
Changing Patterns of Time Use among Romanian Population

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ABSTRACT

The financial challenges of the last decade have changed the national economies and the face of the societies across the world, affecting the time allocation patterns for individuals. Time is spent different by people, because of social norms and values, as well as the culture, traditions and the level of social and economic development of the country.

This paper will analyze the pattern of the time use of Romanian population based on the results of two surveys on time use carried out by National Institute of Statistics in 2000 and 2012.

Keywords: *time use, TUS, questionnaire, diary, working time, leisure, pattern*

INTRODUCTION

The time use research is relatively new in the economic theory, but in the recent decades, it increased fast, especially because data produced on statistical base became available. The significance of time is different between different stages of the same economy and it also different from an economy to other one across the world. That situation made difficult to have comparable data and the international methodology was necessary. Under the UNESCO-Multinational Comparative Time-Budget Research Project, the first cross-national time use project had conducted in order to harmonies data collection methods. This project set out the scheme for data collection, which even today is still used in almost every time use survey. In the 1980s, the datasets collected in the early 1960s were harmonized into the dataset with common series of background variables and total time spent per day in 69 activities, to form the Multinational Time Use Study now hosted at the Centre for Time Use Research at Oxford University. In 1996 and 1997, Eurostat launched a number of pilot studies that resulted in the first guidelines on Harmonized European Time Use Surveys (HETUS). These included recommendations on the sample design, diary days, survey forms, activity coding lists, interviewers, data coding and estimators.

The first time use survey in Romania was developed as a pilot project under the Eurostat HETUS project. As well other European countries, after

the waves of these pilot studies, many countries adopted the harmonized methodology of the time use survey making possible to have comparable results on time spent by population coming from different parts of the world. The most recent methodology was adopted by Eurostat in 2008.

Regarding the results of the time use across the world, a much known library of contribution research in the field of time use is the Research Network on Time Use (RNTU) that offers helpful links to time use related journals, institutions and databases. It supports researchers and other persons who are interested in time use considering surveys, methods and results of analysis and explanation of macro- and micro-behavior as well as policy matters. The RNTU Time Use Bibliography is a database of time use literature developed as results of a project at the St. Mary's University of Halifax, Canada. Other international contribution on time use research is the TUS (Time Use Survey) database made up of harmonized micro-data from fifteen European countries: Germany, Spain, France, Italy, Norway, Finland, Sweden, United Kingdom, Belgium, Bulgaria, Estonia, Latvia, Lithuania, Poland and Slovenia. The database has been developed by Statistics Finland and Statistics Sweden with financial support of the European Commission. Micro-data are not directly accessible, but estimations can be produced by a table generating tool.

In Romania, time use research was developed in the frame of official statistics, the studies being mostly based on the results of the time use surveys carried out in 2000 and 2012.

Rationale of the paper

The paper analyze the pattern of the time use of Romanian population and the most relevant changes of spending time between two stage of economic and social development of national economy (2000 and 2012). Changes in individual time allocation have modified dramatically the picture of nation throughout history, being in continuous contact with the changes that have occurred on the economic side. Generally, the society transitions to higher stages of development have always involved the reallocation of time in activities with higher added value. That was happened also in the Romanian society. Although the analyzed period of time is not so long (12 years), the differences between two patterns of time allocation could be seen. The most important argument is that economy passed the international financial crisis started at the middle of the 2008, propagated in all economic and social structures of society, up to the individual, and that was reflected in the allocation of time. Other reasons of changing patterns of spending time in Romania is reflected by the new approach of the European Union social policy, especially of the labor market policy designed to support increasing participation in the labor

market and its flexibility. That new approach came for reconciliation between work and family life by a better balance between work time and free time.

Methodology of time use survey

The main data source used for the study is TUS. It provides a great variety of statistical images of people's use of time across country. In Romania there were two surveys on time use carried out by National Institute of Statistics:

The first TUS data collection was in August and September 2000. The survey methodology was not fully in accordance with the European guidelines methodology, because of the time sample not covered 12 months (one calendar year);

The second TUS data collection covers one calendar year during September 2011 – September 2012 and it's methodology is fully according with the HETUS (Harmonized European Time Use Survey – 2008 guidelines).

Time Use Surveys require multidimensional probability sample. Not only households/individuals are sampled but also the days when the time use is to be recorded. The general requirement is that all objects in the population have a known probability. For TUS this means that each combination of individuals/households and all days within the surveyed time period have a known probability to be allocated to the sample. There have been subject covered in the sample all persons aged 10 years and older with the residence in research centers (urban and rural areas), members of households in randomly selected household in all counties in Romania, including Bucharest.

