

## **1. WHY A TIME USE SURVEY?**

Time use surveys (TUS) provide information essential to measure and contextualise economic activity and identify opportunities for greater national productivity.

Time use surveys provide information for decision making that is unavailable using other measures. Time diaries provide an exhaustive record of all activities undertaken over a day or week, yielding a versatile reusable resource that can serve multiple and unanticipated objectives. Strengths include accurate time measurement, information on the frequency and timing of activities, where and with whom activities take place, interrelationship between activities and between the activities of different individuals. Attempts to collect this information using more conventional survey instruments are unacceptably error-prone. Regular time use surveys allow cross-national comparisons and the study of trends.

## **2. WHO ELSE DOES THEM?**

Countries now collecting regular time use data include New Zealand, Canada, USA, UK, South Africa, Denmark, Finland, Norway, Sweden, Belgium, France, Germany, Austria, Bulgaria, Netherlands, Poland, Spain, Italy, South Korea, Japan, China, India, Brazil, Argentina. The data are used internationally to enhance decision-making in numerous areas.

## **3. BENEFITS TO PRODUCTIVITY**

### **Valuing the unpaid economy**

- multiple countries quantify time spent doing unpaid work, e.g. elder and childcare, housework and other productive activities that can be outsourced, to determine the financial value of this nonmarket production
- this information is necessary to meet international obligations under United Nations (UN) Sustainable Development Goal (SDG) 5, to compute satellite accounts to GDP and to assess the economic cost of displacing nonmarket production

### **Employment**

Time use data gives unique information relevant to employment and labour supply, e.g. identifying

- barriers to women's labour market participation, factors contributing to gender pay and wealth gaps, e.g. gender division of labour, how care work impacts women's other activities, reduces retirement incomes
- how resources are re-allocated over business cycles, e.g. how much time unemployed spend in job search, doing unpaid household production, substitution between eating out and eating in
- effects on productive time allocation of workplace conditions including flexibility, sick leave, paid parental leave, working at home, non-standard work schedules, multiple jobs, split shifts, part time work
- how parents' work force participation is affected by the sequence of daily time commitments involved in using services such as childcare; school start and finish times; housing location and commuting times; partners' workforce participation and contribution to nonmarket work
- the changing nature of work, growth of underemployment e.g. in the gig economy which groups are most affected, how are they juggling their time commitments, what work is outside conventional market?

### **Education**

- parental time commitment, including developmental activities to enhance learning, volunteering at school or sports, supporting learning and engagement
- relationship of school location, start times, and scheduling with young people's sleep patterns, commuting time, extra curricula activity; quantity and nature of time with friends
- time committed to employment and study; how compare to other countries, effect on learning outcomes
- screen time, including effect of media and gaming on young men's participation in other activities
- enhance returns to national investment in human capital by identifying time barriers to finding work

- Australian female workforce participation low despite high rates of tertiary education, particular issues motherhood, single parents
- young people spending longer in education, but taking longer to secure permanent full time jobs, with more short term contracts and interning, their patterns of unpaid work and job search

### **Health, disability and ageing**

TUS data provide unique information relevant to health status and quality of life, and incidence of behaviours contributing to obesity, rising health costs and lost productivity, e.g.

- unpaid overtime, overwork, burnout and time stress
- time commitment and time strain e.g. dual earner households, single parents; father involvement/absence
- patterns of sleep, exercise, and eating; time costs associated with food preparation
- accessibility to healthy food by neighbourhood; behaviours associated with grocery shopping, e.g. how long it takes people to travel to markets, how they get there, and with whom they go
- time in the company of others: social inclusion, social isolation and mental health
- social-distancing public health policies in the wake of epidemics; exposure to pollution
- older people's labour force participation, social engagement and nonmarket production, including extent of grandparental childcare supporting daughters working
- nonmarket time devoted to aged and disability care, subsidising public and private services

### **International agenda (Foreign Affairs)**

TUS data would support multiple international processes and reporting obligations, e.g.

- implementation of UN Sustainable Development Goals (SDGs), especially no.5 Gender Equity
- implementation of annual Agreed Conclusions from UN Commission on the Status of Women (CSW)
- engagement and participation in the international human rights systems
- human rights treaty reporting, including International Covenant on Economic, Social and Cultural Rights (ICESCR) and International Covenant on Civil and Political Rights (ICCPR)

There are **industry-specific uses of time use data** that could support commercialisation as well as public policy planning. For example, the timing of energy use; public transport use and time spent commuting; consumption patterns of broadcasting, sporting, museum and art events; participation in civil activities, volunteering; timing of accessing medical care; timing of shopping including whether weekend trading adds to cash flow or merely facilitates timing change, and consequences for the productivity of commercial enterprises and their workers.

