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Second meeting of the Expert Group on
Innovative and Effective ways to collect Time-Use Statistics (TUS)

New York, USA, 20-22 May 2019

Conclusions and Recommendations*

Prepared by the

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* This document has not been formally edited.

Conclusions and recommendations of the Second meeting of the Expert Group on Innovative and Effective ways to collect Time-Use Statistics (TUS)

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1. Experts welcomed the organization of the second meeting of the Expert Group on Innovative and Effective ways to collect Time-Use Statistics (TUS) to continue the discussion on how countries can produce high quality and internationally comparable time-use data on a regular basis. The meeting was organized as part of the process to update the "UN Guide to producing statistics on time-use: measuring paid and unpaid work", mandated by the Statistical Commission in 2017.

2. Given that there is no one single "optimal" solution for the collection of time-use data that will work in all countries, experts welcomed the idea of developing a conceptual framework proposing a "basket of options" covering different instruments to collect time-use data in line with ICATUS 2016 and Sustainable Development Goals (SDGs), in particular indicator 5.4.1 on the proportion of time spent on unpaid domestic and care work, by sex, age and location. Each proposed survey instrument/option will highlight its advantages and shortcoming and ways to mitigate possible biases/challenges. Recommendations for related household and individual level questionnaires will also be part of the framework.

3. Experts took note of the following ongoing initiatives and highlighted the importance of informing the work of the Group with their results:
    a. In Latin America and the Caribbean, under ECLAC's leadership, regional guidelines for the collection of time-use data are being developed. This work will provide guidance related to (a) the development of a minimum set of activities to be used with stylized questions in a Time-Use data collection; (b) a minimum number of questions per Time-Use policy-relevant area; and (c) the sequencing/order of questions.
    b. In Europe, under Eurostat's leadership, solutions using technological developments to lower the burden on respondents of Time-Use Surveys, while increasing their response rates and reducing NSOs workload are being explored. This work will provide guidance on the mode and modernization of time-use data collections.

Policy and research data needs

4. Experts discussed the policy and research questions that can be answered with time-use data and agreed that time-use data are particularly needed to inform policies in the areas of unpaid work, wellbeing and gender equality. Time-use data are also very relevant to guide policies related to transportation/travel. Many other uses were mentioned including informing policies and research in the areas of: education, health, culture, environment and sports. Finally, time-use data are an important input for monitoring progress made towards the achievement of the SDGs and targets, including target 5.4 which aims at "recogniz[ing] and valu[ing] unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate" and the related SDG indicator 5.4.1 on the proportion of time spent on unpaid domestic and care work, by sex, age and location.[1]

[1] See http://www.un.org/sustainabledevelopment/gender-equality/.

5. The meeting pointed out that while in some countries the collection of time-use data is required by the Statistical Law (Colombia[2], Mongolia) or is part of regular work programmes of NSOs (Belgium, Canada, USA), in others it is still ad-hoc and very much dependent on available financial resources. Given their complexity and cost, time-use surveys tend to be affected the most (by being postponed or even cancelled) when it comes to prioritizing national data collections due to limited resources.

6. In terms of defining time-use data needs, experts welcomed the strategy adopted by some countries organizing consultations with stakeholders, including line ministries and academia, to determine their data needs (Finland, Canada). In particular, experts promoted an active engagement with researchers and government officials at the preparation stage of a time-use survey to shed light on pressing policy concerns. Experts also appreciated the fact that NSOs are usually the decision makers (have the last word) on matters related to the instrument to be used for the collection of time-use data.

7. Countries use different methods to monitor the utilization of time-use data including: requesting credentials and research proposal submissions in order to provide access to data (Chile, Finland, Canada); surveying data users about how they used the data (USA); maintaining a list of publications that have used time-use data (USA, Finland); and receiving feedback from government entities sponsoring time-use data collection on how they used data and findings (Finland); others (Mexico) publish their microdata openly making the monitoring of data use more challenging. Finally, some countries organize consultations to evaluate how time-use data have been used; this process also supports the planning of the next data collection. It is also important to note that, in some countries, key partners including other government entities, academia and the media are directly consulted for their recommendations on future iterations of time-use surveys.