The survey forms the survey forms/questionnaires of the Time Use Survey are the followings:

- Household Questionnaire
- Individual Questionnaire
- Day Diary
- Weekly Schedule of Working time.

If the first two questionnaires are mostly common with other surveys in the social statistics fields, in terms of the variables used and the method of data collection, the diaries are the forms specific for the time use survey. Time diary is self-administered, with fixed 10-minute intervals to be filled in during randomly designated diary days. The respondents record what they are doing in their own words.

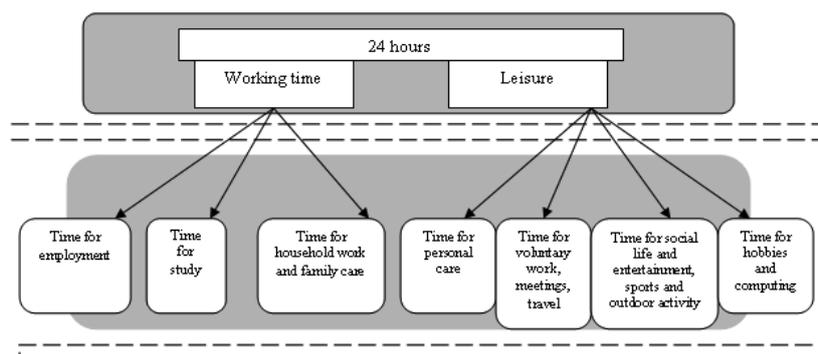
The specificity of the TUS methodology is that all the activities made by individuals during a day are covered by “the activity coding list”. The activity code system is hierarchical, with three levels, the list of the activities being the same for the main and for the secondary activity (if the individual spent two or more activities in the same time). The diary contains also information regarding the location of the activity and the transport mode.

TIME USE PATTERN OF ROMANIAN POPULATION IN 2012

One of the essential objectives in measuring time use has the starting point the identification of the activities of individuals during a day. According to the activity list of time use survey the components of individual time spent in 24 hours are split in some major activities as the figure 1 illustrates schematically below.

Time use according to the activities list

Fig. 1



In this section of paper it will be analyzed the pattern of spending time by the population aged 10 years and over living in Romania during the 5 September 2012 to 4 September 2013, according to the data collection period. Because the individuals in the sample filled the day diary form for two days, respectively one of the weekday and one weekend day, the aggregate time at the national level could be analyzed separately, as *average of time during the week* and *average of time during the weekend*.

For the week days, the population 15 years and over spent 3:33 hours for *economic activities*, representing 23.1% of the active part of the day. Employees work daily 7:44 hours (8:01 hours - men with 38 minutes more

than women). On the other side, employers spend at work 8:01 hours per day (8:05 hours - men with 17 minutes more than women). On weekends, the total of active population spends in economic activities on average 48 minutes. The employers work an average 2:19 hours compared to employees 1:16 hours. In rural areas, people work on Saturdays and Sundays more than in urban area (1:02 hours to 36 minutes).

Persons 65 years and over spent more time for *household activities and family care* (4:46 hours) than younger people 25-44 years (3:12 hours) and youth aged 15 and 24 years (1:50 hours). Time used for household and family care, representing 22.2% of the weekend day, is uniformly distributed according to age groups: the group of population aged 25-44 years old spend 3:40 hours in household and family care activities, almost the same time slot like population aged 45-64 (3:43 hours) and 65 years and over (3:16 hours).

During the week, the individuals allocate for *study* 4.7% of the active time of a day (excluding sleep). Children (10-14 years) spend for study, on average, 5:06 hours, and young people aged 15-24 are involved in study 2:58 hours daily. Weekends daily time for study, allotted by children aged 10-14 years, is 1:11 hours; young people aged 15-24 years study 38 minutes per weekend day.

The most part of 24 hours is spent on personal activities, including *sleep*. For sleep is assigned an important part of the daily time (8:37 hours on weekdays and 56 minutes longer on weekends – as an average of total population aged 10 years and over). Children (10-14 years) sleep more than people aged 25-44 years by about half past one both on weekends and in weekdays. Also, people aged 65 years and over sleep more, to people of 25-44 years, with about half an hour on weekdays and about half past one on weekends.

As it is expected, the results of the survey illustrate that the Romanian population have less hours for *leisure* per day during the week than in weekends (2:11), respectively 4:01 hours on weekdays to 6:12 hours on weekends. Compared with men, women have less free time each day both on weekends and weekdays (3:40 hours to 4:23 hours on weekdays and 5:41 hours to 6:46 hours on weekends). In relative terms, on weekends, the population allocates 43.0% of the day (excluding sleep), for leisure. A more detailed analyzes shows that of the 6:12 hours for leisure, 2:40 are allotted for watching TV. Children aged 10-14 years old spend 40 minutes every day for computer use as a leisure activity, compared with youth aged 15-24 (one hour).

