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**„Preparatory work to revise the harmonised European Time Use survey for the
implementation in the round 2020“**

Final Report

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Introduction

This report provides the results obtained for the full implementation of the action "Preparatory work to revise the harmonised European Time Use survey for the implementation in the round 2020".

The aim of this action is:

- To study, test and outline robust solutions for the 2020 Time Use Survey implementation

The main aims are to be accomplished via following operational objectives and through following phases:

TIMETABLE TO CARRY OUT EACH STAGE OF THE ACTION SHOWING MAIN DATES AND EXPECTED RESULTS FOR EACH STAGE	
Milestones/ Deliverables / Tasks / Results / Reports	Timetable
<u>Topic 1 Survey interview techniques</u>	
1a Literature and best practices review of the communication strategies, process and incentives schemes in relation to the mode of interviewing Expected results: review of international theoretical and organisational experiences related to communication strategies, process and incentives schemes in relation to the mode of interviewing	M+3
1b Taking into account the review in 1a), test of the new communication strategies, respondent invitations and options of incentives Expected results: Methodological report describing the testing of the communication strategies, respondent invitations and options of incentives deemed to be most appropriate for Croatian national circumstances	M+6

1d Evaluation of mode effect and study on calibration strategy Expected results: Methodological report on existing experiences and relevant documents, critical analysis of the material and potential implementation options, and a proposal for the HETUS 2020 Guidelines.	M+6
1e Test and study of the effect of diary recording during the reference day, or the day after Expected results: Methodological report describing the testing and studying of the effect of diary recording	M+10
1f Testing and/or studying various types of questionnaires (e.g. light versus full diaries) Expected results: Methodological report describing the testing and studying of various types of questionnaires	M+11
<u>Topic 3 Revision of the activity list</u>	
3a Review of the current activity list taking into account aspects of interest Expected results: Written review of the current activity list	M+4
3b Taking into account the review in a), elaboration of the coding lists and guidelines for classification allowing continuity of results comparison Expected results: Methodological report on existing experiences and relevant documents, critical analysis of the material and potential implementation options, and a proposal for the HETUS 2020 Guidelines.	M+6
3c Testing of the coding of time use activities using different methods (free text recognition and automatic coding, use of short or detailed lists of activities, etc.), taking into account for example existing practices of coding of ISCED, ISCO, with a focus on efficiency of the methods in terms of, for instance, its precision, burden and time required Expected results: Methodological report describing the tests performed	M+9
<u>Topic 3 New dimensions in the diaries</u>	
3a Cognitive testing of the general subjective well-being variables and variables related to the activities Expected results: Methodological report describing the tests performed	M+6
Interim report	M + 6
Final technical report	M + 12

Final technical report on implementation of the action and financial statement	60 days following the closing date of the action
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General remarks for the pilot implementation

Fieldwork was conducted from June 16th to August 5th during which period all the Time Use diaries were collected. The Survey was conducted in two phases, first being general household and individual interviews using CAPI/CATI¹ methodology in BLAISE program. Individual interviews were conducted on household members 15 years of age and older.

Table: Average length of interviews

Average length of interviews	
Household Interview	8 minutes
Individual Interview	4 minutes

For individual data collection, various modes of interview were engaged.

Table: Number of individuals by obtaining method

Individual interviews obtaining method	Number of individuals
Person for whom data relates (F2F)	156
Person for whom data relates (Telephone)	21
Another member of household (F2F)	46
Another member of household (Telephone)	16
TOTAL	239

Second phase was recruiting all members of household 15 years of age and older to fill out time use diaries for one working day (Monday to Friday) and for one day of the weekend. All members of the household had to complete diaries for the same day(s) and date.

Two types of diaries were tested, open version (full diary) in which respondents entered the activities in their own words to be coded after the fieldwork phase and pre-coded version (light diary) in which respondents were instructed to draw a line of time spend on each set of pre-coded activities in linear fashion, from early morning to bed time.

These diaries were tested on the level of household, meaning all members of single household were given only one type of diary.

