

Time Use and Time Budgets

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German Data Forum (ed.)

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Expanding the Research Infrastructure
for the Social, Economic, and
Behavioral Sciences

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Expanding the Research Infrastructure for the
Social, Economic, and Behavioral Sciences

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9. Time Use and Time Budgets

*Joachim Merz**

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Abstract

“Time use statistics offer a unique tool for exploring a wide range of policy concerns including social change; division of labor; allocation of time for household work; the estimation of the value of household production; transportation; leisure and recreation; pension plans; and health-care programmes, among others” (United Nations). This advisory report will discuss recent developments, improvements and future challenges of time use and time budgets for policy and research with a focus on international but especially national developments in Germany that have emerged in the wake of the 2001 KVI report.

The topics to be addressed are: recently established international time use institutions, data archives, and surveys; German time use databases and their accessibility, current time use research fields and studies; time use for economic and social policy; new methods in time use survey sampling; future developments; and European and international challenges. The conclusions and recommendations first urge the implementation of the new German Time Use Survey (GTUS 2011/12) and urgently call for its financing and support for its active organization. Specific GTUS improvements, SOEP time use issues, a brand new time use panel, and the permanent establishment of the German Research Data Centers are also recommended.

Keywords: time use, time budgets and time use surveys, time use data

JEL classification: C81, J2D1, I3, O15, O17

1. Time use and time budgets: General concerns

Time is the encompassing and compound dimension and resource of individual activities and living arrangements. Very generally speaking, any characteristic or information is only complete where time is a factor that is considered in addition to the factual socio-economic and geographic attributes. Quantitative-statistical based knowledge about the use of time for all conceivable activities – from the labor market to the leisure world – is thus of central importance not only for the individual but also for the economy, for governmental economic and social policy, and for society at large:

“Time use statistics offer a unique tool for exploring a wide range of policy concerns including social change; division of labour; allocation of time for household work; the estimation of the value of household production; transportation; leisure and recreation; pension plans; and health-care programmes, among others” (United Nations Statistics Division).¹

Time use surveys collect information about activity sequences in time spells over a period lasting from one day to a week. At the core of a time use survey is the time use diary, which registers an individual’s activity sequence.

1 http://unstats.un.org/unsd/demo_graphic/sconcerns/tuse/

For each main activity in such a time period additional information is entered – such as secondary activity – and information about “where” and “with whom” this activity was done. In addition to the diary information, a time use survey typically includes a questionnaire about background socio-economic individual and household variables. Sometimes specific information is included in the questionnaire about less frequent activities for a period longer than a day and/or item-specific questions like a seven-day work schedule proposed by the Harmonised European Time Use Study (HETUS, see Eurostat 2009).

Time budgets in a strong sense refer to activity specific to aggregated time used over the course of the entire day. Time budgets as a set of time taking up activities thus are comparable to income budgets spending for a set of consumption expenditures (Harms and Gershuny 2009: 1). However, the terminus time budget or time budget survey is often synonymous with the diary information itself or with the diary-based complete time use survey (diaries plus socio-economic background); this is the interpretation we will adopt here. The overall advantage of a time budget is its more accurate time use measurement than can be recorded by stylized data, and the temporal location of an activity within a given day. This offers the possibility of analyzing the timing of activities (like working hours); moreover, information about the sequence of activity patterns is an extraordinary surplus when compared to all other surveys asking for daily or weekly individual activities in the labor market or in any field of daily life.

Time use research analyses the individual’s use of time. As Andrew Harvey, a longstanding mentor of time use research states,

“Time use research is the study of how people use their time. Minimally, time use studies show what activities people do week to week or day to day. Maximally, they show what people are doing, where they are, who they are with, and how they feel from minute to minute.”²

Time use: Background and literature

Some examples of early time use studies are the American study “How Working Men Spend Their Time” (Bevans 1913) and the British studies “Round About a Pound a Week” (Pemberton-Reeves 1913). A classic German time use study is the 1933 Marienthal Study “Die Arbeitslosen von Marienthal – Ein soziographischer Versuch über die Wirkungen langandauernder Arbeitslosigkeit” (Jahoda, Felix and Lazarsfeld 1933).

Since the beginning of the 20th century, time use research has developed with respect to methodological as well as to substantive issues. Meanwhile

2 <http://www.stmarys.ca/partners/turp/pages/whatistimeuse.htm>

there are a number of comprehensive studies about the interest in and the international development of time use research. Kramer (2005) has recently provided an historic overview, Harms and Gershuny (2009) focus on time budgets and time use issues, Gershuny (2001) covers time use methods, Harvey (2004, 1999), Harvey, Merz and Mukhopadhyay (2006), Harvey, Szalai, Elliott, Stone and Clark (1984), Gershuny (1995), (Andorka 1987) or the volume on “Time Use – Research, Data and Policy” (Merz and Ehling 1999) give a general overview about the current state of the field.

Although within a time use diary the respondent is characterizing his or her activity in a time spell in his or her own words, only coded activities are available for the data user. Thus, the creation of appropriate coding for all conceivable research interests is a challenging task. However, there are international harmonizing approaches, such as the HETUS project (Eurostat 2009), the United Nations (Bediako and Vanek 1999), or alternative approaches (Hoffmann and Mata 1999). Actual scientific articles with in-depth time use analyses, books and projects can be found in particular in the new electronic *International Journal of Time Use Research*.³ Andrew Harvey with his TURP project at St. Mary’s University in Halifax, Canada, provides a substantial bibliography of time use studies. Since 2007, the Centre for Time Use Research (CTUR) has offered information about current time use publications.⁴

This advisory report will discuss improvements in and future challenges for time use and time budgets with a focus on recent international and, in particular, national developments since 2000 in the wake of the 2001 KVI report.⁵ The discussion is organized as follows: section 2 sketches internationally important time use institutions, data archives, and surveys, followed by time use databases and their accessibility in Germany (section 3). Time use research fields with international and national improvements, developments, and studies are presented in section 4. Time use in and for economic and social policy is the topic in section 5. New methods in time use survey sampling are presented in section 6. Section 7 examines future developments within European and international challenges. Section 8 draws conclusions and offers some recommendations.

3 <http://www.eIJTUR.org>

4 <http://www.timeuse.org/c/information>

5 Kommission zur Verbesserung der informationellen Infrastruktur zwischen Wissenschaft und Statistik 2001, Merz 2001.

2. Time use international: Institutions, data archives and surveys

The following represent the most significant of the recently established time use institutions, data archives, and international surveys forming the improved international background in which German time use activities are embedded.

International time use institutions. Important international time use institutions are compiled in table 1.

