

# Appendix A

## Russian Elderly Wellbeing Index (REWI) indicators description

**Table 1:** REWI indicators description.

| Indicator label  | Source  | No. in Questionnaire | Question asked | Answer options | Variable description   |
|--|---|----------------------|----------------|----------------|--|
| 1.1. The real size of pensions, %  | Calculation of the Federal State Statistics Service of Russia (FSSS).<br>URL: <a href="https://fedstat.ru/indicator/31423">https://fedstat.ru/indicator/31423</a>   |                      |                |                | It is determined by dividing the nominal pension index by the consumer price index for the relevant time period.   |
| 1.2. The ratio of the average size of pensions to the subsistence minimum, % | FSSS calculations. URL: <a href="https://fedstat.ru/indicator/31437">https://fedstat.ru/indicator/31437</a>   |                      |                |                | It is determined by dividing the average size of the assigned pensions as of January 1 of the year following the reporting year by the subsistence minimum for the fourth quarter of the reporting year. |
| 1.3. The employment rate above the working age, %                            | Selective Employment Survey. URL: <a href="http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/generation">http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/generation</a> |                      |                |                | The ratio of the number of unemployed of a certain age group to the number of labor force of the corresponding age group, calculated as a percentage.  |

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| 1.4. Any paid work (natural or money form) or any employment over the past week, % | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a> | Section 5. Employment and working conditions. Question 1.  | Did you do any paid or in-kind work last week, or did you have a profitable occupation, including a different kind of side job (at least one hour during the week)? | Yes 1; No - 2   | The ratio of the number of respondents who answered "Yes" to the total number of respondents.  |
| 1.5. Satisfaction with the job, %  | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a> | Section 5. Employment and working conditions. Question 20. | Please indicate the degree of satisfaction with your main work in each of such aspects as ...   | <ol style="list-style-type: none"> <li>1. Earnings</li> <li>2. Reliability</li> <li>3. Responsibilities you perform</li> <li>4. Mode of operation</li> <li>5. Working conditions</li> <li>6. Distance to work (the time you have to spend to get to work)</li> <li>7. Professional satisfaction (able to apply their ideas at work, opportunities for professional growth)</li> <li>8. Moral satisfaction (feeling that you are doing "useful" work)</li> </ol> | First, the share of answers "Fully satisfied" of the total number of respondents for each question is calculated, then the arithmetic average of all eight values obtained is taken. |

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| 2.1. The educational level of pensioners, %  | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a> | Section 7. Education and training. Question 1. | What education do you have?               | 1. Personnel of the highest qualification: <ol style="list-style-type: none"> <li>1.1. Postgraduate;</li> <li>1.2. Doctoral;</li> <li>1.3. Residency;</li> <li>1.4. Adjuncture;</li> </ol> 2. Higher education: <ol style="list-style-type: none"> <li>2.1. Specialist programme;</li> <li>2.2. Master degree;</li> <li>2.3. Bachelor degree;</li> </ol> 3. Incomplete higher education (completed 3 courses or more); <ol style="list-style-type: none"> <li>4. Secondary vocational education;</li> <li>5. Secondary general education;</li> <li>6. Basic general education;</li> <li>7. Do not have a basic education.</li> </ol> | The sum of the options "Undergraduate, Master" and "Undergraduate" was used, i.e. share of people with higher education in the total number of respondents |
| 2.2. Help from children living separately, % | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a> | Section 1. Marital status. Question 7.         | Do your children who live alone help you? | <ol style="list-style-type: none"> <li>1. Provide financial assistance;</li> <li>2. Help with the housework;</li> <li>3. Buy products and other things;</li> <li>4. Caring during illness;</li> <li>5. Provide other</li> </ol>  | The share of answers "Yes" on five questions from the total number of respondents.   |

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|   |   |  |   | assistance.                                  |  |
| 2.3. Use of the Internet, %   | Selective federal statistical observation on the use of information technology by the population and information and telecommunication networks-2016 (ICT-2016). URL: <a href="http://www.gks.ru/free_doc/new_site/business/it/fed_nabl-croc/index.HTML">http://www.gks.ru/free_doc/new_site/business/it/fed_nabl-croc/index.HTML</a> |  |   |  | The distribution of the population, which is the active users of the Internet, in age group 55-72 years. |
| 2.4. Membership in voluntary organizations, %                           | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a>   | Section 9. Recreation and free time. Question 4. | Are you a member of any trade union, public, voluntary or charitable organizations (movements)?   | 1. Yes;<br>2. No;<br>3. Difficult to answer. | The share of answers "Yes" from the total number of respondents.   |
| 2.5. Engagement in recreational, entertaining and leisure activities, % | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a>   | Section 9. Recreation and free time. Question 3. | Have you been and how often in the last 12 months: - to the cinema<br>- in the theatre<br>- at the concert<br>- at an art exhibition in a museum<br>- in a restaurant, cafe, bar<br>- in a religious institution or at a meeting of believers<br>- at any sporting event as a spectator | 1. Yes;<br>2. No.                            | The share of answers "Yes" on seven questions from the total number of respondents.                      |

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| 3.1. Life expectancy in old age, years                                       | The official site of FSSS, the older generation, demographic indicators, life expectancy. URL: <a href="http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/generation">http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/generation</a> |  |   |   | The number of years that on average this generation will have to live with (peers of a certain age), provided that during the whole subsequent life in each age group the death rate will be the same as that of the population of that age during the compilation of the mortality table. |
| 3.2. Opportunity to be engaged in sports activities or physical exercises, % | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a>  | Section 9. Recreation and free time. Question 6. | Can you lead an active life along with everyone else?   | 1. Yes I can;<br>2. No, I can not, does not allow health, age;<br>3. I have no interest or desire;<br>4. Difficult to answer. | Share of answers "Yes, I can" from the total number of respondents   |
| 3.3. Self-assessed health, %   | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a>  | Section 10. Health and medical care. Question 1. | How do you assess your health? It is ...                | 1. Very good;<br>2. Good;<br>3. Satisfactory;<br>4. Bad;<br>5. Very bad;<br>6. Difficult to answer;<br>7. Refusal to answer.  | Cumulative share of "very good", "good" and "satisfactory" answers from the total number of respondents.   |
| 3.4. Self-reported absence of chronic  | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a>  | Section 10. Health and medical care. Question 2. | Do you have any chronic illness prescribed by a doctor? | 1. Yes;<br>2. No;<br>3. Difficult to answer.  | The share of answers "No" from the total number of respondents.  |

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| diseases, %  | ey0/index.html  |   |   |   |  |
| 3.5. Self-reported absence of bad habits (smoking and drinking abuse), % | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a> | Section 10. Health and medical care. Question 39 and Question 41. | Q1: Do you smoke?<br>Q2: Do you consume alcoholic beverages?                                | Q1: 1. I do not smoke;<br>2. I smoked, but quit;<br>3. I smoke occasionally;<br>4. I smoke daily. Q2:<br>1. Yes;<br>2. No;<br>3. Refusal to answer. | First, the cumulative share of answers “I do not smoke” and “I smoked, but quit” is calculated from the total number of respondents on question 39. Values are normalized by the minmax method. Then, the share of answers "No" from the total number of respondents on question 41 is calculated. Values are normalized by the minmax method. The arithmetic average of the normalized values for two questions is taken as the final indicator |
| 4.1. Self-assessed household's living conditions, %                      | Comprehensive monitoring of living conditions. Questionnaire for households. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a>                               | Section 2. Accommodation. Question 10.                            | How would you rate the overall condition of your dwelling (walls, ceiling, floor, windows)? | 1. Excellent;<br>2. Good;<br>3. Satisfactory;<br>4. The bad;<br>5. Very bad.  | Cumulative share of “very good”, “good” and “satisfactory” answers from the total number of respondents.   |

