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CHAPTER 2: HISTORICAL DEVELOPMENT OF THE MTUS

Though some early research compared time use in the United States and the then USSR, comparative time use research work began effectively with the first cross-national study funded by the UNESCO in the 1960s and led by the Hungarian Sandor (Alexander) Szalai. This study collected time use surveys in twelve countries. The Szalai project drew both on the expertise in diary design that had emerged in the Soviet Union and Eastern Europe, and on the new data processing capabilities emerging in Western Europe and particularly North America. John Robinson, still (in 2013) actively writing comparative papers on social indicators using time diaries, and then the US Project Director working, in the late-1960s, at the University of Michigan, with the Principle Researcher Philip Stone, was responsible for the computer processing of the comparative survey materials.

The diary designed by Szalai's UNESCO team, with separate recording fields reserved for primary activity, any simultaneous secondary activity, location and co-presence information, was collected as a face-to-face "what did you do yesterday?" interview, and served as the basis for most modern time use studies. Indeed, the fact that this common model was adopted independently by a very wide range of countries for subsequent national studies, is a large part of explanation of the success of the post-fieldwork harmonisation strategy adopted for the MTUS.

The MTUS process has undergone a variety of iterations over the years. This chapter charts that history, and documents variables and guiding ideas that appeared in earlier versions.

2.1 Theoretical origins and the search for data

The ultimate origin of the Multinational Time Use Study is a 1970s study of "post-industrial society". The US sociologist Daniel Bell (1976) advanced the hypothesis that post industrial "service economies" emerge as a result of an extension of the 19th century "Engel's Law" which holds that households, as they get richer, spend ever-larger proportions of their money income on the purchase of services. Gershuny (1978), investigating the empirical basis of this claim using historical changes in (expenditure diary-based) household consumption

estimates, arrived at a fully counter-intuitive result. Though employment in services occupations was increasing, household expenditure on services, when appropriately deflated by specific price indexes, was rapidly declining. Households were substituting the purchase of manufactured goods (and associated infrastructural provisions) for services, and then producing the final services outside the money economy: private cars substituting for transport services , televisions for cinemas, washing machines for laundry services and so on. (The resulting paradox, of growing service employment with declining service consumption, is explained by the growth in the number of "knowledge work" service jobs involved in the increasingly sophisticated manufacturing technology.)

There was, in effect, a "self-servicing" sector of economic activity growing rapidly, and largely unnoticed by policymakers, outside the measured GNP—a phenomenon analogous to the late 19th century finding (by the British economist and social statistician Robert Giffen) that the as-yet un-named service sector of the British economy (catering for what Giffen in 1883 called "incorporeal functions") should be included in the national product (summarised in Gershuny 1978, 2000). But as Giffen also found, statistics for this sort of activity were almost entirely lacking. Hildegarde Kneeland (1929), an early pioneer in this field, strove to fill this gap by systematically collected time diary samples were the only possible source for information on unpaid domestic production.

The cross-national comparative extension of this 1970s research, funded largely by the EU "Forecasting and Assessment of Science and Technology" (FAST) programme, shaped the subsequent structure of the MTUS. In 1978, Gershuny's first attempt was to find UK diary evidence for extra-economic activity led him to the BBC viewer/listener survey 1974/5, the results of which were in the course of publication by the BBC Audience Research Department. He met John Robinson, then on a sabbatical from the University of Michigan, a visitor at the BBC, investigating the comprehensibility of news broadcasts, and together they searched for, and ultimately found, the original diaries from the 1961 BBC national viewer/listener availability survey (which lay abandoned in the basement of the BBC staff club, now the Langham Hotel, in a pile of egg boxes and tea chests). These 2,500 7-day diaries, recoded to correspond to the Szalai activity classification, and combined with the 1974-75 materials, (and a smaller 1970 diary study, itself using a version of the Szalai instrument) conducted by the sociologists Michael Young and Peter Willmott, (1975) provided the first baseline for estimating historical change in time use in the UK.

