**Mobility in the labour market as the strategy of economic activity in older age**

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# Introduction

In Russia, as in the majority of countries, the population is aging rapidly. For the last 10 years, the Russian population above employable age (55 and 60 years for women and men correspondingly) has risen from 29.7 million (20.8% of the population in 2007) to 36.7 million (25.0% of the population in 2017). According to the medium population forecast, the share of the elderly will increase to 30% of the population by 2036 (43.8 million)[[1]](#footnote-1). This tendency challenges health care and social security systems, pension provision as well as the labour market.

Meanwhile, the process of population ageing has already emerged in some spheres of society. Not only is the Russian pension system experiencing growing numbers of pension recipients as a result in its deficit, but also the labour market is recognizing the growing number of employed pensioners. Right up to the beginning of 2016, the growing number of employable pensioners has increased as well as its share in the total number of pensioners (15.3 million or 35.7% of the population)[[2]](#footnote-2). In the last two years these figures demonstrate negative dynamics (9.9 million or 22.9% at the beginning of 2017) due to the introduction of legislative restrictions on pension indexation of employed pensioners (Sinyavskaya, Ermolina, 2017). At the same time, our empirical calculations on RLMS[[3]](#footnote-3) (2016) show a slight decrease of the pensioners’ employment rate with a moderate growth of informal employment in the main place of work. In other words, the changing of pension legislation has led to the decline of the number of employed pensioners although this was compensated by transition of pensioners to informal employment.

The majority of the elderly continue working at the same job as before becoming a pensioner (Maleva, Sinyavskaya, 2007). Meanwhile, individuals of retirement and pre-retirement ages often face the challenge of maintaining their job. In some cases, employers tend to hire younger employees due to their modern knowledge and higher efficiency instead of older ones (Bratsberg et al., 2003). Unlike most developed countries, in Russia working experience hardly contributes to a higher wage in maturity (Kapeliushnikov, 2006). Thereby, one of the potential strategies to maintain employment in older age may be changing job. On one hand, this transition can be forced, because of impairing health, high work load, the pressure of bosses. On the other hand, the elderly’s working experience may be in-demand, not at the current job but in the related field.

This research aims to evaluate the influence of reaching pensionable age and either continued employment or changing employer beyond pensionable age. We address the following research questions: (1) what factors influence on job changing beyond pensionable age; (2) whether, and to what extent this transition contributes to maintaining employment in old age. To answer these questions, we construct two independent logistic regression models on the basis of 7 annual waves of the Russian Longitudinal Monitoring Survey – Higher School of Economics (RLMS-HSE)[[4]](#footnote-4),5 (2010 – 2016).

# Literature review

## *The types of labour mobility*

Beginning in the middle of the last century, the phenomenon of labour mobility has been examined in social and economic studies. Theoretical and empirical studies operate on plenty of terms related to this research area. Tenure or specific tenure is the duration of employment at the current job. Closely related to this, specific human capital reflects the expenditures on the employment relationship (searching for a worker, training, etc.) that has no value outside of this relationship (Farber, 1999). Clearly, the value of specific human capital rises with tenure.

As far as the employment relationship can be interrupted by ‘voluntary quits’ as well as ‘forced lay-offs’ many researchers separate quit rates and lay-off rates (Parsons, 1972; Farber, 1999). It makes sense because motivation and reasons of labour mobility in these two cases are quite different.

The existing studies are based on two main approaches to define labour mobility. The first approach represents the employees’ ability to change their job; the second one implies a real change of job. Quantitative studies apply more often in the second approach because of its simplicity of accountability (Maltseva, Roshchin, 2007).

Labour mobility can be classified by the similarity of previous and present jobs. Feldman (2007) distinguishes career change, organization change and job change. He defines career change as the transition to a new occupation that requires different from existing knowledge and skills. Organization change means the transition to a new employer without change of profession. Finally, job change refers to the transition to another position within organization, but without change of profession.

We define labour mobility as the real change of job and/or profession during the last three years. The separate proportions of those who changed their job and profession are rather small for the analysis so they were merged. RLMS also contains the question about position change within organization but these transitions can include promotions and demotions without substantial changes of duty, formal renaming of positions, departments, that do not always mean employees’ conform with management labour strategies.

## *Theoretical concepts of labour mobility*

As far as labour mobility characterizes the employment relationships, it depends not only on employees’ behavior but also on employers’ policy, institutional norms, economic situation, etc. Therefore, several theories explain the phenomenon of labour mobility.