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| <p>4.2. Accessibility of social support institutions, %</p>  | <p>Q1: Official website of the FSSS, Older generation, Population size by region of the Russian Federation (at the beginning of the year). URL: <a href="http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/generation">http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/generation</a><br/> Q2: Execution of expenditure commitments of the constituent entities of the Russian Federation and municipalities for the implementation of measures of social support by categories of citizens. URL: <a href="http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/generation">http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/generation</a>.</p> |  |  |  | <p>It is calculated by dividing the number of places in inpatient facilities by the number of citizens over working age.</p>   |
| <p>4.3. Availability of social benefits (government support transfers for senior citizens categories), rubles/person</p> | <p>Q1: Official website of the FSSS, Older generation, Population size by region of the Russian Federation (at the beginning of the year). URL: <a href="http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/generation">http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/generation</a>.<br/> Q2: Inpatient social service institutions for senior citizens and disabled (adults) by subjects of the Russian Federation 2012-2016. URL: <a href="http://www.gks.ru/free_doc/new_site/population/generation/tab-ur2-6.htm">http://www.gks.ru/free_doc/new_site/population/generation/tab-ur2-6.htm</a></p>  |  |  |  | <p>It is calculated by dividing the total amount of expenditures of the consolidated budgets of the constituent entities of the Russian Federation and municipalities into the implementation of measures of social support for certain categories of citizens in all categories of citizens by the number of citizens older than working age.</p> |

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| 4.4. Satisfaction with the place of residence, %                  | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a> | Section 2. Opinion on living conditions in the locality. Question 2. | Can you say that you like to live in your locality (in your residence area)?  | 1. Yes;<br>2. No;<br>3. Difficult to answer. | The share of answers "Yes" from the total number of respondents.   |
| 4.5. Self-reported absence of problems in the residential area, % | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a> | Section 2. Opinion on living conditions in the locality. Question 3. | Are there any problems in your locality (in your residence area) related to the following: 1. High crime rate;<br>The inaccessibility of state and municipal services in the field of ...<br>2. Medical care;<br>3. Pre-school and school education;<br>Great remoteness<br>...<br>4. Outlets;<br>5. Pharmacies;<br>6. Cultural institutions;<br>7. Recreation and leisure venues;<br>8. Objects for physical education and sports;<br>Bad organization of work ...<br>9. Housing and | 1. Yes;<br>2. No;<br>3. Difficult to answer. | First, the share of negative answers for questions (4), (6), (7), (8), (9), (10), (16) is calculated, then the arithmetic average of all seven obtained values is taken. |

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|  |   |  | communal services;<br>10. Public transport;<br>11. General lack of comfort, lack of gardening;<br>12. Road conditions, road safety;<br>13. Vandalism (intentional destruction in public places and homes);<br>14. Drug distribution;<br>15. The spread of alcoholism;<br>16. Pollution of the environment;<br>17. Other. |            |   |
| 4.6. Self-reported absence of problems in medical services availability, % | Comprehensive monitoring of living conditions. Individual questionnaire for persons aged 15 years or over. URL: <a href="http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html">http://www.gks.ru/free_doc/new_site/kouz/survey0/index.html</a> | Section 2. Opinion on living conditions in the locality. Question 3. | As in 4.5.   | As in 4.5. | First, the share of negative answers for questions (2), (5) is calculated, then the arithmetic average of these two obtained values is taken. |

*Source:* Compiled by authors. Data used are taken from (1) “The Older Generation” (Federal State Statistics Service of the Russian Federation (FSSS/Rosstat) website), (2) the Rosstat’s official survey “Comprehensive monitoring of living conditions” (2014, 2016) and (3) the Selective federal statistical observation on the use of information technologies and telecommunications networks.

## Appendix B

### Russian Elderly Wellbeing Index (REWI) scores

**Table 1:** REWI-2014 scores.

| Federal district/Region         | Place in economic the ranking | Economic scores | Place in social ranking | Social scores | Place in health ranking | Health scores | Place in regional environment ranking | Regional environment scores | Overall ranking | REWI - 2014 |
|---------------------------------|-------------------------------|-----------------|-------------------------|---------------|-------------------------|---------------|---------------------------------------|-----------------------------|-----------------|-------------|
| <b>Russia, average</b>          |                               | <b>49.9</b>     |                         | <b>43.6</b>   |                         | <b>43.5</b>   |                                       | <b>57.2</b>                 |                 | <b>48.5</b> |
| <b>Central federal district</b> |                               | <b>50.9</b>     |                         | <b>46.0</b>   |                         | <b>41.4</b>   |                                       | <b>67.3</b>                 |                 | <b>51.4</b> |
| Moscow                          | 72                            | 42.2            | 2                       | 62.1          | 7                       | 50.7          | 1                                     | 79.4                        | 2               | 58.6        |
| Moscow Oblast                   | 8                             | 56.5            | 8                       | 50.7          | 10                      | 47.7          | 31                                    | 52.8                        | 5               | 51.9        |
| Smolensk Oblast                 | 59                            | 44.7            | 10                      | 50.4          | 52                      | 34.5          | 11                                    | 61.3                        | 19              | 47.7        |
| Kaluga Oblast                   | 14                            | 54.5            | 69                      | 32.8          | 25                      | 40.0          | 12                                    | 61.2                        | 22              | 47.1        |
| Belgorod Oblast                 | 25                            | 52.7            | 20                      | 42.1          | 45                      | 36.6          | 40                                    | 50.9                        | 30              | 45.6        |
| Tver Oblast                     | 38                            | 48.1            | 9                       | 50.6          | 60                      | 33.5          | 54                                    | 48.1                        | 36              | 45.1        |
| Tula Oblast                     | 29                            | 51.5            | 39                      | 38.1          | 26                      | 40.0          | 60                                    | 47.1                        | 42              | 44.2        |
| Yaroslav Oblast                 | 12                            | 55.1            | 65                      | 33.7          | 72                      | 30.8          | 49                                    | 49.6                        | 53              | 42.3        |
| Kursk Oblast                    | 46                            | 47.2            | 57                      | 35.1          | 53                      | 34.3          | 44                                    | 50.5                        | 56              | 41.8        |
| Vladimir Oblast                 | 49                            | 47.0            | 74                      | 30.6          | 68                      | 32.5          | 22                                    | 56.1                        | 59              | 41.5        |
| Ivanovo Oblast                  | 57                            | 45.1            | 30                      | 40.3          | 69                      | 32.1          | 59                                    | 47.3                        | 63              | 41.2        |
| Ryazan Oblast                   | 45                            | 47.4            | 79                      | 27.9          | 19                      | 43.4          | 66                                    | 45.7                        | 64              | 41.1        |
| Voronezh Oblast                 | 41                            | 48.0            | 75                      | 30.5          | 23                      | 41.6          | 69                                    | 43.8                        | 65              | 41.0        |
| Lipetsk Oblast                  | 64                            | 43.8            | 51                      | 36.3          | 66                      | 32.8          | 61                                    | 46.7                        | 71              | 39.9        |
| Kostroma Oblast                 | 80                            | 38.8            | 61                      | 34.5          | 48                      | 35.8          | 57                                    | 47.5                        | 73              | 39.1        |
| Oryol Oblast                    | 79                            | 39.6            | 43                      | 37.4          | 79                      | 27.6          | 56                                    | 47.6                        | 75              | 38.0        |