8. For dissemination purposes and to support the use of data, some countries issue press releases (Chile, Dominican Republic, Finland, Paraguay, USA), hold workshops (Chile, Dominican Republic, Finland), produce infographics for the general public (Republic of Moldova), and prepare and share pre-written scripts/codes for statistical packages to help users, including researchers, to analyze data (Chile, Canada).

9. Among survey instruments, experts acknowledged that time diaries are more suitable to provide the level of data needed to inform national policies, including on measuring unpaid forms of work such as care activities, gender equality, well-being, work-life balance, transportation and travel time, environmental impact (in combination with other datasets), etc. Diaries facilitate the collection of primary and secondary activities providing information of activities that otherwise may not be reported or underestimated if only primary activities were collected (e.g. unpaid care work). Diaries allow the collection of contextual information for each activity in a

[2] Colombia adopted in 2010 the Law 1413, which regulates the inclusion of the care economy in the System of National Accounts with the objective of measuring the contribution of women to economic and social development of the country and as an essential tool for defining and implementation of public policies, makes the National Administrative Department of Statistics (DANE) responsible for coordinating the implementation of the provisions of this law (including the creation of a Satellite Account) and determines that a time-use survey must be conducted every 5 years.

straightforward way facilitating the understanding of the circumstances/context in which the activity took place. Furthermore, when information from several members of the household is collected, analyses of the distribution of work and other intrahousehold dynamics are possible.

10. Stylized questions, on the other hand, were found useful to: capture specific activities over a given period; measure incidence of activities that occur infrequently (volunteering or engagement in cultural activities and sports); and supplement diaries to collect information about activities that the diary may not capture or that respondents are not willing to provide (e.g. negative activities). Questions were also deemed useful to identify populations of interest (e.g. shift-workers) or capture additional characteristics that might be needed in designing policies targeting specific groups of the population, e.g. age of children or the elderly as well as sickness and disability status relevant to measure time spent on unpaid care work.

11. The Group recognized that time-use data collected with stylized questions will differ from data collected through a diary mainly in the following aspects: with stylized questions, respondents tend to overreport or underreport the time spent in certain activities (due to social desirability, recall error and cognitive requirements to perform complex time calculations); total time spent per activity in a specific period is reported and therefore no sequencing, timing and number of episodes are captured; primary and secondary activities are easily confused by the respondents; and contextual information is not always collected.

12. Additionally, time diaries can provide more granular and higher quality information about travel/transportation as stylized questions do not capture single episodes and related contextual information such as the motivation behind travels, frequency and mode of transportation and commuting time.

Table 1: Policy and research data needs

Full diary	Light diary	Stylized questions
More detailed information including contextual information Activities that would be better captured: • Unpaid work • Level of satisfaction (by activity and overall) • Intrahousehold dynamics including distribution of work if all household members are interviewed • Environmental-related activities (e.g., exposure to pollution due to being outside) • Detailed time-use patterns and linkages among activities including for specific sub-groups of interest (youth, older people, rural) • Travel/commuting • Primary and secondary activities	Similar advantages as full diaries, although less detailed information; reduced cost and time Activities that could be better captured: • Unpaid work • Level of satisfaction (by activity and overall) • Intrahousehold dynamics including distribution of work if all household members are interviewed • Environmental-related activities (e.g., exposure to pollution due to being outside) • Time-use patterns and linkages among activities including for specific sub-groups of interest (youth, older people, rural) • Travel (*1) • Primary and secondary activities For specific topics, such as satellite accounts and specific policy concerns Respondents might have different understanding of what is included in each activity.	Through questions, identify rare/not so frequent activities • Volunteering • Culture • Sports To further probe for certain activities in combination with a time-use diary Identify populations of interest: • Shift workers For specific topics, such as satellite accounts and specific policy concerns However, issues of: (a) Overreporting or underreporting time spent (for instance due to social desirability) (b) No sequencing, timing and episodes captured (e.g. when measuring transportation/commuting time (*2)) (c) Confusion of primary and secondary activities (d) Respondents might have different understanding of what is included in each activity.

