International Labour Organization

WHAT COUNTS? - Brief No. 1

STATISTICS ON WORK

Exploring Light Time-Use approaches for measuring productive activities

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BACKGROUND

Through the adoption of the Resolution concerning statistics of work, employment and labour underutilization in October 2013, the 19th International Conference of Labour Statisticians (ICLS) has introduced new statistical definitions for a broad range of human productive activities. This is the first time that a comprehensive set of statistical standards has been agreed internationally covering all forms of work whether paid or unpaid. Among other innovations, the new standards recognize that people can be engaged in different working activities during a reference period. In combination these developments create the potential to shine a light on the range of activities people engage in to support their households and communities alongside income generating work, such as subsistence agriculture, work done to maintain and service their own household or work done for others, such as volunteering.

The new standards have far-reaching implications for the design of household surveys, in particular Labour Force Surveys (LFSs). These surveys have traditionally focused on labour market engagement either through employment or unemployment. Measurement practices have varied heavily across countries with some including unpaid activities such as subsistence farming in their employment measure, while others have excluded it leading to widespread comparability concerns and inconsistent meaning and interpretation across countries.

LFSs have not typically been designed to capture information on time spent performing all forms of unpaid work, the measurement of which has often been left to Time-Use Surveys (TUS). However, the low prevalence of dedicated TUS[1] creates a significant data gap in this area.

The existence of this data gap is well recognized and increasing in prominence over time. The gender relevance of the information is also clear for policy makers seeking to tackle persistent inequalities in gendered allocation of time and tasks between unpaid and paid work. Reflecting this, the 2030 Agenda for Sustainable Development includes an indicator that requires information on the "proportion of time spent on unpaid domestic and care work, by sex, age and location" (Indicator 5.4.1).

Concurrently with the establishment of the SDG indicator framework, the international community has adopted a new classification of activities for time-use statistics (ICATUS 2016). The new classification is coherent with the standards from the 19th ICLS, but broader in scope, covering also non-work activities (e.g. leisure, sleeping, eating, etc).

The new standards and classification, as well as the high profile demand for information on paid and unpaid work creates an environment within which the volume of information available on these topics should increase substantially [2]. However, the challenge of achieving this increase is great. This creates a renewed attention on methods to capture time use, with an increasing focus on efficiency, integration with other topics and respondent burden given ever increasing data demands and limited resources.

Within this context many international agencies, including the ILO, are launching efforts to develop guidance to promote accurate measurement of time use in different settings. A particular focus of the efforts of the ILO, supported by Data2X [3], is the development of a data collection strategy centred on the attachment of a Time-Use module to the LFS. The successful design of such an approach offers many potential advantages given the topic overlap between the LFS and TUS, common target populations, high prevalence of LFS internationally, etc.

An in-depth review of methods and country practises has been undertaken to inform the design of such a data collection strategy. This review has focussed in most depth on Light Time-Use Diary (LTUD) approaches to assess their suitability. This Brief highlights results, lessons learned and main challenges identified stemming from that review.

1. UNWomen (2018) highlights that while 84 countries have conducted time-use surveys, only 24 per cent of them have data from 2010 or after.

2. See: https://www.data2x.org/wp-content/uploads/2018/03/Data2X-Invisible-No-More-Volume-1.pdf

3. See: http://www.data2x.org/partnerships/womens-work-employment/

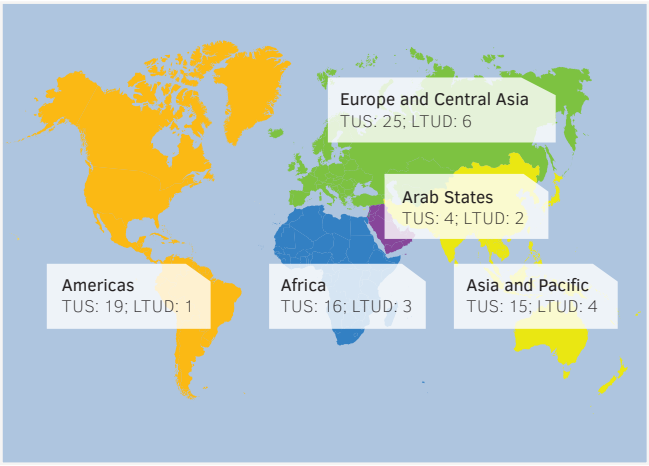
LIGHT TIME-USE DIARIES

While other details of the methodology can vary, the defining characteristic of a LTUD approach is that it records time spent only for a pre-selected list of activities, the number of which can vary but not exceed 30 in view of practicality [4]. This is intended to minimize the cost and complication involved in coding activities ex-post, a process that has often proven to create difficulties when implementing full-fledged TUS. However, this needs to be balanced against the added granularity of information captured by a full TUS. When this level of granularity is not considered essential, LTUD becomes a particularly interesting option.

