

MODELS OF GRANDPARENTS' LABOUR IN THE SOCIO-ECONOMIC SPACE OF RUSSIA

Foreign researchers consider the phenomenon of grandparents' labour in the framework of the economy of parental labour. Since the early 2000s, Russian scientists have been actively studying this problem due to high socio-economic disparity of Russian regions, and important strategic objectives stated in the Demography National Project and the Strategy of Spatial Development of the Russian Federation for the period until 2025. We identified and described specific regional situations, namely, models of grandparents' labour in the socio-economic space of the country. To analyse grandparents' labour, we examined individual questions of the "Comprehensive monitoring of living conditions" survey published by the Federal State Statistics Service (Rosstat). The research methodology includes both hierarchical (based on Ward's method, the square of the Euclidean distance, and other measures) and non-hierarchical cluster analysis (the k-means method). We proposed a method for studying grandparents' labour based on research of parental labour and international demographic studies on grandparenthood. The empirical analysis revealed 6 models of grandparents' labour in the socio-economic space of Russia. These models differ in the level and intensity of involvement of older women in the sphere of grandparents' labour and their potential in this area. For each model of grandparents' labour, we identified the core regions (groups of regions) involved in the clustering. We explained why the government should be interested in the activation and stimulation of grandparents' labour in Russian regions. Further research should focus on examining the particularities of grandparents' labour depending on the actors: men, grandparents living with their grandchildren and apart from them, living in the same city, in the same or different regions of Russia.

Keywords: household labour, parental labour, grandparenthood, grandmothers, demography of grandparenthood, grandparents' labour, labour time expenditure, cluster analysis, Russian regions, models of grandparents' labour

Acknowledgements

The article has been prepared with the support of Russian Foundation for Basic Research, the project No. 20-011-00280.

For citation: Bagirova, A. P. & Shubat, O. M. (2021). Models of Grandparents' Labour in the Socio-Economic Space of Russia. *Ekonomika regiona [Economy of region]*, 17(1), xx-xx, <https://doi.org/10.17059/ekon.reg.2021-1-x>

Introduction

Foreign economics and sociology have been actively studying the topic of female domestic labour since the middle of the 20th century. This type of labour is interpreted as economically significant and important to study as a labour activity. One of the first fundamental works on this topic was presented by Oakley [1], who noted the following features of household labour: dissatisfaction of subjects of labour with the performance of this type of labour, monotony and routine of labour functions, low level of social interaction when performing it, long working hours (77 hours per week), reverse effect of professional work experience on the level of satisfaction with domestic labour, autonomy (relative freedom, according to Oakley) of the subject of labour (this relativity is associated with high responsibility, therefore, in the author's opinion, is rather theoretical).

At the end of the 20th century, Hochschild noted that for many modern parents, work was becoming more like home, and home was becoming more like work [2]. The researcher called this phenomenon a "time bind": with an increase in working hours, a person's feelings of anxiety about home also increase, as does a person's desire to devote more and more time to work. Her research has shown that interest in American family policies that allow parents to work less and choose flexible working hours remains insufficient. The researcher's conclusion was unambiguous: workers with children consider their work to be an area that is more comfortable and more controllable than their home, they associate it with material and non-material remuneration; home is associated with routine, low-status, underestimated labour.

Foreign scientists studying the topic of domestic labour distinguish childcare as one of its components (see, for example, [3–6]), which is represented by parental labour. Since the early 2000s, the topic of parental labour (the part of domestic labour that is associated with children) has been actively researched by Russian scientists (see, for example, [7–9]). To date, several results have been obtained in this area of study in the Urals [10–12]:

1. In theory:

– parental labour is defined as a process of conscious purposeful activity, with the help of which the subjects of this type of labour form the quantitative and qualitative characteristics of the human capital of children, satisfying social and personal needs in the process; parental labour meets all standards of labour activity;

– objects, subjects, forms, stages, structure and labour functions of parental labour have been identified;

– parental labour has been grouped by the subject of its implementation, by performed labour functions, by involvement of subjects in the process of labour activity, etc.;