Also, all employed individuals in the household were given short workweek diary in which working hours were collected for one week, encompassing time use diary completion.

¹ Household interviews were done using CAPI-only methodology (adult with role in family finances) while for individual members CATI option was available.

Since goal of the survey was, among other, to test the content of diaries and respondents competence to fill them as correctly as possible, no sample specifics were defined prior to the start of the fieldwork regarding which households to be included in the survey.

The approach was interviewer based, in a sense that interviewers were given liberty to complete household quotas in the stratum as they saw fit. Each interviewer got single village (in case of rural stratum) or city block (urban stratum).

Also they were given set of approach strategies to conduct in a pre-given order. These include special communication strategies, including incentives for the responding households². The results indicated that resources allocated for incentives were too low and complexity of materials to fill too high for measuring proper rate of response.

Therefore, the response rate was not measured as in practice interviewers approached their neighbours and acquaintances.

Table: Sample – households and individual surveys (conducted in BLAISE CAPI program)

Stratum	Households	Individuals (15yo and older)	Interviewers
Split urban	24	52	1
Split rural	24	39	1
Zagreb urban	40	70	2
Zagreb rural	40	78	2
TOTAL	128	239	6

In total, 239 persons were eligible for second phase of the survey.

Of those eligible, 17 persons refused to fill out the diaries (diary collection was implemented only among households in which at least half of 15 years and older members agreed to fill out the diaries).

² Incentives were given to all households (30 HRK per household - 4€; non-perishable items for household consumption - coffee and package of instant vitamin drink) but for half of the household's incentives were pre-announced while for the other half they were not. Idea behind this practice was to check if incentivised households responded more accurately in filling out the diaries.

Table: Number of diaries collected³

Stratum	Full diaries	Light diaries	Workweek diaries
Split urban	44	56	31
Split rural	40	38	17
Zagreb urban	68	70	33
Zagreb rural	60	68	21
TOTAL	212	232	102

Household and Individual questionnaires were constructed from two sources: Time Use in the Republic of Serbia 2010 survey and Croatian HETUS pilot 2009./2010. Some of the topics were left out (for example, Exchange of goods and services topic from Croatian HETUS pilot which was not well received by respondents in that survey) but in the end questionnaires were constructed to include all important topics and respondents data.

Furthermore, in households and individual interviews number of variables were included which interviewers themselves filled on the perceived quality of life in a given households.

Different methods were used to collect data in household and individual interviews.

Household interviews were implemented via BLAISE program on personal computers and conducted solely by CAPI method since it is an entry point for obtaining reliable information about household and applicable household-members for diaries.

Individual interviews (also in BLAISE) could be conducted by CAPI or CATI method (in case of fieldwork difficulties or possibility of intra-household non-response). Also, a possibility was foreseen for other household members to provide information.

With regard to the diaries, their structure was implemented by upgrading existing forms from Croatian HETUS pilot (2009./2010.) and two time use surveys conducted by Statistical Office of the Republic of Serbia; Time Use Survey (TUS) from 2011 and Seasonal Time Use Survey (LTUS — Light Time Use Survey) from 2015. New dimensions were added in full diaries regarding mobile phone and personal computer use and well-being dimension testing.

Most of the redesign effort went into full diary structure while light diary was implemented with minimal content changes from Seasonal Time Use Survey (LTUS — Light Time Use Survey).

Work week diaries were updated for this survey from Croatian HETUS pilot.

³ Numbers for full and light diaries are total diaries collected, 2 diaries for each respondent

Table: Number of diaries per type

Type of Diary	N of diaries collected	Dimensions and structure
Full diaries	212	<ul style="list-style-type: none"> - Self-completion of main activities, parallel activity and location/mode of transport - Mobile phone/personal computer use (check boxes) - 'With whom' battery (check boxes) Well-being variable (-3 to +3 scale) – for 10 households only
Light diaries	232	<ul style="list-style-type: none"> - Pre-coded list of main activities (respondent fill out time spent on each activity) - Pre-coded location/mode of transport (same input method as main activity)
Work week diary	102	<ul style="list-style-type: none"> - Obtaining data of time spend on work (both workplace and home) during the week of both reference days.