(*1) True for travel, but not for commuting because only one travel code will probably be used.
(*2) Although it is possible to use questions to obtain average distance, average time and traffic congestion experience and mode of transportation they have access to

Survey instruments

Diaries

13. Promoting the collection, analysis and dissemination of information related to secondary activities was considered very relevant by the experts. The collection of secondary activities allows to identify specific types of activities that otherwise may not appear or would typically be underestimated if only primary activities are covered. Childcare is a classic example of an activity performed in parallel with others, like domestic work, that respondents tend to report as secondary activity only.

Light diaries

14. Moving from a full diary to a light diary might lead to a loss of details on certain activities; however, a light diary can be designed and customized with activities a country wishes to highlight according to its data collection objectives and policy data needs. The analysis of time-use statistics trends over time in countries that switched between full-time and light-time diaries can still be undertaken at an aggregate or higher activity level as done in China (full diary in 2008 and light diary in 2018).

15. To use a light diary to capture time spent in an average day, a manageable number of activities (country practices suggest approximately 30 activities) listed in light diaries is necessary; additionally, activities should be balanced in the sense that time spent in each of them should be substantial to justify their inclusion in the pre-defined diary list. Experts highlighted that light diaries could be extremely useful also for collecting data on selected policy/research area(s), in which case the list of activities would need to be adjusted/modified according to the policy needs (e.g. detailed activities for the calculation of SDG indicator 5.4.1, but covering all the activities). The Group agreed to develop a minimum list of activities (and its equivalent to be used in stylized questionnaires) to be recommended for use in (a) light diaries covering all activities in a day; and (b) light diaries focusing on SDG 5.4.1, or for countries to tailor according to their policy needs and data collection objectives.

Stylized questions

16. As mentioned above, experts agreed that a minimum set of questions to collect data on time-use should be developed by the Group and the activities should be aligned with those listed for light diaries. Additionally, given the recall and cognitive burden imposed on respondents when answering stylized questions, a reference period of 24 hours/previous day would be preferred for activities undertaken in an average day (not for rare activities such as volunteering, etc.) to mitigate the problem and improve data quality; however, this option would require preassigning diary days to the respondents.

Operationalization of ICATUS 2016

17. Experts agreed that technology will allow the full digitalization of ICATUS 2016 into a “system” with the aim of simplifying coding and reducing costs. Options discussed among the Group are:
    a. The “system” starts with a minimum list of activities (same as light diary and stylized questions) and then guides the respondent to choose activities. Although the verbatim

answers provided by the respondent will be lost, this solution will be easier to develop and implement (especially if the system will be multilingual), and the diary completion should be simpler (= less burden on respondent) and the coding automatically done.

b. The "system" allows the respondent to provide verbatim answers and based on that it "knows" what to prompt next to gather additional contextual information needed to properly code the information into ICATUS 2016, post data collection. This option might be more difficult to develop in certain languages (i.e. Finnish).

Both options have advantages and challenges. For instance, in the first option, the respondent must check all the activities in the minimum list and find the "correct" one; in the second option, by providing verbatim answers the respondent does not need to know how the activities are classified or check a list of activities to find the correct one. Therefore, further research/testing should be done to explore the (technical and operational) feasibility of these options.

Coding of activities

18. The Group discussed the use of diaries in conjunction with selected labour force questions to identify labor force status, occupation and industry of employed respondents, and information about the institutional sector in which the respondent works. The need for additional contextual questions were also discussed to obtain the necessary information to assign activity codes under employment in ICATUS 2016 (divisions 11, 12 and 13). Questions could be asked differently depending on the country and target population. To mitigate burden on respondents and to avoid replicating a Labour Force Survey (LFS), the Group agreed to identify the minimum set of labour force questions that are needed.[3]

19. Some examples of the questions that could be used are:
    - Are you employed by government, by a private company, a non-profit organization, or are you self-employed [or working in a family business]?
    - Is your business incorporated? (in developing countries, "registered")

20. In the case of activities related to the production of goods for own final use, a sequence of questions asked outside the diary to capture informal work, including animal production, could be used. For example, information on whether animals are being raised for the market or own consumption will be needed. In Mongolia, for instance, interviewers asked an additional question about the number of cattle and based on the answer the activity was considered own use production or market production. Experts highlighted the need to explore, test and provide guidance on how to link information collected through the questions in the household and/or individual questionnaires to the information reported in the diary.

