Engendering Statistics: Time Use Surveys

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In Summary

- What are 'time use data'?
- How are time use data analyzed and used?
- How are data on time use collected and what are the issues that need to be considered?
- What is an activity classification for time use statistics and what is its role in the collection and analysis of time use data?

What are time use data?

- *who*
- does *what*
- during a *day*

→ reference *population*; *activity*

- for *how long*
- *how often*

→ time *duration*; number of *episodes*

- where
- with whom
- for whom
- purpose

→ *context*

Elements of Time Use Data

First person diary					
Time period	*Description of activities*	*Code*	*Same time?*	*Location 1*	*Location 2*
	1 to 3 activities per time period		*Yes No*		
09h00			1 2		
to			1 2		
09h30			1 2		
09h30			1 2		
to			1 2		
10h00			1 2		
10h00			1 2		
to			1 2		
10h30			1 2		
10h30			1 2		

Simultaneously performed

Elements of Time Use Data

Time	Main activity	Secondary activity	Persons present: Alone	Children age 0-9	Other hh member	Others	Location
07.00-0.710	Woke up the children			x			home
07.10-07.20	Had breakfast	Talked with my family		x			
07.20-07.30	.."..	.."..		^			
07.30-07.40	Cleared the table	Listened to the radio					
07.40-07.50	Helped the children dressing	Talked with my childr					
07.50-08.00	Went to the day care centre, by foot	.."..					
08.00-08.10	By bus to job	Read the newspaper					
08.10-08.20	By bus to job	.."..	x				
08.20-08.30	Regular work		x				working place
08.30-08.40			x				
08.40-08.50			x				
08.50-09.00			x				
09.00-09.10			x				
09.10-09.20			x				
09.20-09.30			x				
09.30-09.40			x				
09.40-09.50			x				
09.50-10.00			x				
10.00-10.10	Break: had coffee	Talked with a colleague				x	
10.10-10.20	Regular work		x				working place

Contextual Information

Summarizing Data on Time Spent: Basic Measures- by Activity

Table 17. Six types of time-use measures

Denominator	Numerator: Total duration of activity	Numerator: Total number of episodes of activity	Numerator: Total number of persons performing activity
Total number of persons (population)	(1) $\frac{\text{duration}}{\text{all persons}}$	(4) $\frac{\text{episodes}}{\text{all persons}}$	(6) $\frac{\text{doers}}{\text{all persons}}$
Total number of persons performing activity (doers/participants)	(2) $\frac{\text{duration}}{\text{doers}}$	(5) $\frac{\text{episodes}}{\text{doers}}$	-
Total number of episodes of activity	(3) $\frac{\text{duration}}{\text{episodes}}$	-	-

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Brief History

- Early 1900s— understanding living conditions of working class families and lifestyle of people
- Expanded use— problem of commuting, farming population
- 1960s and 1970s— mass media, transport planning
- 1970s onwards— valuing unpaid work of women
- 1990s onwards— netting SNA work and improving statistics on work, understanding issues related to poverty, human development

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Objectives of Data Collection

- Measurement and analysis of quality of life or general well-being
- Measurement and valuation of unpaid work
- Improving estimates of all forms of work
- Policy analysis and formulation– *What are the trade-related issues?*

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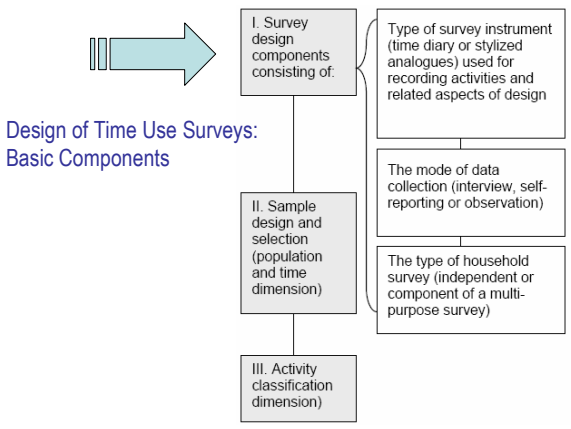
Time Use Surveys +++

Kind of information	Source of information: Externally collected information	Background questionnaire	Time diary	Questions linked to the activity records
Social environment	X			
Geographical environment	X			
Personal resources		X		
Material resources		X		
Social resources		X		
Main activities			X	
Simultaneous activities			X	
Personal values and attitudes		X		
Personal feelings				X
Payments				X
Unpaid services				X
Quality of life			X	X

Source: Haraldsen (2000).