These diaries were tested on the level of different households, all members of single household were given only one type of diary.

Also, all employed individuals in the household were given short workweek diary in which working hours were collected for one week encompassing time use diary completion.

Additional steps have been taken regarding the approach of interviewers to respondents and ways in which diaries are presented. For this pilot-study, a small number of interviewers was used because it can be monitored more closely (also for assessment of the individual impact on item-response).

All interviewers received same instructions for respondent's recruitment and were given enough time to review diaries and materials used in this survey.

Furthermore, all interviewers received large-scope information about potential uses of the study results, part of which they were encouraged to use for facilitating recruitment.

Interviewers were instructed to present diaries to households in a manner that they fill out the diary for previous day for one of the household members while other members are present – information about household members present during this introduction to diaries was noted.

Timetable of fieldwork realisation

Type of activity	Dates: start - end	notes
Revising and preparing the questionnaires and diaries	2.5. – 5.6.	
Programing household and individual questionnaires	15.5 – 6.6.	- BLAISE software
Final fieldwork preparations	12.6. -15.6.	- Including interviewer training and final verification of fieldwork materials
Fieldwork	16.6. – 5.8.	- End date means that all the diaries were collected successfully
Data editing phase	27.6 – 26.9.	<ul style="list-style-type: none"> - This phase started as soon as the first CAPI data started to come from the fieldwork and took longest to complete. Data editing phase included combining all the data from fieldwork phase as well as revising and controlling data entry quality of diary activities. - Diary activities from full diaries were coded. Afterwards, these results were related to other data files and two principal files were created: summary household and individual questionnaires data paired with full or light diary activities. - Working week diary file was delivered independently.
Programing data entry modules	17.7. – 9.8.	- It included logical control of data entry and control scripting
Data entry	21.7. – 22.8.	- Data entry included controlled entry of PAPI collected materials
Final data control and data anonymization	22.9. – 30.9.	

Activity: Literature and best practices review of the communication strategies, process and incentives schemes in relation to the mode of interviewing

This activity was done by reviewing several pools of methodological information, namely

- The first Croatian HETUS pilot (2009/2010)⁴
- 2011 Serbian TUS survey⁵
- 2008 Eurostat HETUS Guidelines⁶

Also, expert help was provided within this project from the head of Time Use Survey team of the Institute of Statistics of the Republic of Serbia.

The results and more detailed decisions for this activity can be found in the presentation for activities following this one.

Activity: Test of the new communication strategies, respondent invitations and options of incentives

New communication strategies were tested on realized sample as shown in table below⁷.

It was decided to test response rates by using the two different invitation letters; one which is more detailed regarding the project information and signed by director of Croatian Bureau of Statistics (hereinafter: CBS) and other which is standard introductory letter. The emphasis was put on differences between mentioned two approaches by analysing the item-response of completed diaries.

Furthermore, all participants of the study were given a reward, but for half of the sample, existence of the reward at the end of the survey was pre-announced while for the other half that was not the case. Value of respondent's reward was symbolic (30 HRK per household - 4€) and consisted of non-perishable items for household consumption (coffee and package of instant vitamin drink).

Additional steps have been taken regarding the approach of interviewers to respondents and ways in which diaries are presented. All interviewers received same instructions for respondent's recruitment and were given enough time to review diaries and materials used in this survey.

Invitation letters were introduced in similar fashion, CBS as study sponsor was mentioned in both cases. Incentives (when they were announced) were presented in singular fashion, as "little something for your trouble, please regard it as a gift from the guest coming to your household".

⁴ Materials available in hard copy.

⁵ <http://pod2.stat.gov.rs/ObjavljenePublikacije/G2012/pdfE/G20126015.pdf>

⁶ <http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-RA-08-014-EN.pdf>

⁷ As can be seen in the table, fieldwork realization of communication strategies testing was not evenly distributed in the sample. Reasons for this is non-response of some households which initially agreed to participate but drop out from participation for which replacement were chosen from the pool of another interviewers.

