



STATISTICAL
OFFICE
OF THE SLOVAK
REPUBLIC



Final report

„Modernisation of the Harmonised European Time Use Survey“

Grant Agreement No. 07141.2017.001-2017.360

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Bratislava, 31th August 2018

INTRODUCTION

The Statistical Office of the Slovak Republic (SO SR) participated in 2016 in Grant project “Preparatory work to revise the Harmonised European Time Use Survey for the implementation in the round 2020”. One of the objective that we solved was a revision of classification of Activity Coding List (ACL) 2008 which was used in HETUS 2008. Slovakia has never realized survey about time use in full extent, therefore there was no valid version of national classification ACL and for that reason we proposed a national version ACL which was consistent with content of ACL 2008. Revision of national version of ACL was implemented on basis of pilot testing on sample of Slovak households. Based on the analysis of the results of this pilot testing main definitions of some codes in ACL have been revised. Also examples of activities was added which content fell into some codes of ACL and they were not included in current version of ACL 2008 because their occurrence was arising from recent changes of lifestyle and technological development.

Following this grant project, the SO SR in 2017 welcomed offer to participate in next round of grant projects, and that Grant project “Modernisation of the Harmonised European Time Use Survey”. Within this grant project our intention was to continue in work focused on actualization of ACL 2008 with regards to classification ICATUS 2016. Within this project we also decided to participate on the task related to measure “subjective well-being” and “multitasking” variables in future TUS.

The SO SR submitted Grant application on the 12th April 2017, afterwards it was approved in July 2017 and the work on Grant project itself started 1st October 2017 and lasted 11 months.

Within the offered objectives, which was subject of solution of this Grant project, we participate in tasks, which cover the content of the following Topics of Technical specification of the action:

1. Topic 5 – Revision of the activity list, “Subtopic b” Study and/or testing of reviewed list of activities taking into account changing lifestyles (adding of new relevant activities/ removal of obsolete activities) and the new classification ICATUS (relate to Objective 1 of this report)
2. Topic 7 – New dimensions in diaries: subjective well-being and multi-tasking, “Subtopic a” Cognitive testing of the general subjective well-being variables and variables related to parallel activities and “Subtopic D” literature and best practices review (relate to Objective 2 of this report)

OBJECTIVE 1

The main intention of this objective was actualization of ACL 2008 which is currently applied. This is done by elaboration proposal of updated activity coding list, where new activities will be added or obsolete activities which are currently not actual will be removed. As base for this actualization served new international classification of activities ICATUS 2016 and its comparison with ACL 2008.

Work on the implementation of this objective lasted from October 2017 till April 2018 and consisted of following partial tasks:

1. Study of classification of ICATUS,
2. Comparison with ACL 2008,
3. Elaboration of updated national activity coding list

Three experts from Department of Population of Living Standard Statistics at the SO SR ensure the fulfilling planned tasks on this objective.

1.

Works began with translation the newest draft version of ICATUS 2016 classification (version from February 2017) into national language. The translation was realized through one external worker based on working agreement in the period from December 2017 till January 2018. After receiving the translated version of classification into national language, the team of workers SO SR checked and commented correctness of translation from the point of terminological correctness. Subsequently final version of this classification was created in our national language.

One of the other planned activities was study literature concerning classification of ICATUS 2016. The work team of the SO SR better familiarized with that classification for its subsequent use in elaboration of proposal of updated national version of activity coding list or ACL 2008.

2.

In the next phase of work was carried out comparison current version of ACL 2008 with ICATUS 2016. For purpose of systematic identification of activities which are content of classification of ICATUS 2016 and they are not included in ACL and vice versa was created "Correspondence table" between classification ACL and ICATUS 2016. As an example to create this Correspondence table was used correspondence table mentioned in classification ICATUS 2016 (version February 2017). With its help we made a correspondence table on 3-digit level of codes together with the name of each code. **This correspondence table is stated in ANNEX 1 of this report.** All activities which were content in classification ICATUS 2016 and not included in classification of ACL 2008 and all activities which were missing in ICATUS 2016 in relation to ACL 2008 are highlighted by yellow colour.