– the concept of the effectiveness of reproductive process and the effectiveness of parental labour has been developed;

– theoretical and methodological provisions for the study of reproductive activity of the population in the sphere of parental labour have been developed;

– the concept of precarisation of parental labour has been identified as a phenomenon that characterises the conditions for the implementation of this type of labour in Russia;

– methodological foundations for studying the motives and conditions for the implementation of parental labour as a determinant of fertility have been developed;

– a sociological consideration of parental labour as a subject-subject interaction, which differs from professional labour by its internal content, has been proposed;

– theoretical and methodological foundations for the study of subjects of parental labour, their self-identification and motivation, have been developed.

2. In methodology:

The following has been developed:

– methodology for analysing the time and material costs associated with parental labour;

– methodology for assessing the results of parental labour at different stages;

– methodology of sociological study of the motives of parental labour;

– methodology for examining the conditions for the implementation of parental labour;

– methodology for assessing the social and economic efficiency of parental labour incentive programmes, which are implemented by individual Russian enterprises in the framework of social responsibility of business;

– methodology for studying the level of precarisation of parental labour.

3. In practice:

– the issue of direct payment for parental labour has been introduced;

– a mechanism for accounting for the results of parental labour in the pension system of Russia has been developed;

– Russian education has been proposed to be considered as a social institution responsible for preparing graduates not only for professional, but also for parental labour; a system of key competencies in the sphere of parental labour and a mechanism for their development at different levels of education have been developed;

– concepts and tools of information policy aimed at increasing the importance and prestige of parental labour in Russian society have been developed.

The results obtained from the studies of parental labour in economics and sociology have an internal unity (they characterise various aspects of labour activity). They are structured (theory and methodology, methods, practice) and clearly divided by scientific field (issues related to conditions, organisation, labour resources are solved in the framework of economic sciences; issues related to subjects of labour, societal attitudes towards labour, behaviour of subjects of labour are solved in the framework of sociological science). We see the development of this line of research in several aspects:

1) study of the types of parental labour, distinguished by its various parameters (subjects of labour, involvement in the process of labour, etc.);

2) study of the interaction potential between the spheres of professional and parental labour;

3) study of features of parental labour during the period of forced distance learning of schoolchildren in 2020.

In particular, we believe that one of the most promising topics in the general area of research of parental labour is the study of the specificity of grandparents' labour (labour of grandparents in relation to their grandchildren).

Theoretical issues in the study of grandparents' labour

The grandparents' labour has specific characteristics associated with a set of labour functions, time expenditure, and involvement in the labour process, which distinguish it from parental labour. We deem it appropriate to use the following developments as a methodological basis for the study of this type of labour.

1. Results obtained in the process of studying parental labour:

– understanding of parenthood as a type of labour, understanding its forms, types, nature and content, characteristics of labour functions;

– development of a methodology for including the results of parental labour in the pension system of Russia;

– development of methods for assessing material and time costs associated with parental labour.

2. Results obtained in the process of studying the demography of grandparenthood.

Primarily, we consider research in the field of the demography of grandparenthood conducted by foreign demographers. For example, Leopold and Skopek compared data for 25 countries and provided information about the age of grandparents, the intersection of grandparent's roles with several other roles (a professional, a parent, a child), and the expected length of the grandparent life stage [13]. The results obtained by these researchers varied significantly across large geographic regions (USA, Eastern and Western Europe).

Margolis and Verdery studied American grandparenthood from a historical perspective and identified the following key indicators to measure the demography of grandparenthood [14]:

– share of the population in age cohorts who have grandchildren during their lifetime;

– average number of grandchildren per 1 grandparent;

– age of transition to grandparenthood (age at which a person has their first grandchild);

– length of grandparenthood.

Modern foreign demography has already identified the demography of grandparenthood as a separate field [15–16]. It covers the prevalence of grandparenthood in society, its age structure and length, the duration of intersection of grandparent and other family statuses in one individual, as well as the number of people with grandparents in society. In addition to these research goals, the consideration of grandparenthood as a labour activity adds a number of questions related to the study of the parameters of this labour, for example, the costs arising in the process of this labour, satisfaction with the labour process, focus on its stimulation, etc.

