FINAL REPORT, HUNGARY

Preparatory work to revise the harmonised European Time Use survey for the implementation in the round 2020, Agreement number: 07141.2016.001.774

I. DESCRIPTION OF THE GENERAL AND SPECIFIC OBJECTIVES THAT THE ACTION AIMS TO ACHIEVE

The main objective of TUS-GRANT study was to prepare the methodology and technical needs for the planned Time-use Survey in 2020. The pilot study was run in order to be able to implement the 2020 Survey with improved, state-of-the-art methodologies and technical procedures for achieving the best data quality and facilitating data providers' responsiveness/willingness. Thus, the main focus of the pilot study was the trial and testing of response methods, techniques and IT solutions, as well as the practical use of the observations.

For this purpose, a multi-element **testing program** was compiled, where the **contents/technical**, **questioning/answering** and other **data collection methods,** as well as the **IT development** aspects of the survey were examined. **Three methods** were applied during the pilot study: **cognitive interviews**, **focus group tests** and **trial fill-ins** of the survey questionnaire. A detailed, **uniformly applicable scenario** was created for each part of the program. This report presents the description and main results of the above mentioned testing programs.

II. SELECTION AND TASKS OF THE PARTICIPANTS OF THE TESING PROGRAM

Independent test subjects were selected based on a specific **criteria**. Taking into consideration the **objectives of the research**, the following factors were found to be of high importance while designing the test's target groups.

- Type of township: Budapest + rural areas (small towns, villages)
- Educational attainment: high + low qualifications
- Age: youth + middle aged + elderly
- Work status/economic activity: students (secondary education, tertiary education) + actively working/employed + retired
- Type of occupation: traditional + non-traditional; working in different schedules (shifts, informal, etc.)
- Type of family/household: childless + small children households (parents on child care leave or child attending kindergarten, etc.)

III. COGNITIVE INTERVIEW TESTS

A total number of **20 cognitive interviews** were conducted during the testing phase of the TUS-grant project. The interviews were conducted based on a detailed, **uniformly applicable scenario**.

Objectives:

The purpose of cognitive interviews is to test the **contents and comprehensiveness of questions and answers**, as well as to understand respondents' response process and thinking in the presence of researchers. The advantage of this method is that it evokes possible **defective interpretations**, the **differences between idiomatic expressions and technical terminology**, and potential wrong formulations. Moreover, opinions about the **design** of the measuring tool, **ordering of questions and question blocks** are also formulated. It is also possible to measure responding time and respondents' reactions during cognitive interviews. Interpreting the results allow for the development of an **interviewer- and respondent-friendly** questionnaire.

Participants:

- o 20 respondents/test subjects, selected through open advertisement and direct contact based on the selection criteria
- o 5 interviewers
- o Observers, time-use researchers, methodologists, IT developers

Applied methodology:

- **Two types of data collecting methods** were applied during cognitive interviews: assisted interviewing and self-administered questionnaires. In both cases, the task was to imitate the interview situation.
- **An interviewer and a respondent** were present during the assisted interviews. Problems were pointed out spontaneously or by direct request and in some cases, better solutions were also suggested.
- Only the respondent and observers were present while filling in the **self-administered questionnaires**. In this case, the respondent was asked to „**think out loud"** while filling in the questionnaire.
- First, **passive observation** was conducted along the lines of pre-planned considerations during the interviews. Also, observers made **direct questions** to the respondent and to the interviewer. These questions were mostly pre-determined but spontaneous questions were also allowed.

The following criteria was examined during the TUS cognitive interviews. These are the criteria that were observed and direct questions were also made based on these points:

	Observation criteria of cognitive interview tests
1.	The completeness of the **list of activities**: does it cover the reality? – are there activities listed that reflect modern lifestyle? Is it possible to classify the activities or not?
2.	The clarity of **questions**
3.	The clarity of **special expressions and terminology**
4.	The **functionality of variables for characterizing the activities**: e.g. for/with whom, where was the activity performed, were there any parallel activities, online-offline, etc.
5.	**„How much did you like the activity" „How were you feeling during the activity"**-type of sub-questions: what kind of response options should be used? – descriptive text response, numeric scales, emoticons; grades or semantic differentiation?
6.	Are there any activities where sub-questions are **irrelevant**? (e.g. online-offline, how did you feel, etc.)
7.	**Length and duration** of the questionnaires (individual, household)
8.	The clarity of diary logging
9.	Contents of **background explanations** for each questions (help function)
10.	Formal display of background information: in a **bubble or built-in** to the question?
11.	Other **solutions**: e.g. number of questions per page (1 or more), design, playfulness
12.	What is better, faster, easier: **closed or open questions**? choosing from a set of drop-down responses or free answers?
13.	What is better? A tematical **tree structure** (choosing from categories and sub-categories) or looking for words completely **freely** or a **half-open** solution open texts + categories
14.	Answering **„multitask"** activities: when doing several **activities parallely** (e.g. travel while working, or reading, cooking while listening to the radio)
15.	Classifying **occupations**: **FEOR** (ISCO) classification or other creative solutions, e.g. *Christmas tree*? At the beginning or end of the questionnaire?
16.	**Are reminder control questions necessary** for refining, specifying the responses? e.g. *„Didn't you forget to mention the following activities: daily habits, helping others, volunteering, etc.?" Or: Is there anything you engaged in **continuously or several times** during the day, such as using Facebook, smoking, talking/chatting, washing your hands?*
17.	Which questions are possible to be answered/not possible to be answered by a **proxy respondent**? What can be transferred from the individual questionnaire to the household questionnaire?
18.	Preferences in **response methods** – Is a **paper journal**/diary (also) needed? Which one is easier: **SAPQ** or **CAPI**? **CAWI**? **Why** did the respondent choose that specific method? **Would he/she choose another method**?
19.	How willing are the respondents to fill the journal **precisely and in detail**?
20.	**What could support** detailed, precise fill in of the journal? E.g. Google calendar, previously sent out diary log by the hour?
21.	**What kind of gift** would be appropriate according to the respondents? One or several kinds? Objects or monetary remuneration? Lucky draw?
22.	**What could motivate the respondents**? For example, is it motivating to get immediate feedback about their time-use compared to the average (e.g. sleeping, washing the dishes, etc.)? Time painting?
23.	What do they think about being able to fill in the diary log **only on a specific day**? How could we facilitate this?

	Observation criteria of cognitive interview tests
24.	How could we achieve that **all household members** fill the diary? Would all the household members be willing to fill it?
25.	What do they think about **downloading an app** on their mobile phones? App or webpage or questionnaire immediately opening up?

IV. FOCUS GROUP TESTS

Five focus group interviews were conducted with the participation of **8-8 respondents** and the guidance of a moderator during the testing phase of TUS-grant project. All test programs were conducted based on a detailed, **uniform scenario**.

Objectives:

The fundamental benefit of focus group method stems from the **group effect**: participants jointly process and elaborate on the aspects to be examined and discuss their experiences together. Participants of the group can **correct** – strengthen or weaken – their own ideas, which helps making individual solutions more accurate and rational. Other beneficial effects of group technique include **synergy**, which results not only from the summing up, but also from the cumulative value of individual skills, thoughts and solutions.

The objective of focus group testing was to get acquainted with the **respondents' views, problems and suggestions** regarding data collection and the measuring instruments of data collection (questionnaires, guides). A fixed set of topics were discussed based on a detailed **scenario** during the focus group work. Participants actively shared their opinions and experiences. For some of the tasks, reaching some kind of **consensus** was aimed for, so that participants agree to the best possible solutions.

Participants:

- Homogenous groups of **8-8 test subjects** were created based on specific research criteria:
    1. Group of the elderly (over 60 years old)
    2. Group of families with small children
    3. Group of youth/adolescents (16-20 years old)
    4. Group of economically active/working people
    5. Group of lower status population (low educational attainment and occupational status, living in small towns)
- Work was led by a **moderator**: the moderator guided the processing of the **assignments** and the conversation. Besides, he/she also encouraged the participants to **actively engage** within the **set timeframe**. Participants shared their own experiences, opinions and suggestions. For some tasks, participants were asked to reach a **common position**.
- **Facilitators** also helped by interpreting the assignments and observing the set timeframe during individual and small group tasks.
- Leading researchers were also present as passive **observers**. However, their presence and reactions did not influence participants as they sat far from the test group in the room.