Table 1: International Time Use Institutions

IATUR: The International Association for Time Use Research	www.iatur.org
TURP: Time Use Research Program at St. Mary's University, Halifax, Canada	www.stmarys.ca/partners/turp
UNSTATS: United Nations Statistics: Allocation of Time and Time Use	http://unstats.un.org/unsd/demographic/sconcerns/tuse/
RNTU: Research Network on Time Use at Lüneburg University, Germany	http://ffb.uni-lueneburg.de/rntu
eIJTUR: electronic International Journal of Time Use Research	www.eIJTUR.org
CTUR: Centre for Time Use Research at Oxford University, UK	www.timeuse.org

Major developments. The time use community is growing since 1970⁶ and has grown increasingly within the last decade. Its annual conference in 2009 – following earlier conferences in the US and Sydney, Australia – will be at the Leuphana University of Lüneburg, Germany,⁷ hosted by our Research Institute on Professions (FBB, *Forschungsinstitut Freie Berufe*) and the German Federal Statistical Office. Since 1985 TURP at St. Mary's University in Halifax (Canada) has provided a worldwide time use bibliography and is a new pioneer in spatial time use research with its 2007–2009 *Halifax Regional Space-Time Activity Research (STAR)* Project, a GPS-assisted household time use survey. Besides the recent UNSTATS activities and the time use research network RNTU activities at Lüneburg, a new peer-reviewed scientific time use journal, the electronic *International Journal of Time Use Research*⁸ hosted by FFB (University of Lüneburg) was founded in 2003. Worldwide time use datasets are archived and harmonized by CTUR/MTUS at Oxford University, representing enormous progress in the ability to make international comparisons.

⁶ <http://www.iatur.org>

⁷ <http://www.leuphana.de/ffb/iatur> 2009

⁸ <http://www.eIJTUR.org>

International time use data archives. The first international time budget study was the Multinational Time Budget Study coordinated in the 1960s by Alexander Szalai (1972). This project developed standardized diaries and survey methods and was implemented by twelve countries⁹ in 1965. Since then new time use and time budget surveys have increasingly been created. Recent main studies and archives since 2000 are compiled in table 2.

Table 2: International Time Use Data Archives

MTUS: Multinational Time Use Study	www.timeuse.org/mtus
MHES: Multinational Household Expenditures Study	www.economics.unimelb.edu.au/SITE/household/MTUS1.shtml
HETUS: Harmonised European Time Use Study HETUS table generating tool	http://ec.europa.eu/eurostat/ https://www.testh2.scb.se/tus
CHAD: Consolidated Human Activity Database	www.epa.gov/chadnet1/index.html

Major developments. The most comprehensive and enduring data archives of international time use studies since is the Multinational Time Use Study (MTUS) at CTUR now at Oxford University (Prof. Jonathan Gershuny, see Gershuny et al. 2000). MTUS is harmonizing time use studies based on diaries from many countries with now about 60 studies from about twenty-six countries worldwide. MHES, the Multinational Household Expenditures Study (MHES) (Prof. Duncan Ironmonger, University of Melbourne, Australia), provides individual and household information about time use and expenditures.

The European Union begun to support the harmonization of time use surveys and statistics in Europe in the early 1990s (HETUS, Eurostat 2009; Rydenstam 1999). Now major European time use surveys are harmonized by HETUS, an enormous advantage for the development of international comparisons. Updated HETUS guidelines are available from 2009. Based on the HETUS, Statistics Finland and Statistics Sweden have developed the *HETUS table generating tool*, an interactive, internet-based, user-friendly tool for producing user-defined statistical tables.¹⁰ The Consolidated Human Activity Database (CHAD) will serve as an example for a specific individual time use

9 USSR, US, BRD, DDR, Bulgaria, Czechoslovakia, Hungary, Poland, Yugoslavia, Belgium, France, Peru.

10 Credentials are necessary to access the tool. Klas Rydenstam, from Statistics Sweden (<https://www.testh2.scb.se/tus/tus/> and klas.rydenstam@scb.se) has to be contacted (Rydenstam 2007, 118).

database dedicated to a certain substantive aim, in this case environmental protection.¹¹

International time use surveys since 2000. At the turn of the millennium around twenty European countries conducted time use surveys according to the harmonized HETUS guidelines. More than 40 international time use surveys worldwide have been conducted since 2000 (see table 3).¹²

Table 3: International Time Use Surveys since 2000

Country	Time Use Survey	Year
Argentina	Encuesta de Uso del Tiempo de Buenos Aires	2005
Australia	Time Use Survey of New Mothers	2005-2006
Austria	Austrian Time Use Survey 2008-2009	2008-2009
Belgium	Belgian Time Use Survey	2000, 2005
Brazil	Belo Horizonte Time Use Survey	2001
Bulgaria	Time Use Survey	2001-2002
Canada	General Social Survey, 19 Time Use	2000, 2005
Denmark	The Time Use of Households	2001
Estonia	Time Use Survey	1999-2000
European Union	Harmonised European Union Time Use Surveys	1999-2002
Finland	Time Use Survey: Everyday Life in Finland	2000
Germany	German Time Use Study	2001-2002
Guatemala	National Survey of Living Conditions	2002
Hungary	Time Use Survey	2000
Ireland	Adolescent Time Use and Well-Being	2007-2008
Ireland	Time Use in Ireland	2005
Italy	National Time Use Survey	2002-2003
Japan	Japanese Time Use Survey	2000, 01, 05
Mongoloia	Pilot Time Use Survey	2000
Netherlands	Time Budget Survey of the SCP Office	2000

11 CHAD is developed by the US Environmental Protection Agency (EPA) CHAD harmonizes about 10 databases with frequency and duration information of an activity (e.g., under pollution) with further daily and spatial information.

12 Detailed information about earlier harmonized international time use studies are made available by MTUS of the Centre of Time Use Research at Oxford University (<http://www.timeuse.org/information/studies/data>). A list of the MTUS harmonized time use activities is available at <http://www.timeuse.org/mtus/documentation/appendix>.

Country	Time Use Survey	Year
New Zealand	Time Use Study	2008-2009
Norway	Tidsnyttingsundersokelsen	2000-2001
Poland	Time Use Survey	2001
Portugal	Teachers Time	2001-2003
Republic of Kiribati	Time Use Survey Gilbert Island	2001-2002
Republic of Korea	Time Use Survey	2000, 2005
Romania	National Time Use Study	2001
Slovak Republic	Time Use Survey	2006
Slovenia	Time Use Survey	2000-2001
South Africa	Time Use in South Africa	2000
Spain	Encuesta de Empleo del Tiempo	2002-2003
Sweden	Time Use Survey	2000-2001
Switzerland	Emploi du temps en Suisse	2001
Taiwan	National Time Use Survey	2004
Thailand	National Time Use Survey	2000-2001
Turkey	Time Use Survey 2006	2006
United Kingdom	Omnibus, One Day Diary Module	2001, 2005
United Kingdom	The National Survey of Time Use	2000-2001
USA	ATUS: American Time Use Survey	2003-2007

Source: CTUR/MTUS harmonized data (<http://www.timeuse.org/information/studies/data>) and author research.

Major developments. In addition to these recent, national cross-sectional time use surveys since 2000, other important developments can be noted. First, the Harmonised European Time Use Surveys (HETUS) were a milestone in concerted multinational sampling and activity coding of time use diary data. Second, the new US time use engagement through the annual American Time Use Study (ATUS)¹³ includes work on the ATUS ancestor, The American Heritage Time Use Study (AHTUS, 1965, 1975, 1989, 1992–94 and 1998/99) which is harmonized by the Centre for Time Use Research (CTUR) at Oxford University.¹⁴ The American Heritage Time Use Data (AHTUD) is the database for the five respective time use studies and was assessed by a

13 <http://www.bls.gov/tus/>

14 <http://www.timeuse.org/ahtus>

multinational group of experts¹⁵ that provided calibration (Merz and Stolze 2008), evaluation, and recommendations for further time use surveys (Harvey 2006)¹⁶. Third, some countries are following a quinquennial period of collecting new time use surveys (Canada, Japan, Korea). Altogether, the almost exponential increase of new time use studies since 2000 worldwide emphasizes the internationally recognized importance of time use data for research and policy.