This study is one of the first economic and statistical studies of grandparents' labour in Russia. Its goal is to identify specific regional situations, namely, models of grandparents' labour in the socio-economic space of the country. Given the high degree of differentiation of Russian territories in terms of many economic and demographic indicators, this study is deemed relevant, since it meets the strategically important tasks that are currently set for the Russian state and society. It is necessary to note the national project "Demography", in the framework of which a separate federal project "The Older Generation" has been developed, as well as the Strategy of Spatial Development of the Russian Federation for the period until 2025. The latter aims to ensure sustainable and balanced spatial development associated with the reduction of interregional differences, which, undoubtedly, is impossible without appropriate information and analytical support.

Data and Methods

At present, Russia does not carry out full-scale studies of grandparents' labour (and grandparenthood in general) with the possibility of differentiated consideration and comparison of the country's different regions. Therefore, we used the only available resource—data from the 2018 Rosstat survey "Comprehensive monitoring of living conditions"¹—as a source of information. This survey covers

¹ Comprehensive survey of living conditions 2018. Federal State Statistics Service. Retrieved from: https://gks.ru/free_doc/new_site/KOUZ18/index.html (Date of access: 11.06.2020).

all regions of Russia and is carried out every two years. Its results are representative for the country in general, for urban and rural settlements, for certain socio-demographic groups of the population. Certain questions of this survey can be used as a first approximation to model the parental labour of grandparents.

We used cluster analysis as a statistical tool to assess regional heterogeneity and specificity of grandparents' labour. It was implemented based on the following variables:

- share of grandmothers involved in the process of grandparents' labour on a daily basis (of the total number of grandmothers);
- time spent by grandmothers on performing the functions of grandparents' labour (hours per week);
- education level of grandmothers (total number of years spent in education);
- self-assessment of health (from 1 = “very bad” to 5 = “very good”);
- social activity of grandmothers (calculated indicator, which is the sum of various types of social activity that grandmothers have shown over the past year: visiting theatre, cinema, sports and religious events, cafes and restaurants, traveling around the country and abroad).

There are some things to note regarding clustering variables.

First, let us note that the official Russian statistics do not have data that would allow us to unambiguously identify the socio-demographic groups of grandparents as persons with grandchildren. Therefore, we modelled this group based on the most valid indicator, namely, the respondent's age. We were guided by the official statistical indicator of the average age of a mother at the birth of her first child. In 2018, this indicator was 28.7 years, and in 1989 (the previous generation of mothers) it was 25.5 years¹. Thus, women aged 55 and older were selected in the study population. On average, a Russian woman becomes a grandmother at this age.

Second, the survey of living conditions of the population², which we used as an information resource, does not operate with the category of “grandparents' labour”. To identify such labour, we used several questions from the survey which reflect the involvement of the population in caring for children (their own or someone else's) without payment. To determine the share of grandmothers who are involved in the daily process of grandparents' labour, we used the following question: “Is it part of your daily routine to take care of children, your own or someone else's (without payment)?”

Third, the indicators of education level, self-assessment of health, and social activity were not selected as clustering variables randomly. The results of our earlier study [17] showed that grandmothers who were actively involved in grandparents' labour were statistically significantly different in terms of these indicators from those who were not active in this type of labour.

In the survey of living conditions of the population, individuals are the units of observation; the survey does not contain aggregated data for the regions. Therefore, to identify typological groups of Russian regions on the basis of cluster analysis, we calculated generalising regional estimates for the variables used in the analysis. Either mean or median values of indicators were calculated. The latter were used in the case when the mean value was not a typical characteristic due to the high variability of intraregional values. Only one indicator was chosen (either the mean or the median) for each variable.

Cluster analysis is known as one of heuristic statistical methods, and its results vary markedly depending on the choice of measures of the distances between merged objects and methods of merging. Considering this circumstance, we carried out clustering based on various measures and used its hierarchical and non-hierarchical varieties. This was necessary in order to compare the results of distribution of regions by homogeneous segments and to confirm the reliability of such distribution.

