lists, activity diaries follow what could be termed a bottom-up approach to time-use data collection. Instead of starting from very aggregate types of activities and eventually disaggregating them further (a top-down approach), diaries invert this principle by collecting detailed information on time-use that is subsequently post-coded and eventually aggregated according to the survey’s activity classification.

TUS based on activity diaries in Latin America have followed two different data collection strategies: either data is collected through an interview or respondents are instructed to record their activities in a diary. In the first type of data collection strategy, the twenty-four hour-recall activity diary, respondents use their own words to report on what they did “yesterday” while the interviewer fills in the diary. This type of diary emphasizes minimizing the respondents’ recall efforts. In doing so, the burden reverts from respondents’ extensive reports on their activities over a fairly long period to sampling design and fieldwork. If correctly designed, less frequent activities will come up less frequently in the sampled days, provided they are representative of the reference population on all different weekdays. Also, fieldworkers working with this type of diary are responsible for activity coding, which is post-edited, so data quality ultimately depends on fieldworkers’ ability to transform respondents’ answers into diary activities with appropriate coding.

Two of the Latin American TUS – for the Dominican Republic (International Research and Training Institute for the Advancement of Women [INSTRAW] and Oficina Nacional de Estadística [ONE] 1995) and Buenos Aires 2005 (Dirección General de Estadística y Censos [DGEyC] 2007a, 2007b) – followed this approach. The former targeted adult women in the household (head or spouse), who would respond for all household members older than 10 years old, and it was aided by direct observation. By contrast, the Buenos Aires activity diary was self-referred: one randomly selected household member (older than 14 and younger than 75) answered about her/his previous day. In the Dominican Republic TUS, time slots were fifteen minutes long, from 5 a.m. to 5 a.m., allowing for one simultaneous activity, and in the Buenos Aires TUS, time slots were of thirty minutes long, from 4 a.m. to 4 a.m., allowing for up to three consecutive and/or simultaneous activities. The Buenos Aires survey also included probing questions that asked for frequently underreported simultaneous activities (for example, passive care) or checked whether an activity was done for pay (for example, taking care of a neighbor’s child for pay).
The second type of data collection strategy involves a self-administered activity diary. Ideally, respondents fill in the activity diary as the day progresses, allowing for a contemporaneous and accurate time-use data registry. As such, self-administered diaries are extremely dependent on the respondents’ ability to understand and accept the diary framework. They do not substantially differ from twenty-four-hour-recall diaries, although they usually have shorter time slots (such as ten minutes). This data collection instrument is normally administered to populations with a high literacy rate and often suffers high non-response rates. Self-administered diaries are also associated with stand-alone TUS.

Probably because of the costs associated with a stand-alone TUS and the complexities associated with this data collection instrument, the only example of self-administered diaries in Latin America is the 2001 Cuban TUS, which was conducted in five municipalities. Answers were collected from all household members older than 15, and two diaries were requested per respondent. The non-response rate was less than 5 percent (ONE 2002). Respondents were instructed to avoid blank lines, to eliminate detailed reports during (paid) working time, to include a detailed registry of means of transport, to write down cases of care work that is done for pay, and to give detailed account of leisure time activities. A full-page example was added to aid respondents.

Time-use data collected from diaries feature a) a chronology of events that can be analyzed (not only total time devoted to a certain activity type, but also when that activity takes place) and b) a better capture of simultaneous activities by asking “what else were you doing?” at any given time. Diaries may or may not include hierarchical simultaneity: they can pre-establish a “main” activity and a “secondary” activity (as in the Dominican Republic and Cuba surveys) or simply capture them without attaching any intrinsic ranking to the responses (as in the Buenos Aires survey).

Institutional frameworks

Support for time-use data collection in Latin America has stemmed from many different sources. As previously mentioned, many surveys have been collected by national statistical offices, but some have not. The 2003 Montevideo TUS resulted from an academic research project at the Faculty of Social Sciences, Universidad de la República, partially funded by the United Nations Development Fund for Women (UNIFEM) (Aguirre and Batthyány 2005). The 2005 Buenos Aires TUS was collected by the Directorate-General of Statistics and Census of the City Government, complying with a mandate of the local legislature, with survey design and analysis performed as part of a cooperation agreement with the Universidad Nacional de General Sarmiento (Valeria Esquivel,
forthcoming). A joint team made up of Inmujeres (Instituto Nacional de las Mujeres) and INEGI, the Mexican National Statistical Office, designed the 2002 Mexican TUS, and its activity list was widely consulted among local experts and interested parties (Pedrero 2003).

UNIFEM, ECLAC, and lately PAHO have actively supported regional expert meetings, which have allowed for information sharing and knowledge building to take place among local practitioners (Comisión Económica para América Latina [CEPAL] 2004). These UN institutions have a vital role in advocating for gender-aware time-use data collection in the region.

Some practical lessons learned

The variety of Latin American TUS shows a high degree of pragmatism in adapting available approaches to collect data under difficult conditions, namely with few resources and without (yet!) mainstream commitments by national statistical offices. As a result, the paths followed have been far more sensitive to local needs than to international comparative standards. I do not believe this is necessarily bad news, as Marilyn Waring (2006) points out: indeed, time-use data collection will progress only if results are locally valued and strategically used to influence concrete spheres of policy-making.12

Paradoxically, Latin American debates around TUS have fallen short of our rich and vast experience. Many practitioners remain convinced that the idealized stand-alone, Eurostat-type self-administered activity diary is the best way of collecting time-use data, but they regard it as infeasible in the Latin American context and ultimately a misuse of scarce social resources.13 In opposition, modules of ongoing household surveys in the form of short tasks lists are regarded as the feasible way of collecting time-use data because they are cheaper than stand-alone surveys and better suited to highly illiterate populations than the self-administered activity diary (see, for example, Vivian Milosavljevic and Odette Tacla [2007]).

In the context of these debates, only Cuba meets the ideal and the many Latin American attempts to collect time-use data are pooled together, concealing the many methodological options available, among which some could eventually prove to be better suited to particular contexts in the region. Actually, the fact that almost all of the TUS summarized above are modules in ongoing household surveys shows that advocating for a modular approach to TUS (as opposed to stand-alone surveys) can give way to many different approaches, depending on reference population (age and literacy rates), coverage (rural or urban), and available statistical infrastructure – including skilled fieldworkers and relative costs.