|   |    |             |    |             |    |             |    |             |    |             |
|---|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|
| Tambov Oblast                           | 74 | 41.9        | 66 | 33.4        | 73 | 30.6        | 71 | 43.2        | 79 | 37.3        |
| Bryansk Oblast                          | 78 | 40.0        | 82 | 25.2        | 40 | 37.0        | 68 | 45.6        | 81 | 36.9        |
| <b>Northwestern federal district</b>    |    | <b>52.2</b> |    | <b>53.5</b> |    | <b>44.8</b> |    | <b>54.7</b> |    | <b>51.3</b> |
| St. Petersburg                          | 3  | 65.7        | 1  | 63.2        | 16 | 43.9        | 6  | 64.5        | 1  | 59.3        |
| Republic of Karelia                     | 16 | 54.4        | 13 | 47.0        | 34 | 38.5        | 7  | 63.9        | 7  | 50.9        |
| Leningrad Oblast                        | 6  | 56.9        | 11 | 49.2        | 12 | 47.4        | 58 | 47.5        | 9  | 50.2        |
| Kaliningrad Oblast                      | 50 | 46.9        | 6  | 51.4        | 28 | 39.5        | 24 | 55.5        | 14 | 48.3        |
| Murmansk Oblast                         | 4  | 58.8        | 17 | 43.3        | 46 | 36.4        | 46 | 50.4        | 20 | 47.2        |
| Nenets Autonomous Okrug                 | 32 | 50.0        | 71 | 32.5        | 51 | 34.6        | 2  | 68.1        | 23 | 46.3        |
| Volgograd Oblast                        | 56 | 45.1        | 34 | 39.3        | 63 | 33.2        | 9  | 61.9        | 37 | 44.9        |
| Arkhangelsk Oblast                      | 82 | 36.4        | 5  | 52.6        | 44 | 36.8        | 55 | 47.8        | 44 | 43.4        |
| Komi Republic                           | 39 | 48.1        | 67 | 33.4        | 75 | 29.4        | 20 | 56.5        | 55 | 41.8        |
| Pskov Oblast                            | 58 | 45.0        | 14 | 45.8        | 82 | 23.4        | 72 | 42.6        | 72 | 39.2        |
| Novgorod Oblast                         | 63 | 43.8        | 40 | 38.1        | 80 | 27.3        | 73 | 42.2        | 77 | 37.8        |
| <b>Southern federal district</b>        |    | <b>45.3</b> |    | <b>41.9</b> |    | <b>44.4</b> |    | <b>49.0</b> |    | <b>45.1</b> |
| Sevastopol                              | 61 | 44.5        | 3  | <b>58.5</b> | 6  | <b>50.9</b> | 23 | <b>55.8</b> | 4  | 52.4        |
| Astrakhan Oblast                        | 17 | 54.4        | 36 | <b>38.9</b> | 22 | <b>42.1</b> | 29 | <b>53.2</b> | 21 | 47.1        |
| Republic of Kalmykia                    | 44 | 47.4        | 28 | 40.3        | 54 | 34.3        | 10 | 61.4        | 27 | 45.9        |
| Krasnodar Oblast                        | 75 | 41.8        | 23 | 41.8        | 21 | 42.6        | 30 | 52.9        | 38 | 44.8        |
| Volgograd Oblast                        | 62 | 44.1        | 25 | 41.4        | 15 | 44.0        | 74 | 42.0        | 47 | 42.9        |
| Rostov Oblast                           | 71 | 42.2        | 38 | 38.7        | 30 | 39.5        | 65 | 46.1        | 57 | 41.6        |
| Republic of Adygea                      | 65 | 43.6        | 78 | 29.2        | 37 | 37.7        | 26 | 54.5        | 62 | 41.2        |
| Republic of Crimea                      | 83 | 28.7        | 35 | 39.2        | 65 | 32.8        | 35 | 51.9        | 74 | 38.2        |
| <b>North Caucasian federal district</b> |    | <b>50.4</b> |    | <b>40.2</b> |    | <b>46.4</b> |    | <b>53.0</b> |    | <b>47.5</b> |
| Chechen Republic                        | 20 | 53.5        | 83 | 24.1        | 2  | 61.7        | 8  | 63.1        | 8  | 50.6        |
| Republic of Ingushetia                  | 76 | 40.5        | 77 | 29.7        | 3  | 59.7        | 25 | 54.7        | 24 | 46.2        |
| Republic of North Ossetia - Alania      | 13 | 54.8        | 45 | 37.0        | 20 | 42.9        | 62 | 46.7        | 31 | 45.3        |

|                                  |    |             |    |             |    |             |    |             |    |             |
|----------------------------------|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|
| Kabardino-Balkar Republic        | 60 | 44.5        | 46 | 37.0        | 9  | 48.3        | 39 | 51.2        | 34 | 45.2        |
| Republic of Dagestan             | 73 | 42.0        | 81 | 27.1        | 1  | 62.3        | 77 | 38.6        | 50 | 42.5        |
| Stavropol Krai                   | 30 | 51.0        | 60 | 34.5        | 31 | 39.2        | 75 | 41.2        | 60 | 41.5        |
| Karachay-Cherkess Republic       | 47 | 47.0        | 70 | 32.8        | 61 | 33.4        | 82 | 34.4        | 82 | 36.9        |
| <b>Volga federal district</b>    |    | <b>52.9</b> |    | <b>44.4</b> |    | <b>40.3</b> |    | <b>50.7</b> |    | <b>47.1</b> |
| Republic of Tatarstan            | 22 | 53.1        | 49 | 36.4        | 4  | 51.7        | 18 | 58.6        | 10 | 50.0        |
| Samara Oblast                    | 21 | 53.4        | 19 | 42.7        | 5  | 51.5        | 48 | 49.7        | 12 | 49.3        |
| Penza Oblast                     | 26 | 52.4        | 54 | 36.0        | 11 | 47.6        | 21 | 56.1        | 16 | 48.1        |
| Chuvash Republic                 | 19 | 54.1        | 58 | 35.0        | 18 | 43.4        | 16 | 59.2        | 17 | 47.9        |
| Nizhny Novgorod Oblast           | 23 | 53.0        | 68 | 33.3        | 14 | 44.7        | 14 | 60.5        | 18 | 47.9        |
| Udmurt Republic                  | 7  | 56.8        | 42 | 37.6        | 39 | 37.3        | 33 | 52.4        | 25 | 46.0        |
| Saratov Oblast                   | 67 | 43.5        | 50 | 36.3        | 13 | 45.3        | 19 | 57.9        | 28 | 45.8        |
| Republic of Mordovia             | 31 | 50.0        | 16 | 44.4        | 47 | 36.1        | 42 | 50.5        | 32 | 45.2        |
| Ulyanovsk Oblast                 | 53 | 46.1        | 59 | 34.8        | 8  | 49.0        | 52 | 48.4        | 40 | 44.6        |
| Orenburg Oblast                  | 36 | 48.6        | 62 | 34.2        | 56 | 34.2        | 28 | 53.8        | 48 | 42.7        |
| Republic of Bashkortostan        | 48 | 47.0        | 64 | 33.9        | 33 | 38.9        | 47 | 49.7        | 51 | 42.4        |
| Mari El Republic                 | 42 | 47.7        | 26 | 41.2        | 55 | 34.3        | 64 | 46.2        | 52 | 42.3        |
| Perm Krai                        | 69 | 43.1        | 29 | 40.3        | 58 | 33.8        | 51 | 48.7        | 61 | 41.5        |
| Kirov Oblast                     | 43 | 47.5        | 32 | 39.6        | 77 | 28.5        | 81 | 35.8        | 76 | 37.9        |
| <b>Ural federal district</b>     |    | <b>53.5</b> |    | <b>44.7</b> |    | <b>44.7</b> |    | <b>59.2</b> |    | <b>50.6</b> |
| Sverdlovsk Oblast                | 11 | 55.2        | 15 | 45.3        | 70 | 32.1        | 5  | 66.9        | 11 | 49.9        |
| Tyumen Oblast                    | 34 | 48.9        | 27 | 40.4        | 38 | 37.5        | 3  | 68.1        | 13 | 48.7        |
| Chelyabinsk Oblast               | 27 | 52.3        | 55 | 35.9        | 36 | 37.9        | 38 | 51.6        | 41 | 44.4        |
| Kurgan Oblast                    | 77 | 40.0        | 21 | 42.0        | 78 | 27.8        | 78 | 38.2        | 80 | 37.0        |
| <b>Siberian federal district</b> |    | <b>49.6</b> |    | <b>41.4</b> |    | <b>39.7</b> |    | <b>49.7</b> |    | <b>45.1</b> |
| Omsk Oblast                      | 10 | 55.3        | 22 | 41.8        | 49 | 35.0        | 43 | 50.5        | 29 | 45.6        |
| Tomsk Oblast                     | 24 | 52.9        | 53 | 36.1        | 62 | 33.3        | 17 | 58.6        | 33 | 45.2        |
| Novosibirsk Oblast               | 52 | 46.3        | 18 | 42.8        | 76 | 29.2        | 13 | 60.6        | 39 | 44.7        |

