

HUMAN CAPITAL FORMATION IN RUSSIAN FAMILIES: TIME BUDGET ANALYSIS

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Abstract

In sequence of long-term depopulation tendency in Russia the issues of improvement the quality of human capital (already existing and newly forming) are actual. The most important social institute providing the reproduction of human resources and human capital is the family.

This article presents the results of time-budgets research for raising and development of children in Russian families. In our study this activity is considered as a parental labor and connected with the reproduction of human capital. The survey covering 60 women practicing parental labor is the empirical basis of our research.

We have revealed that the parental work is comprehensive and it manifests in all types of activities of modern Russian mother. We also found out that the time expenses on realization of parental labor are very significant.

From the macroeconomic point of view the significant time expenses for parental work require the correct accounting and special attention from the officials. It allows to create a basis for a cost estimation of parental work and to include it into the System of National Accounts. Such an account gives an opportunity of regulation and effective stimulation of parental labor according to the principles of wage formation in productive sector of economy.

Key words: parental labour, human capital, time budget, family.

JEL Code: C18, J01, J13.

Introduction

Human capital is the most important resource of any country. In sequence of long-term depopulation tendency in Russia and reduction of the labor resources the issues of improvement the quality of human capital (already existing and newly forming) and its effective reproduction are actual.

The most important social institute providing the reproduction of human resources and human capital is the family. The role of the family in this process is basic in relation to other social institutions. The family realizes the primary socializing and creates the basis for further human capital formation by other social institutions. Family as a social institute determines

character and efficiency of influence of other institutions in the process of formation and development of human capital as a whole.

In our study we proceed from that the activities associated with birth, care, education and development of children is the parental work. This work is implemented in consistent stages: prenatal, infant, preschool, primary school, school teen, professional, incorporative (Ilyshev & Bagirova, 2009). These stages differ by the parental labor functions. Human capital created in the process of parental labor is a strategic resource for the national economy. Studies of this kind of work are aiming for solving problems of its accounting and analysis and also for creating a mechanism of including it to the national economy.

Parental labor is relatively new and complex phenomenon. It is difficult to be analyzed as a social and economical category due to various reasons: «privacy» of this type of activity, its' dependence on socio-economic, cultural and creative activities of a person, the difficulty of collecting initial information for the study.

There are no any adequate indicators for evaluation of parental labor. Today the most appropriate tool for estimation of parental labor content is a household survey of the time expenses that parents spend for the parental activities. The amount and structure of parental labor in this case are determined by the time spent for parental duties.

This information is collected through the researches of time-budget of households. Such researches in Russia were hold from the 1920's. Then there was an intermission until the 1950's. Later the time-budgets researches were conducted regularly until 1990. Nowadays, national statistics service renews the time-budget survey of households after a long break. In 2008 the Federal State Statistics Service of Russia conducted a pilot survey of time-budget of households that covered seven Russian regions.

In European countries the data of time-budgets are collected during The Harmonised European Time Use Surveys (HETUS), in the United States - during The American Time Use Survey (ATUS). There are the cross-country comparisons which are based on that results ("Comparable Time Use Statistics", 2006; "Time Use at Different Stages of Life", 2003), so the research methodology is being improved (Abraham, Maitland & Bianchi, 2006; Frazis & Stewart, 2007) as well the time expenses on different activities are analyzed (Bianchi, 2011), which includes the time for upbringing (Drago, 2009; Krantz-Kent, 2009).

The empirical basis of our study is the time-budgets of Russian families from 1965 to 2008, and the expert survey of 60 women doing the parental work.

1 Data and Methods

The study included two stages. At the first stage the parental labor was considered only as the activity of child care, including physical care and supervision, training, and communication with the child. There are two reasons for such a narrow determination.

First, the time-budget survey conducted by the Federal State Statistics Service does not highlight parental time expenses separately. According to the Classification of activities, the activities for children care are included in the section of "Housekeeping" and provide the following:

- feeding, dressing, washing and preparing for bed ;
- supervision indoor and outdoor ;
- accompany the child to the doctor ;
- waiting at the sports center, a music lesson, ect. ;
- visiting schools, nurseries, parent-teacher meetings at school ;
- helping with homework, coaching;
- reading, playing and talking to the child ("On realization in 2008 of the pilot sample survey on time budget", 2008).

This approach has some methodological flaws. All of these activities relate to the parental work. However this work also includes other unaccounted activities. For example, gathering and checking of children's school bags are supposed to be registered in the "other care for the household" section (along with shopping, hanging curtains, loading and unloading purchases in/out of the car). Another example is: a walk with the child and accompanying the child to sports competitions are identified separately in the "spare time" but of course both of these activities relate to the parental work.

Secondly, the retrospective studies of time-budgets in Russia and other countries show very similar or completely same kinds of activities related to the parental work. This allows to compare the dynamics of time expenses for these activities.