3. Time use data in Germany: Databases and data access

The most important development in providing time use diary data nationally is the official German Time Use Survey GTUS 2001/02 (predecessor GTUS 1991/92). In addition, summarized working hour information is provided by the German Microcensus. Average time use data stylized by a “normal day”¹⁷ are part of the German Socio-Economic Panel (SOEP, *Sozio-oekonomisches Panel*). Finally, some other topic-specific, smaller-sized surveys and firm time use data have been collected in Germany since 2000.

Time use databases in Germany

German Time Use Survey 2001/02. The 2001/02 German Time Use Survey consists of approximately 5,400 households, 37,700 diary days, and 270 activity codes classified by household work and do-it-yourself activities, paid job or job seeking, voluntary and community work, qualification and education, physiological recreation, social life and contacts, use of media and leisure time activities, child care, taking care of and attending to people, and preparation time and travel time including the means of transport. The GTUS design follows Eurostat’s Guidelines on Harmonised European Time Use Surveys (HETUS). All household members aged ten years and older were asked to fill out diaries based on 10-minute intervals on three days – two days during the week from Monday to Friday, and one day on the weekend. Data were collected on primary and secondary activities, persons involved or present, the location, and mode of transport. A wide range of household and

15 Multinational project “Assessing American Heritage Time Use Studies” by Prof. Dr. Andrew Harvey, St. Mary’s University, Halifax, NS, Canada, Prof. Dr. Dr. Ignace Glorieux, Vrije Universiteit Brussel, Brussels, Belgium, Prof. Dr. Joachim Merz, University of Lüneburg, Germany, Klas Rydenstam, Statistics Sweden.

16 <http://pna.yale.edu>

17 The benefits and challenges of diary vs. stylized time use information are discussed for example in Robinson 1985, Niemi 1993, and Schulz and Grunow 2007.

individual data (socio-demographic, economic, and other background variables) were collected in additional questionnaires.

The GTUS microdata themselves and information about the survey are available from the Research Data Centers of the Federal Statistical Office and the Statistical Offices of the German *Länder*.¹⁸ In addition, the Institute for the Study of Labor (IZA, *Forschungsinstitut zur Zukunft der Arbeit*) in Bonn offers metadata about this and other surveys.¹⁹ A comprehensive *GTUS-Compass* describing the broad range of GTUS 2001/02 information and its usage is provided by the Federal Statistical Office (2006a).²⁰

German Socio-Economic Panel (1984–ongoing). Since 1984, the SOEP of living in Germany has annually collected a broad set of individual subjective and objective information from each household member sixteen years and older.²¹ The SOEP, hosted by the German Institute for Economic Research, (DIW Berlin, *Deutsches Institut für Wirtschaftsforschung*),²² registers only “typical” or “normal” work and non-work daytime time use information for each of the following activities: paid work (including commuting and secondary occupational activities), housework and shopping, childcare, do-it-yourself, education/learning, watching television or videos, and hobbies and other leisure activities. In addition, the SOEP asks for information about less frequent activities and how often they were done within different longer time periods.

One advantage of the SOEP (among others) is its truly longitudinal character and its broad range of socio-economic variables for testing behavioral hypotheses. The disadvantage (besides having exclusively stylized information) is that it only permits information on full hours of activity (no minutes or smaller units of time) when collecting data. A simple extension by minutes is strongly recommended for further SOEP waves and for international comparisons.

German Microcensus: The large-scale German Microcensus²³ (1 percent sample of the population) is focused around the labor market and has asked for in-depth information about a variety of “typical” or “normal” working hours since 2005, as well as for current as well as desired working hour arrangement.

18 <http://www.forschungsdatenzentrum.de>

19 <http://idsc.iza.org/metadata/>

20 Compass topics: Publications of government, ministries, and research facilities, conferences, journals and other media; Master thesis, final diploma, doctoral dissertations; Eurostat: Harmonised European Time Use Study (HETUS); Federal Statistical Office publications; United Nations (UN); Journals about time use and related topics; Associations, conferences, data archives and research facilities about time use and related topics; General research facilities and data archives; Contact about the Time Use Surveys at the Federal Statistical Office of Germany.

21 <http://www.diw.de/soep>

22 <http://www.diw.de/english>

23 <http://www.destatis.de>

Further studies with time use information. Time use information gathered by private firms, such as Nielsen Marketing or the Society for Consumer Research (GfK, *Gesellschaft für Konsumforschung*) will be discussed in the “Time Use Research Fields” section below. Television and broadcast services (like ARD or ZDF) and other media firms have developed their own large-scale survey system about media use with a significant amount of process-based time use information. The situation and the suitability of diary-based time use research for media use have recently been analyzed by Merz (2009). Smaller-sized or topic-specific studies include the “Berliner Längsschnitt Medien,” a project to analyze media use and school performance by the Criminological Research Institute of Lower Saxony (KFN, *Kriminologisches Forschungsinstitut Niedersachsen*)²⁴ or, in another example, the time use study focused on intra-family relations conducted by the State Institute for Family Research at the University of Bamberg.²⁵ Although there are important private firms and other institutions that collect time use data in Germany, in general, the data are not available to other institutions or researchers, in general.

Time use microdata access in Germany

While the SOEP and its time use data have been made available for scientists since its inception in 1984 via the DIW Berlin, official microdata have also been provided for some years by new Research Data Centers for the public and the scientific community.²⁶ The official German Time Use Surveys GTUS 2001/02 and GTUS 1991/92 are provided and serviced by the Research Data Centers of the Federal Statistical Office and the Statistical Offices of the German *Länder*. These Research Data Centers provide four different forms of access to selected microdata of official statistics: Public Use Files (PUFs), Scientific Use Files (SUFs), safe scientific workstations and data laboratories, and controlled remote data processing. These four options differ with regard to both the anonymity of the microdata that can be used and the form of data provision.²⁷ Access to German official microdata is possible for foreign institutions and scientists not subject to German law.

New microdata access developments after 2000 and in the future. The entire system of microdata access via the Research Data Centers is a new one and has created very successful options for working with official microdata, such as the creation of SUFs. However, SUFs are still anonymized; a “final run” with the original data held within the Federal Statistical Office is

²⁴ <http://www.kfn.de>

²⁵ <http://www.ifb.bayern.de/forschung/inapf-deu.html>

²⁶ <http://www.ratswd.de/engl/dat/RDC.html>

²⁷ <http://www.forschungsdatenzentrum.de/en/anonymisierung.asp>

necessary for many final results and publications. The new *onsite secured possibilities* (similar to those at the DIW Berlin for geo-coded SOEP data) is a promising avenue for providing advanced access. The possibility for *remote access to micro- and metadata*, which, for instance, is provided by the Luxembourg Income Study (LIS), will also be important in the future. The most important future issue, however, is that the Research Data Center of the Federal Statistical Office must be permanently established in order to continue to provide this necessary, well-accredited service!

4. Time use research fields: International and national improvements, developments, and studies since 2000

In principle, time use research fields encompass the whole range of human activity. However, particularly in the specific time use diary type of data, they focus on and allow for activity analyses incorporating attributes of the timing, duration, and sequence of activities with all its effects and causalities of daily life activities. Stylized time use data also give insight into a normal or average day and/or less frequent activities within a desired period of time.