Table: Respondent invitation and incentives – fieldwork realization

		Incentives	
		Incentives announced beforehand to the respondents	Incentives not announced but given to the respondents at the end
Communication strategy			
Invitation letter from Director General of CBS	67 households	33 households	34 households
Standard introductory letter	61 households	29 households	32 Households

Incentive pre-announcement did not gained better quality of completed diaries.

CBS invitation letter garnered somewhat better results when incentives were pre-announced.

The sample of people was too small to draw stronger conclusions. However, from interviewers subjective fieldwork notes, one can conclude that incentive used in this survey was too small for large scale study. Their impression was that there was a lot of 'good will' on the part of respondents to fill the diaries, mostly to help interviewers to be paid for this project.

Furthermore, the experiences from the field indicated that CBS invitation letter should be used for this type of survey, and it should include educational materials regarding the usefulness of it as well as potential benefits of time use studies. This was primarily concluded from fieldwork notes: this type of survey was new for the respondents and for number of them study was interesting. To that end, better response rates as well as better quality of completed diaries can be attained by workshop for interviewers in which they can be better familiarized with time use study usages, and not only methodology, so they can be more successful in channelling larger benefits of time use survey data.

Table: Respondent invitation and incentives – number of diary episodes recorded (mean – full diary)

		N of Respondents	Diary 1	Diary 2	Mean of Diary 1&2
Total	Total	106	23	23	23
Communication strategy	Incentive and CBS invitation letter	31	24	23	24
	No incentive and CBS invitation letter	26	21	24	22
	Incentive and standard introductory letter	23	21	21	21
	No incentive and standard introductory letter	26	23	22	23

Table: Respondent invitation and incentives – number of diary episodes recorded (mean – light diary)

		N of Respondents	Diary 1	Diary 2	Mean of Diary 1&2
Total	Total	116	16	17	16
Incentive announcement/ Communication strategy	Incentive and CBS invitation letter	28	17	18	17
	No incentive and CBS invitation letter	30	16	17	17
	Incentive and standard introductory letter	30	16	15	15
	No incentive and standard introductory letter	28	16	17	16

Activity: Evaluation of mode effect and study on calibration strategy

Different methods were used to collect data in household and individual interviews.

Household interviews were implemented via BLAISE program on personal computers and were conducted solely by CAPI method since it is entry point survey for obtaining reliable information about household and applicable household-members for diaries.

Individual interviews (also in BLAISE) could be conducted by CAPI or CATI method. Also, a possibility was foreseen that other household members could fill out survey. All of interview modes were recorded and were correlated with item-response in diaries and quality assessment of method implemented.

While there were too few respondents for which individual data was completed by telephone, 23 respondents for which data was completed by another person face to face had lower results on diary item response.

Table: Mode effect of individual interview data collection method – number of diary episodes recorded (mean – full diary)

		N of Respondents	Diary 1	Diary 2	Mean of Diary 1&2
Total	Total	106	23	23	23
Individual interview obtaining method	Person for whom data relates (F2F)	64	23	23	23
	Person for whom data relates (Telephone)	11	26	26	26
	Another member of household (F2F)	23	18	18	19
	Another member of household (Telephone)	8	26	25	25

Table: Mode effect of individual interview data collection method – number of diary episodes recorded (mean – light diary)

		N of Respondents	Diary 1	Diary 2	Mean of Diary 1&2
Total	Total	116	16	17	16
Individual interview obtaining method	Person for whom data relates (F2F)	77	17	17	17
	Person for whom data relates (Telephone)	11	19	18	18
	Another member of household (F2F)	21	14	15	15
	Another member of household (Telephone)	7	13	13	13

In the interviewer fieldwork diary, interviewers were instructed to note for every respondent if they have been present during the introduction to diary filling procedure. For this procedure interviewer was instructed to gather all members of the household (of appropriate age) to fill the form themselves.