Applied methodology:

Four tasks were performed during the focus group work:

1. **Task: Filling and giving opinions about the time-use diary.**

Participants filled part of the diary from the day before **alone** and part of the diary with the **help of the interviewer**. After finishing the diary log, the **moderator** started a conversation with the participants using specific questions:
   a. How much success did the respondent have in filling the diary with as much **detail** as possible?
   b. Did the respondents give more detailed answers when filling the questionnaire **alone or with the help of an interviewer**?
   c. Were the questions and answers clear and **straightforward**?
   d. Answering the question of *„How did you feel"* in two versions: 5-scale numeric (1 to 5) and 3-scale descriptive (good-neutral-bad).
   e. Which is better: **descriptive or numeric response** options?
   f. Interpretation of **simultaneous/parallel activities**
   g. Were the **routine activities** included/not included in the diary?
   h. How difficult was it to **recall** the previous day's activities?
   i. What would be helpful in facilitating **more detailed and precise answers** (e.g. should we send a note beforehand)?

2. **Task: Classifying activities in an Activity list**

Participants were asked to **classify 3-3 activities** in the Activity list from their diaries. **Points to be discussed**: How easy or difficult is it to find the activity? Is it better to have a tree structure or listing the activities in alphabetical order or free search for words?

3. **Task: Filling in and commenting on Household and Personal Questionnaire**

Participants answered the questions in two groups: one group as a self-administered questionnaire and the other group with the help of an interviewer. **Points to be discussed:**
   a. Which method is preferred?
   b. In which cases is it difficult to proxy-answer? A proxy válaszadás mely adatokra vonatkozóan nehéz?
   c. Which questions are delicate, difficult to interpret?
   d. Are there any questions that are worded in an unclear, easy to misunderstand way?

4. **Task: Testing FEOR classification of occupations**

Together with the participants, we tried to classify some selected occupations and scope of activities into FEOR (ISCO) categories. **Points to be discussed:**
   a. Is it easy to understand the FEOR categories?
   b. Are the respondents willing to answer the questions and find the answers from such a detailed list?
   c. How easy/difficult is it to classify occupations?

d. What could help self-administered responders to fill the questionnaire?
e. In terms of formulating, what is the easiest solution?

V. TECHNOLOGICAL TESTS (trial fill-ins)

Objectives:

Technological testing took place after the cognitive and focus group tests, after the methodological and question/answer-related issues were revealed and modified where possible. The aim of technological test was to examine **the functionality and usability of IT applications** in practice. In the course of these tests, several technological problems related to answering were revealed, such as issues with clicking, difficult-to-read texts, screen resolution, visibility and availability of features, software problems, installation, dowloading, sending difficulties, etc.

The developer had to **take the arising problems into consideration** and improve the issues until the next testing when possible.

Participants:

Participants of the technological tests were researchers and experts of the study, methodology and IT professionals, as well as invited colleagues, acquaintances and former test subjects.

Technological background:

- Technological tests of **CAWI**, **CAPI** and **mobile phone applications** were run.
- Invited participants were given access to the application and were sent **a brief guide** to filling in the questionnaires.
- Tests were run based on specific criteria, with the following observations:

	Criteria of technological tests
1.	**Length and duration** of filling in questionnaires (individual, household)
2.	**Perspicuity** of the surfaces/desktop, visibility of each funtion and menu items
3.	**Design solutions**: e.g. one or several questions per page, playfulness, colours, visualization, graphics
4.	Speed of launching **CAPI** and **CAWI** applications, ease of the process
5.	Downloadability and access to **the mobile application**
6.	Visual handling of **sub-questions** (whom was the activity performed with, how did he/she feel, online-offline)
7.	Access, layout, form of **background explanations** and **help** function
8.	Is it better to have a layout of **tree structure** (choosing from categories/sub-categories) – or **free search** – or **half-open** solutions: free search + classifying into categories
9.	Clarity and simplicity of answering the questionnaire
10.	Clarity of displaying the **tasks** to be performed

VI. MAIN OBSERVATIONS, FINDINGS AND SUGGESTIONS AFTER THE TESTS

Many issues were revealed and a lot of suggestions were made during the course of the cognitive interviews, focus group and technological tests. Most of the comments were immediately responded to during the tests by making the necessary modifications. The most important observations and suggestions that need to be taken into considerations during the 2020 Time-use study are summarized below.