2.2 Development of the MTUS and parallel cross-national projects

Jonathan Gershuny raised a series of research grants in the mid-1980s (from the UK Economic and Social Research Council, Anglo-German Foundation, German Marshall Fund, and notably the UK-based Joseph Rowntree Memorial Trust) test his original UK service economy findings using European Labour Force Surveys (LSF) and other harmonised cross-national survey materials. The same "self-servicing" or "first world informal economy" finding emerged (Gershuny 1983, Gershuny and Miles 1983). It became clear that there was need for cross-national comparative data on work outside employment to complement the LSF-type data on paid work. No source of large scale time use information had emerged subsequent to the 1960 Szalai materials. Gershuny's post-fieldwork harmonisation of British time use surveys with the Szalai data yielded promising results. The widespread adaptation of the Szalai diary design as model for a variety of independently funded national studies made this process simpler than might otherwise have been the case.

F. Thomas Juster and Frank Stafford collected a longitudinal national time diary study in the United States from 1974 to 1975 which complemented the 1965-66 national study conducted as an extension to the Szalai programme. A pairwise comparison of the US historical sequence (augmented by a subsequent 1985 national study conducted by Robinson) with the UK sequence (also extended to the mid-1980s), formed the basis for the first cross-national comparisons of diary-based evidence of historical changes in time use (initially undertaken in the early 1980s though not published until Gershuny and Robinson 1988). By this time, and under the auspices of the Working Group on Time Use Research of the International Sociological Association (which later evolved into the International Association for Time Use Research), various other countries with historical sequences of time diary studies (Denmark, France, Hungary, Norway, Netherlands) had contributed their materials to the post fieldwork harmonisation effort, and the first publications of multinational comparative time use change estimates were emerging (Gershuny 1986).

The European Foundation for the Improvement of Living and Working Conditions (EFILWC) provided funding for the first official release of the MTUS (then described as the "Multinational Longitudinal Time Use Study"—this predating the current convention that reserves "longitudinal" as a description of studies with repeated measures at the individual respondent level, such as the Panel Study of Income Dynamics or the British Household Panel Study). This consisted of a seven country harmonisation (Gershuny 1990). A summary of this work presented by the EFILWC to Eurostat in 1991 led to a proposal to set in motion a concerted Europe-wide time use data collection exercise, which subsequently

contributed to the creation of the Harmonised European Time Use Surveys (HETUS). The HETUS programme collected a first tranche of input-harmonised national time-diary surveys between 1998 and 2004. Ten participating countries made data widely available for European policy analysis (Eurostat 2005). Fifteen countries later contributed data to the HETUS table generating tool maintained by Statistics Sweden. In total, 26 countries collected at least a pilot time diary survey in the first HETUS round (Fisher et. al. 2013). A similar number ultimately may participate in the second round of the HETUS surveys, which launched in 2009, though some countries which originally participated in the first round of the HETUS did not participate in the second round, while some countries that did not participate in the first round did collect surveys in the second round. Many of these are already, or will be, included in the MTUS.

2.3 Early phases of the MTUS

The 1965 Szalai surveys, which gave inspiration for the original MTUS, only sampled the working-age population (people aged 18-60) from households where at least one member was employed in an industry other than agriculture. The older versions of the MTUS restricted the diaries included to this age range. From the 1999 version, called World 5.1, we changed policy to now include all diaries collected in harmonised surveys (though those surveys originally harmonised into MTUS and not yet upgraded retain this limitation). This change was driven by research seeking to model the time use of young people and older people (Gauthier and Ferstenberg 2002, Bittman et. al. 2004).

As the post-industrial society research motivated the original development of the MTUS, the range of background variables in the early versions was limited. Prior to the W5.52 version which displaced the W5.1 all ages version, MTUS treated all diaries equally, and did not account for multiple diaries by the same person or completed by members of the same households. The W5.52 version, released from early in the 2000s, differs from previous versions by separately identifying diarists and households, by adding more details of the diary day, and by increasing the range of background variables. MTUS began with seven person- and two household-level variables, with the number of person-level variables rising to 12. The W5.52 version increased the number of household-level variables to six, and the number of person-level variables to 20. The W5.52 version introduced the first elements of relationships within households - adding employment status of the spouse and the relationship between the diarist and the household reference person. The more recent W5.53 version included 11 household-level variables, and 25 person-level variables, three of which facilitate mapping diaries between household members (for multiple diarist per household samples) - identifiers of parents, and identifiers of the spouse or partner.