More than 3/4 of respondents were actively present during diary instructions which reflects the effect of interviewer and stratum selection to facilitate testing of diary procedure themselves, but cannot be considered as an appropriate sampling procedure for large scale time use survey. Larger sample is needed to gauge whether other members of the household can adequately instruct absent members. This is especially important regarding diary type, and it would help determine more appropriate form to gather data from respondents which are absent during introduction to diaries.

Table: Interviewer fieldwork diary – presence of person during introduction to diary filling procedure – number of diary episodes recorded (mean – full diary)

		N of Respondents	Diary 1	Diary 2	Mean of Diary 1&2
Total	Total	103 ⁸	23	23	23
Was the person present during introduction to diary filling procedure	Yes (actively present)	87	23	23	23
	Yes (passively present)⁹	5	21	16	19
	No (person was not in the household)	11	21	17	19

⁸ For 3 respondents interviewer hasn't noted the information

⁹ Present in the household during the introduction to diaries fill procedure, but doing something else.

Table: Interviewer fieldwork diary – presence of person during introduction to diary fill procedure – number of diary episodes recorded (mean – light diary)

		N of Respondents	Diary 1	Diary 2	Mean of Diary 1&2
Total	Total	109 ¹⁰	16	17	16
Was the person present during introduction to diary filling procedure	Yes (actively present)	87	17	18	17
	Yes (passively present)	13	12	13	13
	No (person was not in the household)	9	14	15	14

Activity: Test and study of the effect of diary recording during the reference day, or the day after

In the last Croatian HETUS pilot (2009. /2010.), respondents were explicitly prompted to fill out diaries continuously during the reference day. 28% of respondents self-reported (on question at the end of diaries) that they filled diaries during the reference day while 37% did it on the end of reference day. 31% of respondents self-reported that diaries were filled day after the reference day or later. Regarding these results, it was decided not to split the sample based on instructions when the respondents should fill the diaries.

We enhanced the visibility of instructions for respondents to fill diaries during the reference day, suggesting them that they carry diary with them and try to fill activities every hour or so. This was presented to interviewers too, which suggested the same during the introduction to diaries filling procedure in the households. Therefore, better results were obtained, more than half respondents answered that they recorded activities in the diary during the reference day.

Table: Diary recording time – all interviewer approaches – number of diary episodes recorded (mean – full diary)

		N of Respondents	Diary 1	Diary 2	Mean of Diary 1&2
Total	Total	106	23	23	23
Diary recording time (first diary)	During the reference day	55	24	-	24
	At the end of reference day	35	21	-	21
	1 day (or more) after the reference day	14	21	-	22
Diary recording time (second diary)	During the reference day	42	-	24	24
	At the end of reference day	49	-	21	22
	1 day (or more) after the reference day	13	-	21	21

¹⁰ For 6 respondents interviewer hasn't noted the information

Interesting find is that more responders which were completing light diary form self-reported timely diary recording time. From the interviewers fieldwork notes, impression is that light diary was (at first) looking more complex and daunting, and more responders said that if they were completing it day after they could not remember which activities to choose, prompting them to record activities during the reference day.

Table: Diary recording time – all interviewer approaches – number of diary episodes recorded (mean – light diary)

		N of Respondents	Diary 1	Diary 2	Mean of Diary 1&2
Total	Total	116	16	17	16
Diary recording time (first diary)	During the reference day	66	17	-	17
	At the end of reference day	37	15	-	15
	1 day (or more) after the reference day	11	15	-	16
Diary recording time (second diary)	During the reference day	65	-	18	17
	At the end of reference day	44	-	16	15
	1 day (or more) after the reference day	6	-	12	13

It was also decided to test interviewer approach to control quality of the completed diaries. Half of the interviewers¹¹ were instructed to visit household as soon as it can be arranged after the first reference day for that household. This additional interviewer visit was announced beforehand and its purpose was to review first reference day diaries together with the responders (noting in fieldwork diary those responders for which this was possible).

Interviewers were split in two groups in order to better assess at the end of the survey whether the interviewer/diary reviewer approach garners better enough item-response for higher costs and interviewer/respondents fatigue included.

