NON-PAID PARENTAL LEAVE PERVASIVENESS: DIFFERENTIATION OF REGIONS BASED ON CLUSTER ANALYSIS

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Abstract

In Russia, parental leave lasts 3 years, but only 18 months of it are paid. Therefore, not all families use their right for the second part choosing to return to work. Our study aims to reveal the differentiation of Russian regions by the number of mothers exercising their right for leave while the child is from 18 months to 3 years of age. We calculated an indicator—the number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women living in the Russian region. Further, we validated the differentiation of values by regions and made cluster analysis. The major results are as follows. 1) We identified 4 clusters of Russian regions differing by the number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women. 2) The dynamics of median values of the number of women on parental leave show a similar tendency in a majority of clusters. The results received demonstrate a stable differentiation of Russian regions by the number of women exercising their right for parental leave.

Key words: cluster analysis, parental leave, non-paid parental leave, work-family conflict, corporate demographic policy

JEL Code: J11, J13, J18

Introduction

Parental leave is an instrument that secures workplace and salary when an employee has to take a break from work to make time for family and children. In most of the European countries, parental leave—or its part—is paid, apart from such countries as Cyprus, Greece, Ireland, Malta, the Netherlands, Spain, and the UK (Koslowski et al., 2022). Researchers argue that parental benefits paid during leave and calculated on the basis of the employee's salary are an effective instrument for stimulating birth rate among women with higher income

(Raute, 2019). Moreover, paid parental leave has a positive impact on physical and mental health of mothers in the post-natal period (Hewitt, Strazdins & Martin, 2017; Goodman & Poma, 2023). However, it is claimed that parental payments increase the leave duration—most often, a key reason for some mothers to return to work is the termination of payments (Kuhlenkasper & Kauermann, 2010).

Meanwhile, longer parental leave may have a negative effect on career prospects of parents—research shows that paid leave that lasts longer than a year decreases the chances of women to return to the labour market and overcomplicates their professional adaptation (Valentova, 2019). Also importantly, longer leave may result in lower wages of leave-takers (Frodermann, Wrohlich & Zucco, 2023). According to researchers, mothers on leave prioritise either only family or only work; if leave is long, women tend to be less focused on work rather than those who refuse to take long leave (Morgenroth & Heilman, 2017).

After a long period off work, employees most certainly face difficulties upon their return—they need time to refresh their skills, to adapt to the new intensive work schedule, and to establish connections with the employer and coworkers. In this transitive period, chances for the work-family conflict increase, which may affect physical and mental state of parents.

Researchers identify several instruments for mitigating the work-family conflict among women. One of them is the involvement of fathers into the child rearing—their contribution to taking care of children decreases mothers' burden and boosts their professional and creative potential (Farré & González, 2019). Another instrument, which ensures favourable conditions for balancing work and family, is corporate measures for supporting employees with children (Vahedi, et al., 2018; Costantini, et al., 2022).

In Russia, parental leave lasts 3 years and consists of two parts. The first part—until the child is 18 months of age—is well-paid (40% of the average income in the last two years), while the second part—when the child is from 18 months to 3 years of age—is either much less well-paid or not paid at all. Therefore, many parents use only the well-paid part and then return to work in order to ensure the financial well-being of their family. The resumption of the career is accompanied by a need to be actively involved in the family sphere because children require special attention at their early stages of life. As a result, parents return to work after 18-month leave and find themselves under tremendous pressure because of the strong work-family conflict.

Our study aims to identify the differentiation of Russian regions by the number of mothers using their right for childcare leave and having a child aged 18 months to 3 years.

Data and Methods

As a source of information, we used official Russian statistic data relevant for 1 January 2020–2022 for all 85 Russian regions by two indicators:

1) the number of women on childcare leave whose child is from 18 months to 3 years of age;

2) the number of fertility-age women (aged 15 to 49).

Based on these data, we calculated a new indicator—the number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women living in the Russian region.

The analysis of the variability of Russian regions by the indicators studied shows a high differentiation (Table 1); it justifies using the cluster analysis and identifying groups of regions which differ greatly by non-paid parental leave practices.

