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THE SIGNIFICANCE OF THE INDIVIDUALS' TIME FOR ECONOMIC AND SOCIAL DEVELOPMENT

In the globalization context, the last decades have changed the national economies, and also affected the time allocation patterns for individuals and for the entire society. As an economic resource, time is perceived very different by people, because of various individuals' norms and values, as well as the culture, traditions and the level of social and economic development of the country. The quality of life is a consequence of the structure of time allocation and the quality of every moment spent.

The evolution of labour force and the increase of competitiveness, along with the modern standards of living and a new attitude related to employment are factors that have been leading to the erosion of traditional employment relationships while encouraging the development of new forms of work time.

This paper will analyze the significance of the time use as an economic resource on the individuals, society and national economy based on the results of two survey carried out by National Institute of Statistics (Time Use Survey and Labour Force Survey).

Key words: time use, quality of life, work time, economic and social development

INTRODUCTION

Regardless of how much we add to the physical or material dimension of time, there will always exist people who, because of their traditions, their hobbies, working habits, and life style, would live and consequently, would administer their time in differently.

The changes of habits, ingrained reflexes, and increased concern of optimizing the discretionary time are critical to individuals who, in doing so will become more effective, more educated, and ultimately valued for their professional competence.

An analysis at the microeconomic level, through the delimitation (isolation) factors is almost impossible to achieve, since most of the time, the allocation of time is measured by the cumulative consequences of the factors of influence.

The working time of each individual could be analyzed through couple of aspects: the economic activities dedicated to earning an income (marketed work activities) and time used in the household (non-marketed work activities), for activities which could be related to the economy. We consider that the time used for household work has resulted in obtaining goods and services that can substitute for the goods / services available on the economic market.

One argument of this respect is the existence of positive externalities of time in the family, especially within the families with children. An example could be the amount of time that mothers spend it at work, while the care for their children is being outsourced through nurseries or kindergartens. Other examples could also be enumerated: cooking, household maintenance and home care for their elderly dependents etc...The economic value of the hours of work in the household is still a subject mostly disputed and analyzed through international economic research. Thus, it becomes one of the advanced concerns for the improvement of methodologies used in the production of national accounts.

1. ECONOMIC ASSESSMENT OF INDIVIDUAL'S WORKING TIME

Up until now, we have developed two methods for assessing similar monetary value of time used in the household: The cost substitution method and the opportunity cost method.

The cost substitution method - according to this method, the number of hours worked in their household is assessed by assigning a cost that would be generated for payment of another person, which would achieve the same tasks. Most often, this cost estimation is done by assigning the average calculation for the economic activities of the national economy. For example, the time spent cleaning the environment is treated as wages for persons employed in similar activities in the labor market.

The opportunity cost method - is based on the microeconomic approach of marginal utility. Thus, a person may reduce their working time (paid) to allocate more time to domestic work, up to an amount at least equal to the gain obtained for an hour of work (paid). For example, if

a mother decides to forgo salary of 100 (RON)  to spend an hour in addition to his child, that the hours must be at least 100 (RON) .

For now, we are in the position of offering an estimate of the amount of time working in households according to the cost substitution method.

The data available are the following:

- The average duration of daily households (according to Time Use Survey, 2000);
- The average of earnings by economic activities and occupations (according to Earning Survey, 2008);
- The average of working day duration by economic activities and occupations (according to Structure of Earning Survey, 2006).

We can estimate the cost of non-market work, replacing some market activities with similar activities in the frame of the household, as follow:

- Household and family care activities have been attributed to hotels and restaurants (NACE Rev 1 - section H);
- Gardening and pet care activities have been attributed to agriculture activities (NACE Rev 1 - section A);
- Construction and repair activities were replaced with market activities in construction field (NACE Rev1 – section F);
- Child care is an activity assimilated with health care and social work (NACE Rev1 – section N).

The hourly average of salary:

$$s_i = \frac{S_i}{t_i}$$

where:

S_i – is the average of the monthly salary in the i market activity;

t_i – is the average of the market time in the i market activity;

The daily cost of non-market work:

$$C_{gi} = s_i * t_{gi}$$

where:

s_i – is the average of the hourly salary in the i market activity;

t_{gi} – is the average of the daily non-market time in the i household activity;

The monthly cost of non-market work:

$$C_{gi} = s_i * t_{gi} * Z$$

where:

s_i – is the average of the hourly salary in the i market activity;

t_{gi} – is the average of the daily non-market time in the i household activity;

Z – the average of the monthly working-day (Z=22).