Observations and suggestions related to answering the questionaires:

1. Answering the questionnaires and the diary is much easier **with an interviewer** than alone. Respondents found the self-administered questionnaire very burdensome.
2. Answering **the paper-based** questionnaire is much easier than the computer-based. It was found to be more clearly organized and easier to handle.
3. Respondents were reluctant to download a **mobile phone app** for answering the questionnaire. They would rather use a **web-based solution** that also works on smart phones.
4. For multi-member households, a solution needs to be found for **answering the questionnaire in different ways** on a request: some members on the internet and some members with the help of an interviewer.

Observations and suggestions related to specific questions:

5. Many respondents forget about mentioning **daily routine activities** – it is important to remind them of these, e.g. washing the dishes, using the restroom, smoking, phone calls, smaller household chores, using Facebook, writing and reading e-mails, snacking, watching TV in the background, etc.
    a. It would be useful to have a **warning sign** popping up that reminds them to input these activities.
    b. Another suggestion was to show daily routine activities as **fix categories** at the sub-activity section.
    c. It would be advisable to have a **summary** question at the beginning or end of the journal: *„how many times a day did you do the following?" ….*
6. Respondents are reluctant to report **intimate activities** (e.g. sexual activities, hygiene, sickness, etc.). They are even reluctant to report these with the self-administered questionnaire.
    a. In case of a **direct question**, they might answer.
    b. It would also be possible to ask about these activities as part of the **routine activities**.
7. **„Complicated" activities and occupations** were found to be difficult to find by respondents, therefore they often place them into the „other" category – the respondent and the interviewer both aim for simplicity.
8. It is easier to answer to a question of from when to when (from-to), than answer to a question about duration (how many minutes).
9. It is better to use the expressions of „on computer" or „on paper" than **„Online-offline"**
10. Question of *„how much did you like doing something"*:

    a. in many cases it is **not relevant** (e.g. getting dressed, washing). Therefore this question should be formulated **in various ways** based on the type of activity. E.g. at waking up: „*how relaxed were you?*"; driving: „*how stressful was it?*", etc.

    b. In some cases, answer may be contradictory because someone may **feel good** while doing a certain activity but **does not enjoy** doing the activity.

    c. Or it may have been physically very **difficult**, but still **interesting**.

11. Suggestions related to **scales**:

    a. **Text-based descriptive answers are better** than 3-4-5-scale numerical answers. E.g. „very much-a little-not at all"

    b. In many cases, a **3-scale answer is sufficient**, e.g. at the question of „*how much did you enjoy doing something*"

    c. It is confusing to have **several different scales** for different questions. Standardization of scales is recommended.

12. The question of „***who did you do the activity with***":

    a. It is often **unclear** whom to think about. E.g. colleagues or client while working? Travelling alone or with the other passengers? Alone or with others when driving?

    b. Missing item: **pet** – this is also missing at the „*for whom*" section.

13. It is preferred to answer **income**-related questions in **categories** than in specific amounts.

14. „***Where***?" – questions about location should include a „*varying*" or „*all around the house/apartment*" answer choice.

15. Question related to „***for free or for money***" should include the answer choice of „*Barter/Favour/Volunteering*".

16. Question of „***how difficult was it***"?:

    a. Mental and physical difficulty or burden should be addressed separately.

    b. This question should be separated into two: some things can be done with great attention while they are not burdensome.

17. **Categories of „*travel*"** are too detailed: walking, waiting, traveling, transfering. It is unlikely that respondents will reply in such detail, it is enough to list the means of transportation.

18. More subtle sub-categories should be added to the category of „***work***", such as intellectual work, light physical work, hard physical work.

19. **Occupation** and **job classification** is very difficult for respondents in case of a self-administered questionnaire.

20. **Educational attainment:**

    a. More detailed categories are recommended. E.g. in case of trainings.

    b. Even though it is more and more common and frequent, it is also difficult to classify **qualifications from abroad**.