3.

Activities marked in this way were evaluated from the point of view of their currentness in relation to the current lifestyle. Based on this was elaborated proposal of list of new activities which should be included in update version of ACL. To each new proposed activity was assigned new code within the ACL. These proposed codes have been included into previous proposal of national activity coding list which was the result of the grant project "Preparatory work to revise the Harmonised European Time Use Survey for the implementation in the round 2020" to which the SO SR was involved. **This updated proposal of activity coding**

list is stated in ANNEX 2 of this report. Codes marked by yellow colour were the subject of our proposal within the first grant project mentioned above.

RESULTS

The result of the comparison of correspondence table was proposal of relevant codes which capture new type of activities. One of these proposals is to include a new separate code which should include activities related to waste separation or waste disposal. Such separate code would be appropriate to include into the classification of ACL because in current ACL these types of activities are included into one code (321 Cleaning dwelling) together with other activities. Proposal for inclusion of this new code into category “32 Household upkeep” is mentioned in following table:

32	HOUSEHOLD UPKEEP
321	Cleaning dwelling
322	Cleaning garden and surrounding the house
323	Heating and water
324	Arranging household goods and materials
325	Recycling and disposal of waste

Another area within the new activities were information technology devices, where would be appropriate to create new code for activities including installation, service and repairs of information technology devices. For example it concerns devices called “smart home”. In current activity coding list of HETUS this type of code cannot be found. Inclusion of this type of code would be suitable to add into category “35 Construction and repairs house” as it is mentioned in following table:

35	CONSTRUCTION AND REPAIRS HOUSE
351	Construction and renovation
352	Repairs of dwelling
353	Making, repairing and maintaining equipment
354	Installation, servicing and repair of ICT equipment
355	Vehicle maintenance
359	Other or unspecified construction and repairs

Another area was help to an adult household member where would be suitable to include codes related to affective support of a dependent as well as non-dependent adult household member. That means to include activities such as cheering up/encouraging a dependent/non-dependent household member. It would be also helpful implementation of more detailed breakdown about care of non-dependent household member. Inclusion of these proposed new types of codes in ACL into category “39 Help to an adult household member” is mentioned in following table:

39	HELP TO AN ADULT HOUSEHOLD MEMBER
391	Physical care of a dependent adult household member
392	Affective support of a dependent adult household member
393	Other help to a doependent adult household member

394	Physical care of a non-dependent adult household member
395	Affective support of a non-dependent adult household member
399	Other help to a non-dependent adult household member

After examination of both classifications we also focused on revision of codes related to communication. The final proposal was to rename the code “514 Correspondence” to the new name “514 Conversation and communication” and include into this one only code all of the conversational and communication methods counting also face-to-face conversation, writing and reading text messages, e-mails and chatting through the internet or by mobile applications. As a result the codes “713 Correspondence” and “723 Communication by computing” were removed and it led to simplification of coding these type of activities.

All other proposals are mentioned in proposed national activity coding list (ANNEX 2) highlighted by green colour.

OBJECTIVE 2

Within this objective the following two tasks have been carried out:

1. Based on available literature the methodical study was elaborated where it captures experiences with including subjective well-being variables and multitasking variables into statistical survey and it describes methods how these variables are statistically surveyed.
2. Cognitive testing of proposed subjective well-being variables and multitasking variables.

The work on both tasks were realized through the seven workers from University of Matej Bel in Banska Bystrica based on working agreement in period from March 2018 to June 2018.

Work on the implementation of **the task number 1** consisted of study available literature about well-being variables and multitasking. On the basis of the acquired knowledge from these literature sources was elaborated methodical study. This study contains currently the most used methods on subjective well-being measure and multitasking, experiences and recommendations related to implementation of variables on subjective well-being and multitasking in statistical surveys with a special focus on Time Use Survey.

The English version of this methodical study is stated in ANNEX 3 of this report.