Indeed, restricting TUS methodological options to high-cost, self-administered activity diaries as opposed to low-cost, modular short tasks lists is problematic because doing so conceals the fundamental relationship
between TUS objectives and methodological design. For example, calculating aggregate measures of women’s and men’s total workload can be tackled with short tasks lists, but valuation exercises require enormous detail in order to impute value to time devoted to different activities; studying particular issues like transportation requires questionnaires to differentiate transportation time from the core activity that created the need for traveling in the first place; and identifying childcare provision by families and the community requires care work not being aggregated with housework. When choosing among all cost-feasible design options, researchers need to be aware that certain methodological choices based on cost considerations alone might compromise (or even jeopardize) the fulfillment of survey objectives.

Three methodological trade-offs arise when choosing a particular modular approach to time-use data collection: respondents’ burden versus fieldwork burden, surveying households versus surveying individuals, and considering – or not – simultaneous activities. First, if the respondents’ burden is to be minimized through the use of diaries (twenty-four-hour recall diaries or even stylized diaries, which are both filled in by enumerators) as opposed to exhaustive activity lists, fieldwork has to be carefully calibrated in order to correctly select households, individuals, and days to collect information on, something that might not always be guaranteed or even possible depending on the core survey characteristics the time-use module is attached to. Indeed, restrictions imposed by the core survey are among the main reasons for not choosing activity diaries (Pedrero 2005). On the contrary, if the exhaustive activity list approach is to be followed, extreme caution should be applied to list length and ordering to minimize respondent drop-out.

Second, while household surveying makes it possible to analyze intrahousehold time-use distribution and therefore calculate average distributive measures, it may also raise non-response rates (defined on household bases) when one or some of household members refuse, are absent, or cannot be contacted to conduct the survey.14 A lesson that may be derived from the previous accounts is that if the household is the unit of analysis, this feature has to be built in to the questionnaire’s design, as in the Montevideo TUS (2003).15 Household “total unpaid workload” and shares can be estimated using this approach.16 On the contrary, picking only a limited number of randomly selected members of the household – depending on average household size – can shorten the total interview time and widen the number of surveyed households when the ultimate unit of analysis is the surveyed individual.

A third trade-off arises with inclusion of simultaneous activities in questionnaire design. Making respondents’ answers comply with the twenty-four/168-hour cap by artificially avoiding simultaneous activities, allowing for these limits to be surpassed and therefore implicitly allowing for
simultaneous activities to take place (in aggregate terms), or allowing for pre-defined “simultaneous tasks” are hardly satisfactory ways of dealing with simultaneity. As previously mentioned, problems arise when the total hours surveyed are less than the limit and ad hoc (and highly disputable) adjustments might be required.

Activity diaries (either twenty-four-hour recall or self-administered ones) are the only approaches to consistently monitor simultaneous activities. An interesting question to address is whether to rank simultaneous activities and how to accrue time to each one of the activities performed at the same time. One solution is to divide or average time when analyzing the chronology of activities or daily rhythms to comply with the twenty-four-hour cap and give the full time to each of the activities when aggregating activities (irrespective of when they were performed), as was the case in the 2005 Buenos Aires TUS (Esquivel forthcoming).17

A practitioner’s viewpoint

A personal lesson learned from being involved in the design and collection of a TUS survey is that there is no objective way of collecting time-use data (certainly a truism, since there is no objective way of collecting any data!). All questionnaires – even supposedly value-free diaries – structure respondents’ answers in different ways, and post analysis further shapes results. Lists (either exhaustive activity lists or short tasks lists) show researchers’ interests by singling out some issues and leaving out some others, and by wording activities in ways that might (or might not) sound familiar to respondents.

Diaries’ time slots also signal what a significant activity is and what is not (for example, a respondent probably won’t state that she/he blew her/his nose). Activity prioritization is also ad hoc, as is the notion of activity as such, which usually means an active way of spending time. However, relatively passive ways of spending time can be important, such as being on call to provide care (see Nancy Folbre and Jayoung Yoon [2006] for a thorough discussion).18

Similarly, the classification of activities shows researchers’ interests: all actions that become aggregated in a single code (for example, cooking and setting the table, feeding and bathing a baby or changing her/his nappies) become indistinct behind that code (for example, “preparing meals” and “actively taking care of household children”). This is particularly important when time slots are long and two or three activities can be included, and it is closely related to the way simultaneity is captured. For example, in the Buenos Aires TUS, a parent who answers that she/he bathed a baby, changed her/his nappies, and put her/him to sleep did only one activity (code “511”). This, in turn, means that in a given time slot there are not three subsequent activities but only one, which could have
been performed at the same time as another activity (for example, chatting with baby’s other parent, code “830”) (DGEyC 2005).

Also, even if diaries allow for disaggregating activities to a high degree, these estimates may have high standard errors and thus be not statistically reliable if the number of sample observations is too small (the same is true for very infrequent or detailed activities in a list). Full reporting of coefficients of variation and non-response rates should become customary to evaluate the quality of any TUS results.

Lastly, the way we use our time has many other dimensions that do not fit chronological measurement, which are absent from most TUS (for example degrees of freedom in deciding whether or not to take up certain tasks, differing intensity in performing activities, stressing/relaxing ways of combining activities, power relations, love, and affection). Qualitative approaches – which we economists tend not to be familiar with – should broaden our views on how women and men of different ages, backgrounds, and income levels meet the daily necessities of life.

TIME-USE SURVEYS IN ASIA

Indira Hirway

TUS are not very new to Asia: Even before 1980, countries like Japan, the Republic of Korea, and the former USSR were conducting national-level TUS, and in the 1970s and 1980s, developing countries like the Philippines, India, and Nepal, among others, were carrying out small-scale surveys, often covering just a few villages or a town. The Japan Broadcasting Company, NHK, undertook the first national Japanese TUS in 1941 mainly to collect information on the time people spent on enjoying different TV programs. It also gathered information on what people did in their spare time (Hitoshi Mikami 2000). The NHK repeated the survey in 1960–1, 1965, and then periodically. The National Statistics Bureau of Japan conducted the first large-scale national Survey on Time-use and Leisure Activities in 1976 to understand how people spent their leisure time, and since that time, the Bureau has been conducting this survey every five years. Similarly, the Korean Broadcasting System, KBS, conducted a TUS in 1981, and then after every five years until 2000. The main objective of this survey was to plan for television/media programs. It also gave a picture of how the Korean population spent its time, and particularly leisure time. However, the 1999 TUS, which was conducted by the Korea National Statistical Office, was the first to also explore and estimate men’s and women’s unpaid work.