In the course of our research, we found that a change in the clustering method leads to a change in the clustering affiliation of a significant part of the regions. Therefore, in order to identify truly typical regional models that have developed in the field of grandparents' labour, we found groups of regions that are stably connected in various clustering options (core regions of each model). We compared the segmentation results obtained on the basis of non-hierarchical cluster analysis (k-means method), hierarchical analysis based on Ward's method and the square of the Euclidean distance, as well as hierarchical analysis based on Ward's method and Euclidean distance.

¹ Average age of a mother at the birth of the first child (years). Demographic Yearbook of Russia — 2002. M.: Rosstat, 2003. Retrieved from: https://gks.ru/bgd/regl/B02_16/IssWWW.exe/Stg/d010/i010330r.htm (Date of access: 11.06.2020).

² Comprehensive survey of the living conditions 2018. Federal State Statistics Service. Retrieved from: https://gks.ru/free_doc/new_site/KOUZ18/index.html (Date of access: 11.06.2020).

These methods provided the clearest division of the studied population into homogeneous segments.

Research results

During the analysis, 6 groups of stably connected regions were identified, which, in our opinion, could be considered as models of grandparents' labour in the Russian socio-economic space. General characteristics of these models are presented in Table 1.

The characteristics of these models become more vivid when the indicators included in the analysis are divided into two groups.

Group 1 includes indicators of the involvement of older women in the sphere of grandparents' labour. It is reflected through the level (share of grandmothers involved in the process of grandparents' labour on a daily basis) and the intensity (time spent on performing the functions of grandparents' labour) of this involvement. The differences between the models based on these indicators are shown in Figure 1. Note that the initial data in the identified models were standardised (presented as a ratio to the maximum observed level) for greater clarity of differences.

Group 2 combines indicators of the potential of older women in the sphere of grandparents' labour (according to their education level, health, social activity). Note that the health potential was measured through self-assessment of health, which, on the one hand, may not reflect the real situation of physical

Table 1

Models of grandparents' labour in the socio-economic space of Russia

| Model | Number of stably connected regions | Share of grandmothers involved in the process of grandparents' labour on a daily basis (of the total number of grandmothers) | Time spent on performing the functions of grandparents' labour | Education level | Self-assessment of health | Social activity |
|-------|------------------------------------|--|--|-----------------|---------------------------|-----------------|
| 1 | 6 | 20,4 | 20,5 | 11,92 | 3,14 | 1,40 |
| 2 | 4 | 19,7 | 14,4 | 12,69 | 3,13 | 1,95 |
| 3 | 6 | 19,8 | 13,6 | 11,60 | 3,19 | 1,31 |
| 4 | 17 | 14,0 | 20,1 | 11,71 | 3,28 | 1,03 |
| 5 | 13 | 13,2 | 13,3 | 11,19 | 3,24 | 0,99 |
| 6 | 9 | 12,6 | 13,7 | 11,99 | 3,19 | 1,19 |