COVERAGE OF COUNTRY PRACTICES

The review of country practices identified 16 countries implementing a LTUD since the mid-1990's [5]. More specifically, eight countries attached a pre-coded LTUD as a module to a household survey, such as Multi-topic/Household Budget and Expenditure Surveys (Benin, Cambodia, Iraq, Lao PDR, Lesotho, Madagascar, Oman, the United Kingdom). Canada attached a LTUD to the General Social Survey in 2015. Japan conducted two Independent Surveys on Time Use and Leisure Activities also using a LTUD approach. The Republic of Serbia employed a LTUD for a stand-alone survey to fill in gaps in between two full scale surveys. Slovak Republic tested a LTUD approach in preparation for a full TUS. Four countries (Australia, Finland, Netherlands, Sweden) piloted a trial LTUD alongside a full TUS to test alternative methods for data collection. By comparison, we can note that 79 full TUS were completed over a similar time frame, emphasizing that international experience of LTUD is limited, particularly in recent years (see Figure 1).

Figure 1: Distribution of LTUD by ILO Regions



Source: Authors elaboration on UNSD TUS Data Portal

ESTIMATES FROM LIGHT TIME USE VS FULL TIME USE DIARIES

Among the different LTUD approaches implemented to date, those involving a study alongside a full time-use methodology are of particular note. These approaches were designed to facilitate comparison of outcomes and shed light on where differences may arise.

Resulting evidence provides a mixed picture. Broadly speaking the experiences for which results are available suggest that comparable estimates of time spent on different activities can be derived at the aggregate level, but differences arise when the results are disaggregated, with the greatest impact on specific types of activity. The differences can be of high importance depending on the intended use of the data.

- In the case of Finland (2010), the two surveys produced almost equal total amounts of time spent on employment and study. However, the LTUD generated lower estimates of time spent performing domestic work, with differences particularly acute in the home maintenance and child care categories.
- In Sweden (2010/11), the LTUD also yielded comparable time-use data at an aggregated level. However, differences were significant at lower levels of detail for example, when comparing travel, care, employment and free time. Time spent on personal needs corresponded very well, as did domestic work and household upkeep.
- Similarly, in Australia (2006) it was concluded that comparable aggregate level results were generated. However, again there were differences for certain activities, which caused important difficulties when attempting to estimate the value of unpaid household work. Specifically, the Australian test of the LTUD showed that respondents reported less time on activities that take a short time between longer tasks, and overstate the activities that require longer blocks of time.

Many practical implementation lessons have also been learned from these experiences, which need to be balanced against the data quality considerations (e.g. underreporting of time spent in certain activities). For example, in the case of Australia the evaluation also highlighted that a LTUD had advantages of cost, timeliness, and of lower respondent burden when one respondent per household is selected. It has the further advantage of a larger number of independent records, a greater inclusiveness and higher response rates compared to a full time-use survey. Some of these findings were also highlighted for Sweden, in particular a notably higher response rate for the LTUD.

4. https://unstats.un.org/unsd/publication/seriesf/seriesf_93e.pdf

5. Cases were identified as LTUD through a review of available metadata on international databases supplemented by ILO research. Other LTUD may exist which were not identified.

LIGHT TIME USE DIARIES AS A MODULE IN HOUSEHOLD SURVEYS

In multiple cases, a LTUD has been implemented as a module attached to multi-purpose surveys rather than in stand-alone TUS. In particular, a number of developing countries (e.g. Cambodia, Iraq, Lao PDR, Lesotho, Madagascar) have attached a pre-coded LTUD to socio-economic household surveys, such as income and expenditure surveys.

In implementing a modular approach countries have managed to create synergies, and benefit from the design of the parent survey in a number of ways.

First, a number of countries reported that integration of the LTUD with a multi-purpose household survey conducted continuously over a year ensured that time-use data were capable of capturing seasonal variations in activities.