Countries like India, Nepal, and the Philippines conducted small-scale surveys in the 1970s and 1980s mainly to measure SNA work performed by men and women in the informal sector as well as to estimate the unpaid non-SNA work of women. Such surveys were sporadic, small scale, and
exploratory in character. In the case of India, for example, Devaki Jain and Malini Chand (1982) conducted a time allocation study with a small sample from a few villages of Rajasthan and West Bengal to understand women’s paid and unpaid work. Similarly, Meena Acharya (2003) conducted a study covering a few Nepalese villages in the 1980s to understand the contribution of women’s paid and unpaid work to the national well-being. These small-scale, sporadic surveys provided neither country-level data nor time-series data to analyze long-term changes in the time-use patterns of their respective populations; however, they drew attention to the potential of time-use surveys.

This situation changed considerably in the 1990s, as two events gave a push to TUS in Asia: (1) the Human Development Report (HDR) (UNDP 1995) and (2) the Beijing Fourth World Conference on Women. The HDR 1995 particularly had a significant impact in India, and this led to initiation of the first time-use survey in India. The central message of the HDR 1995 was that “human development must be engendered” and “development that is not engendered is endangered” (UNDP 1995: 1). These messages, along with the new Gender-Related Development Index (GDI) and Gender Empowerment Measure (GEM) that were introduced by the HDR to measure inequality in gender development and gender empowerment respectively, had considerable impact on policy-makers and scholars in India. In 1996, the UNDP and the Government of India organized a national-level seminar at the Singamma Foundation to discuss the new concepts and new measures of human and gender development. Ms. Sakiko Fukuda-Parr, Director of the UNDP HDR team in New York, participated in the seminar along with other experts and policy-makers from all over the country. Importantly, the seminar concluded that without proper data on women’s contributions to national income (GDP) and national well-being, it is not possible to measure the development and empowerment of women. A strong need was therefore felt to conduct a national level time-use survey, at least on a pilot basis, as it was realized that small-scale surveys would not adequately provide the required data for measuring women’s SNA and non-SNA contributions. As a follow-up to this national seminar, the Department of Statistics in the Ministry of Programme Implementation and Planning set up a Technical Committee to undertake a pilot TUS in the country, which was conducted in four rounds between April 1998 and March 1999.

The second important event, the 1995 Beijing World Conference on Women, adopted the Platform for Action (PFA), which called for developing “suitable statistical means to recognize and to make visible the full extent of the work of women and all their contributions to the national economy including their contribution in the unremunerated and domestic sectors” (United Nations and Fourth World Conference on Women 1995: 68.b). It also stressed the need “to develop a more
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comprehensive knowledge of work and employment through efforts to measure and better understand the type, extent and distribution of unremunerated work, particularly in caring for dependents’” (United Nations and Fourth World Conference on Women 1995: 167.g). In May 1997, this conference was followed by a major International Workshop on Integrating Unpaid Work into National Policies, which was organized in Seoul, Korea by the UNDP, UNSD, UNIFEM, and the government of Republic of Korea. Several scholars, activists and policy-makers, particularly from the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) region, participated in the workshop. The papers presented at this workshop have been published in a volume by the organizers (UNDP 1997). As a result of the workshop, the Regional Resource Group on Integrating Unpaid Work into National Policies was established as part of the UNDP Program on Promoting Gender Equality in the Asia-Pacific Region (APGEN) and its project component on integrating paid and unpaid work into national policies. During the 1999–2002 period, the resource group served as the steering committee and advisory group for the statistics sub-component of the project. In this capacity, the resource group undertook several activities to promote TUS in the UNESCAP Region.

The Regional Resource Group organized an international seminar on time-use studies in Ahmedabad to discuss the results of the (first) Indian and Korean TUS, to exchange international experiences in time-use studies, and to learn lessons from the same to promote time-use studies in the Region. The Regional Resource Group also organized training workshops at UNESCAP for national-level planners, statisticians, and gender experts on the subject of integrating unpaid work into national policies. A major contribution of the Regional Resource Group was the development of a guidebook entitled Integrating Paid and Unpaid Work into National Policies (UNDP and UNESCAP 2003). The six major modules of the Guidebook address time-use data collection, the valuation of unpaid work, the context surrounding paid and unpaid work, the policy implications of unpaid work, advocacy efforts for producing more unpaid-work-sensitive policies, and case studies of gender sensitive data collection in India and the Republic of Korea.

By the mid-nineties, several countries in Asia had already conducted their first TUS, and more countries carried out TUS in the late 1990s and early years of the present century, many of them following the guidebook and the training workshops at ESCAP (Bangkok). Apart from India (1998–1999) and the Republic of Korea (1999, 2004), other countries that have undertaken national TUS in the region include Thailand (2001), Mongolia (2000), Laos PDR (2002–03), Nepal (1998–99), China (ongoing), and Palestine, Turkey and Vietnam (in the late 1990s and early years of the present decade). In addition, countries like Bangladesh, Malaysia, Indonesia, and the Philippines, among others, have conducted small-scale
TUS, and Pakistan, Cambodia, and Timor Leste are in the process of conducting their first national TUS in the near future.

**Objectives of time-use surveys**

As far as the objectives of TUS in Asian countries are concerned, one finds broad similarities as well as some variations within the countries. As mentioned previously, prior to the Beijing Conference, Japan had conducted national TUS to understand how people spent their leisure time. After the Beijing Conference, however, Japan introduced the additional objective of measuring and valuing the contributions of unpaid work, mainly of women, to the national well-being. It compiled satellite accounts of unpaid work for this purpose (Mikami 2000). Similarly, a major objective of the South Korean time-use survey conducted in 1999 was to measure unpaid work and evaluate the economic value of unpaid work (Shon Ae Lee 2000; Kim Young 2003).

Developing countries in the region, however, had different objectives in carrying out TUS. While developed countries are concerned mainly in understanding the non-SNA activities of people through time-use surveys (it is argued that they get the required information on SNA work of people through conventional surveys and sources), developing countries are also interested in drawing from time-use data to understand the SNA or economic work of people, particularly of those engaged in sectors that are difficult to measure such as subsistence work, home work (for example, outsourced work carried out within homes), and other informal work. Since conventional labor force surveys do not seem to be capable of netting this work adequately, TUS are used for this purpose.