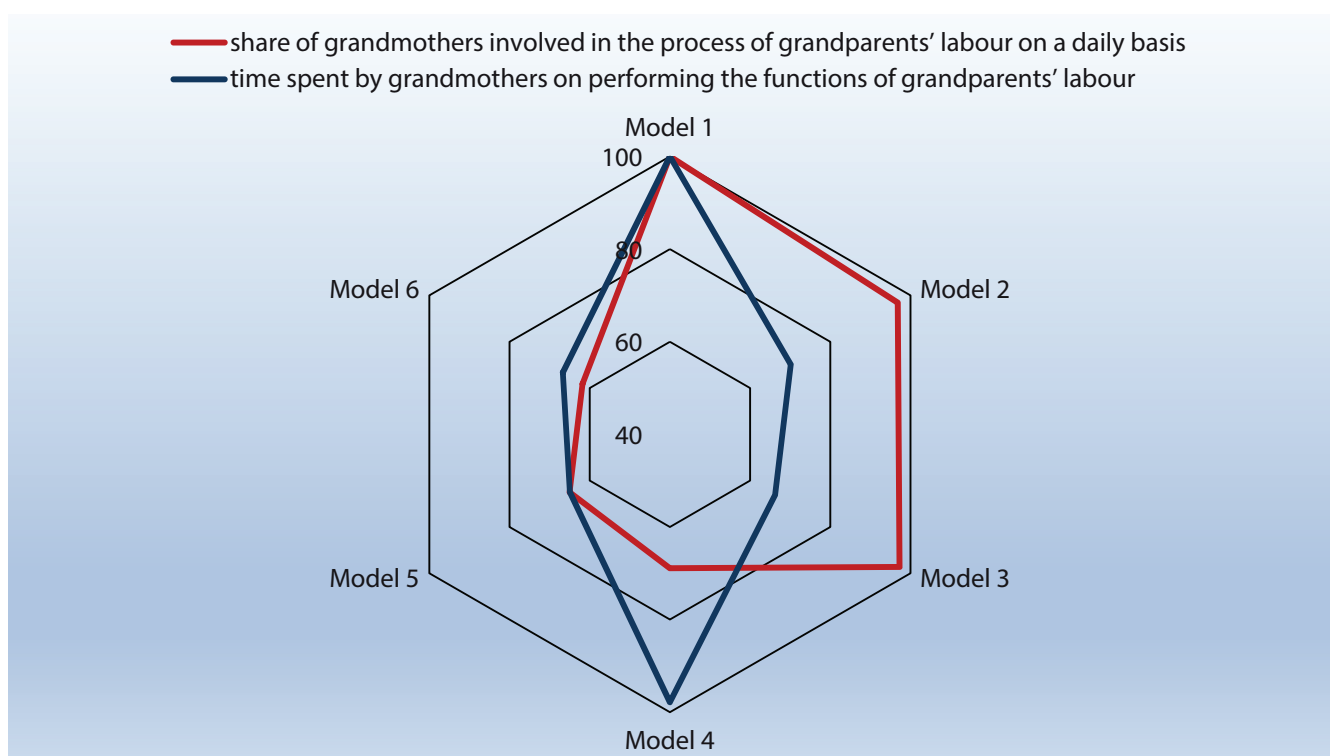


Fig. 1. Indicators of the involvement of grandmothers in grandparents' labour (standardised values)

Core region of the models of grandparents' labour in the socio-economic space of Russia

| Model | Core regions of the model |
|-------|--|
| 1 | Perm Krai, Republic of Buryatia, Komi Republic, Republic of Sakha (Yakutia), Republic of Tatarstan, Udmurt Republic |
| 2 | Moscow, Saint Petersburg, Leningrad Oblast, Tyva Republic |
| 3 | Vologda Oblast, Kirov Oblast, Kostroma Oblast, Altai Republic, Chelyabinsk Oblast, Yaroslavl Oblast |
| 4 | Altai Krai, Amur Oblast, Belgorod Oblast, Zabaykalsky Krai, Krasnoyarsk Krai, Orenburg Oblast, Oryol Oblast, Primorsky Krai, Pskov Oblast, Republic of Adygea, Republic of Bashkortostan, Republic of Mordovia, Republic of Khakassia, Saratov Oblast, Smolensk Oblast, Tver Oblast, Tyumen Oblast |
| 5 | Vladimir Oblast, Ivanovo Oblast, Kabardino-Balkarian Republic, Karachay-Cherkess Republic, Kursk Oblast, Lipetsk Oblast, Nizhny Novgorod Oblast, Omsk Oblast, Penza Oblast, Mari El Republic, Republic of North Ossetia-Alania, Tambov Oblast, Ulyanovsk Oblast. |
| 6 | Sevastopol, Irkutsk Oblast, Krasnodar Krai, Moscow Oblast, Novosibirsk Oblast, Samara Oblast, Sakhalin Oblast, Tula Oblast, Khabarovsk Krai |

