Time use surveys: Current status and challenges

Expert Group Meeting (EGM) on Innovative and Effective ways to collect Time-Use Statistics (TUS), in line with ICATUS 2016 and other international standards and in support of SDGs monitoring

United Nations Statistics Division
Social and Gender Statistics Section
Why are we here?

• Why should we produce time-use statistics?

• How can we produce time-use data more efficiently?

- Quality of life
- Gender
- Leisure
- Health
- Environment / energy
- Travel
- Unpaid work
- Care
- Paid work
- Etc.
Decisions time-use survey (not exhaustive)

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Design</th>
<th>Instrument</th>
<th>Mode of collection</th>
</tr>
</thead>
</table>
| • How population spends time  
• Quality of life  
• Measurement of all forms of work (paid and unpaid)  
• Household production satellite account | • Instruments  
• Type of household survey  
• Sample design  
• Mode of data collection  
• Data processing  
• Data analysis  
• Dissemination of results and data | • Diary  
{o} Full  
{o} Light  
• Questions  
• Others | • Interview  
{o} PAPI (OCR, ICR, OMR), CAPI, CATI  
• Self-completed  
{o} Paper diary, Web app, Mobile app, EMS (SMS/IVR, mobile, wearable devices)  
• Observation  
{o} Person, Technology assisted |

Expert Group Meeting (EGM) on Innovative and Effective ways to collect Time-Use Statistics (TUS)

New York, USA, 20-22 June 2018
What are the challenges faced by NSOs with TUS?

- Cost to undertake a dedicated time-use survey
  - Economic/financial aspects
  - Human resources
  - Time to capture and validate information

- Use of data
  - TUS usually underutilized

- Granularity/quantity of information collected
  - Complexity of coding
  - Respondent’s burden => Low response rate
Time use instruments requirements

• Inputs
  – Cost
  – Processing information
  – Field operation
  – Respondents’
    • Comprehension
    • Burden
    • Literacy

• Outputs
  – Data quality
  – Data granularity
  – Data usability
## Time use instruments requirements

<table>
<thead>
<tr>
<th></th>
<th>Full diary</th>
<th>Light diary</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost</strong></td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td><strong>Processing</strong></td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Respondents’ requirements</strong></td>
<td>High</td>
<td>Medium-high</td>
<td>Low-medium</td>
</tr>
</tbody>
</table>

<p>| | | | |</p>
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<thead>
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<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Data quality</strong></td>
<td>High</td>
<td>High</td>
<td>Basic</td>
</tr>
<tr>
<td><strong>Data granularity</strong></td>
<td>High</td>
<td>Medium</td>
<td>Basic</td>
</tr>
<tr>
<td><strong>Data usability</strong></td>
<td>High</td>
<td>Medium</td>
<td>Basic</td>
</tr>
</tbody>
</table>
Time use instruments

How can we optimize:
- Reduce inputs
- Keep high outputs
Time use instruments

How can we optimize:
• Reduce inputs
• Keep high outputs

Inputs

Outputs

Basic

Low

High

Inputs

Full time diary
Light time diary
Questions
How can we optimize:

- Reduce inputs
- Keep high outputs

Time use instruments

- Full time diary
- Light time diary
- Questions
Time use instruments

How can we optimize:
• Reduce inputs
• Keep high outputs
Time use instruments

How can we optimize:
- Reduce inputs
- Keep high outputs

Inputs
- Full time diary
- Light time diary
- Questions
- Optimal

Outputs
- Basic
- High

Inputs vs Outputs graph:
- Low
- High

Legend:
- Blue circle: Full time diary
- Orange circle: Light time diary
- Grey circle: Questions
- Black circle: Optimal

Question mark at high inputs and basic outputs.
Current situation across countries

Out of around 100 countries, 88 countries collected data as follows:

**Full time diary: 57**

- 1 Country (Japan) uses two types of diary: full and light
- 5 use diary either full or light (tbc)
- 6 tbc

**Light time diary: 9**

**Questions: 22**

Preliminary assessment reviewing the latest survey of around 100 countries that have conducted time use surveys since 2000.
Switzerland

- The “unpaid work module” provides data on domestic, childcare and voluntary work in Switzerland

- Attached every 3-4 years to the Swiss LFS

- Telephone interview

Questionnaire
How much time did you spend shopping, going to the post office, the dry-cleaner's, but not including time spent just window-shopping?