While the MTUS team has developed significant data quality control procedures since 1999, in early versions, limited or no efforts were made to clean data or to account for information included across all domains of the diary. From the early versions through the World 5.52 version, diaries missing 61 or more minutes of main activity time were deleted. Using the diary processing procedures the MTUS now follows, some diaries that would have been deleted in the past now are counted as good quality diaries. MTUS processing and analysis techniques now are more sophisticated and account for other considerations in addition to reported time, and some diaries originally included as good quality diaries now are classified as low quality diaries not suitable for more analysis. In addition to refining the classification of diary quality, MTUS now include all collected diaries, though we 0-weight the low-quality diaries. Nevertheless, MTUS does continue to exclude row cases of non-participants where these are included in the original data.

Some activities have changed (distinct reading by medium purchased has changed as people have more platforms one which they can read a greater variety of material, making the delivery of the text read less significant), and some new activities (use of the internet) have arisen since the initial development of the MTUS. MTUS data also now are used for a much wider range of research purposes that the early motivations. The early activity category lists no longer meet many research needs. The W5.8 version, introduced from 2007, added a more detailed and updated range of activity categories. At the same time, MTUS developed the W6 files offering episode level data and activity context data.

As the numbering system makes sense only to people who know the history of the MTUS, the current version has changed to using descriptive file names without the numbers.

2.4 Variables from older versions no longer in use

The MTUS has evolved with time. In addition to adding a number of variables, we also have dropped some variables available in earlier versions. We detail the changes and the variables no longer in use here for those users who have read research using older versions of the MTUS of who themselves have used previous versions of the files.

- COUNTRY: (ancient versions): Country where survey conducted
- COUNTRYA: Country where survey was conducted
- PERIOD: Time survey period

- ID: Case Identifier
- BADCASE: Marker of low quality cases
- AGE1/2: Age
- AGEGR5Y: Five-year age groups
- AGEKID: Age of the youngest child in household
- CPHOME
- EMPSTAT2/3
- OCCUP
- TOTTIME
- OPOPWT
- ODAYWT
- POPWT2
- DAYWT2
- 22-category activity typology

COUNTRY: (ancient versions of MTUS, numeric variable) Country where study conducted

This is the old variable that records the country where the survey was carried out. In this old variable, countries were given the next number as they were added to the MTUS. This variable remains solely for those users who may still have code for analysis of older versions of the MTUS.

Value	Label	Value	Label
1	Canada	**18**	Italy
2	Denmark	**19**	Australia
3	France	**20**	Israel
4	Netherlands	**21**	Sweden
5	Norway	**22**	Germany
6	UK	**23**	Austria
7	USA	**24**	South Africa
8	Hungary	**25**	Spain
9	Japan	**26**	Estonia
10	Poland	**27**	Brazil
11	Belgium	**28**	Ireland
12	Bulgaria	**29**	Korea (South)
13	Czechoslovakia	**30**	Mexico
14	India	**31**	New Zealand
15	Peru	**32**	Portugal
16	Russia	**33**	Romania
17	Finland	**34**	Slovenia

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COUNTRYA: (numeric variable) Country where study conducted[1]

This variable recorded the country where the survey was carried out. We replaced these MTUS specific codes that had to be renumbered as new surveys were added with international standard harmonised letter codes.