SLEEPING MORE AND WORKING LESS – A COMPARISON BETWEEN 2000 AND 2012 PATTERNS

In the next section, it will be presented a comparison of time spent by population aged over 10 years old – working and weekend day, as daily average for all individuals living in Romania, in two different periods, respectively 2000 and 2012. At a first view (see table 1), the structure of the time used by population for the main activities is almost the same in these years, but leisure is 1.7 percentage points more in 2012 than it is in 2000.

A comparison between 2000 and 2012 time use in Romania (%)

Table 1

Activity	2000	2012
Personal care (including sleep)	50.8	50.7
Working time (including economic activity, household and family care, study and other activities related to work)	29.6	28.0
Leisure	19.6	21.3

A more deep view on data illustrates that for economic activity population spent in average less time in 2012 (2:11 hours per day) than 2000 (2:20 hours per day), even for employee (4:30 to 4:70). It is noted that average of time is calculated both for weekdays and weekends.

Time spent in the main activities during a day by population aged 10 years and over, working days and weekend days – comparison between 2000 and 2012 (hours)

Table 2

Time spent in the activity	2000	2012
Personal care	11.50	12.11
Sleep		
• total population	9.00	9.05
• employee	8.30	8.32
• children/student	10.00	9.47
Economic activity		
• total population	2.20	2.11
• employee	4.70	4.30
Household and family care		
• total population	3.60	3.17
• employee	2.60	2.39
Study		
• total population	0.40	0.27
• children/student	2.20	3.04
Leisure		
• total population	5.80	5.36
Mass media		
• total population	2.90	2.37
Watching TV		
• total population	2.50	2.21
• employee	2.60	2.06
• unemployed	3.10	3.00
Social life and entertainment		
• total population	1.40	1.18
• employee	1.10	1.02
• unemployed	1.70	1.45

Population sleeps more time in 2012, excluding children in school (9:47 hours in 2012 less than 10:00 hours in 2000). Table 2 shows that in the recent period the individuals allot less time for leisure (from 5:80 in 2000 to 5:36 hours per day in 2012), including mass media activities (from 2:90 in 2000 to 2:37 hours per day in 2012), watching television (from 2:50 in 2000 to 2:21 hours per day in 2012) and social life and entertainment (from 1:40 in 2000 to 1:18 hours per day in 2012).

CONCLUSIONS

Time use survey is the most important statistical tool created to capture data on time use of population. On the results of two surveys, carried out in Romania in 2000, respectively in 2012, it was presented a time based profile of the individuals living in Romania. In general, the structure of time allocation on activities does not differ greatly for the two period of time analyzed in this study, though there are larger differences for leisure activities at the expense of time for work.

There remain, however, many unknown aspects related to the measurement of time, derived from the fact that time is a difficult concept to define, mainly because of different perceptions of individuals over time. Therefore, developing a statistical tool to capture time measurement in whole and with high comparability of data is an ongoing process.

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Appendix A.

Activity coding list - Main and secondary activities

A. Personal care

- A.1. Sleep
- A.2. Sick in bed
- A.3. Eating
- A.4. Washing and dressing
- A.5. Other or unspecified personal care

B. Economic activity, study, household and family care, travels

- B.1. Economic activity
- B.2. Study
- B.3. Household and family care
 - B.3.1. Food management
 - B.3.2. Household upkeep
 - B.3.3. Making and care for textiles
 - B.3.4. Gardening and pet care
 - B.3.5. Construction and repairs
 - B.3.6. Shopping and services
 - B.3.7. Household management
 - B.3.8. Childcare
 - B.3.9. Help to an adult family member
 - B.3.10. Other or unspecified of household and family care
- B.4. Travels - travel by purpose

C. Leisure

- C.1. Voluntary work and meetings
- C.2. Social life and entertainment
 - C.2.1. Social life
 - C.2.2. Entertainment and culture
 - C.2.3. Resting — time out
- C.3. Sports and outdoor activities
- C.4. Hobbies and computing
 - C.4.1. Arts and hobbies
 - C.4.2. Computing
 - C.4.3. Games
- C.5. Mass media
 - C.5.1. Reading
 - C.5.2. Watching TV, Video or DVD
 - C.5.2. Listening to radio or recordings
- C.6. Other unspecified time use