The aggregate monthly cost of hours allotted to household and family care activities:

$$C_g = \sum_{i=1}^n s_i * t_{gi} * Z = \sum_{i=1}^n c_{gi}$$

The share of the aggregate monthly cost of hours allotted to household and family care activities in the average of market salary:

$$C_g(\%) = \frac{C_g}{S_{med}} * 100$$

where:

C_g – is the aggregate monthly cost of hours allotted to household and family care activities;

S_{med} – is the average of the monthly market salary at national economy level;

The main results:

- The monthly cost of hours allotted to household and family care activities in the model¹, represents 40,4% of the average of the monthly market salary at national economy level. In other words, in case a household pay for these activities, it is necessary to allot financial resource almost equal with the half of the monthly average of the market salary;
- If the activities in the household are carried by a woman (818,2 lei²/month), it is necessary much money than the household pay for a man in the same activities (556,8 lei/month).

Table 1. The monthly cost of hours allotted to household and family care activities, by gender

	total	masculin	feminin
<i>The monthly cost of hours allotted to household and family care activities, gardening and pet care activities and care of children</i>	685,1	553,8	818,2
<i>as % of the average of the monthly market salary at national economy level</i>	40,4	31,7	50,5

The next section of paper comprises an analysis of the use of time in Romania and factors of influence on the results of TUS. As already noted, although statistical research models only comprise the use of time in the year of 2000, it is a relevant source of information regarding the time budgeting in our country. Thus, with regards the work situation is as follows:

- The average daily economic activities undertaken at the workplace is 6.6 hours per day.

¹ household and family care activities, gardening and pet care activities and care of children

² lei- national currency

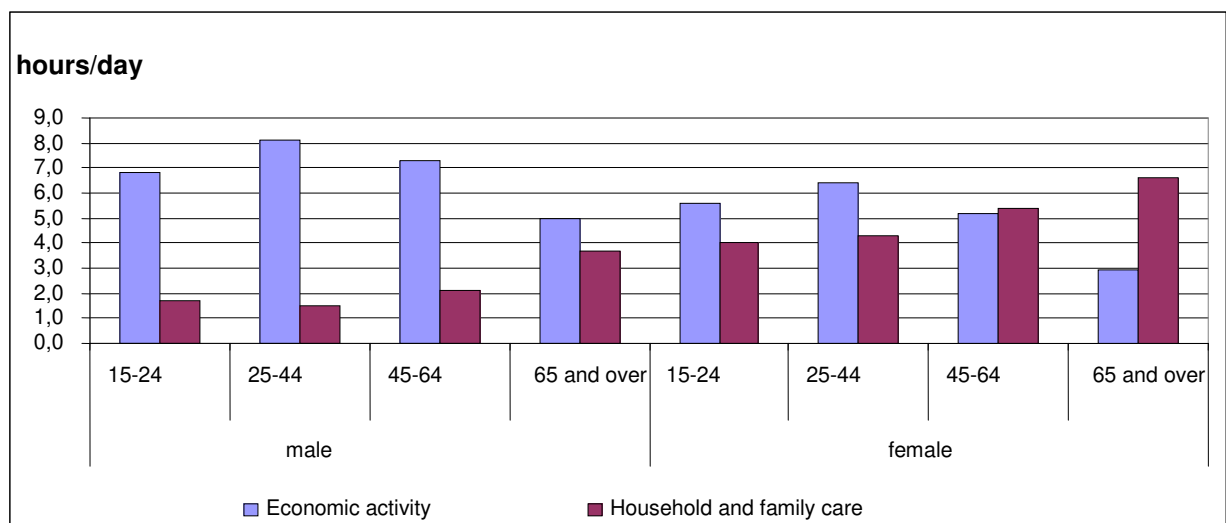
- In the household the allocation of various work activities, is on average, 3.9 hours per day (the largest budget of time are the activities to prepare meals 1 to 2 hours per day).

A simple calculation leads us to the following result: nearly half (44.2%) of the total daily disposable individual is assigned to work, whether it takes place in a formal working environment or household environment. Why? Each individual has particular reasons to work, and these reasons vary as often as people could differentiate among themselves. From a scientific point of the economy, we can always say that people work because this action would satisfy their needs. There are, for example, people who work out of their own passion, or a sense of personal fulfilment, but there are also people who seek work to just build relationships with fellow colleagues, or just to overcome the challenges of their own personal and professional goals. However, for most individuals, the income remains the main reason why they invest time and effort in the economic activities.