Tab. 1: Minimum and Maximum Regional Values of Indicators Studied

Variable	Minimum	Maximum
Number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women (for 1 January 2020)	44,81	238,80
Number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women (for 1 January 2021)	48,39	251,67
Number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women (for 1 January 2022)	48,80	232,55

Source: calculation of authors

For the cluster analysis, we used hierarchical analysis and k-means while validating the sustainability of clusters. To decide on the number of clusters, we analysed the dendrogram, agglomeration schedule and the size of clusters. The significance of differences between cluster centroids were checked through the non-parametric criterion—Kruskal-Wallis Test.

Results

Our study obtained the following results:

1) We revealed four clusters of Russian regions differing by the number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women (Table 2). The biggest number of such women for all three periods of time is observed in Cluster 4, which consists of 19 Russian regions. In Cluster 4, the median number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age

women approximately accounts for 183–198. Cluster 3, which includes the largest number of regions, demonstrates the smallest number of women on childcare leave whose child is from 18 months to 3 years of age (37 regions); the median values during the period observed range from 150 to 164. In Cluster 2 (25 regions), the number of such women is even smaller—129–139. Finally, Cluster 1 comprises only 4 regions, in which the number of women on childcare leave per 10,000 fertility-age women is nearly 2.5 times lower than that in Cluster 4.

Tab. 2: Descriptive Statistics by Clusters

Statistical Indicator	Cluster 1	Cluster 2	Cluster 3	Cluster 4
Number of regions	4	25	37	19
Number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women (for 1 January 2020)				
- mean	71.16	129.80	156.38	197.83
- standard deviation	21.23	12.40	8.58	21.50
- median	**72.84**	**131.32**	**158.13**	**188.74**
- minimum	44.81	101.16	137.52	172.19
- maximum	94.14	150.04	171.37	238.81
Number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women (for 1 January 2021)				
- mean	73.14	137.07	166.03	206.06
- standard deviation	19.80	13.48	8.37	22.06
- median	**77.00**	**139.11**	**164.95**	**198.72**
- minimum	48.39	107.62	151.47	177.91
- maximum	90.16	156.43	186.16	251.68
Number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women (for 1 January 2022)				
- mean	78.90	126.17	151.04	187.37
- standard deviation	25.92	9.77	6.07	19.33
- median	**82.35**	**129.18**	**150.76**	**183.58**
- minimum	48.80	99.92	140.98	159.48
- maximum	102.12	138.55	165.23	232.54

Source: calculation of authors

With Kruskal-Wallis Test, we validated significant differences of indicators between clusters (Table 3).

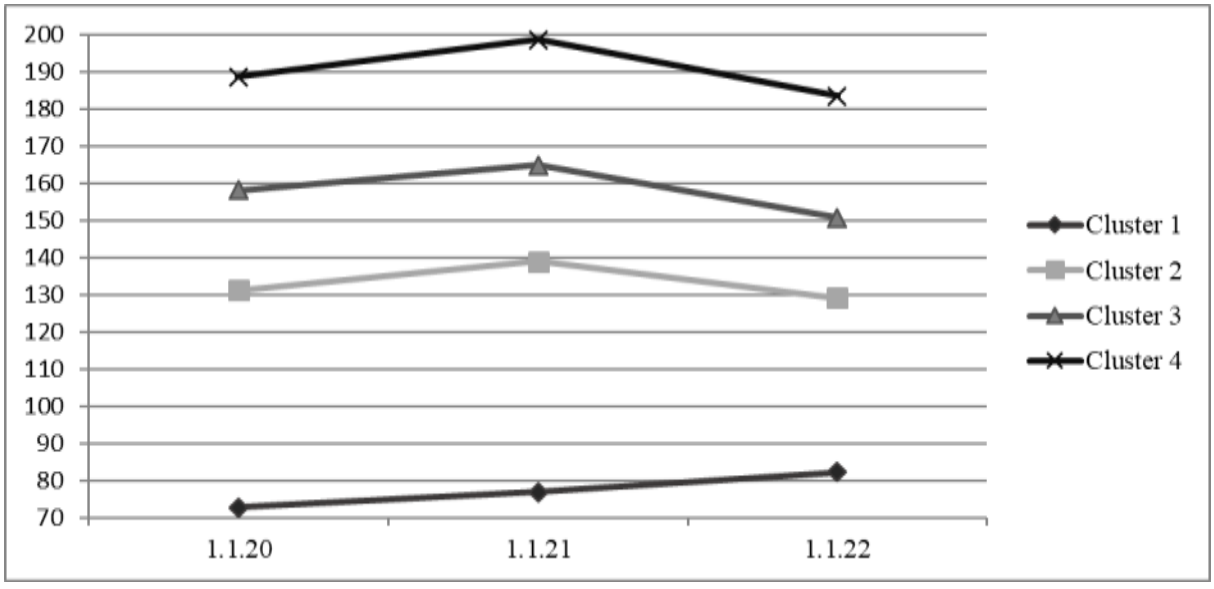
Tab. 3: Evaluation of Statistical Significance of Differences between Clusters by Clustering Variables: Kruskal-Wallis Test