Moreover, the specific objectives of each developing country differ depending on that country’s situation. We will examine the objectives of three different developing countries – India, Thailand, and Mongolia – to illustrate the similarities and variations in the objectives.

The main objectives of the 1998–1999 TUS in India were threefold: first, the TUS aimed to collect and analyze the time-use patterns of women and men in order to have comprehensive information about the time spent by people on marketed and non-marketed economic activities covered under the UN–SNA 1993; non-marketed, non-SNA activities covered under the General Production Boundary; and on personal care and related activities. Second, the data would be used for generating more reliable estimates on work force, estimating and valuing unpaid work, and inferring the policy/programe implications of gender equity analyses, among other purposes. And finally on the statistical side, the TUS would be used to develop a conceptual framework and a suitable methodology for designing and conducting time-use studies in India on a regular basis (Indira Hirway 2000).
In Thailand, TUS were initially conducted as a part of the Cultural Activity Participation and Time-use Survey Project in 1985, 1990, and 1995. These surveys primarily sought to understand the participation of people in different cultural and custom-related activities. However, in 1997 Thailand faced a severe economic crisis, and the resulting economic slow down led to increased unemployment and underemployment as well as the expansion of the Thai economy’s informal sector. Since it was not easy to measure the work and workers in the informal sector, Thailand’s National Statistical Organization (NSO) decided to conduct a carefully designed labor force survey in the late 1990s. This labor force survey asked specific questions about men’s and women’s unpaid economic work, which was defined as work without pay performed on a farm or in business enterprises owned and operated by a member of the household. However, the labor force survey was not rated as a satisfactory survey by the NSO for measuring the work and workers belonging to the informal sector, so the NSO of Thailand decided to conduct a TUS in August 2001 to get comprehensive knowledge of all forms of work by men and women. The 2001 TUS aimed to get improved estimates of the Thai workforce (NSO 2002). The specific objectives for the survey were: (1) to measure the amount of time people aged 10 years and over spent on the main categories and sub-categories of activities, (2) to provide information on the context in which people undertake various activities and whether these activities take place simultaneously, (3) to study the differences in patterns of men’s and women’s paid and unpaid work, (4) to provide data to markedly improve the estimates of the labor contribution to GDP, and (5) to provide internationally comparable time-use data for the country.

The third country, Mongolia, embraced free market principles and initiated economic liberalization in the early 1990s under the Mongolian People’s Revolutionary Party government after about seventy years with a centrally planned economy. As a result, in 1996 the government brought in sweeping economic changes, including the privatization of state assets, liberalization of trade, and promotion of foreign capital. This transition of the economy created space for the private sector, which dramatically increased the size of the Mongolian economy’s informal sector. In 1998, Mongolia’s National Statistical Office carried out an informal sector survey in an effort to estimate the number of informal sector workers, but it could not adequately capture the size of the informal sector. The National Statistical Office therefore decided to conduct a TUS to measure this sector in April 2000. The specific objectives of the survey were threefold: first, the survey sought to collect data on employment in the informal sector to arrive at realistic estimates of employment; second, it aimed to collect comprehensive information on how men and women in Mongolia spend their time on paid and unpaid activities; and finally, it would collect data on gender inequality and women’s unpaid work (Y. Noov 2000).
In short, the origin of all three countries’ surveys lies in the realization of authorities that conventional surveys are unable to provide accurate estimates of the workforce in these countries, and as a result, one major objective of all three TUS was to get better estimates of the workforce.

Neither developed nor developing countries have recognized another important aspect of TUS: these surveys provide a complete view of “total economy.” Some feminist economists (Diane Elson 2000) now argue that a country’s “total economy” should include the paid and unpaid work that is covered in the production boundary of the SNA as well as the unpaid work (domestic services and voluntary work) falling within the general production boundary. It is increasingly recognized that unpaid work is a part of the total economy for three reasons. First, unpaid work contributes to human welfare and well-being (for example, it frequently provides care for children, the old, the sick, and the disabled). Second, it contributes to the formation of human capital (for example, it takes care of workers in the household and replenishes their productivity and reproduces labor), which is an important factor of production in any economy; and finally, unpaid and paid work are not independent of each other, and are in fact frequently substituted for each other.

Because TUS may be used as a tool to shed light on the nature and extent of unpaid work, they allow researchers to more fully explore this relationship. Several activities move from paid to unpaid work or vice versa under different economic situations, and together they form the total economy. It is frequently observed that unpaid work moves in the reverse direction of business cycles. During a country’s boom period, unpaid work declines as a large part of the workforce goes into the market economy as a result of rising incomes and employment levels. During the downturn of the economy when the paid work (incomes and employment) is declining, unpaid work tends to increase. In other words, there is no watertight compartmentalization between the two, and there is an urgent need to understand this interrelationship. Because of this very close connection between paid and unpaid work, it is important to incorporate the unpaid work in our data system in order to have the total view of any economy. TUS help here, as they constitute the only survey technique that helps us to understand unpaid work in a country and therefore contributes to presenting a total picture of an economy. Unfortunately, as mentioned previously, this aspect of TUS is not really well appreciated at present, but one hopes that as TUS become more prevalent, researchers and policymakers will begin to understand this relationship more clearly.

**Approaches to time-use surveys**

When developing countries in Asia started conducting national TUS, they did not have standard concepts and methods to follow, as the available
concepts and methods were developed with the needs of developed countries in mind. These countries therefore had to select or develop their own methods for conducting TUS. Consequently, one finds wide variations in the approaches and methods used by different countries. The Appendix provides some interesting information on the type of TUS and the methods used in conducting TUS in some Asian countries. It shows that there are considerable variations in survey design, classification, and methods of data collection used in the different countries. I discuss these variations in the following paragraphs, particularly with reference to India, Thailand, and Mongolia.

An independent survey versus module in a major survey

A TUS can be conducted as an independent survey or as a module for another survey like the LSMS (living standard measurement survey), income–expenditure surveys, or labor force surveys. Most surveys in Asia are conducted as independent surveys, though a few TUS were also conducted as a module (for example, Nepal’s TUS was conducted as a module for its national labor force survey in 1999–2000). For the three country surveys discussed in detail in this contribution, the TUS were conducted independently.