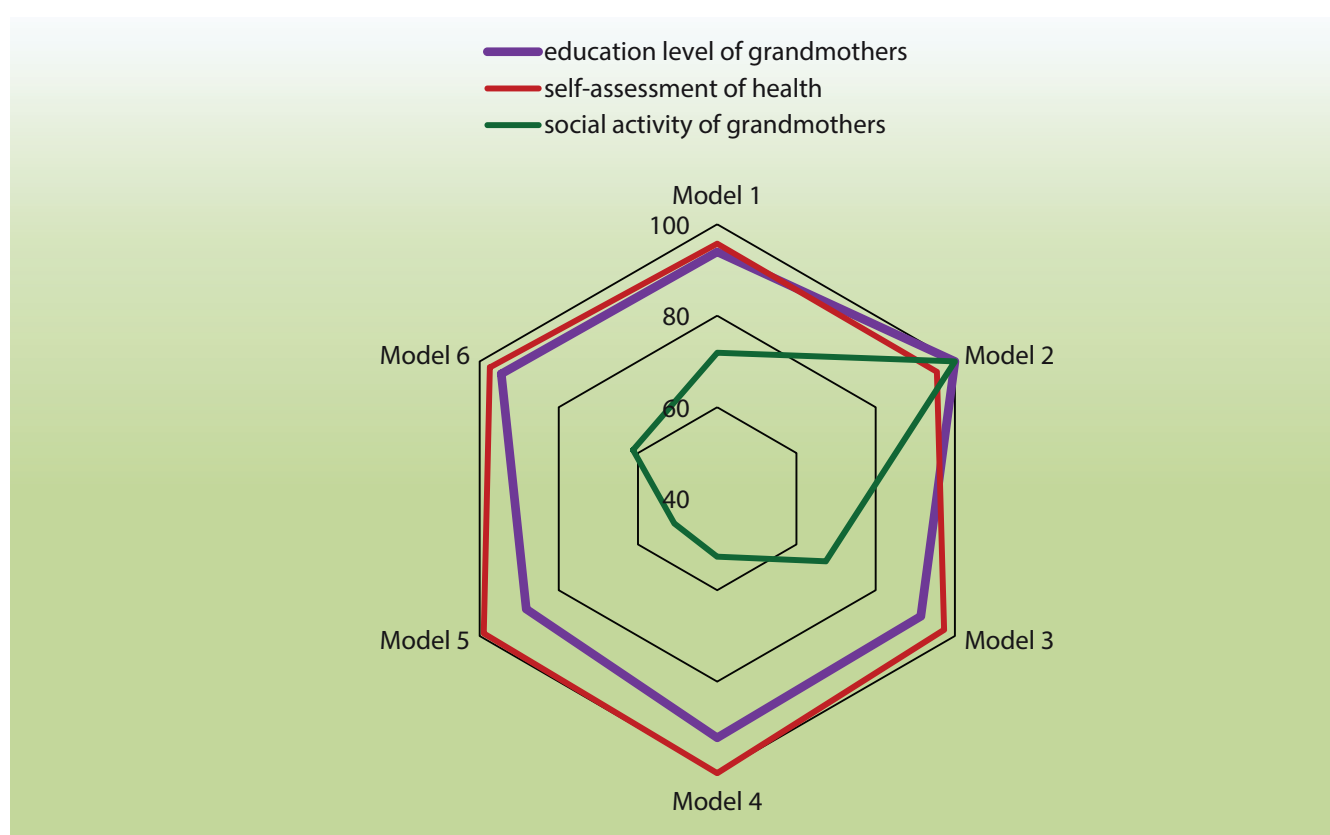


Fig. 2. Indicators of the potential of older women in grandparents' labour (standardised values)

health, but, on the other hand, can determine the readiness of women to implement the functions of grandparents' labour according to their education level, health, and social activity in older age. The differences between the models in terms of the indicators of this group (standardised) are shown in Figure 2.

The grandparents' labour is most actively implemented in the first model: the highest average indicators of the level and intensity are recorded in this type of regions (20.4 % grandmothers are involved in the daily care for grandchildren, weekly time cost of this type of labour is 20.5 hours). At the same time, the potential of subjects of grandparents' labour is far from the best in this type of regions: low self-assessment of health, average indicators of social activity and education. This cluster, for example, includes Perm Krai, Komi Republic and Tatarstan (the full regional composition of each model is presented in Table 2).