	Number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women (for 1 January 2020)	Number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women (for 1 January 2021)	Number of women on childcare leave whose child is from 18 months to 3 years of age per 10,000 fertility-age women (for 1 January 2022)
Chi-Square	73.067	73.763	75.074
df	3	3	3
Asymp. Sig.	0.000	0.000	0.000

Source: calculation of authors

2) In most of the clusters, the dynamics of median values of women on non-paid parental leave show the same trend. In 2020–2021, median values increased, while 2022—as compared to 2021 and even 2020—saw a sharp decline. The only exception is Cluster 1 with the lowest values which grew gradually during the period observed (Figure 1).

Fig. 1: Dynamics of Median Values of Women on Childcare Leave whose Child is from 18 Months to 3 Years of Age per 10,000 Fertility-age Women Living between Clusters in 2020–2022.



Source: calculation of authors

Discussions

The clusters identified can be described as follows.

Cluster 1, the smallest one, includes 4 regions—the Republic of Dagestan, the Chechen Republic, the Kabardino-Balkarian Republic, and the Republic of Tyva. Despite the high birth rates, these regions show the lowest number of women taking care of children aged 18 months to 3 years. This distribution may probably result from several reasons. Firstly, these regions can be characterised as predominantly conservative; there, traditional attitudes to the role of men and women in the society are the strongest. The key actor on the labour market is a man who most often provides for the whole family. A woman, on the contrary, is attributed a traditional role of the housekeeper and the mother. Therefore, many women may willingly (or under the insistence of the family) refuse to work, while unemployment automatically deprives women of their right for parental leave—even for its paid part. Secondly, regions from Cluster 1 may demonstrate a higher unemployment rate. Therefore, even those women that strive for professional self-fulfilment cannot always find a job and thus ensure their right for parental leave in the future.

Cluster 4 consists of some well-developed regions—the largest cities Moscow and Saint-Petersburg, oil- and gas-producing regions (the Republic of Tatarstan, the Tyumen Region, the Yamalo-Nenets Autonomous District, the Khanty-Mansiysk Autonomous District, etc.), industrial regions (the Sverdlovsk Region, the Nizhniy Novgorod Region, the Samara Region, etc.). These regions show the highest number of women on non-paid parental leave. A favourable social and economic climate there may probably reduce the chances of losing family income during parental leave and motivate women not to return to work after the child is 18 months of age. Women willingly agree for a non-paid part of parental leave as they are certain that the spouse is able to provide for the family.

We assume that the increasing number of women on parental leave taking care of children aged 18 months to 3 years in the beginning of 2021 is due to the coronavirus pandemic. To protect children's health, mothers could have decided to minimise person-to-person contact and refused to return to the workplace. Additionally, the Government of Russia initiated a number of measures to support families with children during the pandemic; they could also motivate mothers to keep using parental leave. At the same time, a sharp decline of the indicator studied observed for 1 January 2022 may be due to the removal of coronavirus restrictions and the stabilisation of the labour market.

Conclusion

Our results testify to the sustainable differentiation of Russian regions by the number of women exercising their right for parental leave. We assume that the number of women using their non-paid part of leave is directly related to the socio-economic development of the region they live in. More economically developed regions demonstrate a bigger number of such women.

It is evident that women from other regions have to return to work after their child is 18 months of age more often in order to ensure the financial well-being of their family. While balancing professional and family responsibilities, women of this category face a serious work-family conflict. We argue that, as a possible solution to the issue, employees with children should receive comprehensive support from not only the government, but also the employer. Presumably, the need for corporate demographic measures is the most urgent in the regions with the hugest number of women who have to return to work after the child is 18 months of age. Our results may be of practical use while developing regional programmes for encouraging business to implement family-friendly policy.

Acknowledgment

This work is supported by the Russian Science Foundation under grant № 22-28-01847. https://rscf.ru/project/22-28-01847/

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