The methodical study consists of two main chapters. In the first chapter the study is focused on well-being issue. It contains the experiences and recommendations of experts dealing with this issue. Further it describes OECD guidelines on measuring subjective well-being which represents an important turning point in knowledge of measuring subjective well-being. The study also describes the guidelines developed by organization United Nations and by Eurostat for Harmonized European Time Use Survey. The second chapter of the study is dedicated to the multitasking. It deals with parallel activities issue, describes opinions and experiences of foreign experts within this area. It also describes methods of research multitasking variables and recommendations within the harmonized European time use survey.

The international comparison of methods used for measuring well-being and multitasking elaborated in this methodical study led to the conclusions which are stated at the end of the

methodical study. There are mentioned the most frequent methods which were processed and used in the following part of this Objective 2, i.e. use in cognitive testing of subjective well-being variables and multitasking variables. In Annex of the methodical study are listed approaches of each country to measuring subjective well-being.

The task number 2 was dedicated to cognitive testing of proposed well-being variables and variables related to parallel activities. Testing was focused on verification of understanding questions on measuring well-being variables.

In the following part of this report is described preparation and course of testing, results of testing with its evaluation.

Preparation of testing

On the basis of review international experiences, recommendations and methods which are mentioned in methodical study mentioned above, the workers from university chose and processed methods and their combination for following testing.

As a result there were prepared 3 methods for testing of well-being variables and multitasking variables. These 3 methods were subsequently reflected into the 3 individual questionnaires. The following is a description of these three methods:

1. Method

It is the Diary method for recording activities in 10-minute intervals with inclusion of the multitasking variables, such is recording secondary activities (“What else were you doing?”), location (“Where was it?”), and with whom (“Were you alone or together with someone?”).

Within the well-being variables there was a column of happiness in diary where the respondent expressed how he/she did feel during the recording activity. There was a scale of feelings at every activity from -3 *very unpleasant* to 3 *very pleasant*. Respondents filled in this column simultaneously with answering the questions on multitasking. In this case the HETUS recommendations were used.

2. Method

It is the Diary method for recording activities in 10-minute intervals with inclusion of the multitasking variables, such is recording secondary activities, location and with whom.

It is also include an individual DRM questionnaire (Day Reconstruction Method) to assess well-being variables. In this case the DRM questionnaire was filled in the next day after the day of filling in the diary. Respondents answered the questions about how they felt only at three randomly selected activities which they recorded previous day. This is the difference from the first method where they expressed feelings during every recorded activity directly when recording it and simultaneously with questions on multitasking. Within this method for every selected activity is monitored 6 emotions on the scale 0 – 10 where “0” represents *feeling you have not experienced* at all and “10” represents *feeling you have experienced very strongly*. In this case the OECD recommendations were used.

3. Method

In the third method there was also the Diary method for recording activities in 10-minute intervals with inclusion of the multitasking variables (recording secondary activities, location and with whom) and with individual DRM questionnaire for well-being assessment.

The principle of this method is similar to the second method. Respondents answered the questions about how intense they felt during randomly selected activities which they recorded previous day. The difference from the previous method is that in this case was tested experienced feelings of respondents on the scale 0 – 6 where “0” means *feeling you have not experienced at all* and “6” means *feeling you have experienced very strongly*. In this case for the measuring well-being variables the recommendations of TUS implemented in USA (ATUS) were used.

All of the above mentioned approaches were reflected into the three individual questionnaires. Overall, there was created 3 versions of questionnaires **which are stated in Annex_4a_ Questionnaire number 1, Annex_4b_ Questionnaire number 2, and Annex_4c_ Questionnaire number 3** of this report.

Each of the questionnaires consists of the *Main questionnaire*. It contains 4 sections:

- Part A. Basic information about the respondent
- Part B. Instructions on how to complete the diary
- Part C. Example of recording activities to diary
- Part D. Diary for recording activities

Next the Questionnaire No.1 contains *Questionnaire of cognitive testing* and *Instructions for interviewer*. In case of Questionnaires No.2 and No.3 contain also the *Questionnaire of cognitive testing* and *Instructions for interviewer* and also the *part E. DRM Questionnaire*.