=>INT.: Indicate hours and minutes (e.g. 1½ hours = <01> <30>, 15 min. = <00> <15>)

- H: Hours ............<xx> <00>
- M: Minutes ...........<00> <xx>
- Don't know ..........<98> <00>
- No answer ..........<99> <00>

Was it ...?

=> INT.: HELP ESTIMATE
- Less than 20 minutes .........................<01>
- 20 minutes but less than 40 minutes ..........<02>
- 40 minutes but less than 1 hour ..............<03>
- 1 hour but less than 2 hours ...............<04>
- 2 hours but less than 3 hours ..............<05>
- 3 hours but less than 4 hours .............<06>
- 4 hours but less than 5 hours .............<07>
- 5 hours but less than 8 hours ...........<08>
- 8 hours but less than 13 hours ..........<09>
- 13 hours or more .......................<10>
- Don't know ..........<98> - No answer ..........<99>
### Switzerland 2016

#### Time-Use Statistics (TUS) in Switzerland 2016

Durchschnittlicher Aufwand für Erwerbsarbeit, Haus- und Familienarbeit und Freiwilligenarbeit nach Geschlecht und Familiensituation

Ständige Wohnbevölkerung ab 15 Jahren, in Stunden pro Woche 2016

<table>
<thead>
<tr>
<th></th>
<th>Frauen</th>
<th>Männer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unbezahlte und bezahlte Arbeit</td>
<td>Unbezahlte und bezahlte Arbeit</td>
</tr>
<tr>
<td></td>
<td>Haus und Familie-arbeit</td>
<td>Freiwilligen-arbeit Total</td>
</tr>
<tr>
<td>Total 15-jährige und ältere Personen</td>
<td>28.1</td>
<td>2.0</td>
</tr>
<tr>
<td>15- bis 64-jährige insgesamt</td>
<td>29.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Nach Familien situation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alleinlebende</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner/in in 2-Personenhaushalten</td>
<td>18.1</td>
<td>2.0</td>
</tr>
<tr>
<td>Mütter, Väter mit Partner/in und jüngstem Kind 0-14-jährig</td>
<td>21.7</td>
<td>2.1</td>
</tr>
<tr>
<td>Mütter, Väter mit Partner/in und jüngstem Kind 0-6-jährig</td>
<td>52.8</td>
<td>4.4</td>
</tr>
<tr>
<td>Mütter, Väter mit Partner/in und jüngstem Kind 7-14-jährig</td>
<td>68.8</td>
<td>13.9</td>
</tr>
<tr>
<td>Partner/in mit jüngstem Kind 15-24-jährig oder anderen Erwachsenen</td>
<td>32.4</td>
<td>19.7</td>
</tr>
<tr>
<td>Alleinlebende Mütter, Väter mit jüngstem Kind 0-14-jährig</td>
<td>48.4</td>
<td>19.7</td>
</tr>
<tr>
<td>Alleinlebende Mütter, Väter mit jüngstem Kind 0-6-jährig</td>
<td>54.2</td>
<td>20.1</td>
</tr>
<tr>
<td>Alleinlebende Mütter, Väter mit jüngstem Kind 7-14-jährig</td>
<td>64.2</td>
<td>20.1</td>
</tr>
<tr>
<td>Bei Eltern lebende Töchter (15-24-jährig)</td>
<td>15.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Andere Situation</td>
<td>20.0</td>
<td>1.5</td>
</tr>
</tbody>
</table>
Fiji

- 2015-2016 Employment and Unemployment Survey, schedule 2 questionnaire covering Demographic, economic activity and migration

<table>
<thead>
<tr>
<th>Person's Reference Number</th>
<th>01</th>
<th>02</th>
<th>03</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.16 How many hours of household chores per week you spent on</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>[a] Cooking</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>[b] Washing clothes</td>
<td></td>
<td></td>
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<tr>
<td>[c] Child care</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>[d] Gardening/compound cleaning/grass cutting</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>[e] Other household chores [specify]</td>
<td></td>
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</tr>
</tbody>
</table>
Ecuador

- In 2012, time-use data were collected with over 100 questions
### Serbia

#### 2010 Full Diary

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:00</td>
<td>Устанави</td>
</tr>
<tr>
<td>07:10</td>
<td>Приготвя се</td>
</tr>
<tr>
<td>07:20</td>
<td>Пиеш кафе</td>
</tr>
<tr>
<td>07:30</td>
<td>Отива за работа</td>
</tr>
<tr>
<td>08:00</td>
<td>Обяд</td>
</tr>
</tbody>
</table>