21. The following difficult-to-code activities were discussed by the experts: waiting, walking/traveling, talking, religious activities and own-use production of goods and provision of services. In some cases, pre-defined coding rules providing guidance on how to classify these activities will be developed. In other cases, information from the background questionnaires (household or individual levels) or from contextual information provided in the diary will be used for their coding.

[3] For example, in the USA, employment status, sex, the presence and age of children in the household, and whether the diary is about a weekday or weekend day are important factors in how people spend their time.

Contextual information

22. The experts agreed that contextual information is necessary to determine the classification of reported activities, and, where needed, additional probing questions are essential to identify the correct category (e.g. number of cattle owned by respondents in Mongolia to differentiate own use production versus market production). In order to properly code activities into ICATUS 2016, the following contextual information is needed: for pay or profit, for whom, with whom and location. Given the relevance of the topic, and in line with ICATUS 2016, experts highlighted the importance of capturing the use of ICT also as contextual information.

23. Experts highlighted that contextual information should be activity-specific (not for all activities) to mitigate some of the burden on respondents. For example, "**for pay or profit**" is contextual information that is not needed if the respondent mentions that he/she was sleeping.

24. Probing on the motivation behind undertaking an activity was found redundant with the information provided on the contextual variable "**for whom**" and experts recommended the use of the latter as it might be easier to understand by the respondent. Experts highlighted that this should not be asked for personal activities, such as sleeping, eating/drinking, etc.

25. "**With whom**" is a very common contextual variable in time-use surveys. However, it was highlighted that the understanding of this contextual variable depends on the person, as it could be understood as who else was simply "present" or was "engaging in/undertaking the activity together". Clear guidance on the definition and use of this contextual variable is needed to obtain robust and comparable data.

26. The Group highlighted that countries collect contextual information differently. Depending on the contextual information (and the mode), some use open-ended questions, while others provide a list of options from which respondents can choose. Therefore, it was suggested developing guidance on the categories of each contextual variable to be used by respondents as well as to facilitate coding and harmonize data dissemination.

27. It was discussed that contextual variables are also relevant when collecting data with light diaries; however, a more selective/reduced set of contextual information should be required having in mind the lightness of the instrument and the burden on the respondent.

28. In many cases, stylized questions already include some context in their wording, in particular "for whom" and "for pay or profit". If additional information is required based on the objectives, additional questions to capture the context might be needed.

29. Experts highlighted that summary/probing questions (like those used in the USA and Canada) might be helpful to avoid the collection of contextual information for every activity/episode level. In addition, these could be useful to identify primary and secondary jobs from the diary.

30. Experts highlighted that the collection mode can also impact the type, amount and quality of additional/contextual information that can be obtained. For example, in a conversational interview (by phone or face-to-face), the interviewer would be able to select and ask the

relevant probing questions as needed to help identify the activities. However, in self-administered surveys, additional questions/contextual information may add burden on the respondent.

Other

31. Although countries have different practices in terms of the reference/recall period and the designated day, experts agreed that the shorter the recall period the more accurate the information obtained, and suggested that the reference period should not be more than 24 hours to avoid recall errors. Regarding the designated day, some guidance on substituting the assigned day is needed in particular when field operations are involved. There is the need to test if designated days can be replaced with a "similar" day (e.g. Monday-Thursday vs. Saturday and Sunday, or market days vs. non-market days). In relation to this, Canada will test the "yesterday method" and study the effect, if any, of not assigning any days to any respondent; Results should be available in spring 2020.

Quality

32. The Group discussed the definition of "quality" in the context of time-use surveys/data. Given that data that are fit for purpose is a necessary but not sufficient condition to measure quality, the Group agreed that other elements should be considered, including the sampling strategy, weighting, consistency of the data with previous collections and with data from other surveys, number of episodes, response rates, and if "necessity" activities are reported (eating, sleeping, etc.).