Course of testing

Cognitive testing of well-being variables was carried out on sample of 60 respondents. After the preparation of all the materials (questionnaires, instructions for interviewers) for implementation of cognitive testing the interviewers themselves were contacted. Overall, the data collection was done by 6 interviewers where each of them addressed 10 respondents. Before the testing itself the training of interviewers was conducted in date 15th – 16th May 2018 in Banska Bystrica. On training the interviewers were informed about the project and they were also familiar with all of the materials for testing. These materials are *the Main questionnaire, Questionnaire of cognitive testing* and *Instructions for interviewers*. Afterwards the work steps with respondent were explained in detail and the way of recording information from cognitive testing were also explained.

Each of 6 interviewers addressed 10 respondents in household. These respondents filled out the diary on a pre-arranged day and the next day they answered questions of cognitive testing.

Around two thirds of respondents filled out the Main questionnaire (eventually also DRM questionnaire) in workday and one third in free day in order to keep approximately representativeness according to the character of day due to diversity of activities carried out in workday and in free day.

After the addressing respondent the interviewer planned a personal meeting with him/her. Following steps depend on each version of the questionnaire. In case of Questionnaire number 1 it required simpler way of procedure than in case of Questionnaire no.2 and 3:

1. Questionnaire No. 1

In case of Questionnaire No. 1, after the interviewer filled in the identification data in the Main questionnaire and in the Questionnaire of cognitive testing, the interviewer read the Introductory words of the interviewer and filled in the Basic data of the respondent (part A. of

the Main questionnaire). The interviewer gave the Main questionnaire to the respondent and explained its main parts to the respondent. Subsequently they agreed to a second meeting, which was held the next day after the respondent fill in the diary. The aim of the second meeting was filling in the Questionnaire of cognitive testing.

Total duration of the first meeting was about 10 – 15 minutes and the second meeting about 20 minutes.

2. Questionnaire No.2 and No.3

In case of these two questionnaires, the interviewer filled in the identification data in the Main questionnaire, in the DRM questionnaire and Questionnaire of cognitive testing. The interviewer read the Introductory words of the interviewer and filled in the Basic data of the respondent (part A. of the Main questionnaire). The interviewer gave the Main questionnaire to the respondent and explained its main parts to the respondent. The interviewer kept the DRM questionnaire (part E. of the Main questionnaire) which was fill in at the second meeting. Interviewer and respondent agreed to a second meeting which was held the next day after the respondent fill in the diary. During the second meeting the interviewer presented to the respondent DRM questionnaire and let the respondent to fill it in on their own. Subsequently the interviewer together with respondent filled in the Questionnaire of cognitive testing.

The first meeting took about 10 – 15 minutes and the second meeting about 40 – 50 minutes.

The group of addressed respondents was diverse from the point of view age, gender, education and economic status. The following tables represent social and demographic characteristics of the addressed respondents within three versions of questionnaires used:

Table 1 Structure of the respondents by gender

Gender	Number of respondents		
	Questionnaire No.1	Questionnaire No.2	Questionnaire No.3
Man	8	11	9
Woman	12	9	11
	20	20	20

Table 2 Structure of respondents by education

Education level	Number of respondents		
	Questionnaire No.1	Questionnaire No.2	Questionnaire No.3
Primary school	0	1	1
Secondary school without graduation	4	2	0
Secondary school with graduation	7	9	11
University Bachelor or equivalent	2	3	0
University Master or equivalent	4	4	7
Research qualification	3	1	1
	20	20	20

Table 3 Structure of respondents by economic activity

Economic activity	Number of respondents		
	Questionnaire No.1	Questionnaire No.1	Questionnaire No.1
Working	17	13	12
Employed but temporarily out of work	1	0	0
Unemployed	0	0	1
Old age pensioner	1	5	1
Student	1	2	6
Economic inactive person in household	0	0	0
Disabled person	0	0	0
Working old age pensioner	0	0	0
Non-applicable	0	0	0
	20	20	20