According to human capital theory, long-term employment relationships contribute to specific human capital accumulation by job training and experience. This capital is lost at ‘quits’ and ‘lay-offs’ that is unprofitable for employers as well as for employees, so long-term employment relationships are preferable for both sides (Gimpelson, Kapeliushunikov, Otshepkov, 2017). Specific human capital accumulates with age therefore labour mobility rates decrease in older age groups.

Based on job-matching theory, labour mobility represents the process of searching for optimal matching between an employee and their job place (Jovanovic, 1979; Flinn, 1986). The main measure of this match is labour productivity influencing on the employee’s wage. With age, and the number of job places the probability of optimal matching between employee and their job place increases thus the rate of labour mobility is lower in older age (Gimpelson, Kapeliushunikov, 2011).

The growing demand on production in prosperous sectors of the economy and, as a result, the increasing wages in these sectors are the factors of labour mobility in the theory of demand-side shocks (Jovanovic et al., 1990; Davis et al., 1995). Technological progress, the business environment determines the requirements to workers so labour demand shifts from stagnant to growing sectors of the economy.

On practice, labour mobility depends on the complex description of the above factors. Firms are oriented on the economic situation and needs for staff. In particular, technology shock and the reducing labour demand may lead to ‘lay-offs’ and labour mobility growth, but firms interested in specific human capital will prefer to ‘lay off’ less senior workers because these people embody less knowledge and experience (Farber, 1999).

Speaking about labour mobility in older age, one should not forget about its alternatives, especially in a case of ‘forced lay-offs’ – early retirement, unemployment benefits, etc. Generous unemployment insurance for the involuntary unemployed as well as the possibility to retire earlier does not create incentives for labour mobility (Tatsiramos, 2010).

The theoretical explanation of labour mobility also lies in the field of an employee’s characteristics that is largely confirmed in empirical studies. Blumen, Kogen & McCarthy (1955) distinguishes two types of workers (high mobility and low mobility). The probability of job change depends on its type or, in other words, the number of previous job changes. The employee’s behavior is generated by their socio-demographic group characterizing various needs and possibilities to realize these needs (Maltseva, 2007). For example, family workers and older individuals tend to prefer stable home lives and community environments (Lee & Maurer, 1999, Maltseva, 2007). Thus, as a rule, they change their job less often than their young and unmarried colleagues, except cases when labour mobility is due to family circumstances (Kirchmeyer, 2006). Finally, the probability of labour mobility increases if the probability of getting a better job is quite high and the transition costs to a new job is quite low (Maltseva, 2007).

## *The determinants of labour mobility in older age*

The existing theories of labour mobility mainly explain its decline in older age. Older workers’ mobility is determined not only by their motivation to change job, but also by their ability to do so in terms of their health, productivity, etc. (Feldman, 2007). In general, compared to prime-age workers the elderly have lower probability to be re-employed (Ichino et al., 2007).

Feldman (2007) defines three groups of labour mobility factors: individual-, job- and occupational-level ones. Searching for a new job in older age may be caused by growing physical problems, cognitive deficits, although worsening health is one of the main constraints to find an alternative job.

More educated workers, as a rule, have more stable employment relationships due to their high specific and general human capital (Farber, 1999). Empirical studies on Russia show that the employment stability rises with educational level (Nesterova, Sabirianova, 1999; Gimpelson, Kapeliushunikov, Otshepkov, 2017). Highly educated and qualified workers do not tend to change their job because they can lose out on salaries at a new job place (Maltseva, 2007). The elderly’s unique competences, as well as their narrow professional specialization, contribute to maintain their current job (Potekhina, Chizhov, 2016).

Gender differences in labour mobility are often mediated by other factors: sector of the economy, profession, salary, etc. Nevertheless, empirical studies on Russia indicate that women tend to have longer relationships with their employer than men (Maltseva, 2007; Gimpelson, Kapeliushunikov, Otshepkov, 2017) although women benefit from labour mobility much more than men (Maltseva, Roshchin, 2007).

Besides individual-level factors, Feldman (2007) also differentiates job- and occupational-level factors. If job-level factors relate more to job characteristics (working conditions, job satisfaction) then occupational-level factors correspond to the demand for labour force in a profession due to technological progress.