Value	Label	Value	Label
1	Armenia	**20**	Latvia
2	Australia	**21**	Lithuania
3	Austria	**22**	Netherlands
4	Belgium	**23**	New Zealand
5	Brazil	**24**	Norway
6	Bulgaria	**25**	Pakistan
7	Canada	**26**	Poland
8	China	**27**	Portugal
9	Denmark	**28**	Republic of Korea
10	Estonia	**29**	Romania
11	Finland	**30**	Serbia / Yugoslavia
12	France	**31**	Slovak Republic/Czechoslovakia
13	Germany	**32**	Slovenia/Yugoslavia
14	Hungary	**33**	South Africa
15	India	**34**	Spain
16	Ireland	**35**	Sweden
17	Israel	**36**	Turkey
18	Italy	**37**	United Kingdom
19	Japan	**38**	USA

PERIOD: Survey time period

[1] En español: countrya 'País o region de la encuesta'.
val lab countrya
1 Armenia; 2 Australia; 3 Austria; 4 Bélgica; 5 Brasil; 6 Bulgaria; 7 Canadá; 8 China; 9 Dinamarca; 10 Estonia; 11 Finlandia; 12 Francia; 13 Alemania; 14 Hungría; 15 India; 16 Irlanda; 17 Israel; 18 Italia; 19 Japón; 20 Letonia; 21 Lituania; 22 Holanda; 23 Nueva Zelanda; 24 Noruega; 25 Paquistan; 26 Polonia; 27 Portugal; 28 República de Corea; 29 Rumania; 30 'Serbia / Yugoslavia'; 31 'Republica Eslovaca / Checoslovaquia'; 32 'Eslovenia / Yugoslavia'; 33 Sudáfrica; 34 España; 35 Suecia; 36 Turquía; 37 Reino Unido; 38 Estados Unidos de América.

This variable records the period during which the survey was carried out. The values range from 1961-69 (value '1') to 2000-04 (value '7'). Precise information on when the survey was carried out is recorded in the variable 'Survey'.

Note that the length of each period is not equal. Cut-off points were chosen to maximise the number of countries in each period and to ensure that there was only 1 survey per period for any specific country. In cases for which multiple surveys were available for a country during a specific period, only one of these surveys has been included in the MTUS dataset.

Value	Label
1	1961 – 1969
2	1970 – 1975
3	1976 – 1984
4	1985 – 1989
5	1990 – 1994
6	1995 – 1999
7	2000 – 2004
8	2005 – 2009
9	2010 – 2014

ID: Diary identifier

In the oldest version of the MTUS, this variable served as a case id within each survey. No regard was given to multiple diaries per person or multiple diaries per household. Rather, this variable ranged in value from 1 to the highest number of diaries in the survey. This decision was recognised as a mistake, and in most versions of the MTUS, this variable distinguishes diaries, and taken alongside persid, hldid, msamp, swave, survey, and country, uniquely identifies cases.

BADCASE: Marker of low quality cases

This variable identified individual reasons for not weighting diary cases as lacking sufficient quality for analysis. The main domains for not weighting a diary included missing key basic demographic variables (age and sex); day of the week the diary reflects; missing 91 or more minutes of main activity time; containing only 1 to 6 episodes (changes in any domain of the time diary as originally reported by the diarists); and missing 2 of four basic domains (with exceptions made for high episode diaries and diaries from carers who otherwise met all other quality criteria).

Value	Label
0	good case
1	missing age or sex only
2	missing day of the week only
3	missing 91+ minutes in diary only
4	(1 to 6) <7 episodes only
5	missing 2+ basic activities only
6	missing age or sex & the day of week
7	missing age or sex & 91+ diary minutes
8	missing age or sex & <7 episodes
9	missing age or sex & 2+ basic activites
10	missing the day of the week & 91+ diary minutes
11	missing the day of the week & <7 episodes
12	missing the day of the week & 2+ basic activites
13	missing 91+ diary minutes & <7 episodes
14	missing 91+ diary minutes & 2+ basic activites
15	<7 episodes & 2+ basic activites
16	missing age or sex, the day of the week, & 91+ diary minutes
17	missing age or sex, the day of the week, & <7 episodes
18	missing age or sex, the day of the week, & 2+ basic activites
19	missing age or sex, 91+ diary minutes, & <7 episodes
20	missing age or sex, 91+ diary minutes, & 2+ basic activites
21	missing age or sex, 2+ basic activites, & <7 episodes
22	missing the day of the week, 91+ diary minutes, & <7 episodes
23	missing the day of the week, 91+ diary minutes, & 2+ basic activites
24	missing the day of the week, 2+ basic activites, & <7 episodes
25	missing 91+ diary minutes, 2+ basic activites, & <7 episodes
26	missing age or sex, the day of the week, 91+ diary minutes, & <7 episodes
27	missing age or sex, the day of the week, 91+ diary minutes, & 2+ basic acts
28	missing age or sex, the day of the week, <7 episodes, & 2+ basic activities
29	missing age or sex, 91+ diary minutes, <7 episodes, & 2+ basic activities
30	missing day of the week, 91+ diary minutes, <7 episodes, & 2+ basic acts
31	bad case on all points