|                                     |    |             |    |             |    |             |    |             |    |             |
|-------------------------------------|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|
| Kemerovo Oblast                     | 18 | 54.2        | 56 | 35.7        | 67 | 32.7        | 34 | 52.0        | 43 | 43.7        |
| Irkutsk Oblast                      | 37 | 48.5        | 33 | 39.4        | 43 | 36.8        | 53 | 48.3        | 45 | 43.3        |
| Republic of Khakassia               | 40 | 48.1        | 63 | 34.1        | 42 | 36.9        | 32 | 52.6        | 46 | 42.9        |
| Altai Krai                          | 66 | 43.6        | 37 | 38.7        | 59 | 33.8        | 36 | 51.9        | 54 | 42.0        |
| Tuva Republic                       | 15 | 54.4        | 44 | 37.3        | 81 | 24.2        | 45 | 50.4        | 58 | 41.6        |
| Republic of Buryatia                | 81 | 38.2        | 31 | 39.7        | 29 | 39.5        | 67 | 45.6        | 66 | 40.8        |
| Krasnoyarsk Oblast                  | 33 | 49.5        | 52 | 36.2        | 64 | 32.9        | 70 | 43.4        | 69 | 40.5        |
| Altai Republic                      | 54 | 45.6        | 73 | 31.8        | 50 | 34.6        | 79 | 37.6        | 78 | 37.4        |
| Zabaykalsky Krai                    | 68 | 43.2        | 48 | 36.7        | 74 | 29.6        | 83 | 30.4        | 83 | 35.0        |
| <b>Far Eastern federal district</b> |    | <b>49.3</b> |    | <b>33.1</b> |    | <b>48.2</b> |    | <b>45.5</b> |    | <b>44.1</b> |
| Chukotka Autonomous Okrug           | 1  | 84.7        | 24 | 41.4        | 57 | 34.0        | 4  | 67.7        | 3  | 57.0        |
| Sakha (Yakutia) Republic            | 5  | 57.2        | 4  | 56.1        | 17 | 43.5        | 50 | 49.0        | 6  | 51.5        |
| Khabarovsk Krai                     | 35 | 48.7        | 7  | 51.2        | 32 | 39.0        | 27 | 54.2        | 15 | 48.2        |
| Magadan Oblast                      | 2  | 70.8        | 72 | 32.1        | 24 | 40.6        | 76 | 40.4        | 26 | 46.0        |
| Primorsky Krai                      | 55 | 45.2        | 12 | 47.0        | 35 | 37.9        | 41 | 50.6        | 35 | 45.2        |
| Amur Oblast                         | 70 | 42.3        | 47 | 36.7        | 27 | 39.7        | 37 | 51.7        | 49 | 42.6        |
| Jewish Autonomous Oblast            | 51 | 46.5        | 41 | 37.9        | 71 | 31.6        | 63 | 46.6        | 67 | 40.7        |
| Kamchatka Krai                      | 28 | 51.8        | 80 | 27.5        | 83 | 23.3        | 15 | 59.7        | 68 | 40.6        |
| Sakhalin Oblast                     | 9  | 55.5        | 76 | 30.4        | 41 | 37.0        | 80 | 37.2        | 70 | 40.0        |

Source: Compiled by authors. Data used are taken from (1) “The Older Generation” (Federal State Statistics Service of the Russian Federation (FSSS/Rosstat) website), (2) the Rosstat’s official survey “Comprehensive monitoring of living conditions” (2014, 2016) and (3) the Selective federal statistical observation on the use of information technologies and telecommunications networks.

**Table 2:** REWI-2016 scores.

| Federal district/Region         | Place in economic the ranking | Economic scores | Place in social ranking | Social scores | Place in health ranking | Health scores | Place in regional environment ranking | Regional environment scores | Overall ranking | REWI - 2016 |
|---------------------------------|-------------------------------|-----------------|-------------------------|---------------|-------------------------|---------------|---------------------------------------|-----------------------------|-----------------|-------------|
| <b>Russia, average</b>          |                               | <b>51.0</b>     |                         | <b>45.9</b>   |                         | <b>38.0</b>   |                                       | <b>53.0</b>                 |                 | <b>47.0</b> |
| <b>Central federal district</b> |                               | <b>51.6</b>     |                         | <b>49.1</b>   |                         | <b>34.4</b>   |                                       | <b>56.7</b>                 |                 | <b>47.9</b> |