Decisions: Scope and Coverage

- Describing activities
  - Classification of activities
- Recording time and action
  - *Position*- point in time
  - *Duration*- length of time or period
  - *Sequence*- relative to other actions

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"Clock time" among Soussou of Guinea

Toxè singé raté	The first cockcrow
Toxé firindé raté	The second cockcrow
Subaha	On very early morning
Kuè yalan béré	At the time when the night is cured
Waliha	Work hour (6 o'clock)
Sogé xono	When the sun is at its zenith in the middle of the day (noon)
Sogé xono yanyi ra	When the sun is at its zenith in the middle of the day(noon)
Sèli fana	The prayer (2 o'clock)
Laxansara	The frog hour
Fitiri	The decline of the day
Sarafu	The time when one play music (9 o'clock)
Sa tèmui	The time to go to bed
Kuè tègi	The middle of the night

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Issue: Simultaneous Activities

- Unpaid work is often undertaken 'together' with other activities
  - *Domestic work and domestic work*
  - *Domestic work and child care*
  - *Work and domestic work and child care*
  - *Work and media use*
  - *...*

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Issue: Contextual Information

Who does what– where, with whom, for whom, paid/unpaid?

- Gives meaning to activities
- Different context, different activity
- Aids recall

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Survey Instruments

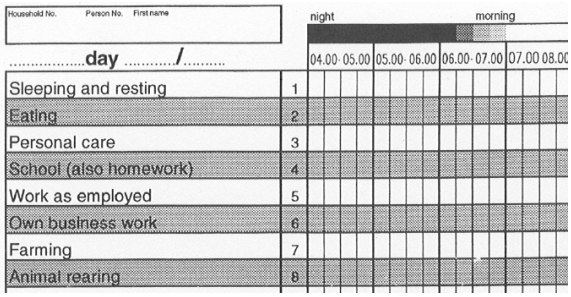
- Background questionnaires
  - *Household*
  - *Individual*
- **Time diary**

Analytical Objectives & Data Sources & Items

Kind of information	Source of information			
	Externally collected information	Background questionnaire	Time diary	Questions linked to the activity records
Social environment	X			
Geographical environment	X			
Personal resources		X		
Material resources		X		
Social resources		X		
Main activities			X	
Simultaneous activities			X	
Personal values and attitudes		X		
Personal feelings				X
Payments				X
Unpaid services				X
Quality of life			X	X

Source: Haraldsen (2000).

Pre-Coded or "Light" Time Diary



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Stylized Questions

Now I will like to ask you some questions about the activities that you had yesterday and the time that you spent on them.
(FOR ACTIVITIES OUTSIDE THE HOUSEHOLD INCLUDE TIME USED IN TRANSPORTATION).

WORK/JOB ONLY FOR WORKING PERSONS (SEE SECTION 5)

ID CODE	1. Did you spend time on household agricultural or livestock activities yesterday? (Work on plot of land owned by household)		2. Did you spend time yesterday on non-agricultural household enterprise or business?		3. Did you spend time yesterday on a regular paid job?		4. Did you spend time yesterday on a non paid job?		5. Did you spend time yesterday searching for a job?	
	YES..1 NO...2 (→2)	How much time did you spend? HOURS MINUTES	YES..1 NO...2 (→3)	How much time did you spend? HOURS MINUTES	YES..1 NO...2 (→4)	How much time did you spend? HOURS MINUTES	YES..1 NO...2 (→5)	How much time did you spend? HOURS MINUTES	YES..1 NO...2 (→6)	How much time did you spend? HOURS MINUTES
1										
2										
3										
4										
5										
6										
7										