The majority of studies on labour mobility focus on job-level factors: the sector of the economy, the size and ownership of enterprise, salaries, job satisfaction, etc. The size of salary is one of the most significant factors influencing on decision-making about labour mobility. In the 2000s’ the workers of Russian enterprises had a ‘penalty’ for specific human capital that decreased their earnings by 0.7 – 1.6 % for each additional working year. This ‘penalty’ has been gradually declining, and long-term employment relationships have had positive return since 2005 (Maltseva, 2009). In general, highly-paid workers are less likely to quit and, as result, have lower labour mobility (Freeman, 1980; Morternsen, 1986). People are less inclined to change position where they are dominant. The transition to other professions are mainly associated with higher salary at a new job place (Maltseva, 2005). At the same time, the elderly’s financial resources may promote them to change their career despite the financial uncertainty associated with doing so (Doeringer, 1990; Feldman, 1994). Besides personal financial resources the elderly’s behavior on the labour market is substantially determined by material well-being of their family. Family income per capita is also the factor of labour mobility in older age (Maltseva, Roshchin, 2007).

In older age it can be more preferable to leave a highly stressful job and find a more personally pleasant one (Feldman, Leana & Bolino, 2002). The elderly prefer to increase their time with families and friends, so full-time work pushes out the present job (Johnson, 2011). In general, low job satisfaction leads to ‘quits’ and contributes to labour mobility (Boeckerman & Ilmakunnas, 2007). Workers dissatisfied with their jobs tend to search for an alternative job that significantly influences on real job change (Cornelissen, 2006).

In Russia substantial differences in labour mobility are observed between state and private enterprise. Private enterprise largely depends on the economic situation and market demand, therefore they usually have higher labour turnover than state enterprises. The workers of private enterprises change their jobs twice as often as their peers in state enterprises (Maltseva, 2009). In addition, labour mobility is higher among the workers of small and microenterprises (Gimpelson, Kapeliushunikov, Otshepkov, 2017). In large enterprises workers may have a narrow specialization so their specific human capital has more value than in small enterprises (Maltseva, 2009). Lower labour mobility and high tenure are typical for agriculture, education, health care, army (Gimpelson, Kapeliushunikov, Otshepkov, 2017).

## *Hypothesizes*

Based on the previous studies, we hypothesize that:

1. A higher educational level contributes to maintain the current job in old age.
2. Specific tenure is negatively associated with labour mobility.
3. The workers of state enterprises, large enterprises, budget sectors of economy (education, health care, etc.) are less likely to change their jobs.
4. Early retirees may seek new jobs due to impaired health, high work load, and decline in labour productivity.
5. Higher salary and job satisfaction decrease the probability of job change.

# Data & Methodology

The research is based on 7 annual waves of the Russian Longitudinal Monitoring Survey (RLMS-HSE) conducted from 2010 to 2016.

Our sample consists of three 5-years panels (2010-2014, 2011-2015, 2012-2016), where the first year corresponds to the initial point of observation t0, the next three years – intermediate point t1, the fifth year – final point t2 (Table 1). We select individuals aged 45 years and over in t0 who will be working pensioners in t1.3. Thus, this contains the individuals retired in the statutory retirement age[[5]](#footnote-5) as well as early retirees.

The sample includes 2,069 individuals (598 men and 1,471 women). The selection of observations led to unequal shares of men and women, but working with panel data is possible without additional weighting by taking into account the attrition of the respondents from the panels.

**Table 1 – Sampling scheme**

|  |  |  |  |
| --- | --- | --- | --- |
| Wave | Initial point,  t0 | Intermediate point,  t1 | Final point,  t2 |
| 1 | 2010 | 2011-2012-2013 | 2014 |
| 2 | 2011 | 2012-2013-2014 | 2015 |
| 3 | 2012 | 2013-2014-2015 | 2016 |

We estimate two independent logistic regressions where the dependent variables are as follows:

1. The fact of changing/getting a job (profession) at least once in a three-year period t1 (1 – yes / 0 – no).
2. The pensioner’s employment status in the year t2 (1– employed / 0 – unemployed).

The independent variables of the first and the second equations were measured in t0 and t1.3 correspondingly. These variables are grouped into three categories:

1. Characteristics of the job place: sector of the economy, professional group, formal / informal employment, length of a working-day, length of specific tenure, type of enterprise ownership, enterprise size.
2. Job satisfaction and erosion of workers’ rights: satisfaction with working conditions, wage, opportunities for professional growth, work in general, employer's monetary debt to the employee, reduction of wage and hours of work, enforced unpaid leave.
3. Economic factors: pensioner’s salary in comparison with the minimum wage in the corresponding year.