The second and third models are similar in terms of the level and intensity of grandparents' labour: in both models, there is a fairly high level of this type of labour among older women (19.7–19.8 %) with a

fairly low intensity (13.6–14.4 hours). The differences between the two models lie in the characteristics of the potential of labour subjects. In the regions of the second cluster, all indicators (except for self-assessment of health) are maximal: the highest average length of education (12.7 years), the largest number of social activities (1.9). In the regions of the third cluster, these indicators are noticeably lower (11.9 years and 1.4 activities, respectively). Moscow, Saint Petersburg, and Leningrad Oblast are examples of the second cluster regions. The third cluster includes Vologda, Kostroma and Yaroslavl Oblasts.

In terms of the involvement in grandparents' labour, the fourth model mirrors the second and third clusters: older women are not as involved in the process of caring for their grandchildren (only 14.0 % of the respondents), but those who are involved implement these functions quite intensively (average time cost is 20.1 hours per week). Subjects of grandparents' labour in the regions of this cluster demonstrate an average potential in terms of education and social activity and the highest self-assessment of health. Krasnoyarsk Krai, Orenburg and Saratov Oblasts are examples of regions included in this cluster.

In the fifth and sixth models of regions, there is a situation of passivity (in comparison with other clusters) in the sphere of grandparents' labour: there are low indicators of both level and intensity of this type of labour (on average, 12.6–13.2 % of grandmothers are involved in the daily care for grandchildren, weekly time cost is 13.3–13.7 hours). The differences between these clusters lie in the characteristics of the potential of subjects of grandparents' labour: in the sixth model, they are higher in education and social activity, and in the fifth model, they are higher in self-assessment of health. Krasnodar Krai, Samara and Novosibirsk Oblasts are examples of regions of the sixth cluster; Vladimir and Omsk Oblasts, Karachay-Cherkess Republic are examples of the fifth cluster.

Discussion of results and research questions

The results of our research indicate that Russian regions have various models of grandparents' labour in terms of the involvement of the older population in its implementation and the characteristics of the potential of the labour subjects. In the regions with more active grandparents' labour (which are included in the first and, to some extent, the second, third and fourth clusters), various social effects can be expected that affect both individual social groups and society as a whole. Scientists note such effects as an increasing life expectancy of people who are involved in caring for grandchildren [18], positive emotions and emotional support from grandchildren [19], strengthening positive motivation and improving mental and psychological well-being [20], improving physical health [21], reduced risk of death [22], increased level of happiness [23], etc. There are studies that reveal the positive effect of intergenerational interaction for children: for example, the impact on their learning outcomes [24], mitigation of family crises (in particular, divorce of parents [25]), even a decrease in child mortality [26]. The spread of such advantages of active grandparents' labour on a regional scale means that regions with higher intensity and prevalence of intergenerational transfers demonstrate lower level of social inequality between generations and simpler intergenerational relations. This means that such regions have more positive family dynamics and a higher level of social well-being of the population.

Since the advantages of active grandparents' labour in the region are obvious, it is relevant to raise the question of the possibility and the need to stimulate this type of labour, especially in regions where it is not yet widespread and where there are no potential social and economic benefits from it. The development and implementation of a mechanism to stimulate grandparents' labour not only raises the standard of living of the older population, but also allows employable parents to return to the labour market quicker, as well as stimulates family decisions in relation to having more children.

In our opinion, raising questions about strengthening and stimulating the involvement of older people in grandparents' labour should include issues of the quality of its implementation. The development of special competencies, which are necessary for a modern subject of grandparents' labour, can be organised at the regional level at the expense of budget funds of the respective entities of the Russian Federation.