Data-collection methods

Developing countries face some specific problems with data collection. To start with, the low literacy level in many countries makes it difficult to use the twenty-four-hour, self-administered time diaries for data collection. Many countries therefore use the twenty-four-hour recall method, in which interviewers fill in the diaries based upon the respondents’ recollections of their activities on a previous day. Likewise, in some developing countries watches and timepieces are not commonly used, particularly in lagging and remote areas. It therefore becomes necessary to use broader time slots (for example, half hour or hour rather than ten-minute slots) to get more accurate responses from people. Moreover, women often do not respond well to male interviewers, which makes it necessary to employ both female and male interviewers. And lastly, since agriculture is a predominant activity in most developing countries, it is desirable to collect seasonal time-use data keeping agricultural seasons in mind.

In the case of India, three data-collection schedules were designed: the first was for household-level information, the second for individual-level information, and the third for the time-use patterns of the selected individuals. The twenty-four-hour recall method was used for data collection, and interviewers logged information about the previous day in twenty-four-hour activity diaries made up of one-hour slots (Hirway 2003)
and Raj Nath Pandey 2000). For the Mongolian TUS, background information was collected through interviews, while time-use information was collected using both the twenty-four-hour recall and the self-administered diary. For the Thai TUS, as in the Indian TUS, three schedules were prepared for collecting data on background information, individuals, and time-use respectively. While interviewers canvassed the first schedules, the third schedule was self-administered in ten-minute slots.

**Contextual variables**

Contextual variables have to be selected carefully in developing countries as the contexts respondents need to understand their respective activities are likely to be different from that in developed countries. A few important contextual variables for developing countries could be whether a given activity performed is paid or unpaid, “for whom” the economic activities are performed, and “where” all – paid or unpaid – activities are performed (such as inside or outside the house). The two contextual variables used in the Indian survey are whether an activity is paid or unpaid and whether the activity is performed inside or outside the home. The TUS also collected information about the mode of payment for paid activities. In the case of Mongolia, the context variables used were for what purpose the activities were performed, for whom and with whom they were performed, and whether the activity was paid or unpaid. Though the number of contextual variables in the Mongolian TUS is large, not all of them were always used simultaneously. And lastly, the Thailand survey used three contextual variables, namely, for whom and with whom activities were performed, where the activities were performed (location), and whether the activities were paid or unpaid.

**Sampling of households and the time samples**

There were no major sampling problems for these surveys. All three countries used stratified random sampling with systematic selection. The sample size, however, varied widely: Thailand selected a sample of 27,000 households from a total population of thirty million households; India selected 18,620 households for the survey from six states, with a total of about fifty million households; and Mongolia selected a sample of 1086 households from a total of 0.65 million households.

The age groups of the people sampled also differed: In India the cut-off age was 6 years old (meaning that respondents aged 6 years and above were included in the time-use sample), while the cut-off ages were 10 years old in Thailand and 12 years old in Mongolia.

Also, there are large differences in the timing of the survey administration: The Indian data were collected in four rounds to capture the seasonal
variations in the time-use, while the TUS in Thailand was conducted in only one round in August 2001. Similarly, Mongolia’s TUS only collected data in June 2001. The number of reference days and the manner of presentation also stood as points of variation among the surveys. India collected data for two days in a week (and three days in the event that one of the days turned out to be an abnormal day), with data presented in terms of weekly time-use. In contrast, Thailand only collected data for one day, which was selected randomly in such a way that the sample was equally distributed across the different days of the week, and the data were presented in terms of daily time-use. And finally, Mongolia collected data for two or three days, with two-thirds of respondents assigned two diary days and one-third of respondents assigned three diary days. All days of the week were covered uniformly.

**Classification of time-use activities**

In order to make time-use statistics meaningful, it is important that time-use activities are listed comprehensively and that time-use activities are classified in a manner that allows for meaningful analysis of time-use data. Researchers in the South found that the classifications of time-use activities adopted by developed countries were not suitable for the requirements of developing countries, mainly because (1) the classifications are extremely limited with respect to SNA activities because TUS in developed countries do not focus on collecting information on SNA activities, and (2) the rest of the activity classifications also frequently do not suit the needs of developing countries since the types of activities performed in developing countries are frequently different from those in developed countries. Though efforts are being made at the global level to develop standard classifications that could be applicable to both developed and developing economies, these have not yet met with much success so far.

In the absence of a standardized global classification scheme for time-use activities, Asian countries have selected and/or developed their own classifications. One commonly used classification is the (Trial) ICATUS, which was developed at UNSD after a meeting of Expert Group in 1997 (Grace Bediako and Joann Vanek 2000). This classification has been designed in the SNA framework, under which the activities were divided into three broad groups: (1) activities that are covered under the SNA production boundary (SNA activities), (2) activities that are not covered under the SNA production boundary but are covered under the General Production Boundary (non-SNA activities), and (3) personal services, which need to be performed by persons themselves and which cannot be delegated to others. The total time-use activities are divided into ten broad groups. The first three groups refer to economic or SNA activities, the next three groups refer to non-SNA activities, and the last four groups refer
to personal services. Each of these groups was divided into sub-groups (two digits), bringing the total of sub-groups to eighty. The national statistical offices then divided each sub-group into three-digit activity groups, while keeping the activities performed by people in their respective countries in mind.23

The NSO of Mongolia, for example, used the trial ICATUS and developed its three-digit classification. In the case of India, the Technical Committee (set up for designing the concepts and methodologies of the pilot TUS) modified the trial classification to suit the needs of the country. The first three major groups in the Indian classification included primary-sector activities, secondary-sector activities, and tertiary-sector activities. The total activities were divided into nine major categories, sixteen sub categories (two-digit sub-groups), and 176 three-digit activities. Thailand has used two sets of classification of activities: the classification commonly used in industrialized countries and the 1997 trial ICATUS. The first classification divided all activities into four broad groups: necessary time, contracted time, committed time, and free time,24 while the trial classification divided all activities into ten groups and eighty sub-groups as seen above.

In short, in the absence of standardized guidelines, these three developing countries have developed their own concepts and methods to generate time-use data, which are sometimes not of the best quality (for example, a tiny non-representative time sample does not provide stable estimates or the absence of seasonal rounds neglects seasonal variations in time use), and are not strictly comparable across countries.