Table: Different interviewer approach by type of diary used

		Effect of interviewer review of diaries after every reference day	
		Interviewer checks quality of diaries after every reference day (Interviewer group 1)	Interviewer checks quality of diaries after every reference day (interview group 2)
Type of diary	Total respondents		
Full diary	106	52	54
Light diary	116	62	54

¹¹ Therefore, we had two groups of interviewers for these two approaches. Reason for this was to better track interviewer impact on data quality and to avoid fieldwork mistakes.

This approach was very interviewer-centric, so additional quality of completed diaries was hard to gauge. With only 6 interviewers conducting this study, there was variation in quality of fieldwork regardless of aforementioned interviewer pool split.

However, respondents were more prone to give correct diary recording time when interviewers were visiting them after first reference day. This is especially the case in full diary recording time. Less than half respondents self-reported that they were recording diary activities during the reference day in case of the first diary. This dropped to less than third on the second diary, suggesting that reduction in bias can be attained by this interviewer approach.

Table: Diary recording time – by interviewer approaches (N – full diary)

		Interviewer group 1	Interviewer group 2
Total	Total	52	54
Diary recording time (first diary)	During the reference day	23	32
	At the end of reference day	20	15
	1 day (or more) after the reference day	9	5
Diary recording time (second diary)	During the reference day	15	27
	At the end of reference day	32	17
	1 day (or more) after the reference day	5	8

In case of the light diary recording time, there was as large bias reduction. It may be true that because of the novelty and perceived complexity of light diary form, majority of responders thought it would indeed be easier to complete diaries during the reference day. Reduction in “During the reference day” answers was about 10 percentage points.

Activity: Testing and/or studying various types of questionnaires (e.g. light versus full diaries)

Diaries structure was implemented by upgrading existing diaries forms from Croatian HETUS pilot (2009. /2010.) and two time use survey conducted by Statistical Office of the Republic of Serbia; Time Use Survey (TUS) from 2011 and Seasonal Time Use Survey (LTUS — Light Time Use Survey) from 2015¹². New dimensions were added in full diaries regarding mobile phone and personal computer use and well-being dimension testing.

¹² Household and individual survey was also constructed using items and findings from these studies with some changes regarding the goals of this survey.

Table: Types of questionnaires used

Instrument	Methodology	Dimensions
1. Full diaries	PAPI	<ul style="list-style-type: none"> - Self-completion of main activities, parallel activity and location/mode of transport - Mobile phone/personal computer use (check boxes) - 'With whom' battery (check boxes) - Well-being variable (-3 to +3 scale) – for 10 households only,
2. Light diaries	PAPI	<ul style="list-style-type: none"> - Pre-coded list of main activities (respondent fill out time spent on each activity) - Pre-coded location/mode of transport (same input method as main activity)
3. Work week diary	PAPI	<ul style="list-style-type: none"> - Obtaining data of time spend on work (both workplace and home) during the week of both reference days.

Activity: Review of the current activity list taking into account aspects of interest

During the implementation of this activity several experiences have been taken into account.

The basis for the analysis was the 2008 Eurostat's Harmonised European Time Use survey Guidelines, with the application of the full standard coding possibilities.

In order to assess the optimal structure and level of the activities two additional projects were analysed, namely previous Croatian HETUS pilot from 2009 and the 2011 Serbian TUS survey.

During the previous Croatian HETUS pilot (Time use survey 2009./2010.), standard Eurostat activity code system has been utilised. The code system was directly derived from the 2008 Eurostat HETUS Guidelines.

From the side of importance of the application of this pilot, it is important to stress that Serbian experiences showed that "experience from the pilot survey prior to the Time Use Survey, which was conducted in 2009, together with Eurostat recommendations, enabled activity codes to be expanded to include national specificities. As a result, some new codes were included in the code book because of their widespread occurrence and it was, therefore, pertinent to include them in the national survey (022, 023 and 388).¹³

Having in mind aforementioned, it was concluded that, although number of respondents will be relatively small, the feedback in the form of personal description of individual activities will allow,

¹³ <http://pod2.stat.gov.rs/ObjavljenePublikacije/G2012/pdfE/G20126015.pdf> (page 138)

during the coding process, to establish whether there are possibilities at this point to add new three-digit level activities.