From this perspective, the international and national time use research fields that have emerged since 2000 can be said to include substantive contributions from economic, sociology, and other sciences and also to have addressed methodological issues on a national and multinational level. Though there are a multitude of studies behind each time use research field over the past decade, and certainly behind those dating before this,²⁸ in assembling table 4 only one international and one national reference will characterize each issue. My taxonomy of time use research fields tries to capture recent international and national research activities and a variety of sources could be cited.²⁹

²⁸ See for example Merz and Ehling 1999.

²⁹ National: For GTUS 2001/02 based studies the excellent GTUS-Compass by the German Federal Statistical Office (Statistisches Bundesamt 2006) and further actual information provided by its author Erlend Holz; Research Project Summary and literature from the Research Data Center of the Federal Statistical Office (<http://www.Forschungsdaten.zentrum.de>). International: CTUR publication list (<http://www.timeuse.org/information/publications/>); Information by the Research Network on Time Use Research (RNTU: <http://www.rntu.org>; electronic International Journal of Time Use Research (<http://www.eIJTUR.org>) and other Journals.

Table 4: Time Use Research Fields since 2000 – International and National

Time Use Research Field	International		National	
	Reference	Time Use Data	Reference	Time Use Data
Labor Market/ Paid Work Timing, Fragmentation of Work/ Work-life balance/ Sequencing	Hamermesh 2002/Fisher and Layte 2004/ Lesnard 2004	MTUS Version 5.0.1 (D), British TUS 2000-01 (D), HETUS 2003 (D)/ French TUS 1985-86, 1998-99 (D)/.	Merz and Böhm 2005; Merz and Burgert 2004; Merz, Böhm, Burgert 2004	GTUS 2001/02 (D)
Unpaid work/ Nonmarket Activities/ Household Production	Deding and Lausten 2006, Harvey 2006, Ironmonger 2001	Danish TUS 2001 (D), American (Heritage) TUS (D), Australian TUS (D)	Schäfer 2004	GTUS 2001/02 (D)
Gender Perspectives	World's Women Report UNIFEM 2009	Multiple time use data worldwide (D/Q)	Cornelißen 2005, Sellach et al. 2004	GTUS 2001/02 (D)
Division of Housework	Anxo and Carlin 2004, Bonke and McIntosh 2005	French TUD 1999 (D)	Gille and Marbach 2004	GTUS 2001/02 (D)
Child Care/ Day Care/ Care giving	Joesch and Spiess 2006, Chalasani 2006	ECHP 1996 (Q)	Kahle 2004, Fendrich and Schillig 2005	GTUS 2001/02 (D)
Family Interactions/ Parental Time and Leisure	Anxo and Carlin 2004/ Guryan, J., Hurst, E. and M.S. Kearney 2008	French TUS 1999/ American TUS 2006	Bundesministerium für Familie, Senioren, Frauen und Jugend 2006	GTUS 2001/02 (D)
Nutrition/ Household Economics	US Department of Agriculture	American TUS 2005, 2006	Gwodz et al. 2006	GTUS 2001/02 (D)
Consumption/ Shopping	Jacobson and Kooreman 2004	Netherlands SCP Survey 2000 (D/Q)	Merz, Hanglberger and Rucha 2009	GTUS 2001/02 (D)
Education	Guryan et al. 2007	ATUS 2005	Wilhelm and Wingerter 2004	GTUS 2001/02 (D)
Leisure/ Culture/ Quality of Life	Torres et al. 2007	European Quality of Life Survey (25 countries)	Statistisches Bundesamt 2008, Weick 2004	GTUS 2001/02 (D)

Time Use Research Field	International		National	
	Reference	Time Use Data	Reference	Time Use Data
Media use/ Play/ IT	Deal 2008	Digital Games Survey 2006 (D/Q)	Merz 2009, Jäckel and Wollscheid 2004, 2007, Fritz and Klingler 2006, Kleinmann and Mößle 2008	GTUS 2000/01 (D), ARD/ZDF-Studie 2005 (Q), BL 2005-2010 (D/Q)
Space/ Geography/ Environment	Harvey 2009	STAR: GPS Time Use Survey 2008	Kramer 2005	GTUS 2001/02 (D)
Mobility/ Transport/ Travel	Keall and Baker 2008	Travel Survey New Zealand 2001 (D)	Kramer 2004	GTUS 2001/02 (D)
Social Contacts/ Networks / Volunteering	Bittman et al. 2005	Australian TUS 1997 (D), Australian SDAC 1998 (Q)	Merz and Osberg 2009, Gabriel et al. 2004	GTUS 2001/02 (D)
Time Crunch/ Time Stress/ Harriedness	Sullivan 2007, Bonke and Gerstoft 2007	Danish TUS 2001 (Q), Home OnLine 1998 (Q/D)	Gille and Marbach 2004	GTUS 2001/02 (D)
Poverty/ Extended well-being/ Inequality	Akarro 2008, Folbre 2009	Time Use Study and Advanced Census Analysis in Tanzania 2002 (D)	Holz 2004, Ketttschau et al. 2004, Merz and Rathjen 2009 ISG 2004	GTUS 2001/02 (D)
Special Populations Children/ Adolescent, Youth/ Elderly, Retirement	Pääkkönen 2008/ Mulligan, Schneider and Wolfe 2005/ Piekkola and Leijola 2006	Finnish TUS 1999/00 (Q)/ CPS 1992 (Q), NELS 1992, SDAC 1992/93 (ESM)/ MTUS: 1987, 1991, 1995, 1999 2000 (D)	Cornelißen and Blanke 2004, Engstler et al. 2004	GTUS 2001/02 (D)
Economic Accounting/ Valuing/ Sustainable Society	Landefeld and Culla 2000, Eurostat 2003	Country time use study aggregated to Natinal Accounts	Schäfer 2004, Stahmer 2003, Stäglin 2003	GTUS 2001/02 (D). Time-Input-Output Tables

Time Use Research Field	International		National	
	Reference	Time Use Data	Reference	Time Use Data
New Methods Visualization/ Sequence Analysis Timing/ Profiling/ Heterogeneity/ Entropy	Michelson and Crouse 2004, Ellegard and Cooper 2004/ Wilson 2001/ Stewart 2006/ Gonzales-Chapela 2006/	ALLBUS 12 1998 (D), FAMITEL 2001 (D/Q), Swedish TUDPS 1996 (D)/ ALLBUS 1998 (D)/ EPA TDS 1992-1994 (D), ATUS 2006 (Q)	Hufnagel 2008	GTUS 2001/02 (D)
Methodology Diary versus Questionnaire/ Representa- tivity	Kitterod and Lyngstad 2005, Niemi 1993/	Norwegian TUS 2000/01 (D/Q)/	Schulz and Grunow 2007/ Merz and Stolze 2008	ifb TUS 2006/ AHTUD 1965-99

AHTUD: American Heritage Time Use Data, ALLBUS: German General Social Survey, ATUS: American Time Use Survey, ARD/ZDF 2005: ARD/ZDF-Studie Massenkommunikation 2005 (Q), BL: Berliner Längsschnitt Medien, CPS: Current population survey, ECHP: European Community Household Panel, HETUS: Harmonised European Time Use Studies, MTUS: Multinational Time Use Study, NELs: National Education Longitudinal Study, TUS: Time Use Survey, SDAC: Survey of Disability, Ageing and Carers, Sloan Study: Study of Youth and Social Development Wave 1, GTUS: German Time Use Survey

Source: Author taxonomy based on various national and international data (see Footnote 10).