Data collection modes

33. Experts agreed that if interviewers are involved in the collection of data, they should be very well trained to obtain the right information and reduce the "interviewer's effect". Additionally, in many countries, interviewers are responsible for the coding of the activities and therefore should be very knowledgeable of the classification used and the meaning of activities.

34. The use of innovative ways to collect data should aim at reducing the respondent's burden, improving the response rates, reducing the workload in the NSOs, improving the integration of different data sources (including georeferenced information), improving the data quality and possibly reducing the total cost of collecting time-use data.

Next steps

35. Experts agreed with the development of a "draft" conceptual framework by the end of 2019 and its finalization in 2020. Further testing of the conceptual framework, including of selected components of the proposed basket of options in interested countries will follow in 2021 and 2022 (see table below on planned TUS in countries who are members of the Expert Group).

36. Experts agreed to organize:
    a. Monthly virtual meetings to advance with the work: first virtual meeting at the end of June (21 June 2019)

b. The third meeting of the Group back-to-back with the meeting of the Inter-Agency and Expert Group on Gender Statistics (IAEG-GS) probably in November 2019 (tbc).

37. Experts agreed that the points listed in the table below need to be addressed by the Group as a priority and related recommendations should be included in the conceptual framework:

Activity	**Possible responsible**	**Time frame**
Glossary containing time-use relevant definitions to make sure that in future discussions all experts speak the "same language"[4]	Canada, ECLAC	End of Sept
Minimum list of activities for light diary and stylized questions (a) covering all activities in a day; and (b) focusing on SDG 5.4.1	UNSD, ECLAC, Finland, Mexico, ILO	End of Sept
Digitalization of ICATUS 2016 in a "system" and options on how additional information including contextual would be collected	IATUR	End of Sept
Coding rules: ICATUS 2016 Coding rules	UNSD	August 2019
Coding rules: ICATUS 2016: identification of activities that can be easily confused and contextual information needed to properly classify them	UNSD	August 2019
Coding rules: Linking information between Household and individual questionnaires; e.g. measuring own use production of goods based on reported activity in diary and information captured at the household level	Mongolia	July 2019
Minimum set of labour force questions for individual TUS questionnaire	ILO/USA	
Flow of questions and use of different instruments: moving from LFS to TUS; how to switch from the week reference period in the host survey (e.g. LFS) to the last 24 hours as reference period for the TUS	Thailand/ILO	July 2019
Explore and develop guidance on substituting assigned day in particular when field operations are involved (Monday-Thursday vs. Saturday and Sunday or market days vs. non-market days or other criteria relevant in a given country)	UNSD (UK and Eurostat)	End of Sept
Test the "yesterday method" and study the effect, if any, of not assigning any days to any respondent.	Canada	Results available in spring 2020
Definition of quality in the context of time-use surveys/data	Marge Guerrero	End of Sept
Drafting/putting together the draft basket of options=conceptual framework	UNSD	Nov / Dec 2019

[4] Terms that have been identified include: Light diary (only in paper or web – self-administered?), full diary, passive care (what is in, what is out – children and older people), response rate, probing questions, summary questions, screening questions and data quality.

Time-use data collections in countries who are members of the Expert Group

Country	Past time-use data collections	Future planned time-use data collection
Canada	1986, 1992, 1998, 2005, 2010, 2014, 2015-2016	2022
China	2008, 2018	
Finland	1979, 1987-1988, 1999-2000, 2009-2010	2020-2021
Italy	1988-1989, 1996, 2002-2003, 2008-2009, 2013-2014	
Japan	1996, 2001, 2006, 2011, 2016	2021
Mexico	1996, 1998, 2002, 2009, 2014	2019
Mongolia	2000, 2007, 2011, 2015	2019
Morocco	1997-1998, 2011-2012	2020-2021
New Zealand	1998-1999, 2009-2010	
South Africa	2000, 2010	
Thailand	2001, 2004, 2009, 2014-2015	2020
USA	Since 2003 continuous data collection	