Table 4 Structure of respondents by age

Age	Number of respondents		
	Questionnaire No.1	Questionnaire No.1	Questionnaire No.1
16-24	0	1	5
25-34	7	3	6
35-44	6	8	3
45-54	5	2	3
55-64	1	1	2
65+	1	5	1
	20	20	20

Evaluation of questionnaires

Variables of well-being and multitasking were tested within three version of questionnaires as it was mentioned above. There were the same questions concerning multitasking in the all three versions of questionnaires. The questionnaires differed by formulation of questions concerning well-being variables, their placement and scales of feelings. In the following part of this report, the evaluation of questions about variables of well-being and multitasking, which are included in these three versions of questionnaires is stated from point of view comments and problems of respondents with answering questions.

1.

The question: „*What else were you doing*“ (*secondary activity*)

- The question was well understood by the most of respondents. 44 respondents had no problem with answering this question. Only two respondents had problem with answering this question. They did not know how to record the situation when the priority of activities between main and secondary activity was changing during a longer period of time.

2.

Question: „Where was it? “ *Record the location or mode of transport.*

- Totally 50 respondents could respond to the questions without any problems. 10 respondents had objections towards the wording of question. According to their opinion, there was not completely defined, to what extent there is a difference between the place and way of transport and from this reasons they did not know how correctly to mark down into one recording box e.g. ride on a bike in the park. At the same time two respondents were not quite clear how the level of detailed description of place should be mentioned. Whether it should be geographical place (e.g. in Bratislava) or a particular place (in a car in Bratislava).

3.

Question: „Were you alone or together with someone? “ *Mark by crossing*

- 31 respondents did not have any objections or problems with answering this question. 7 respondents mentioned that in answer the column with options “children at the age over 15” was absented , in case of 2 respondents the column with options “friends” was absented and in cases of 5 respondents column with the option “household pet” was absented.

As well 12 respondents had problem whether to take into consideration also the random pedestrians in the street, shoppers in the shop, and people at public offices as persons present at doing the given activity.

6 respondents had problem with specification of surroundings of which persons should be to take into consideration (for example to record only person in the close vicinity (in the same room of the household) or also in the further distance (in the house).

4.

Questions concerning well-being variables – Questionnaire No.1:

How did you feel at it? Circle your answer.

(from -3: very unpleasant ... to 3: very pleasant)

20 respondents were addressed this question.

The question was well understood, altogether 8 respondents did not have any objections or problems with answering this question. 3 respondents found to record the feelings in every 10 minutes intervals during day as irritating. Two respondents proposed to record the emotions by means smileys. For two respondent it was very difficult to differentiate the level of the feelings between 2 and 1. 2 respondents considered as redundant to record the same feelings multiple times in case that character of activity was not changed for a longer period of time.

5.

Question concerning well-being-variables – Questionnaire No.2:

How did you feel at it? Express it using the following six feelings. Use the scale from 0 (you did not experience the feeling at all) to 6 (you experienced the feeling very strongly).

20 respondents were addressed this question.

The question was well understood, altogether 15 respondents did not have any objections, comments or problems with answering this question. The two respondents were not quite clear whether question asked for physical or mental pain. 1 respondent had problem with differentiation of terms sadness, pain, and tiredness (for example at mental overload) and also term happiness he considered as very broad. One respondent proposed that the feelings could get the respective share of 100% among them.

Respondents were also asked for their opinion whether they would have welcomed addition of another feelings to the given ones. Their proposals are mentioned in table below. The table includes also number of respondents who proposed the given feeling.

Proposal of another feeling	Number of respondents
Feeling of self-satisfaction (e.g. from achieving a goal)	1
Impatience	1
Stress	4
Disappointment (disillusion)	1
Enjoyment (good mood)	1
Nervousness	4
Frustration	3
Open field for entering one's own feeling	1

6.