Major improvements and developments. Altogether, the table 4 overview shows a wide range of research fields relating to important economic and social issues. For instance, specific time use information provided by diaries allows particular *labor market analyses* that are not available in other labor market surveys: the sequencing, timing, and fragmentation of daily working hour arrangements, multiple jobs per day. These are important for new forms of labor contracts in the development of labor market flexibility. *Unpaid work and nonmarket activities* are significant for understanding the importance of the informal economy and underscore women's economic importance and gender approaches to labor in particular. The *total leisure activities*, including social networking and volunteer work, family interaction, media use, culture, sports, and genuine leisure (to mention only a few) are important in many respects for understanding economic, social, individual, and societal living conditions. For example, recent psychology time use studies (via experience sampling) have been used to study affect regulation (Riediger et al. 2009).

For the German context this overview also demonstrates that the recent German Time Use Study GTUS 2001/02 enabled a broad spectrum of in-

depth activity research in a wide range of research fields. However, the primary German database GTUS 2001/02 is no longer up to date; there is an urgent need for a new German time use diary survey. Further information about the over fifty substantive research projects that have been reported to date that are served by the Research Data Centers and based on GTUS 2001/02 (with a great number more using data from GTUS 1991/92) emphasizes the critical importance of the German Time Use Survey for scientific as well as for administrative purposes (see the list of the Research Data Center research projects in the Appendix table A1).

In addition to the spectrum of time-use based scientific research activities that have been discussed, there are many other fields in private enterprises and administrative or governmental activities that ask for or would gain from time use information.

Private firms and time use information. Besides all the working hour time use data within any given private firm, private organizations in the field of consumer surveying also collect item- and time-specific information. To mention only the two important of these private firms: The Nielsen Consumer Panel survey, for example, which now includes 300,000 households in twenty-eight countries, collects information on consumption activities³⁰ scanned by the respondents via bar-codes. The GfK runs its ConsumerScope with even more explicit time use information, including specific studies on gardening, media use, etc., thus deepening the activity-specific time use information.³¹

Time use and downsizing bureaucracy by reducing administrative burdens: The Standard Cost Model (SCM) of the Federal Statistical Office, a tool for downsizing bureaucracy, measures the administrative costs imposed on businesses and individuals by central government regulation. Specific SCM time use surveys and interviews provide the data to this end and data from GTUS 2001/02 is used for further investigation. The German efforts are integrated in an international SCM network.³²

Time Use, National Accounts, and Nonmarket Production: Though the main focus of time use research is on individual behavior, there are substantial longstanding international and national efforts to record the contribution of nonmarket production to the national product and national accounts. Emphasis in this area is placed on valuing individual time use using various methods, such as market replacement costs with global or specialized substitutes, opportunity costs, and self-evaluation (Chadeau 1985; Goldschmidt-Clermont 1993). Recent international nonmarket national accounts efforts are described by Landefeld and Culla (2000) and Eurostat (2003). An interesting new way to describe the macro situation of a society is the “Great Day,” an aggregated time use picture proposed by Gershuny (1999).

30 http://www.acnielsen.de/products/cps_homescan.shtml

31 <http://www.gfkps.com/scope/infopool/chartoftheweek/index.de.html>

32 <http://www.administrative-burdens.com/>

Recent German national accounts by nonmarket satellite systems focus on time pattern in a Social Accounting Framework (see Stahmer 2003, Stahmer and Schaffer 2004, Stäglin and Schindtke 2003 for time input-output tables). Schäfer 2004 provides an estimate of a nonmarket production contribution for the German national accounts based on the GTUS 2001/02.

5. Economic and social policy and time use

Targeted economic and social policy needs accurate individual information about the population. The comprehensive range of time use data on individual activities can provide genuine information to support almost any sound economic and social policy and to accompany the daily temporal coordination of life. Against the substantive background of our time use research field overview (Table 4), one can identify a few main policy areas and new activities – of international importance but cited here with German references – that gain in particular from individual time use information:

- *Family and time use policy.* For almost all activities considered in the recent Seventh Family Report of the Federal Ministry of Family Affairs, Senior Citizens, Women and Youth (BMFSFJ, *Bundesministerium für Familie, Senioren, Frauen und Jugend*) (2006) with time policy for child care, child-rearing allowances, balancing family and work, education and other aspects of individual living conditions.³³
- *Public transport, traffic, mobility, and time use policy.* There is increasing interest in individual transport and traffic time aspects of working and leisure activities (see Kramer 2005).
- *Bureaucracy downsizing and time use.* Reducing administrative costs and time burden imposed on businesses and individuals (see the discussed SCM project).³⁴
- *Poverty and time use policy.* See the reports in this publication for a discussion of the three German Federal Richness and Poverty Reports (Armuts- und Reichtumsberichte der Bundesregierung, Bundesministerium für Arbeit und Soziales 2008; in particular: ISG 2004; Kettschau et al. 2004).
- *Working hours, labor market flexibility and time use policy.* Setting administrative general regulations on working hours and working conditions with particular daily working time regulations.

³³ <http://www.bmfsfj.de>

³⁴ <http://www.administrative-burdens.com>

- *Time policy in urban and rural areas.* To support the temporal coordination of public services and the private and firm sector.

The Time Use Compass by the Federal Statistical Office (2006a) mentioned above provides an additional range of time use information used by the German administration for economic and social policy.

New and future time use policy developments. The temporal aspect regarding family affairs and working-hour arrangements is a longstanding policy focus. Time use policy interests are new with regard to urban and rural temporal coordination of daily life, such as the time policy project for the metropolitan area Hamburg (Mückenberger 2008) and the new time policy of Europe-wide activities (Garhammer 2008). For further examples, see the activities of the German Society for Temporal Governance (DGfZP, *Deutsche Gesellschaft für Zeitpolitik e.V.*).³⁵

6. New methods in time use survey sampling

All the substantive time use approaches and research fields are based on the following instruments and methods:

- *Direct time use questions (stylized approach)* record the number of times that an individual participated in a given activity or the amount of time denoted for that activity in a typical day – either time constrained (must cover a defined time period) or time unconstrained.
- *Activity lists* are typically selective rather than exhaustive; mostly time-unconstrained.
- *Beepers* (experienced sampling) collect information via signaling devices that call for immediate information randomly over a given period (day) to register immediate subjective and context-sensitive information.
- *Time use diary* is an exhaustive record of all activities and patterns of associations between people and locations; this allows for sequence analyses; a highly recommended approach.

Time use research uses all kinds of time use data, but the diary is the preferred method of sampling, followed by stylized data. Both have benefits and challenges: diaries allow the investigation of activity timing during a day, stylized data capture less frequent information and disregard the randomness of situations occurring on a single day, to mention only the main issues (see Harvey

³⁵ <http://www.zeitpolitik.de>

1999 for more). There are some beeper data-based results, like those of the ISR Michigan group, but beeper data is not the dominant sampling instrument that is used. However, experience sampling, by a beeper or another instrument, which collects context-sensitive data by a self-reported momentary experience, by a random or other scheme over a day, for instance, is increasingly used at least in psychological investigations (Riediger 2009).