We have compiled time series data of time expenses on activities for children care in Russia (including the former USSR). The three studies (Karahanova & Bessokirnaya, 2008; Patrushev, 2003; "Results of the pilot sample survey", 2010) became the sources of information. To ensure comparability, we recalculated the data of the 2008 year and presented them in a weekly section. According to the Federal State Statistics Service, the average time required for children care is - 24 minutes a day or 2.8 hours a week ($24 \times 7 = 168$ minutes) in particular.

At the second stage, the parental labor was identified broader, with the possibility of its realization in numerous parental activities. At this stage we conducted an expert survey of women with children who implement the parental labor at all stages. In general 60 experts were involved in the survey.

Table 1 lists classification of the time expenses used in the expert survey. The Federal State Statistics Service applies this classification in research of time-budgets of households.

Tab.1. The structure of activities used in the expert survey

<i>Kind of activity</i>	<i>Sub-activities</i>
Personal care	<ul style="list-style-type: none"> – sleeping; – meal; – other personal care (bathing, dressing)
Work and work-related time	<ul style="list-style-type: none"> – the main work; – additional work; – activities associated with a job search.
Education	<ul style="list-style-type: none"> – study at an educational institution; – classes in professional and other courses.
Housekeeping	<ul style="list-style-type: none"> – catering (cooking, canning, washing-up); – household care (cleaning, home heating); – taking care of clothes, underwear, footwear; – private farming, gardening – construction and repairing; – purchase of goods and services; – child care (physical care and supervision, training, and communication);
Leisure	<ul style="list-style-type: none"> – social and religious activities; – communication; – entertainment and culture; – rest, repose; – outdoor sport events; – hobbies and games; – media.
Locomotion	<ul style="list-style-type: none"> – to the place of work / from work; – to the place of study / from the place of study; – other.

Source: "On realization in 2008 of the pilot sample survey on time budget", 2008

The sample set was formed so that the number of women implementing parental work at different stages was about the same (Table 2).

Tab. 2. The distribution of respondents by the stages of parental labor

<i>The stage of the parental labor</i>	<i>Number of experts that implement parental labor at the appropriate stage</i>
Infant	8
Preschool	12
Primary school	10
Teenager	10
Professional Training	11
Incorporative	9
Total	60

Source: *Data of author's survey*

We asked the experts to assess the extent to which their activities are related to the child care and upbringing (in fact the parental labor).

2 Results

At the first stage of the research we have constructed the time series data of time expenses of the parental labor based on official statistics and sociological research. It is shown in Table 3. As we can see from the data, the time spent for child care and upbringing by working women has been steadily declining over the last 40-45 years.

Tab. 3. The time expenses for child care and upbringing by working women

<i>Years</i>	1965	1986	1998	2004	2008
<i>Time expenses, hours per week</i>	5.4	5.3	4.1	2.9	2.8

Source: Karahanova & Bessokirnaya, 2008; Patrushev, 2003; "Results of the pilot sample survey", 2010

Table 4 shows the average annual decrease rate of time expenses. We can see that before the 2004 there was a rapid decline in this indicator which continued to decrease further but not so rapid. We can distinguish the following reasons for this tendency:

1) increasing involvement of women in the productive sector of the economy that obviously leads to a reduction in the time expenses on activities within the household. Thus

the study of T. Karakhanova and G. Bessokirnaya shows that over the period from 1965 to 2004 time expenses of working women have increased from 56 % to 60 % in paid work and decreased from 44 % to 40 % in unpaid work (occupation in the household). The duration of paid work for women has increased by 1.3 hours per week, and the time spent on household activities (including child care) decreased by 4.8 hours per week (Karahanova & Bessokirnaya, 2008).

Tab. 4. The average annual decrease rate in time expenses of working women for child care and upbringing

<i>Time period</i>	1965-1986	1987-1998	1999-2004	2005-2008
<i>The average annual decrease rate, %</i>	-0.1	-2.1	-5.6	-0.9

Source: *Author's calculation*

It should be noted that the increase of women involvement in economic production is not always the result of personal desires of women. Often this choice is determined by the economic reasons.

2) The complexity of the socio-economic life (especially in big cities) and increasing amount of the time expenses for the locomotion leads to a reduction in time expenses for parental labor by working parents.

According to V. Patrushev study in the early 1990's it took 1.5 hours a day to move for a place of work and back home for men and 1.4 hours for women - in Moscow (Patrushev, 2003). It is logical to assume that nowadays these expenses have increased or at least remained unchanged.

3) the rapid development of information and computer technologies that began in Russia in the 2000s. The studies show that the time spent by family members with computer increases (Zherebin & Ermakova, 2010) and as a result there is a reduce in time expenses for other activities, including the parental labor.

4) the biggest decrease of time expenses for child care was observed in crisis years in Russia (since 1998). Most parents had economic problems at that time. This led to a reduction in the time budget aimed for communication with children.

The subsequent stabilization of the socio-economic life of the country in 2005-2008, led to a "return" of population to their parental duties. As a result, the rate of decline of time expenses for child care and upbringing during this period was not as rapid as in previous years.

5) the slowdown in the decrease of time expenses on parental labor (observed in 2005-2008) could be connected with the fact that the possible reserves of time run out. In other words the amount of time needed for a basic child care nowadays is at the minimum level (or close to the minimum) below which it cannot fall.