… Stylized Questions

ID CODE	EDUCATION - ONLY FOR STUDENTS				HOUSEHOLD MAINTENANCE					
	6. Did you spend time yesterday on school classes/university or other training?		7. Did you spend time yesterday doing homework?		8. Did you spend time cooking yesterday?		9. Did you spend time yesterday doing dishes, laundry, ironing, or cleaning your house?		10. Did you spend time yesterday repairing your house/property (patio)?	
	YES..1 NO...2 (→7)	How much time did you spend? HOURS MINUTES	YES..1 NO...2 (→8)	How much time did you spend? HOURS MINUTES	YES..1 NO...2 (→9)	How much time did you spend? HOURS MINUTES	YES..1 NO...2 (→10)	How much time did you spend? HOURS MINUTES	YES..1 NO...2 (→11)	How much time did you spend? HOURS MINUTES
1										
2										
3										
4										
5										
6										
7										

Time Intervals

24-hour Diary with Fixed Time Intervals

Time	Main activity	Secondary activity	Persons present: Alone	Children age 0-9	Other hh member	Others	Location
07.00-0.710	Woke up the children			x			home
07.10-07.20	Had breakfast	Talked with my family		x	x		
07.20-07.30	.."..	.."..		x	x		
07.30-07.40	Cleared the table	Listened to the radio	x				
07.40-07.50	Helped the children dressing	Talked with my children		x			
07.50-08.00	Went to the day care centre, by foot	.."..		x			travel-on foot
08.00-08.10	By bus to job	Read the newspaper				x	travel-by bus
08.10-08.20	By bus to job	.."..	x				
08.20-08.30	Regular work		x				working place
08.30-08.40			x				
08.40-08.50			x				
08.50-09.00			x				
09.00-09.10			x				
09.10-09.20			x				
09.20-09.30			x				
09.30-09.40			x				
09.40-09.50			x				
09.50-10.00			x				
10.00-10.10	Break: had coffee	Talked with a colleague				x	
10.10-10.20	Regular work		x				working place

Simultaneous Activities

24-hour Diary with Open Time Intervals

Starting time	Ending time	(1) What was your main activity? (Please record all activities, even if they only lasted a few minutes)	(2) Whom did you do this for?	(3) What else were you doing at the same time?	(4) Where were you?	(5) Who was with you at home, or with you away from home?

Contextual Information

Collecting Data

Type of Household Survey

- Independent survey
- Time-use module in multi-purpose survey
  - *Time-use module in LSMS*
  - *"Rider" survey*
  - *Time-use in labour force survey*

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Mode of Data Collection

- Participant observation
  - *Look and record*
- Recall interview
  - *Ask and record*
- Self-completed diary
- Combinations

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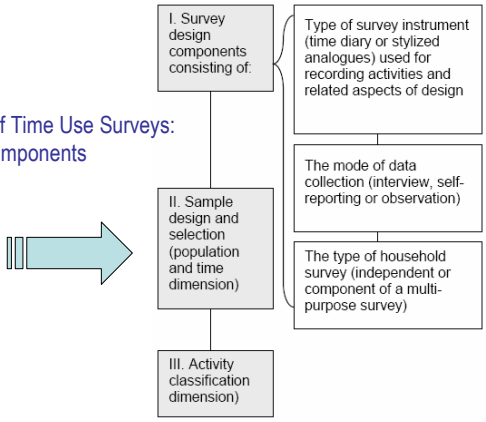
Design of Time Use Surveys: Basic Components



Issues: Sample Design

Sampling the population

- Sampling of households
- Sampling of household members
  - *Who and how many?*

Sampling time

- Hours in a day
- Days in a week
- Seasons in a year

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Sampling: Time Dimension

Persons	1-Jan	2-Jan	.	.	.	31-Dec
1						
2						
3						
4						
.						
.						
.						
N						

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Sampling: number of days per persons

Diary day	Su	Mon	Tue	Wed	Th	Fri	Sat
1 day							
1 weekday/1 weekend							
Sun, Sat + weekday							