Within this methodological framework, many new sampling tools connected with the growth of handheld devices and mobile phones have been developed (see the conference volume about new sampling technologies with focus on time use surveying by Ehling and Merz 2002).

Table 5: New time use sampling technologies by surveying principles

<p>Come and Go PZE-Master [Working hour per terminal] www.zeit-reporter.de/article_info.php?articles_id=154 NovaCHRON [Workers time per web client] http://www.novachron-zeiterfassung.de/personalzeiterfassung.php diTime [Working hours per web-client] http://www.disoft-solutions.de/ timeCard [Working hours per chipcard/token] www.easy-technology.de/software/timecard/ Micades [Mobile per barcodescanner and GPRS/GSM] www.mobile-zeiterfassung.info/Fahrzeug.html MOBILDAT [Mobile per software] www.mobile-zeiterfassung.info/Fahrzeug.html Webalizer [Media/IT use per software] www.tobias-schwarz.net/webalizer_gui.html Web-Zählpixel [Internet use per plugin/software] www.ivw.de User tracking [Internet use per cookies/software] www.agof.de/</p> <p>Project Precise MobilZeit SERVICE [Working hours per terminal] http://www.mobile-zeiterfassung.info/Fahrzeug.html TimeLog Project [Working hours per software] http://www.timelog.de/produkte/zeiterfassung.html TIM / TIM Mobile [Mobile per cell phone (GPRS/GSM) and software] www.pressebox.de/pressemeldungen/echtzeit-zeitmanagement/boxid-108393.html</p> <p>Task Precise Zeittagebücher [per diary] Time-Soft [Working Hours per web-client] www.lewald.com Micro-Kiosk-System [Working Hours per terminal / PDA] www.softguide.de/prog_g/pg_2252.htm diTime [per Barcodescanner] http://www.disoft.de/index.htm SMS-Methode [per cell phone and software] Mobile Zeiterfassung [per cell phone and software] http://www.virtic.com/?u=mobile_zeiterfassung Halifax Regional Space-Time Activity Research (Star) Project [activity per cell phone (GPS) and diary] http://www.stmarys.ca/partners/turp/pages/projects/STAR/STAR_Main.htm TimeCorder [activity per hardware] http://www.paceproductivity.com/timecorder.html Timeboy [per Hardware] www.datafox.de mQuest [per PC, PDA or smartphone] www.mquest.info</p>
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Source: Merz 2009.

Many new sampling instruments, mainly developed to collect individual working-hour information, can be classified – according to the taxonomy of Merz 2009 – by three principles: Come and Go, Project Precise, and Task

Precise. Come and Go measures the total daily working time (when and how long). Project Precise measures the time information for a certain project (when and how long). Task Precise might measure a certain (sub-)task of a project. Table 5 provides examples of new time use sampling devices for each of these principles.

For a discussion of the benefits and challenges of these new time use data sampling instruments see Merz (2009). They certainly have to be considered and tested before they might be used for a future German Time Use Survey.

7. Future developments: European and international challenges

The worldwide financial and economic crisis accentuates the importance of the effective use of scarce resources. Since time use surveys encompass many (or all) individual activities incorporating temporal information, they are a very efficient “all-in-one” tool that provides a broad scope of detailed individual data in a household context for a multitude of substantive interests with minimal investment. Therefore, one could expect that the current crisis favors the implementation of new time use surveys; however, policy-makers still need to be convinced of its enormous practical value.

In Europe, great efforts have been invested and still have to be invested in order to get a full HETUS every ten years (as Norway, among other countries, has been doing for decades). Following approximately twenty new time use surveys from the beginning of the millennium (2000–2002), the next European Harmonised Time Use Study (HETUS) in 2010–12 will be a cornerstone not only in national surveying and research but also for the development of the European community as a whole.

In the UK, “light” diaries have been discussed for the multiple intervening years between the full-scale surveys every ten years (in Japan and Korea there are only five intervening years). According to the IATUR secretary Dr. Kimberly Fisher, there are a growing number of diary surveys on specific topics linked to longitudinal data – several studies focus on children, for example, notably the Child Development Supplement of the PSID (*US Panel Study of Income Dynamics*)³⁶ and the “Growing Up Longitudinal Study of Australian Children.”³⁷ These narrowly focused studies represent another way to collect individual time use data.

36 <http://psidonline.isr.umich.edu/CDS/>

37 <http://www.aifs.gov.au/growingup/>

Internationally, new countries and new time use surveys are on the agenda worldwide. A new UN-sponsored series of studies in developing countries is being discussed. Based on the experiences and the efforts of the annual American Time Use Studies, the international time use community will succeed in more frequent cross-sectional time use surveys. A comprehensive survey by the German Federal Statistical Office about *Time Use Survey – National Plans for the next wave of surveys 2008-2010 for 32 countries* is included in Appendix 2.

Periodic cross-sectional time use surveys with intervals of five or ten years will be very important in the upcoming years. The invention of an annual time use panel of regularly surveyed individuals and/or households with all its longitudinal information is on the international agenda. The panel option will be an enormous step forward in time use research that will provide – among others things – specific event-driven micro information for up-to-date and targeted policy and research. New electronic devices allow more precise and at the same time less expensive time use data sampling. Future developments and challenges for the time use survey situation in Germany will be outlined in our conclusions and recommendations.

8. Conclusions and recommendations

This advisory report on the current situation in international and national recent time use, recent improvements and future developments has underscored the following: time use surveys – with time as the comprehensive dimension of any individual activity – allow new insight into daily living activities, incorporating the timing and sequence of lived events. The central time diary methodology cues respondents to walk through the sequence of events in a given day, which has significant advantages in ensuring the completeness and consistency of responses. Time use diaries thus support an understanding of causality, and the interdependence that exists between all market and nonmarket activities and their individual synchronization. The disadvantage, however, is the high cost of administration, which mandates relatively few days observed per respondent with the resulting possibility that a survey will miss low frequency events. Therefore, additional summary questions about the “work week” (HETUS) have already been added to the GTUS 2001/02 as well as in some other time use surveys.

Against the background of growing international experience in the field of successful time use survey methodology, the following recommendations are indicated, with a particular focus on Germany. They will support research and targeted policy with more advanced, substantive as well as methodological investigations on modeling individual and household behavior at the

micro-level and on developing new and sound national accounts data at the macro-level:

- *Recommendation 1a (GTUS 2011/12):* it is essential that the next official German Time Use Survey (GTUS) is conducted in the years 2011–2012 nationwide by the Federal Statistical Office. The financing for GTUS 2011/12 is not yet assured and it must be organized as soon as possible. The next GTUS has again to be embedded in the European Harmonised Time Use Surveys (HETUS, Eurostat 2009). The next GTUS 2011/12 would assure information in a ten years interval context together with GTUS 1991/92, GTUS 2001/02 with precious time use information including socio-economic background available for targeted policy and research.
- *Recommendation 1b:* new methods in sampling time diaries based on mobile devices – including beeper and/or experience sampling methods for even more context-sensitive questions – should be incorporated in the next GTUS after a proper pilot study. This will fulfill three objectives: first, to gain more context-sensitive data; second, to reduce the burden of filling out a traditional diary booklet; and third, it will reduce the overall expense. The sampling procedure should use mixed-mode data collection (internet, cell- or telephone, mail, pre-coded diaries, etc.) and the advantages of the Access Panel (Körner et al. 2008) with voluntary information from the German Federal Statistical Office.
- *Recommendation 1c:* the single activity spell with its “where” and “with whom” attributes should be extended by expenditure information. This would provide new data about expenditures associated with each activity and the intensity for all related activity fields (transport, shopping, etc.).³⁸ A suitable way must be found to characterize a second or third job within a daily activity spell.
- *Recommendation 1d:* the time use diary information should be extended by questions concerning less frequent activities. First, with information about the work week consistent with the recent HETUS recommendation (Eurostat 2009, Guidelines Annex VI). Second, by information about a longer period than a day (different week diaries, frequencies, etc.). Third, by information about a “typical” or “normal” period (day, week, month).
- *Recommendation 1e:* the time use diary supplementary information should be extended by more objective background individual and household questions and questions about the living environment. The supplementary data should contain information about the income situation from