AGE1/2: Age

This variable records the age of respondents (up to 3 digits). For surveys in which age was recorded in categories, we recoded age into a continuous variable by assigning the mid-point of each age group (e.g. 17 for age group 15-19). When surveys only included the year of birth of respondents, we computed

AGE by subtracting the year of birth from the year of the survey. This variable was renamed as AGE for clarity from the release of Version 5.53.

AGEGR5Y: Five-year age groups

This variable, derived from AGE2, recorded respondent's age in 5-year bands.

Value	Label
1	0-4
2	5-9
3	10-14
4	15-19
5	20-24
6	25-29
7	30-34
8	35-39
9	40-44
10	45-49
11	50-54
12	55-59
13	60-64
14	65-69
15	70-74
16	75-79
17	80+

AGEKID: Age of youngest child in household

This variable records information on the age of the youngest child in the household. If there are no children under 18 in the household, this variable takes the value -7 (even if the original survey gives a valid value for such cases).

Value	Label
1	Youngest child between 0-4
2	Youngest child between 5-12
3	Youngest child between 13-17

This variable is highly comparable across surveys. However, the cut-off point for the age of the child varies across surveys. Also, in some surveys the data correspond to the diarist's children rather than children residing in the diarist's household. This variable has been upgraded to AGEKIDX which now includes a category for a child aged 18 or older in the household.

CPHOME: Unmarried child living in parental home[2]

This variable indicates whether or not diarists who are not married or cohabiting live with their parents, regardless of the diarists' age. Note that diarists who are the child of another household member who also are married can be indentified using PARNTID1 and PARNTID2.

Value	Label
0	Not a child in parental home
1	Child in parental home

We abandoned this variable as no users worked with this variable, and the effort to create it seemed unjustified with our scarce resources. Where multiple household members completed diaries, parntid1/2 map diaries of children and parents together, and FAMSTAT=4 still marks children aged <18 living with parents or guardians.

EMPSTAT2/3: Employment status

This variable has been updated and modified slightly over various incarnations of the of MTUS. The first version, called simply EMPSTAT, had three categories, 1=Full-time employed, 2=Part-time employed, and 3=no employed. Diarists who said that they were in the military but for whom no hours of work were reported were coded as '3' (other, not employed).

We recognised this as a mistake and from version 5.51, changed category 3 to "employed, hours unknown" and coded people not employed as 4. With this change, diarists who reported serving in armed forces or otherwise being employed but whose weekly hours of work were unknown were coded as the new category 3. This recoding affected few surveys and very few cases, but to note the change, the variable was renamed EMPSTAT2.

[2] En español

```
var lab cphome Hijo no casado en casa de padres.
val lab cphome
     0 No
     1 Sí
    -7 "no aplica/no se preguntó"
    -8 no encontrado
    -9 no se pudo crear.
```

With the release of Version 5.52, we further amended the coding of this variable. In previous incarnations of the MTUS, people reporting working 30 or more hours per week were coded as working full-time. From the release of version 5.52, preference was given to self-declared full-time or part-time status. Additionally, diarists who said that they were employed but did not declare their full-time or part-time status and whose hours of work are not reported are coded as '3' (working, hours unknown) rather than missing, as had been the case in earlier versions. The variable was renamed to EMPSTAT3.