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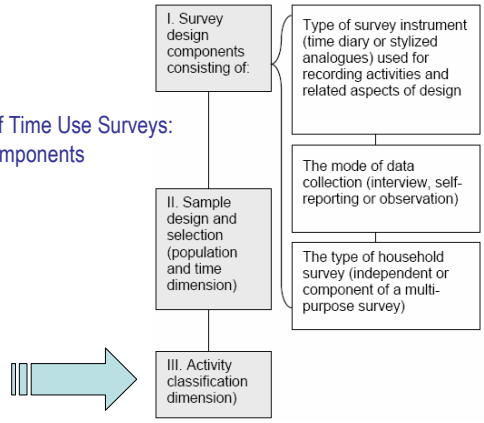
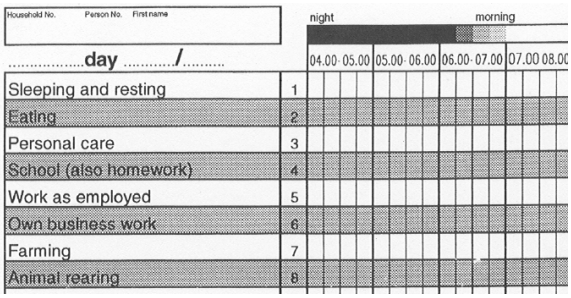
Design of Time Use Surveys: Basic Components



Classification of Activities for Time Use Statistics

Listings of Activities in Pre-Coded Diaries



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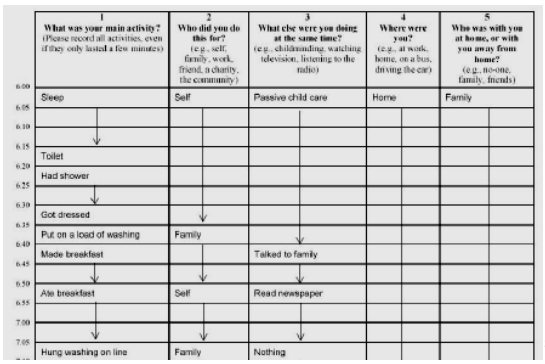
24-Hour Diary

	(1) What was your main activity? (Please record all activities, even if they only lasted a few minutes)	(2) Whom did you do this for?	(3) What else were you doing at the same time?	(4) Where were you?	(5) Who was with you at home, or with you away from home?
0.00					
0.05					
0.10					
0.15					
0.20					
0.25					
0.30					
0.35					
0.40					
0.45					
0.50					
0.55					
1.00					

Next step- Activity Coding



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Classifications for Time-use Statistics

Time-use data is all about people's activities

- Detailed comprehensive systematic listing
  - *To be able to assess completeness of coverage*
  - *Guide the design of survey instruments and selection of methods*
  - *Interviewer's guide for eliciting responses at the level of detail required for the survey objectives*
  - *Basis for developing coding rules*

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"Choice" of Classification

- Related to the *objectives* of data collection
  - *Defines framework of analysis of time-use data*

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Objectives & Classifications

- *Historical standard- non-economic activities*
  - *Multinational Comparative Time Budget Research Project- As framework*
- Improving measurement of 'work', especially women's work and unpaid work
  - *National-- Armenia, China, India, Mongolia, Nepal, Pakistan, South Korea, Thailand, South Africa …*
  - *International– Trial International Classification of Activities for Time Use Statistics (ICATUS)*
- Others

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UN Approach to Time-Use Classifications

- Improve measurement of SNA work
  - *Household production of goods for own final use*
    - Subsistence agriculture
    - Collecting firewood
    - Fetching water
  - *Production of household unincorporated enterprises, including informal sector enterprise*
- Provide a basis for valuation of unpaid work
- International comparability

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Classifications & Analytical Framework

- Ås framework
  - *Necessary time*
  - *Contracted time*
  - *Committed time*
  - *Free time*
- ICATUS framework
  - Personal care
  - SNA work
  - Non-SNA work
  - Free time

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- What are 'time use data'?
- How are time use data analyzed and used?
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- What is an activity classification for time use statistics and what is its role in the collection and analysis of time use data?

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