38 For example, with brackets for a sequence of equal activity spells.

labor market activities (occupational status, wages, and detailed income including unemployment benefits, etc.) or from other income sources (capital income, further third-party payments, etc.). The environmental information should encompass external child care possibilities and external living conditions (residence environment, exposure to environmental risks, and social life participation including social networks, social “inclusion” etc.).

- *Recommendation 1f:* the time use diary supplementary information should also be extended by subjective information about satisfaction (of life in general and other items beyond time type and stress information) and health (subjective and objective). In addition, the “Big Five” personal characteristics items³⁹ should be added to create an approximate measurement of unobserved heterogeneity, for instance. All this subjective data will allow researchers to value and qualify the time use information.
- *Recommendation 1g:* the time use diary supplementary information should be closely adjusted and harmonized with the respective socio-economic questions of the SOEP to allow for high quality merged new datasets.
- *Recommendation 2:* a brand new annual Time Use Survey Panel should be started to answer important longitudinal questions. A TUS Panel – for example in the wake of GTUS 2011/12 – will allow the investigation of changing individual time uses and time use profiles in changing environments with extended causality and sequential event analyses. The TUS Panel thus has a different focus than the SOEP.
- *Recommendation 3:* the SOEP should continue to ask for both “typical day” as well as less frequent time use information. First, this will allow continuing longitudinal analyses. Second, it will enable the use of the enormous socio-economic background information on the labor market and additional information present in the SOEP to explain time use behaviour. The SOEP should not only ask for full hours but should allow minutes’ information as well.
- *Recommendation 4:* the Research Data Center of the Federal Statistical Office should in any case be advanced to a permanent standing. However, particularly for its time use data service and its role developing new time use data it should be established permanently. The new onsite secure data access possibilities should be further developed. Particularly,

39 See for a short Big Five Inventory, the SOEP version of the Big Five (Schupp and Gerlitz 2008).

remote access to micro- and metadata should be expanded for fast and secure access.

- *Recommendation 5:* in general, the German Data Forum (RatSWD) should actively support and strengthen all activities related to ensuring that the GTUS 2011/12 will be financed and organized. Because a time use survey provides such a multitude of substantive answers for policy and research in a single, “all-in-one” tool, because it is harmonized now within Europe and offers an efficient use of scarce resources, the next GTUS 2011/12 should be rigorously and tenaciously promoted.

**Appendix A1: Current registered research projects
registered with the Research Data Center of the Federal
Statistical Office and based on GTUS 2001/02**

No.	Research Projects: Registered with the Research Data Center of the Federal Statistical Office and based on GTUS 2001/02 (March 2009)
1	Arbeitstitel: Haushalt: Kleine Fabrik oder gender factory
2	Zeitverwendung von Arbeitslosen und Vollzeiterwerbstätigen. Eine vergleichende Analyse mit den Zeitbudgetdaten des Statistischen Bundesamtes von 2002.
3	Inklusionsprofile
4	Zeitverwendung in Haushalten
5	FrauenDatenReport 2005
6	Feiertage, Freizeit und Soziales Kapital
7	Soziale Netzwerke und Hilfebeziehungen im unteren Einkommensbereich
8	Consumption and Time Allocation
9	Female labor market supply and home work in Germany
10	Bayerischer Familienreport 2006 – Schwerpunkt "Väter in Deutschland"
11	Kooperative Demokratie – Kritik der Arbeit und der Arbeitslosigkeit
12	1. Erwerbsverhalten und Home Production / 2. Zeitverwendung im Alter
13	Der soziale Dienstleistungsbereich als Chance für eine höhere Arbeitsmarktintegration und Professionalisierung weiblicher Erwerbskarrieren
14	Zeitverwendung und Work-Life-Balance in Großbritannien und Deutschland
15	Das Arbeitsangebotsverhalten von Frauen in Deutschland
16	A. Mobilitäts- und Freizeitverhalten von Kindern und Jugendlichen B. Verbesserung der Methoden zur Prognose der KFZ-Bemessungsverkehrsstärken
17	Zeitverwendung und soziale Schichten
18	Klartext reden oder Farbe bekennen: Der Einfluss von Sprachkenntnissen und Aussehen auf gesellschaftliche Integration von Migranten in Deutschland
19	Der Einfluss von Kindern auf Zeitallokation von Haushalten
20	Effekt von Zeitverwendung auf die Ausbildung von nicht-kognitiven Fähigkeiten
21	Arbeitszeit & Zeitbudgetanalysen – Analyse täglicher Arbeitszeiten und Nachfragearrangements
22	Soziale Ungleichheit und Prävention
23	Das Konzept der Europäischen Sozioökonomischen Klassifikation und seine Anwendung auf die in der Zeitbudgeterhebung 2001/02 befragten Haushalte
24	Renewability
25	Substitutability of Partner's Productive Activities
26	Einkommensabhängiges Freizeitverhalten unter älteren Menschen
27	Zeit und soziale Ungleichheit. Die schichtspezifische Strukturierung sozialer Zeit – unter besonderer Beobachtung von Geschlecht und Generation
28	Schulz-Borck/Hofmann: Schadenersatz bei Ausfall von Hausfrauen und Müttern im Haushalt – mit Berechnungstabellen, 6. Aufl.-Karlsruhe: VVW 2000, ISBN 3-58487-89487-894-8
29	"Integration of Rebound Effects into Life-Cycle Assessment" (finanziert durch BFE und Nationalfonds)
30	Ruhestandsmigration in Deutschland
31	Assisted Living – Technisch unterstütztes Wohnen im Alter, Teilprojekt: Sozialwissenschaftliche Begleitforschung
32	Sozioökonomische Berichterstattung (soeb.de)
33	"Einkommen und Freizeit – Eine empirische Analyse des Freizeitverhaltens älterer Menschen mit Daten der Zeitbudgeterhebung des Statistischen Bundesamtes"