|                                      |    |             |    |             |    |             |    |             |    |             |
|--------------------------------------|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|
| Belgorod Oblast                      | 18 | 57.3        | 47 | 42.6        | 56 | 36.2        | 9  | 58.4        | 23 | 48.6        |
| Bryansk Oblast                       | 76 | 46.6        | 68 | 37.1        | 36 | 39.8        | 50 | 50.2        | 69 | 43.4        |
| Vladimir Oblast                      | 27 | 56.2        | 35 | 44.7        | 52 | 36.6        | 13 | 57.6        | 21 | 48.8        |
| Voronezh Oblast                      | 32 | 55.4        | 59 | 39.7        | 50 | 37.6        | 28 | 53.6        | 41 | 46.6        |
| Moscow                               | 82 | 42.3        | 4  | 59.7        | 18 | 43.6        | 1  | 72.5        | 4  | 54.5        |
| Ivanovo Oblast                       | 73 | 47.1        | 65 | 37.7        | 57 | 36.2        | 29 | 53.6        | 66 | 43.6        |
| Kaluga Oblast                        | 9  | 58.8        | 41 | 44.2        | 51 | 37.0        | 45 | 50.9        | 27 | 47.7        |
| Kostroma Oblast                      | 39 | 54.1        | 66 | 37.3        | 30 | 40.7        | 51 | 50.1        | 52 | 45.5        |
| Kursk Oblast                         | 7  | 59.1        | 60 | 39.5        | 45 | 37.9        | 7  | 59.8        | 20 | 49.1        |
| Lipetsk Oblast                       | 19 | 57.3        | 73 | 35.3        | 35 | 39.9        | 37 | 52.0        | 46 | 46.1        |
| Moscow Oblast                        | 35 | 55.0        | 20 | 48.3        | 9  | 49.2        | 36 | 52.2        | 10 | 51.2        |
| Oryol Oblast                         | 59 | 50.1        | 56 | 40.3        | 74 | 30.7        | 30 | 52.8        | 68 | 43.5        |
| Ryazan Oblast                        | 54 | 51.2        | 31 | 45.0        | 8  | 49.7        | 22 | 54.4        | 15 | 50.1        |
| Smolensk Oblast                      | 67 | 47.7        | 57 | 40.2        | 65 | 33.9        | 42 | 51.4        | 70 | 43.3        |
| Tambov Oblast                        | 72 | 47.1        | 39 | 44.3        | 47 | 37.9        | 77 | 40.2        | 73 | 42.4        |
| Tver Oblast                          | 37 | 54.8        | 24 | 46.7        | 78 | 28.8        | 70 | 44.6        | 65 | 43.7        |
| Tula Oblast                          | 5  | 59.4        | 55 | 41.1        | 39 | 39.4        | 32 | 52.6        | 25 | 48.1        |
| Yaroslavskaia Oblast                 | 8  | 59.0        | 13 | 49.4        | 43 | 38.6        | 18 | 55.8        | 11 | 50.7        |
| <b>Northwestern federal district</b> |    | <b>50.6</b> |    | <b>58.5</b> |    | <b>39.3</b> |    | <b>54.1</b> |    | <b>50.6</b> |
| Arkhangelsk Oblast                   | 83 | 41.4        | 2  | 62.4        | 24 | 42.7        | 39 | 51.6        | 18 | 49.5        |
| Vologodskaya Oblast                  | 60 | 49.7        | 21 | 48.1        | 12 | 46.5        | 20 | 54.6        | 17 | 49.7        |
| St. Petersburg                       | 4  | 60.2        | 1  | 72.2        | 34 | 40.0        | 5  | 61.3        | 1  | 58.4        |
| Kaliningrad Oblast                   | 22 | 56.9        | 26 | 46.0        | 32 | 40.1        | 14 | 57.6        | 13 | 50.1        |
| Leningrad Oblast                     | 34 | 55.3        | 15 | 48.9        | 14 | 45.2        | 10 | 58.2        | 8  | 51.9        |
| Murmansk Oblast                      | 66 | 48.2        | 10 | 51.4        | 61 | 35.0        | 56 | 49.4        | 49 | 46.0        |
| Novgorod Oblast                      | 43 | 53.2        | 44 | 43.7        | 19 | 43.6        | 67 | 45.4        | 43 | 46.5        |
| Pskov Oblast                         | 50 | 51.8        | 9  | 52.2        | 80 | 26.7        | 21 | 54.4        | 44 | 46.3        |
| Republic of Karelia                  | 75 | 46.6        | 3  | 61.8        | 69 | 32.8        | 62 | 47.8        | 33 | 47.3        |

|   |    |             |    |             |    |             |    |             |    |             |
|---|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|
| Komi Republic                           | 58 | 50.4        | 42 | 44.1        | 84 | 24.4        | 58 | 48.6        | 74 | 41.9        |
| <b>Southern federal district</b>        |    | <b>52.6</b> |    | <b>44.2</b> |    | <b>39.0</b> |    | <b>49.5</b> |    | <b>46.3</b> |
| Astrakhan Oblast                        | 15 | 57.8        | 52 | 41.4        | 40 | 39.2        | 52 | 50.1        | 34 | 47.1        |
| Volgograd Oblast                        | 40 | 54.1        | 32 | 44.9        | 15 | 44.9        | 66 | 45.8        | 29 | 47.4        |
| Sevastopol                              | 48 | 52.6        | 6  | 58.0        | 4  | 53.0        | 57 | 49.2        | 5  | 53.2        |
| Krasnodar Oblast                        | 61 | 49.7        | 49 | 42.2        | 11 | 47.0        | 27 | 53.6        | 24 | 48.1        |
| Republic of Adygea                      | 49 | 52.0        | 78 | 32.5        | 62 | 34.8        | 78 | 40.2        | 80 | 39.9        |
| Republic of Kalmykia                    | 3  | 60.4        | 7  | 57.9        | 7  | 52.8        | 26 | 53.6        | 3  | 56.2        |
| Republic of Crimea                      | 70 | 47.2        | 29 | 45.3        | 28 | 42.0        | 68 | 45.4        | 57 | 45.0        |
| Rostov Oblast                           | 45 | 52.9        | 54 | 41.2        | 33 | 40.0        | 46 | 50.7        | 45 | 46.2        |
| <b>North Caucasian federal district</b> |    | <b>49.9</b> |    | <b>36.9</b> |    | <b>43.0</b> |    | <b>47.6</b> |    | <b>44.3</b> |
| Kabardino-Balkar Republic               | 23 | 56.8        | 45 | 43.0        | 25 | 42.2        | 81 | 34.3        | 61 | 44.1        |
| Karachay-Cherkess Republic              | 44 | 53.1        | 77 | 32.7        | 63 | 34.2        | 64 | 46.7        | 75 | 41.7        |
| Republic of Dagestan                    | 31 | 55.7        | 82 | 28.8        | 5  | 52.8        | 35 | 52.2        | 31 | 47.4        |
| Republic of Ingushetia                  | 47 | 52.7        | 64 | 38.0        | 3  | 53.8        | 84 | 31.9        | 60 | 44.1        |
| Republic of North Ossetia - Alania      | 16 | 57.5        | 37 | 44.3        | 10 | 49.1        | 47 | 50.5        | 12 | 50.4        |
| Stavropol Krai                          | 46 | 52.8        | 40 | 44.2        | 23 | 42.7        | 73 | 43.0        | 51 | 45.7        |
| Chechen Republic                        | 84 | 24.8        | 84 | 20.9        | 1  | 69.7        | 2  | 64.9        | 55 | 45.1        |
| <b>Volga federal district</b>           |    | <b>56.5</b> |    | <b>43.3</b> |    | <b>41.8</b> |    | <b>52.7</b> |    | <b>48.6</b> |
| Kirov Oblast                            | 41 | 53.7        | 30 | 45.2        | 82 | 24.9        | 80 | 38.0        | 78 | 40.5        |
| Nizhny Novgorod Oblast                  | 36 | 54.9        | 69 | 36.9        | 26 | 42.2        | 19 | 55.6        | 30 | 47.4        |
| Orenburg Oblast                         | 12 | 58.4        | 58 | 40.2        | 59 | 35.9        | 60 | 48.4        | 50 | 45.7        |
| Penza Oblast                            | 20 | 57.2        | 71 | 36.5        | 53 | 36.6        | 23 | 54.1        | 47 | 46.1        |
| Perm Krai                               | 52 | 51.5        | 33 | 44.8        | 41 | 38.9        | 24 | 54.1        | 32 | 47.3        |
| Republic of Bashkortostan               | 26 | 56.4        | 34 | 44.8        | 20 | 43.5        | 49 | 50.2        | 22 | 48.7        |
| Mari El Republic                        | 62 | 49.2        | 53 | 41.3        | 70 | 32.6        | 17 | 56.8        | 56 | 45.0        |
| Republic of Mordovia                    | 2  | 61.3        | 22 | 47.6        | 22 | 43.1        | 15 | 57.3        | 6  | 52.3        |