Activity: Elaboration of the coding lists and guidelines for classification allowing continuity of results comparison

The basic standpoint is that this project should continue on the experiences of the previous Croatian HETUS pilot from 2009.

In addition, special attention was taken to annul the influence of the interviewer on the coding practice (as the coding practice will mirror the one implemented during the 2009 pilot).

Likewise, codification process will be controlled by deriving a sample of original material with activities and additional codification made by another person familiar with HETUS methodology.

Activity: Testing of the coding of time use activities using different methods (free text recognition and automatic coding, use of short or detailed lists of activities, etc.)

With regard to full diaries, activities designated by the respondents were coded manually.

It provided the personnel dealing with the coding a unique opportunity to make in-depth inquiry and gain practical knowledge on how to code different activities and similar or same activities designated in different terms, by using standard activity list.

The same holds true with regard the insight on whether additional three-digit activities are to be developed.

Coding was done on three digit level and afterwards adapted to two digit level in order to mirror input from the light diary.

Some of main analytical findings were following.

Some of the codes were not fully determinable, as from the open data entry they could not be unambiguously classified

- “In the garden” – whether a person was resting, or just passing thru, or doing garden activities like raking together dead leaves
 - Sometimes a clear picture can be made by utilising secondary activity (e.g. just thinking, listen to the wind, etc.) but in some cases an estimation based on the several previous and following activities had to be done
- “Tidying up”
 - If no other orientation is given (e.g. after the lunch would mean code 311), sometimes it is hard to designate appropriate code to the activity (whether is it cleaning of dwelling or ironing or similar)
- Putting away laundry
 - From the secondary activity and from previous/following activities it is not always clear whether the code to use is 321 (not ironed) or 322 (ironed)
- “Internet”
 - In majority of cases one can presume that it will refer to codes 722 or 723, but it is possible that it will embed also code 731 (for the large part of such doubts a relevant help can be found in the form of previous and/or following activities)

- Designation of location, such as “At my sisters”
 - This was sometimes also a challenging issue, especially if secondary activity was not given (in fact this secondary activity is the primary one), and if following 10-minute intervals did not reveal additional information. For this case, respondents can simply be additionally advised to avoid such designation.

Likewise, some designated activities were by their nature much shorter than 10 minutes interval, like “getting out of a bed” which was often the case in the full diary. To that extent, although classified according to the methodology, it can be stated that for this episode a slightly better instruction for the respondents could be made. Also in this case (similar to “waking up”), there is always a potential doubt on whether the person is getting out of bed (code 031) or is still in bed (code 011).

Analysis of the coding of secondary activities did provide assistance to clear some primary activities, however the major part of secondary activities, in cases when they were recorded, was dedicated to “being on internet”, “usage of mobile phone”, “hanging out with friends/neighbours/relatives”. Likewise, it can be stated that the main characteristic of secondary activities was that they were far less diversified in content than primary ones.

To some extent it was puzzling to code “Walking” activity when the person was walking together with a friend (code 611) and his/her dog (code 344), because the activity does refer to both intentions without prevalence of one of them.

Likewise, there was a methodological doubt on how to code “watching movies on the internet” (whether as 821 or as code 722/723).

In some cases, it seems that people tend to cover different things with the “transportation phase”. This is because in some instances, when people reported that they went to their friends or relatives, the way home after the meeting lasted much more than the way to there, and vice versa. This is also something to look at in the future dealing with the full diary.

It was also noticed that time spent with the children on various activities is often accompanied with an abundance of different activities (unlike the majority of other life situations reported in the full diary), and for that reason special attention should be made to those cases in order to extract the main ones.