Foreign countries have more than two decades of experience in such programmes¹. Individual examples of such courses exist in Russia: a joint project of the Department of Healthcare and the Department of Labour and Social Protection "I know the school curriculum better than my grandchild"

¹ Japanese Granny School Announces Recruitment. RBK. 14.11.2001. Retrieved from: <https://www.rbc.ru/society/14/11/2001/5703b3129a7947783a5a265bhttps://www.rbc.ru/society/14/11/2001/5703b3129a7947783a5a265b> (Date of access: 11.06.2020)

for Moscow residents of retirement age¹. Its target audience is grandparents who actively communicate with their grandchildren, who have taken on the functions of accompanying their grandchildren from school and helping them with their school homework. There is also the School of Effective Grandmothers at the University for the Elderly of the society “Knowledge”², programmes for grandparents at the School for Dads and Moms in Moscow³, etc. One-time events are also held in many regions, for example, the day of grandmothers and grandfathers at the “School of grandchildrenology” in the city of Lesnoy, Sverdlovsk Oblast⁴. The organisation of such programmes at the regional level shows the importance of developing special competencies necessary for effective intergenerational interaction, helps develop optimal programmes for older people, and, finally, involves a wider range of participants in grandparents’ labour in the region.

The presence of various models of grandparents’ labour in the Russian socio-demographic space, as well as positive social effects that are potentially possible in the regions where this labour is carried out in the most active way, generates an objective need to monitor the emerging regional situations. Regular demographic and statistical observation will create an information and analytical basis for the development of effective government measures to stimulate and activate grandparents’ labour. In addition, conducting regular nationwide studies of grandparenthood is correlated with the most important task of creating an information and analytical system for tracking the implementation of national projects developed by the Government of the Russian Federation. It primarily concerns the targets of the national project “Demography” and its federal project “Older Generation”, which aim to increase healthy life expectancy to 67 years⁵.

Conclusion

The study of grandparents’ labour presented in this article is a promising line in the development of the research on parental labour, since it correlates with the strategic objectives of the country’s socio-economic development.

The paper shows that there are several models of grandparents’ labour in Russia that are characterised by varying degrees of involvement of the population in this type of labour, as well as different potential in this sphere. The identified regional clusters do not have statistical stability due to the lack of specialisation and, therefore, the incomplete validity of the indicators used to identify these clusters. However, we have revealed the stable cores of each cluster, namely, models of grandparents’ labour that have developed in Russia. It is obvious that research of these particular regions will be needed for a deeper analysis of this type of labour.

Our research can also be expanded to include the study grandparents’ labour of its other subjects (grandfathers), as well as its differences from grandmothers’ labour. Another direction in the development of our research is the analysis of the features of grandparents’ labour for different categories of its subjects: the ones living with their grandchildren and apart from them; the ones living in the same city, region, or different Russian regions; as well as the study of numerous sociological aspects of the implementation of grandparents’ labour.

Moreover, the theoretical foundations for the existence of positive social effects of grandparenthood, which were generalised and presented in our study, raise the relevant question of the possibility and necessity of stimulating grandparents’ labour considering its specifics in different regions.

¹ A project for grandparents who help grandchildren do their homework. Mosgorzdrav.ru. Retrieved from: <https://mosgorzdrav.ru/ru-RU/school-program.html> (Date of access: 11.06.2020).

² Shvetsov I. School of effective grandmothers at the University for the Elderly of the society “Knowledge”. State TV and Radio Company “Vyatka”. Retrieved from: <https://www.gtrk-vyatka.ru/vesti/society/18570-shkola-effektivnyh-babushek-pri-universitete-dlya-pozhilyh-lyudey-obschestva-znanie.html> (Date of access: 11.06.2020).

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⁴ Day of grandmothers and grandfathers “School of grandchildrenology”. Kultura.rf. Retrieved from: <https://www.culture.ru/events/531722/den-babushek-i-dedushek-shkola-vnukovedeniya> (Date of access: 11.06.2020).

⁵ Passport of the federal project “Development and implementation of the programme of systemic support and improvement of the quality of life of citizens of the older generation “The older generation “. Approved by the Presidium of the Council under the President of the Russian Federation for Strategic Development and National Projects (protocol of 24.12.2018 №16) Retrieved from: <https://rosmintrud.ru/ministry/programms/demography/3> (Date of access: 11.06.2020).

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