|                                     |    |             |    |             |    |             |    |             |    |             |
|-------------------------------------|----|-------------|----|-------------|----|-------------|----|-------------|----|-------------|
| Republic of Tatarstan               | 1  | 62.8        | 23 | 46.9        | 2  | 56.4        | 3  | 63.9        | 2  | 57.5        |
| Samara Oblast                       | 17 | 57.3        | 38 | 44.3        | 6  | 52.8        | 34 | 52.5        | 9  | 51.7        |
| Saratov Oblast                      | 25 | 56.5        | 72 | 35.8        | 27 | 42.1        | 53 | 50.0        | 48 | 46.1        |
| Udmurt Republic                     | 10 | 58.6        | 18 | 48.8        | 38 | 39.5        | 54 | 49.7        | 19 | 49.1        |
| Ulyanovsk Oblast                    | 21 | 57.2        | 76 | 34.0        | 21 | 43.4        | 31 | 52.7        | 39 | 46.8        |
| Chuvash Republic                    | 13 | 58.4        | 75 | 35.1        | 16 | 44.8        | 25 | 54.0        | 26 | 48.1        |
| <b>Ural federal district</b>        |    | <b>50.8</b> |    | <b>47.2</b> |    | <b>38.5</b> |    | <b>52.5</b> |    | <b>47.3</b> |
| Kurgan Oblast                       | 65 | 49.1        | 27 | 45.4        | 77 | 28.8        | 65 | 46.3        | 72 | 42.4        |
| Sverdlovsk Oblast                   | 51 | 51.8        | 28 | 45.4        | 42 | 38.7        | 40 | 51.6        | 38 | 46.8        |
| Tyumen Oblast                       | 81 | 43.0        | 16 | 48.8        | 66 | 33.8        | 4  | 62.2        | 36 | 46.9        |
| Chelyabinsk Oblast                  | 28 | 56.0        | 46 | 42.8        | 44 | 38.3        | 43 | 51.4        | 35 | 47.1        |
| Yamalo-Nenets Autonomous Okrug      | 68 | 47.5        | 14 | 49.0        | 64 | 34.1        | 16 | 57.0        | 37 | 46.9        |
| <b>Siberian federal district</b>    |    | <b>50.9</b> |    | <b>39.8</b> |    | <b>36.5</b> |    | <b>47.6</b> |    | <b>43.7</b> |
| Altai Krai                          | 55 | 50.5        | 17 | 48.8        | 55 | 36.4        | 48 | 50.4        | 42 | 46.5        |
| Zabaykalsky Krai                    | 57 | 50.4        | 63 | 39.0        | 68 | 33.1        | 83 | 32.2        | 82 | 38.7        |
| Irkutsk Oblast                      | 53 | 51.2        | 48 | 42.6        | 48 | 37.6        | 72 | 44.3        | 62 | 43.9        |
| Kemerovo Oblast                     | 38 | 54.4        | 70 | 36.7        | 71 | 32.3        | 74 | 42.3        | 76 | 41.4        |
| Krasnoyarsk Oblast                  | 56 | 50.4        | 50 | 42.1        | 49 | 37.6        | 41 | 51.5        | 53 | 45.4        |
| Novosibirsk Oblast                  | 63 | 49.1        | 43 | 43.7        | 58 | 36.1        | 12 | 57.8        | 40 | 46.7        |
| Omsk Oblast                         | 6  | 59.4        | 79 | 32.3        | 60 | 35.8        | 44 | 51.2        | 59 | 44.7        |
| Altai Republic                      | 33 | 55.4        | 83 | 28.2        | 83 | 24.5        | 79 | 40.1        | 84 | 37.0        |
| Republic of Buryatia                | 29 | 55.8        | 25 | 46.1        | 31 | 40.2        | 11 | 58.1        | 14 | 50.1        |
| Tuva Republic                       | 30 | 55.7        | 67 | 37.2        | 37 | 39.6        | 59 | 48.4        | 54 | 45.2        |
| Republic of Khakassia               | 14 | 58.0        | 74 | 35.3        | 72 | 31.7        | 55 | 49.5        | 67 | 43.6        |
| Tomsk Oblast                        | 74 | 46.8        | 80 | 31.9        | 67 | 33.2        | 38 | 51.8        | 77 | 40.9        |
| <b>Far Eastern federal district</b> |    | <b>46.2</b> |    | <b>45.4</b> |    | <b>34.6</b> |    | <b>47.0</b> |    | <b>43.3</b> |
| Amur Oblast                         | 79 | 43.7        | 61 | 39.3        | 81 | 26.4        | 71 | 44.5        | 83 | 38.5        |
| Jewish Autonomous Oblast            | 69 | 47.4        | 19 | 48.7        | 79 | 28.8        | 69 | 45.3        | 71 | 42.5        |

|                           |    |      |    |      |    |      |    |      |    |      |
|---------------------------|----|------|----|------|----|------|----|------|----|------|
| Kamchatka Krai            | 77 | 45.1 | 5  | 58.9 | 46 | 37.9 | 61 | 48.0 | 28 | 47.5 |
| Magadan Oblast            | 24 | 56.8 | 81 | 30.1 | 76 | 29.1 | 75 | 40.8 | 81 | 39.2 |
| Primorsky Krai            | 64 | 49.1 | 51 | 41.7 | 29 | 40.8 | 63 | 47.8 | 58 | 44.8 |
| Sakha (Yakutia) Republic  | 71 | 47.2 | 8  | 56.6 | 17 | 44.6 | 8  | 59.5 | 7  | 52.0 |
| Sakhalin Oblast           | 42 | 53.4 | 36 | 44.4 | 54 | 36.6 | 76 | 40.5 | 64 | 43.7 |
| Khabarovsk Krai           | 78 | 44.2 | 12 | 49.4 | 75 | 29.3 | 33 | 52.6 | 63 | 43.9 |
| Chukotka Autonomous Okrug | 11 | 58.5 | 62 | 39.1 | 73 | 31.1 | 82 | 32.2 | 79 | 40.2 |

*Source:* Compiled by authors. Data used are taken from (1) “The Older Generation” (Federal State Statistics Service of the Russian Federation (FSSS/Rosstat) website), (2) the Rosstat’s official survey “Comprehensive monitoring of living conditions” (2014, 2016) and (3) the Selective federal statistical observation on the use of information technologies and telecommunications networks.

\* Khanty-Mansi Autonomous Okrug and Nenets Autonomous Okrug are excluded from the final rating of REWI-2016 due to the lack of values for several indicators.