The question concerning well-being variables - Questionnaire No.3:

How did you feel at it? Express it using the following six feelings. Use the scale from 0 (you did not experience the feeling at all) to 6 (you experienced the feeling very strongly).

20 respondents were addressed this question.

There were no comments regarding the wording of the question from the respondents, the question was well understood. The reactions for the question were similar how for the question concerning well-being in version of questionnaire 2 what how is mentioned above.

On the basis of the analysis of the problems with the answering the questions about the well-being, the following table was elaborated with the pros and cons between the different questionnaire versions. Due to the fact, that questionnaires 2 and 3 were very similar in content, a comparison was done only between questionnaire 1 and questionnaires 2 and 3 as follows:

	Questionnaire No.1 (column of happiness)	Questionnaire No.2 and No.3 (DRM questionnaire)
Pros	<p>respondent</p> <ul style="list-style-type: none"> - answers the feeling questions simultaneously with filling in the activity and multitasking questions, - does not have to remember their emotional state with the time delay, - is not forced to analyse deeply the 6 feelings that some respondents considered as substitutes in some cases, - can note the change of feelings during the same activity. <p>The data collection is less technically demanding (PAPI method) and there is no need of the extra visit of the interviewer on the following day.</p>	<p>respondent</p> <ul style="list-style-type: none"> - expresses their experienced feelings during the activity in progress only at three randomly selected time intervals, not during the whole day, - fills in the diary faster than at the version 1.
Cons	<ul style="list-style-type: none"> - it takes longer to fill in the diary than at diary versions 2 and 3 - respondent expresses the experienced emotional states at every 10-minute interval of activity (this can be limited by Instruction to the activity as such but this would mean the loss of information on the change of emotional state within the episodes) 	<ul style="list-style-type: none"> - must go back in their memories to the emotional states from the previous day, which can affect the recorded degree of the experienced feeling, - must analyse up to 6 feelings at every activity, - this approach would require relatively big sample of respondents to achieve the balanced structure of activities in the sample.

CONCLUSIONS AND RECOMMENDATIONS

On the basis of evaluation report elaborated by workers, which were responsible for preparation and course of testing, there was collected following suggestions. These suggestions concern inclusion of well-being variables and multitasking variables within time use survey in future.

In case of inclusion variables related to parallel activities there are the following suggestions:

- In case of question “Where was it?” in future there should be mentioned more specific explanation relating to this question. Also within the instructions for filling out the diary should be added a few examples of how to fill this column;
- In case of question “Were you alone or together with someone?” in future there should be appropriate to add a column with option “children over 15 years”. This option was missing in some cases by respondents during the testing;
- Also in the case of question “Were you alone or together with someone?” in future there should be appropriate to mention more specific definition of space in which the respondent records the presence of other persons or their cooperation in carrying out the activity;

Within the Objective 2 of this report there were tested 3 methods of surveyed subjective well-being through the 60 respondents. These methods were already used in time use survey in

the past. Surveyed variables of well-being within these methods were also cognitive tested through the same respondents.

In terms of cognitive testing the respondents didn't have any big trouble to identify themselves with tested well-being variables. All of the tested well-being variables seem as appropriate for Time Use Survey in future. Based on cognitive testing, respondents suggested to add well-being variables – "nervousness", "frustration"- which were missing in expressing feelings which they felt during the performance of individual activities. We suggest possibility to add these two variables of subjective well-being in future Time Use Survey.

In terms of methods used in testing the method of Questionnaire No.1 is less technically demanding (PAPI method), in the method of Questionnaire No.2 and No.3 it is suitable and already abroad implemented with additional technical support of data collection (CATI method). In case of Questionnaire No.1 method there is no need of extra visit of the interviewer on the following day with regard to data collection for variables of well-being. For that reason this method seems as financially less burdensome method. In case of Questionnaire No.2 and No.3 this approach would require relatively big sample of respondents to achieve the balanced structure of activities in sample.