34	Ökonomische Analyse der Zeitverwendung für Ernährung
35	Integrierter Survey
36	International Evidence on housework and market work by husbands and wives
37	Entwicklungstendenzen im Online-Printmedienbereich in Deutschland – Arbeitsmarktstatistische und Arbeitsorganisatorische Analyse der Strukturveränderungen durch das Internet für Journalisten, 1990 - Gegenwart
38	Erstellung von Tabellen für das Seminar zur Wirtschaftslehre des Haushalts, in dem Studierende den Zeitaufwand für Kinder in den unterschiedlichen Haushaltstypen vergleichen sollen
39	Stochastische Modellierung von Nutzerverhalten in Wohngebäuden
40	A cross-cultural analysis of overreporting of socially desirable behavior
41	Bezogenes Verkehrsverhalten von Beschäftigten im sekundären und tertiären Sektor
42	Potentiale der Zeitbudgeterhebung 2001/02 Eine Bestandsaufnahme anhand der Zeitverwendung "Junger Alter"
43	Berichtete und tatsächliche Kirchgangshäufigkeit in Ost- und Westdeutschland
44	Comparative Study on the Double Burden of Working Parents; Gender Differences in Time Poverty
45	Zeitverwendung von Arbeitslosen für Arbeitssuche
46	Soziale Netzwerke und Hilfebeziehungen im unteren Einkommensbereich
47	Zeitbudgeterhebungen – Methodik und Anwendungen
48	Analyse der Verschiebungen zwischen Wegezeiten und Zeiten für andere Aktivitäten in Abhängigkeit von der Raumstruktur
49	PACT (Pathways for carbon transitions)
50	Der zweite demographische Übergang

Source: The Research Data Center of the Federal Statistical Office, Wiesbaden 3/2009.

Appendix A2: Time Use Survey – National plans for the next wave of surveys 2008–2010

Country	Foreseen schedule	Comment
Belgium (BE)	2010	Statistics Belgium collects TUS data and Vrije Universiteit Brussel analyzes them. Next data collection will take place in 2010, analysis in 2011.
Bulgaria (BG)	2009/2010	Survey will be included into the National Program for Statistical Surveys 2009/2010.
Czech Republic (CZ)	Not before 2010	The implementation of TUS has not yet begun (no plan exists). There is a lack of financial resources and human capacity, the respondents' burden is still increasing, and neither TUS nor related activities are the priority of Czech Statistical Office in the area of social statistics.
Denmark (DK)	2008/2009	DTUC-Danish Time Use and Consumption Survey by Rockwool Foundation (Pilot ongoing).
Germany (DE)	No schedule	The next wave of the TUS survey is not yet organized and financed.
Estonia (EE)	2009/2010	EE is planning a TUS by 2009/2010.
Ireland (IE)	Not before 2010	The National Development Plan Gender Equality Unit, which was based in the Department of Justice, Equality and Law Reform, engaged the ESRI to carry out a pilot light diary survey in 2005. The report is available to download at: http://www.justice.ie/en/JELR/Pages/Time_use_survey_report Anonymized microdata is available through the Irish Social Science Data Archive (ISSDA), see: http://www.ucd.ie/issda/dataset-info/timeuse.htm However, with the exception of this 2005 light diary pilot and a small CSO HETUS pilot carried out in one region of Ireland (Munster) in 1998, to date no national time use study has been carried out in Ireland. There are no definite plans to carry out a HETUS based or light diary survey at present.
Greece (EL)	No schedule	There is a lack of "economic and human resources."
Spain (ES)	2009/2010	ES plans a TUS in 2009/2010. Fieldwork between 10/2009 and 9/2010.
France (FR)	September 2009- August 2010	
Italy (IT)	2008/2009	Fieldwork between February 2008 and January 2009.
Cyprus (CY)	Not before 2013	It is unlikely that TUS will be launched before 2013.
Latvia (LV)	Not before 2011	It is difficult to have a precise plan at this moment. This depends on financial resources.

Country	Foreseen schedule	Comment
Lithuania (LT)	Not before 2010	It is difficult to have precise plan at this moment. This depends on financial resources.
Luxembourg (LU)	Not before 2010/2011	First, they have to integrate the Time Use Survey in their national plan. Thus, it is difficult to have a precise plan for the moment (financing and human resources must be confirmed). It is unlikely that the survey will be launched before 2010–2011.
Hungary (HU)	2009 or 2010	They plan to organize a TUS during 2009 or 2010. Only a pilot (with a n=100 sample) will be made. If it is successful, the results of this pilot can be used to emphasize the importance of such a survey. It is not easy to find financial sources for a survey in Hungary, as it is not compulsory there.
Malta (MT)	No updated information	The previous TUS survey was carried out in 2002.
Netherlands (NL)	2010	Previous TUS surveys: 1. 2005 applying national methodology 2. 2006 according to HETUS guidelines In 2010, they will either apply their national methodology or the Hetus methodology. They have to weight the pros and cons of both methodologies before they reach a decision.
Austria (AT)	2008/2009	Fieldwork from March 2008 until February 2009. The sample for TUS will be a subsample of the Austrian Microcensus. In addition to the Microcensus questionnaire, persons in the selected households will be asked to fill in a diary for one day (aim: net sample of 8,000 persons being 10 years and older). There will be no special TUS questionnaire.
Poland (PL)	(2012) 2014	It is impossible for Poland to carry out TUS in 2010 because of the Agricultural Census in 2010 and the National Census in 2011. The most likely and convenient time for the Polish CSO is 2013/2014, but it will be considered in 2012. This depends on financial resources.
Portugal (PT)	No schedule	It is not planned and depends on financial resources.
Romania (RO)	2009/2010?	The Romanian National Institute of Statistics could not carry out TUS in 2008/2009 due to a lack of financial and human resources. They provisionally planned the survey to be launched in 2009/2010, which depends on financial and human resources.
Slovenia (SI)	No schedule	Slovenia did not plan to incorporate financial resources and employees for the TUS in the medium term plan. A TUS will not be conducted in the near future.
Slovakia (SK)	Not before 2010	Previous TUS surveys: In 2006, the Pilot project on TUS, in accord with the 2004 HETUS guidelines, was carried out. A plan for regular TUS (not earlier than 2010) depends on obtaining of financial resources.

Country	Foreseen schedule	Comment
Finland (FI)	2009/2010	Fieldwork between April 2009 and March 2010.
Sweden (SE)	2010 if resources available	Regarding the next round of TUS, there is an ongoing discussion with the Ministry for Integration and Gender concerning financing. There is a great interest in taking part in the next round.
United Kingdom (UK)	Full survey: not before 2013. Exploring lower cost options (e.g., collecting basic data via an existing survey)	The UK carried out a light diary survey over 4 months in 2005. With regard to a HETUS survey, there appears to be no prospect of funding a full survey in the current planning period (2008-2012) given other priorities and budgetary pressures. ONS is still exploring lower cost options (e.g., collecting basic data via an existing survey), but this will also depend on the provision of financial resources from government and the ESRC.
Croatia (HR)	No schedule	National plan to be confirmed.
FYROM (MK)	2009	According to the working plan 2008-2012, TUS will be carried out in 2009. Fieldwork will start on 1 January 2009.
Turkey (TR)	2011	The previous TUS survey was carried out in 2006 and the results published in July 2007. The Turkish Statistical Institution, TURKSTAT, has planned to carry out TUS for a 5-year-period in line with HETUS guidelines.
Norway (NO)	2010	
Switzerland (CH)	Not before 2011	No TUS is planned at the Swiss Federal Statistical Office (FSO). In the context of the new Statistical System on Households and Persons, the possibility of a mini-TUS added to the omnibus survey is being examined (light diary, CATI-interviews with precoded activities). It would be realized in 2011 at the earliest. The decision is still open.

Source: German Federal Statistical Office 2009 (situation as of November 4, 2008)

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