#### 2015 Light Diary

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>06:00</td>
<td>Спомнява се</td>
</tr>
<tr>
<td>06:10</td>
<td>Пиеш кафе</td>
</tr>
<tr>
<td>06:20</td>
<td>Отива за работа</td>
</tr>
<tr>
<td>06:30</td>
<td>Отива за работа</td>
</tr>
</tbody>
</table>

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**Expert Group Meeting (EGM) on Innovative and Effective ways to collect Time-Use Statistics (TUS)**

New York, USA, 20-22 June 2018
Japan

- Survey on Time Use and Leisure Activities has been conducted every five years since 1976
  - Pre-coded list of activities in a light diary
- In 2001, in addition to Questionnaire A (pre-coding system), Questionnaire B (after-coding system) was introduced to obtain more detailed results of people's time allocation
- About 77,000 households were selected (200,000 members of the households 10 years old or more). About 73,000 households were surveyed using Questionnaire A, and about 4,000 households with Questionnaire B.
- In 2011, "Questionnaire A: paper; Questionnaire B: paper and online"
- In 2016, paper and online were used
## Japan (QA)

### Diary

*Please report on what you did on each of the two days specified and how much time you spent on each activity, in units of 15 minutes.*

*Please draw a horizontal line to specify the activity and persons with whom you for each 15 minute unit.*

**First Day**

<table>
<thead>
<tr>
<th>Kind of activities</th>
<th>0 o'clock</th>
<th>30</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>30</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep</td>
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<tr>
<td>Personal care</td>
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<tr>
<td>Meals</td>
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<tr>
<td>Commuting to and from school or work</td>
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<tr>
<td>Work</td>
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<td>Schoolwork</td>
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<td>Housework</td>
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<tr>
<td>Caring or nursing</td>
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<td>Child care</td>
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<tr>
<td>Shopping</td>
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<td>Moving (excluding commuting)</td>
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<tr>
<td>Watching TV, listening to the radio, reading newspapers or magazines</td>
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<td>Rest and relaxation</td>
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<tr>
<td>Learning, self-education, and training (except for school work)</td>
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<tr>
<td>Hobbies and amusements</td>
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<td>Sports</td>
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<td>Volunteer and social activities</td>
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<tr>
<td>Social life</td>
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<tr>
<td>Medical examination or treatment</td>
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<tr>
<td>Other activities</td>
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</tr>
</tbody>
</table>

**Person(s) being together**

- Alone
- Family member(s)
- Classmate(s) or colleague(s)
- Other person(s)
All the respondents are asked to reply.

### 16 Diary

- Please report on what you did on each of the two days specified and how much time you spent on each activity, in units of 15 minutes.

<table>
<thead>
<tr>
<th>Time</th>
<th>What were you mainly doing?</th>
<th>Were you doing something else at the same time?</th>
</tr>
</thead>
<tbody>
<tr>
<td>0:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
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<tr>
<td>4:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Using smartphone**

- **At home**: 1, 2, 3, 4
- **At school or work**: 1, 2, 3, 4
- **On travel**: 1, 2, 3, 4
- **At home, alone**: 1, 2, 3, 4, 5
- **At home, not alone**: 1, 2, 3, 4, 5

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**Persons being together**

- **Spouse**: 1, 2, 3, 4, 5
- **Child or grandchild**: 1, 2, 3, 4, 5
- **Friend or acquaintance**: 1, 2, 3, 4, 5
- **Other family members**: 1, 2, 3, 4, 5
- **Other non-family members (e.g., work colleague)**: 1, 2, 3, 4, 5
- **No one**: 1, 2, 3, 4, 5

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**Place**

- **At home**: 1, 2, 3, 4
- **At school or work**: 1, 2, 3, 4
- **On travel**: 1, 2, 3, 4
- **At home, alone**: 1, 2, 3, 4, 5
- **At home, not alone**: 1, 2, 3, 4, 5

---

**Time and hour code**

- 01
- 02
- 03
- 04
- 05
- 06
- 07
- 08
- 09
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

---

**Notes**

- Please report on what you did on each of the two days specified and how much time you spent on each activity, in units of 15 minutes.
- When doing several things at the same time, please report just one.
Comparability of data

• Several studies have compared the data obtained from the different instruments

  – (Full) time diaries believed to be the most accurate time use instrument

  – Questions believed to be less accurate than diaries specially for activities of short-duration
Where do we go?

• What is the optimal instrument(s) to collect time use information?
Thank you!