2. FACTORS THAT DETERMINE THE USE OF TIME

Age is the primary factor which has a critical influence on the individuals' working potential. It is indeed, the age bracket that determines the configuration of the professional structure and family size, etc... Thus both, vital capacity of the working individuals, and biological condition / psychological functions of the body are dependent on age. Over time, the mechanisms of the population's evolution are related to events in the socio-economic transition which marks the individual from one stage of life to another. Age is a demographic characteristic that implies a distinct perception of values and time. On the other hand, how the time available is divided, allocated and used - it changes along with the age, with the main stages of biological evolution, social and economic individual. The data shows that between working age, the 25-44 years group are allocating most time to economic activities in the labor market (on average 8.1 hours / day - men and 6.4 hours / day females) .

Fig.1. Daily time spent to work, by age group and gender in the year 2000



Source: TUS, 2000

In the Romanian households, women are still the ones who do most of the house work regardless of age, and women's status in the family is closely linked to their status in the society. Therefore, the time could be considered an eloquent measure of *gender* inequality. One argument is that the available daily time is unevenly distributed among genders, meaning that women are allocating a higher amount of time to household activities (5.0 hours per day) than men (2.4 hours per day). The men, however, spend more time at their work place (7.5 hours per day) compared with women (5.6 hours per day).

Thus, the household tasks are still considered “women's responsibility”. Only the *education* could be a relevant factor which may reduce women's household labour time. The more educated, the less involved in household activities (from 6.4 hours per day, corresponding to elementary level of education, at 3.1 hours per day for women with higher education). Men are generally responsible for household maintenance, home repair, gardening and pet's care.

Marital status, household structure and *the number of family members* are also factors that determine the individuals' use of the time. For example, young men (15-24 years), unmarried are working on average 6.6 hours per day vs. married men who are working 8.3 hours per day. The reasons are obviously related to the additional responsibilities of married men, from commitments to family, mainly by providing financial security to their family members. Data regarding the use of working time for paid economic activities shows that the women of the same age group is recording a daily average of 4.9 hours per day.

Considering the methodological limitations of our survey related to the individuals' use of time, the representation scheme of the life cycle is based on a sequence of stages of formation and transformation of the household in different stages. Regarding this matter, statistical research distinguishes eleven types of households, which reflects the life-cycle stages (box 1).

Box 1. Types of households, according to the methodology of the use of time survey

- single person (under 25 years), living with parents without children;
- single person (25-44 years) living with parents without children;
- couple consisting of two married adults (under 45 years) without children;
- two adults - another civil status (under 45 years) without children;
- single parent with at least one minor child;
- couple consisting of two married adults with children, the smallest child aged 0-6 years;
- couple consisting of two married adults with children, the smallest child aged 7-17 years;
- couple consisting of two married adults (45-64 years) without children;
- couple consisting of two adults - another civil status (45-64 years) without children;
- couple consisting of two married adults (over 65 years) without children;
- couple consisting of two adults - another civil status (over 65 years) without children.

The women who have at least one child of school age (0-6 years old) and living as a couple, whether married or not, allocate on average 1.8 hours per day for paid economic activities, compared with men in the same category (4.7 hours per day).

If considering the time spent for their family care and household for different household types, the highest hourly average recorded for married women, aged over 65 years without dependent children is over 6.0 hours per day. Analysis of time use over the life's cycle reveals that, mainly a reduction - along with age - a time budget for completion of activities paid for the care of household and family, it is accentuating, especially for women over the age of 65.

Residential environment is another factor which requires a specific pattern of the use of time, actually being the most influential factor in the distribution of household activities (those living in rural areas are allocating an increased amount of time to daily household activities than those living in urban areas; 4.5 hours per day, compared with 3.1 hours per day, the average is cumulatively calculated cumulatively for daily working activities and leisure time activities). In the urban areas, where there exists an ideology for gender equality the distinction is not always categorical and men are more involved in household tasks. Regarding paid economic activities, most people living in urban areas allocate on average 7.6 hours per day, 1.9 hours more than those in rural areas.

CONCLUSIONS

The approach used to discuss time allocation from an economic perspective opens a broad front of research, leading to a better understanding of the relationship between the total time available for a country and its population growth. More specifically, the question whether the time and how it is used the benefits of economic development. There are at least two reasons why time should be regarded as an important macroeconomic indicator. First - **the quantity** - that the time used for work of a country's population is one of the main resources of a national economy.

The other reason - **quality** - is that the economic results achieved in the actual use of time for the purpose in the goal of achieving them consequently expresses the hourly labor productivity. Therefore, time remains one of the most important resources available to individuals, intended to provide the necessary economic existence in direct correlation with economic and social structure in which they live.

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