It would not be out of place to discuss some recent developments in India with respect to TUS to concretely illustrate some of the successes and some of the limitations faced by researchers in Asia. As mentioned previously, the Indian (pilot) TUS was carried out in India’s six major states. It must be emphasized that it was solely an Indian initiative that was fully funded by the Government of India, without any outside technical or financial help. The major results of the survey were discussed and scrutinized carefully, and the data were presented in two seminars that included international experts. The first international seminar (1999) discussed the preliminary results of the TUS as well as the methods, while the second seminar focused on the application of time-use statistics (2002).

Since most experts and policy-makers in the government accepted the advantages of time-use statistics in understanding socioeconomic aspects of the Indian society, another committee of experts was set up to finalize the methods, particularly the classification of time-use activities, having learned lessons from the first survey. The report of this committee was recently submitted to the Department of Statistics, Government of India. And finally, the recent third international seminar (May 2007) on mainstreaming time-use surveys in the Indian statistical system has made some
recommendations for incorporating TUS in the national statistical system. The government has not accepted these recommendations yet.

Taking the example of the Indian case, which may be extended to TUS experience in Asia and in other developing countries, one can state that the process of mainstreaming TUS is very slow. It takes a lot of time and effort to develop sound methods and classification and to foster discussions and studies in an effort to convince mainstream economists and statisticians about the utility and soundness of the methods and the quality of time-use data.

Some issues and concerns

There are some important issues and concerns with respect to TUS in Asia that need to be addressed in order to promote TUS in the region.

Absence of standardization of concepts, methods, and classification of time-use activities

The first major concern of researchers is to ensure the soundness and standardization of the concepts, methods of collection, and analysis of TUS in Asia (and for that matter, the world). The non-standard methods are reflected in the variations in the quality of time-use data on the one hand and the limited cross-country comparability of time-use data on the other hand. A lot needs to be done to develop standardized concepts and methods for conducting TUS.

Under use/Non-use of time-use statistics

One important observation about the time-use studies in Asia (and also in developing countries) is that the data are not used by these countries for policy-making or for research studies (Lorraine Corner 2003). For example, the UNDP commissioned a study of the application of time-use data in three developing countries – India, Benin, and Mexico – that showed that the TUS data were not used much by policy-makers in these countries (Gabriel Brunnich, Pippa Druce, Mehdi Ghissassi, Mercedes Johnson, Nassim Majidi, Anne Laure Radas, Pilar Rodriguez Riccheri, Camille de Sentenac, and Danielle Vacarr 2005). Likewise, this trend is evident in the three countries discussed in detail in this contribution. Following the TUS, Thailand’s NSO has published a big volume of the data with elaborate tables (NSO 2002), but they have not used the data thereafter for any official analysis. In Mongolia, the case is more or less the same. India’s time-use data have been used in a limited way to estimate the size of the workforce and to estimate the value of men’s and women’s...
unpaid work (Swaraj Kumar Nath 2003), but apart from that, the data are not much used, in spite of their large potential.

Several reasons may account for this state of affairs: First, international organizations frequently push for TUS though national governments do not really need the data for their official use. Second, some developing countries lack the national capacity to analyze the data, and other countries are not in a position to bear the cost of analysis. Third, the lack of cross-country comparability discourages the use of the data, particularly by global organizations. Fourth, as a consequence of the absence of standardized norms, time-use data are frequently not respected as “good data” (meaning data with reasonable and acceptable quality) by national statistical offices and policy-makers.

Lack of mainstreaming of time-use surveys

Aside from a few exceptions (like Mexico in Latin America), most developing countries have not conducted more than one national TUS so far. In this sense, TUS are not yet mainstreamed in developing countries. Asia is no exception to this, and TUS have not become a regular part of the national statistical systems. Though some work has been done to show the utility of time-use data in understanding the socioeconomic characteristics of human society, national statistical offices in most developing countries do not seem to be inclined to mainstream TUS.

In short, the promotion of TUS in Asia requires three major inputs: First, TUS need to be conducted in more countries, and researchers need to analyze the available time-use data to illustrate its usefulness for understanding socioeconomic realities and for policy-making. Second, the quality of data must be improved by strengthening the concepts, methods of data collection, and data analysis. And finally, standard concepts and methods need to be developed in an effort to promote the cross-country comparability of time-use data.

Since an increasing number of developing countries are now realizing the advantages of time-use studies in acquiring a better understanding of their national economy and society, the number of countries conducting TUS is continuously increasing. It will be fairly realistic to hope that TUS will not take a very long time to acquire its due position in national statistical systems.

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The (Trial) International Classification of Activities for Time-Use Statistics (ICATUS) was conceived of as a universal methodology for conducting TUS and sought to foster a universal time-use activity classification. It was developed with the intention of keeping in mind the needs of developing countries. UNSD has produced two classifications, one in 1997 and another in 2000–1 (and modified later on). The 1997 ICATUS has been used, and in some cases adapted, by some developing countries.

Ginwala subsequently became the speaker of the first post-apartheid parliament.

Countries represented were Angola, Lesotho, Malawi, Mauritius, Mozambique, Seychelles, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe.

Because available information is scattered and out-of-date, there might be other cases of which I am not aware. In particular, I was not able to gather enough information about a Chilean survey (María Luisa Rojas and Lylian Mires 2002) and the Belo Horizonte Time-Use Survey in Brazil (Neuma Aguiar 2007).

The Mexican 1996 TUS falls into this category because it has not collected data on “sleeping, eating, socializing and resting” (INEGI 2002: 7).

The Uruguayan TUS follows a methodology applied successfully in Spain (Cristina García Sainz 2005).

These are not “light diaries”: there is no information on the chronology of activities (see the discussion on activity diaries in the following section).

This can potentially be problematic as some activities asked (for example, productive work and social events) most frequently take place on different weekdays.

There are other diaries that use open time slots, like the 1998 Mexican TUS. Results from the 1998 Mexican TUS have not been published, precluding its analysis.

The Buenos Aires TUS draws heavily on the 2000 South African TUS, though it introduced several changes in interviewers guiding questions, activity classification, context variables, probing questions, and the way in which simultaneous activities are recorded (Debbie Budlender 2007).

A distinctive feature of the 2005 Buenos Aires TUS is that all household members’ socio-demographic and labor market data is available from the core Annual Household Survey it was attached to (Esquivel forthcoming).

This is even clearer when time-use data collection is discontinued after attempts tied to one-time-only (foreign) funding.

Of course, they are not alone. This is the view that permeates the tone of the Guide to Producing Statistics on Time Use: Measuring Paid and Unpaid Work (UNSD 2005).