No further changes were added when the variable was renamed to EMPSTAT from the release of version 5.53 – but we felt that the variable name EMPSTAT was more clear than EMPSTAT3 – which creates the expectation that two other variables also are available in the same file. Also, few people used the MTUS in the old SPSS versions when the original variable also had this name, and we felt that the length of time which has passed justified the return to the original name with minimal chance that users might be inconvenienced.

OCCUP: Occupation[3]

This variable details the diarist's occupation. If the diarist is not presently employed, but there is information on the diarist's most recent occupation, use this information to code occupation.

[3] En español -

```
var lab occupo Ocupación.
val lab occup
     1 administración
     2 'profesional de finanzas/legal'
     3 'profesional ciencias/ingeniería'
     4 'profesional civil/servicio social'
     5 profesional de educacion
     6 profesional medico
     7 otro professional
     8 'soporte de salud/educación/social'
     9 'soporte de oficina'
    10 'fuerzas armadas o de seguridad'
    11 'ventas/servicios/soporte de arte/limpieza'
    12 granja, forestal, pesca
    13 'construcción, ensamblaje/reparaciones, transporte'
    14 no professional autoempleado
    -7 "no aplica/no se preguntó"
    -8 no encontrado
    -9 no se pudo crear.
```

Value	Label
1	Management (senior management, not supervisors) Code lower-level managers and self-employed professionals or small firm owners in the other codes below, for instance, include SOC codes 1110 and 1999
2	Finance and legal professionals For instance SOC codes 2411-2424; 3516-3541 or 3544
3	Science and engineering professionals For instance SOC codes 2321 or 2111-2209 or 3111-3119, or 3131 or 3132
4	Civil and social service professionals For instance SOC codes 2431-2443 or 3121-3123 or 3231 or 3232 or 3551-3561 or 3563-4099
5	Education and social science professionals For instance SOC codes 2322 or 2311-2319 or 2451 or 2452
6	Medical professionals For instance SOC codes 2211-2309 or 3210-3229
7	Other professionals For instance SOC codes 2329 or 2444 or 2521-2949 or 3311-3519 or 3542 or 3543 or 3562
8	Health, education, and social care support For instance SOC codes 5501-6209 or 9221
9	Clerical and office support For instance SOC codes 4111-5109 or 9211 or 9219
10	Security and armed forces For instance SOC codes 9241-9249
11	Sales, services, creative support, and cleaning For instance SOC codes 5411-6109 or 6141-8109 or 9222-9239 or 9251 or 9259
12	Farming, forestry, and fishing For instance SOC codes 5111-5209 or 8223 or 9111-9119
13	Construction, assembly & repair, moving goods, transport, extraction For instance SOC codes 5211-5409 or 8111-8222 or 8229-8532 or 9121-9209
14	Self-employed non-professionals

TOTTIME: Total diary minutes per day

This variable was a constant value of 1440 – and was generated during tests that all diaries had been correctly coded. As this variable merely is an interim check and of no research value, we no longer include it.

OPOPWT: Original population weight

Where original surveys included a weight that correct for over- and/or under-sampling and non-response but did not correct for the distribution of the days of the week, we included this weight under this column heading. This weight appeared in versions World 5.0 through World 5.52.

ODAYWT: Original day weight

Some original surveys offered separate weights, one which corrected for the variation between the observed population and the respondents, and another for balancing the distribution of the days of the week (but not the sample variation from the observed population). If the original survey included separate weights, we used this name for the day of week distribution weight.

POPWT2: Post-hoc sex-age weight

Where original surveys did not include a weight that corrected for the distribution of age and sex groups in the population, we calculated such a weight on the basis of the age/sex group distribution in that country reported in an international organisation text, such as the International Labour Organization (ILO) Year Book. This weight appeared in versions World 5.0 through World 5.52.