# Appendix C

## Russian Elderly Wellbeing Index (REWI) clustering dendrograms by individual domains

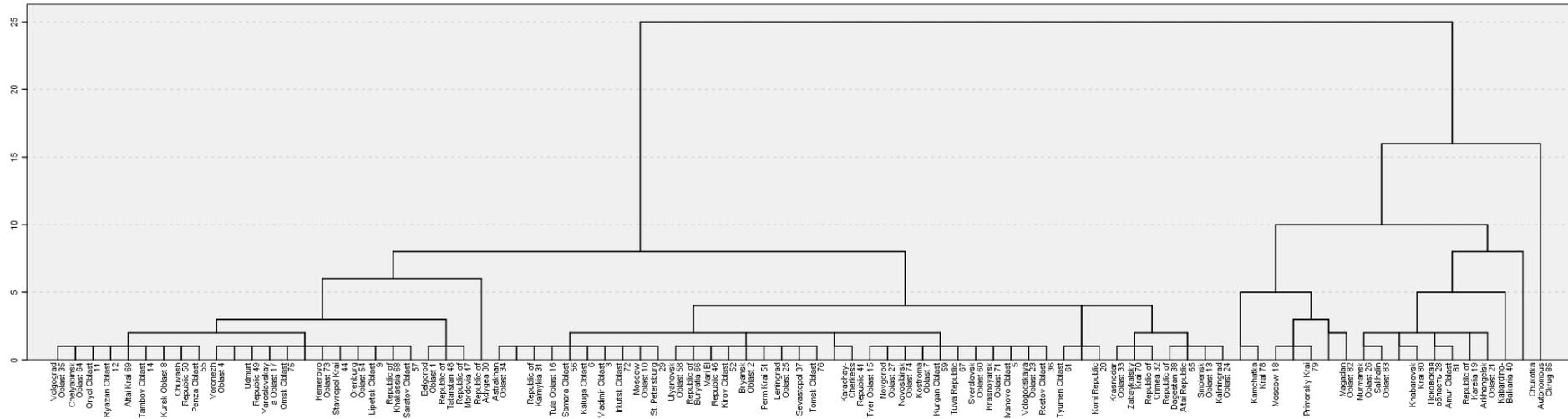


Figure 1: Hierarchical clustering (between-groups linkage method, squared Euclidean distance): an economic dimension dendrogram.

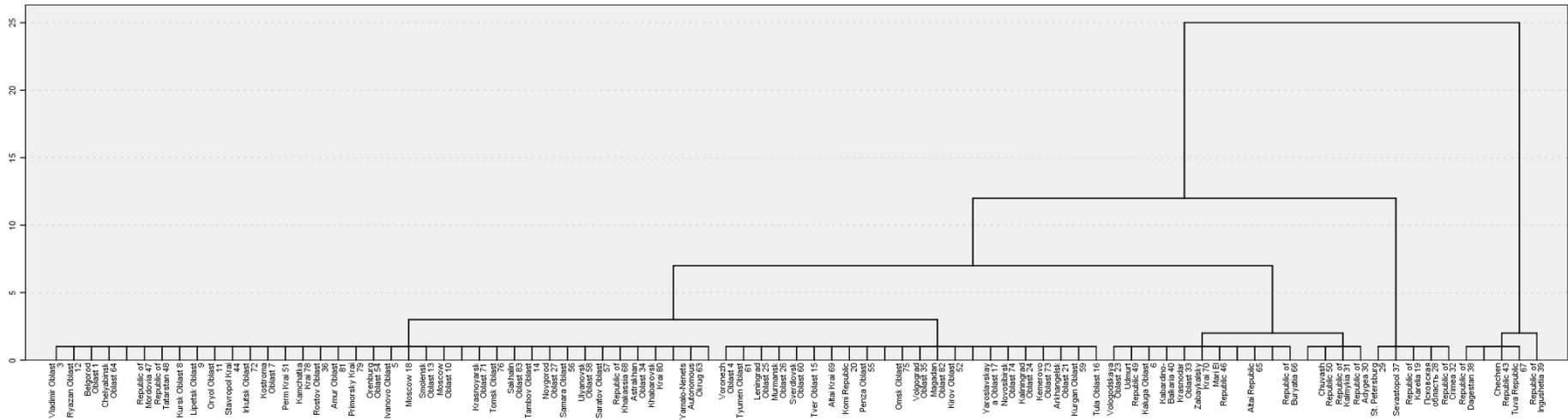
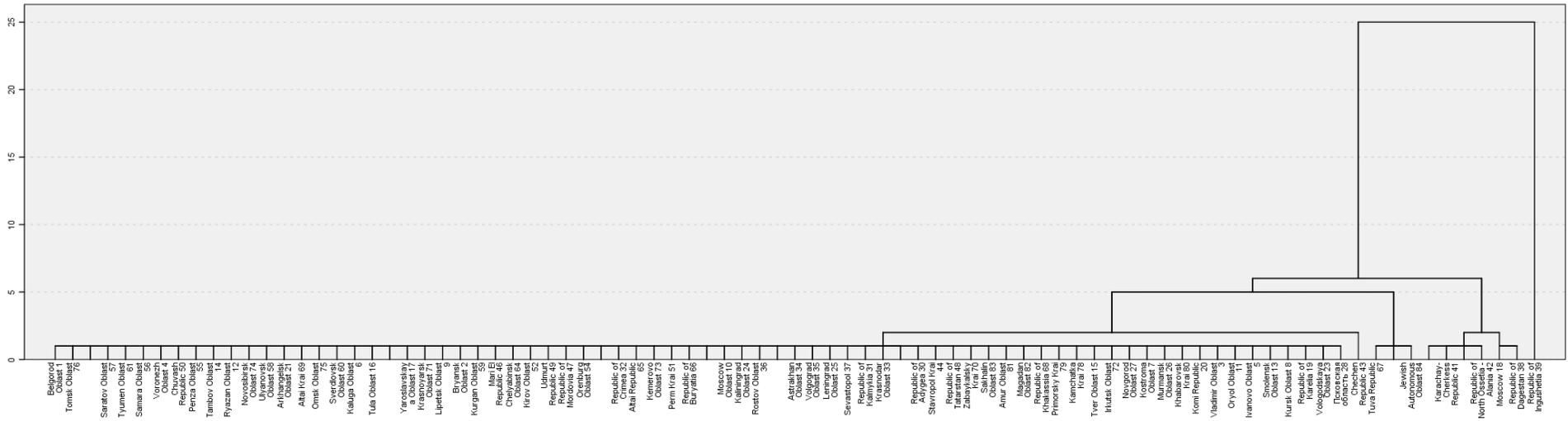
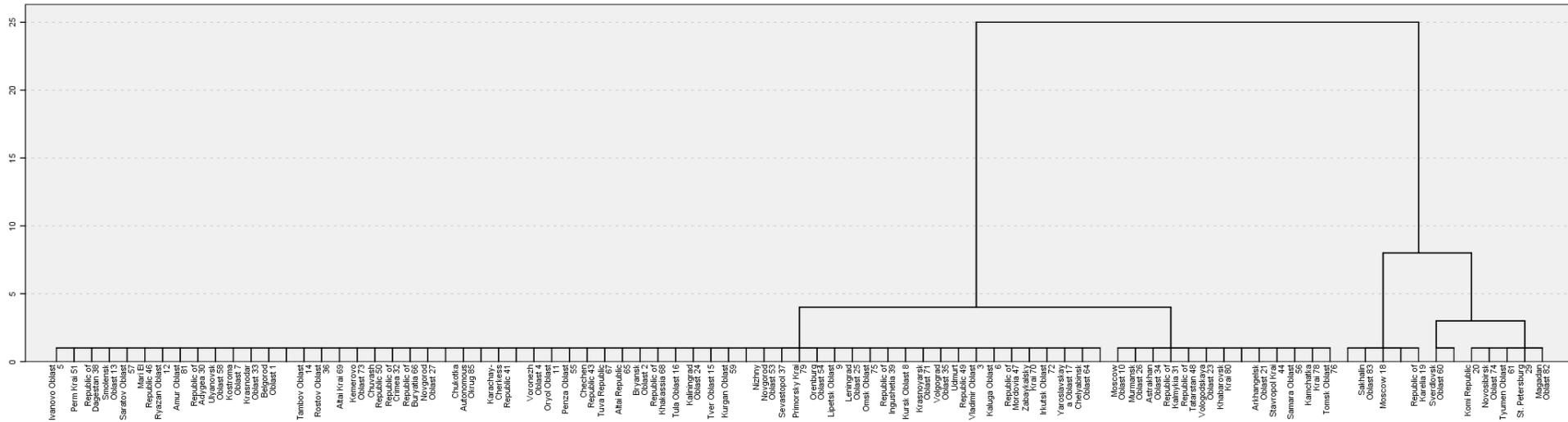


Figure 2: Hierarchical clustering (between-groups linkage method, squared Euclidean distance): a social dimension dendrogram.