In the second phase of our research, we invited experts to assess the extent to which their activities are related to the child care and upbringing. The results of the survey are presented in Table 5.

Tab. 5. The proportion of parental labor in different kinds of activities of female parents

<i>Kind of activity</i>	<i>The proportion of parental labor, %</i>
Personal Care	13
Working time and work-related	10
Training	8
Housekeeping	62
Leisure time	80
Locomotion	51

Source: *Data of author's survey*

Our results indicate the comprehensive character of parental labor. The parental functions are implemented by women-parents in all types of their activities.

The survey has revealed that in type of activity "free time" the part of parental labor is the greatest. At various stages this part accounts from 60 % to 90 % (an average 80%). If we consider the classifier of Federal State Statistics Service, the parental labor is manifested in the following activities:

- communication with family members, including by phone (for elder children);
- watching movies in cinemas (parents spend time on children's movies);
- visits to theaters, concerts, museums, sporting events;
- walking in the fresh air;
- physical activity and sports, games.

Usually parents fulfill parental functions such as education, training and socialization of children during their leisure.

Our study showed that in such kind of activity as "the activities for housekeeping", the proportion of parental labor is also high - 50-75%% (an average 62%). Usually parents fulfill

such parental functions as children care and medication, education and training during the process of housekeeping.

The significant part of locomotion activities of adult members of the family is also connected with children - from 40% to 60% (an average 51%). This can be a shared trip with a child to school, or a separate locomotion associated with the child's needs. In the first case parents carry out functions such as education, training and socialization of the younger generation.

Three other groups of activities - "personal care", " education " and "working time" – are filled with parental labor in a less proportion (13%, 8% and 10% correspondently).

According to the experts, women spend between 5% and 15% of the "working time" for parental duties. Typically that is lunch lime, coffee/or other short breaks. Experts pointed out that during this time they:

- communicate with the children on the phone ;
- supervise homework ;
- search for information needed for a child's homework in the Internet;
- meet and accompany kids from school to the institutions of supplementary education;
- discuss and resolve personal issues of elder children.

Implementation of parental duties in working time is more typical for the further stages of the parental labor - starting from the school life and next.

The expert survey also found out that in "education" activities for adult members of the family there are some aspects of parental labor. The interviewed mothers pointed out the driving courses, sewing courses and music lessons as the most associated with parental labor. Education in these courses is considered as an additional opportunity for parental function realization (teaching creativity, be able to fix and produce children's clothing).

The type of activity "personal care" of adult members of the family includes sleeping, eating (at home or outside), washing, dressing. Women with children under one year noted that their time for personal care is a manifestation of parental labor for 40-60 %%. Actually in the infancy period there is an uninterrupted physical and emotional contact of mother with the baby. This is connected with the period of breastfeeding. At this period the whole regime of the mother's day is subject of the baby's needs. This also applies to the regime of food taking and sleeping, which is often combined with child feeding.

Obviously that in the further stages of parental labor its proportion in the "personal care" markedly reduces. For example, in the incorporative stage, it equals 0%. Thus in the activity "personal care" the proportion of parental labor varies considerably in different stages. However the average is 13%.

We have calculated the total amount of time spent on parental work based on the results of the expert survey and official statistics (Table 6). As it can be seen from the table the parental work takes about 7 hours (6 hour 56 min) per day for working women.

Tab. 6. The calculation of the total time expenses on parental labor¹

<i>Kind of activity</i>	<i>Time expenses, min</i>	<i>The proportion of parental labor, %</i>	<i>The time spent on parental work, min</i>
Personal Care	645	13	83.9
Working time and work-related	344	10	34.4
Education	7	8	0.6
Housekeeping	171	62	106.0
Leisure time	185	80	148.0
Locomotion	84	51	42.8
<i>Total</i>			<i>415.7 (6 hours 56 min)</i>

Source: Results of the pilot sample survey", 2010, author's calculation

Conclusion

Our research led to the following conclusions. Firstly the parental labor (in the aspect of child care and supervision, education and communication with children) is a dynamic activity. It is highly influenced by the external economic, social, informational and technical factors. The cumulative effect of these factors in the last 40-45 years formed the negative tendency in the time budget for children raising.

Secondly the parental labor is actually comprehensive. Different parenting functions are implemented almost in all activities of parents, including those that are not directly related to the parent labor (e.g. working hours). Different activities include various parental duties – the proportion of parental labor varies from 8% to 80%.

Thirdly the parental labor expends an essential amount of time resources (about 7 hours per day). From the standpoint of macro-economic approach the process of formation of

¹ Calculation is made for the working woman living in the city

the future human capital is a third part in the economic activity of the population. Such significant work expenditures on the reproduction of a strategic resource for the state need the competent governmental accounting, regulating and effective stimulating in compliance with the principles of wage formation in the productive sector of economy.

Fourth, the methodology and practice of the population time-budgets research may become a basis for creating the valuation system for the parental labor. Of course this assessment should be based on the data of other economic and socio-psychological studies.

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