Indeed, most surveys that targeted households ended up analyzing individuals as their observation unit.
Through the case of Montevideo, distributive measures are derived from information provided by the respondent (the “main person in charge of household tasks”).

However, distributive analyses are rarely performed (see Valeria Esquivel [2006] for an example).

In a different treatment of hierarchical (main/secondary) activities, the Guide defines simultaneous activities as main and secondary performed in parallel (UNSD 2005: 143ss). However, parallel activities needn’t be prioritized (Waring 2006: 6).

Passive care was included in the Buenos Aires TUS Classification of Activities. Fieldworkers were trained to differentiate it from active care (see Budlender [2007] and Esquivel [forthcoming]).

The present author headed the Technical Committee.

Industrialized countries are using time-use studies for understanding (1) unpaid non-economic domestic services; (2) time spent on self-development or human-capital formation – such as education, training, reading, etc.; (3) social interactions, social networking, and community-based volunteer work; and (4) leisure time and leisure-time activities, etc.

The activity classifications in industrialized countries usually devote only one group to SNA activities, which then has a few sub-groups to more specifically describe those SNA activities.

These groups are (1) employment for establishment; (2) primary production activities (not for establishments); (3) service for income and other production of goods (not for establishments); (4) household maintenance, management, and shopping for own household; (5) caring for children, the sick, elderly, and disabled members of the household; (6) community services and help to other households; (7) learning; (8) social and cultural activities; (9) mass media use; and (10) personal care and self maintenance.

It should be noted that UNSD called another meeting of experts in 2000 and developed a modified time-use activity classification, which was further modified in the following years. This classification has fifteen major groups (UNSD 2005).

Necessary Time is the time devoted to personal care activities such as sleeping, eating, personal hygiene, etc. Contracted Time refers to explicit contracts which control the periods of times in which activities are performed. Committed Time describes activities to which a person has committed herself/himself because of previous social and community interactions, such as setting up home, performing community work, etc. And Free Time is the amount of time left when the previous three types of time have been taken out of a personal day.

REFERENCES


EXPLORATIONS


### Appendix Table 1 Time-use surveys

<table>
<thead>
<tr>
<th>Country</th>
<th>Survey</th>
<th>Type of survey and coverage</th>
<th>Survey instrument</th>
<th>Reference period</th>
<th>Surveyed population</th>
<th>Mode of data collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>South Africa Time-use survey</td>
<td>Stand-alone survey covering all parts of country</td>
<td>Activity diary; 30 minute intervals with up to three activities in each one; non-hierarchical simultaneous activities. Adapted the 1997 trial ICATUS</td>
<td>Yesterday. Data was collected in three rounds or 'tranches'</td>
<td>2 randomly selected members per household, 10 years or older</td>
<td>Face-to-face interview</td>
</tr>
<tr>
<td>Tanzania</td>
<td>Integrated labor force survey</td>
<td>Module administered to every fifth household in sample; covered mainland Tanzania and Zanzibar</td>
<td>Activity diary; 60 minutes intervals with up to five activities in each one; non-hierarchical simultaneous activities. Adapted the 1997 trial ICATUS</td>
<td>Yesterday, for seven contiguous days</td>
<td>All household members 5 years or older</td>
<td>Face-to-face interview</td>
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### Appendix Table 1 (Continued)