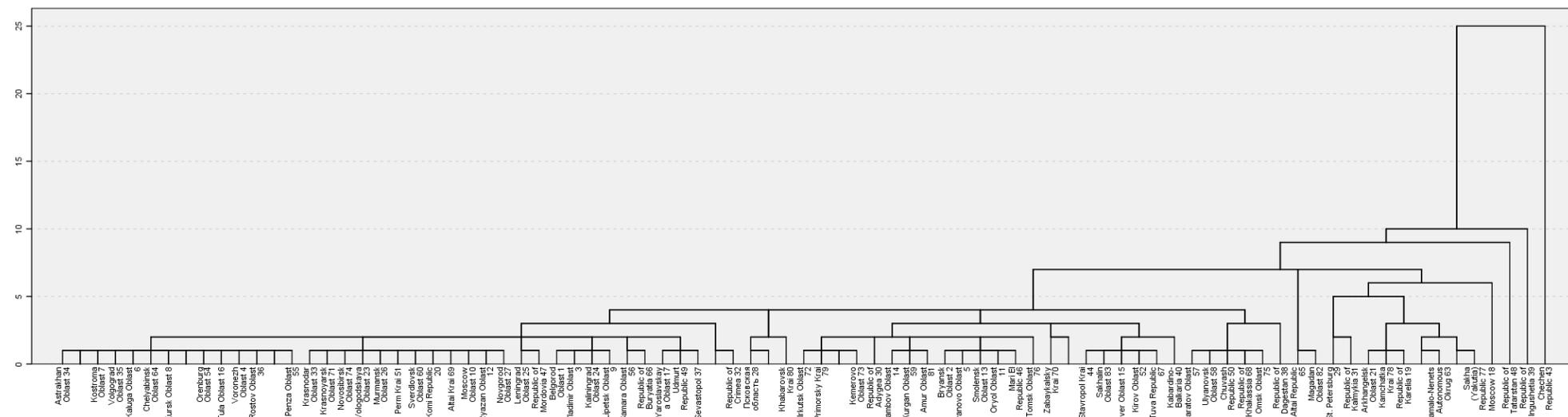
**Figure 3:** Hierarchical clustering (between-groups linkage method, squared Euclidean distance): a health dimension dendrogram.



**Figure 4:** Hierarchical clustering (between-groups linkage method, squared Euclidean distance): a regional environment dimension dendrogram.

# Appendix D

## Russian Elderly Wellbeing Index (REWI) clustering dendrogram (all domains within the REWI)



**Figure 1:** Hierarchical clustering (between-groups linkage method, squared Euclidean distance): a dendrogram for the entire REWI-2016.

**Table 1:** Regions in the cluster.

| Region                         | Cluster | Region               | Cluster | Region                    | Cluster |
|--------------------------------|---------|----------------------|---------|---------------------------|---------|
| Yamalo-Nenets Autonomous Okrug | 1       | Belgorod Oblast      | 4       | Zabaykalsky Krai          | 15      |
| Kaluga Oblast                  | 1       | Vladimir Oblast      | 4       | Chukotka Autonomous Okrug | 15      |
| Kostroma Oblast                | 1       | Lipetsk Oblast       | 4       | Tver Oblast               | 16      |
| Kursk Oblast                   | 1       | Kaliningrad Oblast   | 4       | StavropolKrai             | 16      |
| Tula Oblast                    | 1       | Samara Oblast        | 5       | Kirov Oblast              | 16      |
| Astrakhan Oblast               | 1       | Republic of Buryatia | 5       | Tuva Republic             | 16      |
| Volgograd Oblast               | 1       | Yaroslavskaya Oblast | 6       | Sakhalin Oblast           | 16      |
| Rostov Oblast                  | 1       | Sevastopol           | 6       | Kabardino-Balkaria        | 17      |

|                                  |   |                            |    |                                |    |
|----------------------------------|---|----------------------------|----|--------------------------------|----|
| Nizhny Novgorod Oblast           | 1 | Udmurt Republic            | 6  | Chuvash Republic               | 18 |
| Orenburg Oblast                  | 1 | Republic of Crimea         | 7  | Saratov Oblast                 | 18 |
| Penza Oblast                     | 1 | Nenets Autonomous Okrug    | 7  | Ulyanovsk Oblast               | 18 |
| Chelyabinsk Oblast               | 1 | Pskov Oblast               | 8  | Republic of Khakassia          | 18 |
| Republic of North Ossetia-Alania | 1 | Jewish Autonomous Oblast   | 8  | Omsk Oblast                    | 18 |
| Republic of Bashkortostan        | 1 | Khabarovsk Krai            | 9  | Republic of Dagestan           | 19 |
| Moscow Oblast                    | 2 | Irkutsk Oblast             | 10 | Altai Republic                 | 20 |
| Ryazan Oblast                    | 2 | Kemerovo Oblast            | 10 | Magadan Oblast                 | 20 |
| Komi Republic                    | 2 | Primorsky Krai             | 10 | St.Petersburg                  | 21 |
| Vologodskaya Oblast              | 2 | Karachay-Cherkess Republic | 10 | Republic of Kalmykia           | 21 |
| Murmansk Oblast                  | 2 | Republic of Adygea         | 11 | Republic of Karelia            | 22 |
| Novgorod Oblast                  | 2 | Tambov Oblast              | 12 | Arkhangelsk Oblast             | 22 |
| Krasnodar Oblast                 | 2 | Kurgan Oblast              | 12 | Kamchatka Krai                 | 22 |
| Perm Krai                        | 2 | Amur Oblast                | 12 | Yamalo-Nenets Autonomous Okrug | 23 |
| Sverdlovsk Oblast                | 2 | Bryansk Oblast             | 13 | Tyumen Oblast                  | 23 |
| Altai Krai                       | 2 | Ivanovo Oblast             | 13 | Sakha (Yakutia) Republic       | 24 |
| Krasnoyarsk Oblast               | 2 | Oryol Oblast               | 13 | Khanty-Mansi Autonomous Okrug  | 24 |
| Novosibirsk Oblast               | 2 | Smolensk Oblast            | 13 | Moscow                         | 25 |
| Leningrad Oblast                 | 3 | Mari El Republic           | 13 | Republic of Tatarstan          | 26 |
| Republic of Mordovia             | 3 | Tomsk Oblast               | 14 | Republic of Ingushetia         | 27 |
|                                  |   |                            |    | Chechen Republic               | 28 |

Source: Compiled by authors.