The work-life balance was especially difficult to capture with persons who were self-employed or whose nature of work is connected with being out the whole day. In those situations it is sometimes really difficult to differentiate the work segment and the private one. Like the time spent with children, this also just means that it would be wise to identify and pay special attention to these situations in the raw data.

Activity: Cognitive testing of the general subjective well-being variables and variables related to the activities.

For 10 households, full diary form includes well-being scale for main activity ranging from -3 (unpleasant) to +3 (pleasant). Respondents are instructed to note how pleasant main activity was for each uninterrupted activity set. This approach was chosen among other subjective well-being measurements proposed in Guidelines for Harmonising Time Use Surveys because it doesn't overload full diary form and it enables analysis of collected data sequentially, on how are emotional responses connected to the events and activities and influenced by previous activities.

Some of the main analytical findings were following.

Respondents as a rule did not experience major amplitudes in the way they perceive activities during the day.

This is to a certain extent connected with the individual character of an individual, and his/her general mood, which will be difficult, if not impossible, to statistically extract.

To illustrate this, making a cup of coffee can for one person be just a regular activity he/she does at a certain point of time. For another person, the same activity can signify a special part of the day, connected with pleasant feelings, his/her escape from the boredom or difficulties of the day, etc.

Here one needs to point out that testing showed some respondents find difficult to separate two different issues

- A feeling of pleasantness while doing certain activity, due to the activity itself and what it represents to the respondent
- A feeling of dis/satisfaction not directly derived from the activity itself (e.g. a person feels satisfied not because he/she is washing dishes (which is maybe a boring activity) in the morning but because somebody close will come for a conversation in the afternoon and will use those same dishes)

This is something that in the future data collections (either in the forms of pilots or full scale surveys) a special attention will have to be taken in order to provide respondents with appropriate explanations.

In addition, it is worth noting that the same activity done in the different part of the day, can be ranked markedly different, although done by the same person (for example, dish washing in the morning prior to any major activities outside personal hygiene and breakfast and in the late afternoon once the respondent was enjoying a company of people close to him/her).

From the input provided by the respondents, this does not seem connected with the activities preceding those in question, but it is more connected with the fatigue (activity done in the morning has as a rule more beneficial grade than the same activity done in the afternoon). However, sample is really small to make systematic assumptions in that regard.

As stated by one respondent, a major factor influencing the manner of respondent's relation towards the activity can be the expectance of some future activity (whether directly forthcoming or not). The concrete example was upcoming work. To what extent is this influencing the pleasantness of the current activities and is the intensity of influence the same in case of a positive or negative attitude is a question.

One could also notice that there is a strong indication of interaction with children and pets on a pleasantness of an activity. In cases where respondents were reporting playing with pets and/or children, the level of pleasantness would be reported as positive, either as the continuation of a same emotional state from previous activities, or as a positive change reported under that activity.

Also, in case of a future full scale national survey it will be interesting to test the structure of different averages of attitudes toward performed activities people tend to have during different parts of the year, as well as in different parts of the country.

Conclusion

This project enabled several important developments

- It enabled personnel of the CBS, majority of who did not have prior experience in dealing with this survey, to gain important experience and basis of knowledge important for future work
- It allowed to collect and analyse the current state of the art regarding Time Use Survey methodology and certain important aspects of field implementation
- Notwithstanding the fact that the sample size was not applicable to identify nationally representative conclusion (not it was intended to provide this), it did indicate to a certain extent the attitudes of potential respondents, influence of interviewers, pros and cons for different data entry practices, comparisons between full and short diary, etc.
- As this is a rather specific survey, not just due to diary element, but also due to the potential sense of intrusion, intensity of 10 minute episodes, differences in how people see the structure of their day and priorities set in reporting them, and other elements which make it specific.

Having in mind solely abovementioned main benefits, but also the time period between this project and the Croatian HETUS pilot 2009./2010., it seems inevitable to conclude that future efforts aimed at the identification and realisation of improvement activities with regard to Time Use Survey is needed, in order to prepare and satisfy all preconditions for a future implementation of the Time Use Survey in Croatia.