21. Questions related to the current **weather**:

    a. too detailed, difficult to differentiate

    b. It is recommended to include the category of „*altering, varying*"

22. Some categories are **missing from the activity list:**

    a. E.g. ***house clearance, solarium, self-treatment***

    b. It is recommended to separately include the option of „**boredom, being bored**" in the main category of „*personal needs*", and sub-category of „*rest*"

  c. An activity suggesting idle rest and filling in empt time, such as „***doing nothing***"
should be included

  d. **Volunteer** work

Observations and suggestions related to motivating respondents and receiving more precise and detailed answers:

23. It is recommended that the questionnaire starts with a few **interesting questions**. Otherwise respondents easily lose interest and patience if the first few questions are related to individual and household data. The questionnaire should not be started by questions on individual and household data because respondents easily lose interest and patience.

24. It is important to inform the respondents about his/her tasks in an **invitation letter** prior to filling out the questionnaire. Including a **sample diary day** in the envelope is also recommended.

25. It would be useful to send out **a paper-based diary before the interview**. This way respondents could pre-record their activities of the day concerned so that it is already prepared by the time they meet the interviewer.

26. A **Respondent's guidebook** or other guidelines using pictures and graphs should be prepared.

27. Accurate answers could be promoted by showing a **sample** with the level of detail needed during the recording of activities.

28. Considering that responding to the questionnaire might be burdensome to some respondents, some kind of incentive **gift** should be prepared (at the value of around 3,000 HUF).

29. Respondents are motivated by getting direct feedback (statistical data, graphs) about their utilization of time compared to the average. Others prefer a general feedback over a personal one, summarizing the data of Hungarian population or international comparisons.

Observations and suggestions related to design and technological solutions/implementation:

30. It is recommended to use **illustrations and figures**, especially in case of routine activities.

31. **„Next" button** should always be at a visible place, preferably rolling down while the respondent is scrolling down on the screen.

VII. Time-Use Grant Pilot Study - Results of the Feedback from Interviewers

The Time-use pilot study was conducted in September-October 2017. During this period, **61 interviewers visited 1416 assigned households**. Households were visited on a **designated date** when **each household members were interviewed** about a chosen date. Respondents were also offered the option of **independently filling an internet-based questionnaire**. From the addresses assigned, interviewers were able to fill the individual and daily activities questionnaires for 437 households (978 individuals). Interviewers achieved a **44% fulfilment rate** among the valid addressses (equals to 37% of all addresses). **Internet-based responses yielded 2%** more successful responses besides the personal interviews.

Following data collection, interviewers were sent an **electronic feedback questionnaire**. The objective of the questionnaire was to compile interviewers' experiences of the newly developed computer-based questionnaire program, their experiences of respondents' reactions to data collection, as well as to receive suggestions for further development. **84% of the interviewers returned the filled-out feedback questionnaire**. Most of them were women, secondary school graduates and 30-63 year-olds (average age 51 years). Two-third of them conducted other data collecting activities in collaboration with HCSO in the same time with Time-use data collection.

1. Getting in contact with and convincing respondents

458 households strongly rejected the requested interview during the Time-use Pilot Study. Interviewers had various experiences about the difficulty of convincing respondents: part of them reported that in at least half of the addresses, household members were **easy to convince** to do the questionnaire, while the other part of the interviewers reported that only a much smaller fraction of the potential respondents were easy to convince. Regrettably, **highly reluctant respondents were rarely possible to be convinced in the end**.

An increasingly typical form of reluctance and rejection is when **the visited person promises to fill the questionnaire through the internet** but does not do so in the end. Almost half of the interviewers experienced this issue, however most of them only a few times.

Interviewers in **big cities** had the most difficulties, while interviewers in villages reported less problems. The main reason for rejecting to answer the questionnaire was the **time factor** (as it is usually the case for all surveys): respondents do not have time, the questionnaire is long, or they are obstructed by something, such as illness, traveling or other longer activities. In many cases, respondents **agreed to answer the household questionnaire** but rejected to fill the diary, the detailed part about activities due to time limitations. In addition, **lack of interest** and **mistrust** were also frequent reasons of rejecting responses. Some people found the subject too personal based on the letter of invitation or the information from the interviewer. A few households rejected by refering to the **voluntary** nature of giving an answer specified in the letter of invitation. Indirect rejections were also frequent: some households promised to answer the diary at another time but did not open the door at the following request.