DAYWT2: post-hoc day weight

Where original surveys did not include a weight that corrected for the distribution of the days of the week, we constructed this weight. This weight appeared in versions World 5.0 through World 5.52.

General note on older weights

All the weights in earlier versions of the Multinational Time Use Study were post-hoc types, that is, weights that were computed by the MTUS team as opposed to 'original' weights computed by the statistical agencies in charge of administering each survey. These post-hoc weights were age-sex-employment specific. They were computed based on official data published in the ILO's *Year Book of Labour Statistics.* From Version 5.0 through 5.52, the original survey weights were included wherever possible, and ad hoc weights only constructed when original weights were not calculated.

SEXEMPWT: Sex, age, employment weight (not account for day)

This weight balanced the demographic distributions in accordance with ILO data. This older weight made use of employment data as well as sex and age, though has been superseded. Partly, in older and younger age categories in some datasets, too few people were employed to allow for meaningful weights to be based (in the earliest versions of the MTUS were employment status also was used, the MTUS sample also was restricted to people aged 20-60 – the working age population). Also, in the majority of more recent surveys, weights provided

with the original data account for an even wider range of demographic characteristics.

SURVWT: Weight to get 2000 per survey (not account for day of week)

This weight generally reduced the apparent size of the survey, though in a limited number of cases inflated the size of the survey to place all surveys on a comparable sample size. More recent surveys tend to have significantly larger samples, and better options are available in statistical software than were available in the mid-1980s, and we no longer make this restriction.

COUNWT: Weight to get 2000 cases per country (not account for day)

This weight created an artificial balance between the countries. When the MTUS covered a smaller scope and time period, this weight served some limited research purposes of the original creators. As more countries, some of which have many surveys over decades and some of which have only one survey, this weight no longer makes the same sense, so no longer is created.

DAYWT: Weight to balance the distribution of the days of the week

This weight balances the distribution of the days of the week for the survey.

SEDWT: Sex, and age weight from ILO data (not account for day of week)

This weight balanced the demographic distributions of sex and age only in accordance with ILO data.

SEDWT2: Sex, age, employment, and day weight

SEXEMPWT * DAYWT generates this weight. This weight is the weight most often used in the analysis of the earlier versions of the MTUS.

SEDWT3: Sex, age, employment, day and survey balance weight

SEXEMPWT * DAYWT * SURVWT generates this weight.

SEDWT4: Sex, age, employment, day, survey, and country balance weight

SEXEMPWT * DAYWT * SURVWT * COUNWT generates this weight.

22-category activity typology

Table 3.1 shows how the 41 activity category code list collapses into 22 categories. Half the categories directly map to one category on the AV41 code list. The SPSS syntax which makes this collapse is available on the user contributions page of the CTUR website.

Table 3.1: Map of the 22-category to 41-category MTUS activity codes

22 codes	MAIN	Notes on changes and similarities
paidetc	AV1 AV2 AV3 AV5	Paid work and education combined
hwork	AV7	Routine housework
cooking	AV6	Food preparation and cooking
eating	AV15	Meals and snacks
kidcare	AV11	Child care
shopping	AV10	Shopping (all sorts)
dtravel	AV12	Domestic related travel
otravel	AV17 AV18	All other non-work travel
perscare	AV13 AV16	Personal care activities
eatout	AV28	Eating out
pubsclubs	AV26 AV27	At pubs or clubs
spectat	AV20 AV22 AV23 AV24 AV25	Spectator
asports	AV19	Active sporting
walking	AV21	Walking
visits	AV29 AV38	Visiting or entertaining friends **Note that we return to this collapsed category in the 69-category typology**
tvrad	AV30 AV31 AV32	Televisions, radio etc.
reading	AV33 AV34 AV35	Reading books, papers or magazines **Note that we return to this collapsed category in the 69-category typology**
chatsets	AV36 AV37	Talking, relaxing
oddjobs	AV8	Non-routine domestic work

	AV9	
hobbies	AV39 AV40	Other at-home leisure
medical	AV14	Medically related personal care
educ	AV4	Education (included in paidetc in the earliest versions of the MTUS)