A second synergy relates to the administration of the LTUD as a leave-behind diary. For surveys with planned revisits over a period of time, there is an opportunity to familiarise respondents and clarify responses over multiple visits. This was noted in the case of Lao PDR where enumerators had revisits to households over the course of the month and used this to administer a leave-behind LTUD.

A further potential advantage lies in the ability to leverage the data collected in the parent survey. This is particularly relevant to a LFS, which will capture detailed information on employment and the characteristics of jobs, which could be exploited to improve the quality of information on time use in working activities, subject to appropriate design.

SIMULTANEOUS ACTIVITIES AND CONTEXT VARIABLES

The majority of the LTUD survey instruments did not foresee the measurement of simultaneous activities and context variables, which can be essential to appropriately classify activities. While perceived wisdom is that a full time diary is required for this to be feasible, experience from the use of a LTUD attached to the Omnibus Survey in the UK in 2005 shows that this can be achieved. In this particular case, interviewers were instructed to probe respondents at intervals to find out if they were doing anything else and if so, to record the secondary activity using a different symbol to differentiate it from the primary activity.

LESSONS LEARNED AND CHALLENGES

Despite the fact that LTUD can be a cost-effective alternative to a full diary in the measurement of time use, the coverage of country practices in applying such an approach is rather scarce. Piloting trials conducted in several developed countries concluded that LTUD can yield comparable time-use data at the aggregate level and identified several advantages in data collection, such as higher response rates due to less respondent burden. However, evidence also indicates that estimates at the aggregate level may mask significant differences at the more detailed level for activities such as travelling, and caring related activities. The importance of these differences will depend on the measurement objectives of the survey. Furthermore, additional evidence is needed in developing countries where specific challenges related, for instance, to illiteracy and informality need to be taken into account.

While very instructive, the experiences to date have not been built upon the standards adopted at the 19th ICLS or ICATUS 2016. Among other things, the latest standards create an added emphasis on context variables, such as 'for whom' the work is completed. These changes create a need for further development and testing.

Considering the varied experiences and the challenges created by the new standards and classifications, we can identify a range of key issues that need to be addressed in further work to develop a LTUD, including:

- An appropriate activity listing needs to be developed, which is sufficiently short but still allows activities to be classified to an appropriate level of detail of ICATUS 2016.
- This activity listing must be accompanied by context variables to be incorporated in the survey instrument.
- A variety of methodological choices are needed on issues such as sample design, data collection mode, period and strategy, etc.
- For attachment to other surveys, the design will need to address how to leverage information from the parent survey, for example, information on jobs collected through a LFS.

To generate the evidence upon which future guidance will be built requires a substantial development and testing process to be undertaken. While the primary ILO focus will remain on the measurement of work, there are clear synergies and a confluence of interests across many national and international experts, interested in the further development of time-use methodologies for current and future purposes, (e.g. health, leisure, ICT use, etc.), including SDG monitoring. This creates an opportunity to build a collaborative approach to advance this work over the coming years.

Lessons learned

The coverage of Light Time Use Diaries is scarse

Light Time-Use Diaries are cost-effective

Results at the aggregated level are comparable to Full Time use Diaries

Light Time-Use Diaries can record context variables and simultaneous activities

Different modes of data collection are feasible

Ways forward

Diary methods are accurate and valid for measuring the use of time

The identification of productive activities requires context variables, such as for whom?

Measuring the provision of household services requires simultaneous activities to be covered

Leverage information collected through LFS

Gather evidence on results and develop guidance

WHAT COUNTS? - Statistics on Work Series - Brief No. 1

This series aims at encouraging and informing policy debate on advancing the implementation of Resolution I of the 19th ICLS. It covers different topics of relevance to the practical implementation of internationally agreed standards on the measurement of work and labour underutilization. Brief 1 was written by Elisa Benes, Senior Statistician, Cecilia Tinonin, Project Technical Officer, and Kieran Walsh, Senior Statistician, Department of Statistics, International Labour Organization.

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The **Labour Force Survey Methodology Unit** is responsible for the provision of guidance and support to countries in the implementation of Labour Force Surveys. The Unit is in charge of the preparation of technical manuals and of tool kits and other supporting materials as well as the research and methodological work upon which guidance can be built. In addition, the Unit provides capacity development and direct technical assistance to countries seeking to implement the standards.