**4. The data will be useful to the following agencies:** Department of Health, Department of Education, Department of Employment, Department of Social Services, Department of Foreign Affairs and Trade, Treasury, Office for Women. If all participated, the cost could be shared at \$1mill each.

**5.** Need to be factored into new policy Budget 2018-19

### **6. PREVIOUS APPROACH - PAPER BASED, EXPENSIVE**

The previous time use surveys conducted by the ABS (1992, 1997, 2006) used paper and pencil diaries. They require a pre- and post- interview, a leave-behind diary and extensive manual post-coding. The ABS recently estimated the cost of repeating this approach at \$15 million.

### **7. NEW APPROACHES – MIXED METHOD, CHEAPER**

A new approach using online surveys has been developed to reduce the high cost of data collection and coding while remaining compatible with existing collections cross nationally. The Modular Online Time Use Survey (MOTUS) has been successfully trialled in national collection in Belgium. Any online approach would need to be supplemented by paper diaries to ensure a representative population sample, but cost estimates indicate a mixed approach MOTUS/paper survey of 7,000 households/14,000 individuals (comparable in size to the previous ABS surveys), could be undertaken for approximately \$7 million (below half the cost of the above ABS estimate).

In the short term the best option for managing a mixed approach MOTUS/paper survey may be through a university, with ABS input and advice. The ABS is moving to more online collection, but requires within-agency compatibility, so rather than adopt the MOTUS software would need to develop its own web based system. This would be much costlier and take much longer. Also, the ABS is unlikely to be able to get such a survey on their survey program and into the field within five years, creating an unacceptably long time interval since the 2006 survey. A university-managed survey could be done within a much shorter time frame.

Models for university management are the Household Labour Dynamics in Australia (HILDA) Survey, which is funded by DSS and managed by the University of Melbourne, and the recent (paper-based) UK TUS in 2014, with funding from the EU and the ESRC, and designed and managed by Centre for Time Use Analysis (CTUR) at Oxford University.

## **8. PROPOSED STRATEGY**

Conduct a mixed method collection with conservatively assumed 50:50 paper/online split and attrition rate of 50% for paper diaries and 75% for online diaries for an achieved sample of 7,000 households and 14,000 diarists.

Compliance with prior AUSTUS and also international TUS collections would be achieved by following Harmonised European Time Use Survey (HETUS) design protocols, including whole household coverage (all household members aged 15+), two time-diary days per respondent, plus seven-day employment log, and a pre and post questionnaire.

The survey to be designed and managed through the University of Melbourne (UoM), drawing on the academic expertise of time use specialist Lyn Craig, Professor of Sociology and Social Policy, and the academic expertise and TUS data collection experience of Dr Theun-Pieter van Tienoven (co-developer of MOTUS).

**Cost estimates** based on discussions with MOTUS team (Vrije Universiteit Brussels) and the paper-based CTUR-managed UK2014 (Oxford University, UK)

Total approximate costs over four years for collection and preliminary analysis: \$7 million

MOTUS preliminary estimates: \$1.5 million

Includes licensing, computer programming and data collection only

Proportionally adjusted UK2014 collection costs: \$4 million

UK2014 costs all direct paper collection costs including setup, sampling, recruitment, instrument design/testing, post-coding, high-level analyses and reporting (additional to online collection costs and common to online and paper collections)

Institutional hosting, data management, access provision, external user help and administrative support: \$1.5 million.

**Sustainability** would be enhanced by the expert TUS team partnering with a university social research centre with proven capacity to host and manage large scale data collections, allowing repeat surveys to be undertaken at lower cost as the proportion of online responses grows and some online MOTUS (repeat programming) savings can be made.

The collection strategy draws on HETUS design protocols, which are open source, and MOTUS software which is accessed under licence.

Costs will be further refined based on discussions to be held by Professor Craig at the annual conference of the International Association of Time Use Researchers (IATUR), in Madrid, Spain from 17<sup>th</sup> to 21<sup>st</sup> July 2017. She will further consult with international time use survey experts including the MOTUS developers and UKTUS14 survey director.