Interviewers suggested to **notify the designated households** by post prior to the interview day **in order to prevent refusals**. **A paper-based diary could also be included** in the letter of invitation sent to the designated households. In this case. households would be able to record the activities of the designated date in the diary and **prepare for the actual interview**. Information in the letter of invitation should cover the **diversity of data utilization**, the pupose, meaning and social importance of the data.

2. Experiences of using a laptop computer for the interviews

Regular interviewers of the HCSO have been using a laptop computer for data collection since 2013.

Interviewers often convinced respondents by offering to **conduct the interview at the door** of the apartment instead of going inside. This inconvenient situation occured with **more than half (52%) of the interviewers** during the Time-use pilot study and it suggests the importance of making the questionnaire **as easy and as quick as possible**. A Diary sent out prior to the interview could facilitate responding to the questionnaire.

Technical and software issues also occured during the interviews supported by an electronic device. More than one-third of of the interviewers reported problems with the internet connection.

3. Opinions on the timing and duration of the interview

In the Hungarian Time Use Survey, respondents have to give a detailed information of a given day, and the interviewer must make the interview within one or two days of the day selected. (If the interview can not be completed in the selected day, the next appointed day for the interview will be the same day of the following week.) These requirements limit the time of the response to both the respondent and the interviewer, and minimize the possibility of deviating from it.

Interviewers recallsed to have spent an average of 79 minutes at each **households**. However, this estimate considerably differs (by 32 minutes on average). There was an interviewer who only spent 20 minutes, while another who spent around 120 minutes at each households on average – based on their memory. **Most interviewers recalled 50-60 minutes** of interview time.

Respondents do not like to answer long questionnaires, most of them only agrees to spend 10 to 30 minutes of their time on responding. All interviewers reported that at least one respondent **wanted to stop answering the questionnaire in the middle of the interview**. Fortunately, this issue was experienced at only less than a quarter of the designated households.

4. Attitude of the respondents and reliability of the responses

Based on the impressions of most of the interviewers (around two-thirds, three quarters of them), **most of the households answered the questionnaire accurately and in detail** and also truthfully answered personal questions. However, only around one-third of the of the interviewers felt that households previously did preparations about the designated diary day, read the invitation letter or

got informed about the survey. Interviewers' experiences were also very mixed as to how much respondents liked to talk about themselves or their activities.

According to the relative majority of the interviewers, **it was not problematic** to specify whether an activity was conducted online (or using any kind of electronic or computer-based application) or not. The sub-question of *„how did you feel while…"* **caused the most difficulties** to respondents, as for some activities it was hard to understand what it means. Many interviewers reported that it was difficult for respondents to recall daily activities in detail.

5.   Opportunities to increase respondents' willingness

Due to the deteriorating willingness of participation, **increasing responsiveness** will be an important task during the 2020 survey. Interviewers reported that respondents set an amount equivalent to **several thousands of Forints** as a remuneration for participating in the survey – they think that a **gift** of that value would be fair. Most respondents suggested a gift certificate or voucher and many proposed foodstuff, such as chocolate or coffee as a gift. The third group of respondents suggested a small and useful object (e.g. desk pencil holder, thermometer, key chain, pen, note pad) would be an appropriate gift.

According to the interviewers some of the respondents are possible to be convinced through giving appropriate **prior information** with well-formulated and attractive content sent out in an official **invitation letter**. Most of the interviewers (71%) found it a good idea to send a paper-based diary to the respondents prior to the interview, so that they have some time to prepare.

Facilitating diary logging could also increase the willingness to respond. Suggestions for this issue were partly focusing on simplifying the fill-out of the questionnaires and rationalizing response options. A suggestion to consider is to include several general, routine activities in the Diary, so that respondents do not have to take too much time thinking about them.

VIII. OVERVIEW OF IT SOLUTIONS

Data collection management (metadata)
Data collection monitoring
Questionnaire data entry
Questionnaire data review
Statistical data output

Different roles
- Interviewer
- Interviewee
- Reviewer

Cross-platform
- Web (HTML5)
- Mobile app (Android, iOS)
- Desktop application (Windows, OSX, Linux)