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<tr>
<th>Country</th>
<th>Survey</th>
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<tr>
<td><strong>Latin America</strong></td>
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<tr>
<td>Argentina</td>
<td>National living conditions survey 2001, daily life module</td>
<td>Module of living conditions survey; urban, national</td>
<td>Short tasks list (10 housework/care tasks)</td>
<td>Last week (weekdays/weekends)</td>
<td>All household members 15 years or older</td>
<td>Face-to-face interview (sometimes to key informant)</td>
</tr>
<tr>
<td>Buenos Aires</td>
<td>Time-use survey 2005</td>
<td>Module of the Buenos Aires annual household survey 2005, a labor force, income and social indicators survey; Buenos Aires City</td>
<td>Activity diary; 30 minute intervals with up to three activities in each one; non-hierarchical simultaneous activities. Adapted the 1997 trial ICATUS</td>
<td>Yesterday (4 am to 4 am today)</td>
<td>A randomly selected household member, older than 15 years and younger than 75</td>
<td>Face-to-face recall interview; self-referred; one diary day</td>
</tr>
<tr>
<td>Bolivia</td>
<td>Continuous household survey 2001, housework and unpaid work module</td>
<td>Module of labor force survey; national</td>
<td>Short tasks list (7 housework/care tasks)</td>
<td>Last week (weekdays/weekends)</td>
<td>All household members 7 years or older</td>
<td>Face-to-face interview (sometimes to key informant)</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>Continuous household survey 2004; time-use module</td>
<td>Module of labor force survey; national</td>
<td>Stylized diary (15 pre-defined activities); tried to differentiate between childcare performed simultaneously</td>
<td>Yesterday, except for Mondays’ interviews, which referred to Saturdays and Sundays</td>
<td>All household members 12 years or older</td>
<td>Face-to-face interview (sometimes to key informant)</td>
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<tbody>
<tr>
<td>Cuba</td>
<td>Cuban time-use survey 2001</td>
<td>Stand-alone survey; five municipalities</td>
<td>Activity diary; 10 minute intervals; simultaneous activities as main and secondary. Adapted the 1997 trial ICATUS</td>
<td>Pre-defined days</td>
<td>All household members 15 years or older</td>
<td>Self-administered; two diary days</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>Time-use survey 1995</td>
<td>Stand-alone survey; national</td>
<td>Activity diary; 15 minute intervals; simultaneous activities as main and secondary; ‘for whom’</td>
<td>Yesterday (5 am to 5 am today)</td>
<td>All household members 10 years or older</td>
<td>Interview to adult women plus participant observation; one day diary</td>
</tr>
<tr>
<td>Ecuador</td>
<td>Labor force survey since 2003–2004; unpaid housework module</td>
<td>Permanent module of labor force survey; national</td>
<td>Yes/no question on housework plus short tasks list (5 tasks)</td>
<td>Last week</td>
<td>All household members 5 years or older</td>
<td>Face-to-face interview (sometimes to key informant, particularly in the case of children)</td>
</tr>
<tr>
<td></td>
<td>Time-use survey 2005</td>
<td>Module of labor force survey; Quito City plus two provinces, including rural areas</td>
<td>Exhaustive activity list (99 activities plus 11 tasks asked in case there are household members who are mentally/physically in need of continuous care)</td>
<td>Last week (weekdays/weekends)</td>
<td>All household members 12 years or older</td>
<td>Face-to-face recall interview; self-referred</td>
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<tbody>
<tr>
<td>El Salvador</td>
<td>Natural environment and time-use survey 2004</td>
<td>Module of a stand-alone specific survey; national</td>
<td>Stylized diary (6 productive work activities plus 24 pre-defined activities)</td>
<td>“In a given day” n/a</td>
<td>All household members 8 years or older</td>
<td>Face-to-face interview (sometimes to key informant)</td>
</tr>
<tr>
<td>Guatemala</td>
<td>National living conditions survey 2000; time-use module</td>
<td>Module of living conditions survey; national</td>
<td>Stylized diary (25 pre-defined activities); simultaneous activities as groups (up to 3 simultaneous activities per group; up to 4 groups)</td>
<td>Yesterday</td>
<td>All household members 7 years or older</td>
<td>Face-to-face interview (sometimes to key informant, particularly in the case of children younger than 12)</td>
</tr>
<tr>
<td>Mexico</td>
<td>Labor, time-use and contributions to household expenditures survey 1996</td>
<td>Module of an income and expenditure survey; national</td>
<td>Short tasks list (34 activities)</td>
<td>Last week</td>
<td>All household members 8 years or older</td>
<td>Face-to-face recall interview; self-referred</td>
</tr>
<tr>
<td></td>
<td>Time-use survey 1998</td>
<td>Module of an income and expenditure survey; national</td>
<td>Activity diary, open time slots</td>
<td>Yesterday</td>
<td>All household members 8 years or older</td>
<td>Face-to-face recall interview; self-referred</td>
</tr>
<tr>
<td></td>
<td>Time-use survey 2002</td>
<td>Module of an income and expenditure survey; national</td>
<td>Exhaustive activity list (87 activities)</td>
<td>Last week (weekdays/weekends)</td>
<td>All household members 12 years or older</td>
<td>Face-to-face recall interview; self-referred</td>
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</thead>
<tbody>
<tr>
<td>Nicaragua</td>
<td>Valuing Nicaraguan women’s work, 1995–1996</td>
<td>Stand-alone survey; national, rural/urban designed and collected by FIDEG, an independent research center</td>
<td>Short tasks list (9 housework/care tasks plus questions on household production for paid and auto-consumption work)</td>
<td>“A typical day”</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Living conditions survey 1998; time-use module</td>
<td>Module of living conditions survey; 50% of core survey coverage (national)</td>
<td>Stylized diary (22 pre-defined activities) plus 2 questions on simultaneous activities (childcare; other)</td>
<td>Yesterday</td>
<td>All household members 6 years or older</td>
<td>Face-to-face interview (sometimes to key informant)</td>
</tr>
<tr>
<td>Uruguay</td>
<td>Montevideo time-use survey 2003</td>
<td>Stand-alone survey; Montevideo City and suburban areas; designed and collected by a research team based at Universidad de la República</td>
<td>Short tasks list (housework/care tasks) plus information on household paid domestic work</td>
<td>Last week</td>
<td>Household respondent is ‘mainly responsible’ for unpaid domestic work in the household</td>
<td>Face-to-face interview to household ‘mainly responsible’ for unpaid domestic work</td>
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### Appendix Table 1 (Continued)

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<th>Mode of data collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>Bangladesh</td>
<td>(1) No national survey has been conducted so far (2) There are small-scale surveys covering small regions/samples conducted by private scholars</td>
<td>Short tasks list. Scholars developed their own classifications without following any one pattern</td>
<td>Yesterday</td>
<td>All household members 6 years or older</td>
<td>Face-to-face interview</td>
</tr>
<tr>
<td>India</td>
<td>Indian pilot time-use survey 1998-99</td>
<td>Stand-alone survey; six major states in India</td>
<td>Activity diary with one hour time slots. India developed its own activity classification by changing the first three groups of the 1997 trial ICATUS</td>
<td>Two days in the reference week were selected. Data was collected in four rounds in the year 1998-99 to capture seasonal variations</td>
<td>All household members 6 years or older</td>
<td>Face-to-face recall interview; self-referred</td>
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<tbody>
<tr>
<td>Lao PDR</td>
<td>National survey as a module in 2002–03</td>
<td>Activity diaries. Trial ICATUS 1997 (adapted) was used</td>
<td>Yesterday</td>
<td>All household members 10 years or older</td>
<td>Self-administered; diary plus face-to-face recall interview</td>
<td></td>
</tr>
<tr>
<td>Mongolia</td>
<td>Mongolia TUS 2000</td>
<td>Stand-alone survey; national</td>
<td>Activity diaries. Trial ICATUS 1997 (adapted) was used</td>
<td>2–3 days in the reference week</td>
<td>All household members 12 years or older</td>
<td>Self-administered; diary plus face-to-face recall interview</td>
</tr>
<tr>
<td>Nepal</td>
<td>National time-use survey 1998–99</td>
<td>Module in the national labor force survey 1998–99; national</td>
<td>Short tasks list</td>
<td>Last week; data collection was spread over the entire year</td>
<td>All household members 5 years or older</td>
<td>Face-to-face interview (sometimes to key informant)</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Country</th>
<th>Survey</th>
<th>Type of survey and coverage</th>
<th>Survey instrument</th>
<th>Reference period</th>
<th>Surveyed population</th>
<th>Mode of data collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Republic of Korea</td>
<td>First national time-use survey in 1999, followed by a second TUS in 2004</td>
<td>Stand-alone survey; national</td>
<td>Activity diary; 10 minute intervals; simultaneous activities as main and secondary Adapted from ICATUS and Eurostat</td>
<td>Two days in the reference week; four rounds in the reference year</td>
<td>All household members 10 years or older</td>
<td>Self-administered; diary</td>
</tr>
<tr>
<td>Thailand</td>
<td>National time-use survey 2001</td>
<td>Stand-alone survey; national</td>
<td>Activity diary. Trial ICATUS 1997 and the classification used in developed countries</td>
<td>One day in the reference week</td>
<td>All household members 10 years or older</td>
<td>Self-administered; diary</td>
</tr>
</tbody>
</table>