We also control for socio-demographic factors: gender, age, type of settlement, the elderly’s education and health, disability, entitlement period for early retirement, marital status. In the second equation, the fact that job (profession) changing/getting was also included.

Regression models were constructed in several ways: for all respondents/by gender; with testing the sector of economy/professional groups. As far as general job satisfaction correlates with satisfaction with some aspects of job and erosion of workers’ rights we also separate models (1) with job characteristics without including job satisfaction in general and (2) only controlling for job satisfaction in general.

# Main trends in labour mobility in Russia

The previous studies on labour mobility in Russia indicate its decline in the 2000s’ in comparison with the 1990s’. After the collapse of the USSR, 42% of employed people changed their profession (Sabirianova, 2002). In the 1990s’, almost every second employee quit or got a job annually (Обзор занятости в России, 2002). The explanation of higher labour mobility rates in this period in comparison with the previous and the following ones is the structural changes of the economy in the 1990s’ caused by mass occupational reallocation. The existing jobs were being destroyed, the new ones being created (Sabirianova, 2002).

More recent studies show that employers changed 18% of working-age employees annually in 2000 – 2005 (Maltseva, 2007). Taking into account that labour mobility rates decrease with age, this figure for the whole employed population, including pensioners, might be lower.

The length of specific tenure demonstrates the opposite dynamics over the period 1994 – 2005. In 1994, the most common employment relationships were 10 – 20 years (more than 20% of the employed) while in 2005 the highest proportion of employed were in the group less than 1 year (more than 25% of the employed). This tendency can be partly explained by extension of the private sector in the Russian economy characterized by less sustainable development and stable labour relationships (Maltseva, 2007).

The Federal State Statistics Service (Rosstat)[[6]](#footnote-6) contains rather limited data on labour mobility. The indicator of specific tenure is available for the employed population without an age gap.

For the period 2010 to 2016 the proportion of employed with the longest specific tenure has slightly increased by reducing the proportion of ones with specific tenure less than 5 years (Figure 1).

**Figure 1 – Structure of the employed by length of specific tenure, by percentage of people**

Source: Rosstat 2010-2016

Rosstat also contains the number of employees who quit / got a job. In 2013, before the economic crisis of 2013 – 2014, the coefficient of labour turnover (the ratio of the number who quit, and the newly employed, to the average number of employed) reached the highest level and then steadily declined (Figure 2).

**Figure 2 – Dynamics of the coefficient of labour turnover**

Source: Rosstat 2010-2016

We calculated the dynamics of specific tenure of the employed at the age of 45 years and over and compare it with the whole employed population. Obviously, the distribution of specific tenure for the older age groups shifts towards more durable employment relationships. Despite these differences, the dynamics of specific tenure of the employed aged 45 years and over, and the whole of the employed population in 2010 – 2016 was similar. The calculations based on RLMS (Figure 3), as well as Rosstat data (Figure 1), indicate the increasing share of employed with long specific tenure. The proportion of employed with 6 or more years of specific tenure rose in both analyzed groups. The proportion of the employed with more than 20 years of specific tenure only rose in the group of ‘all ages’ employed population. Short-term employment relations with specific tenure less than 1 year were more common for both analyzed groups in 2012 and 2014. This is also consistent with the coefficient of labour turnover, which had peaks in previous years – 2011 and 2013.

(a)

(b)

**Figure 3 – Structure of ‘all ages’ employed population (a) and the employed of 45 years and over (b) by the length of specific tenure**

Source: RLMS 2010-2016

# Results

Due to our research based on two independent logistic regression models, we separated the obtained results in two sections: (1) the factors of the elderly’s labour mobility and (2) the elderly’s labour mobility and other factors of employment in older age. Because of multicollinearity of general job satisfaction and satisfaction with particular aspects of the job, we include these variables into the models separately. Besides, in order to provide a sufficient number of observations in each group of categorical variables we separate the models by the sectors of the economy and professions. Finally, considering an adequate proportion of men and women in our sample we separated our models by gender as well. The description of the results follows the above mentioned order.

## *Factors of the elderly’s labour mobility (the first equation)*

According to all constructed models, the probability of changing job reduces with age that corresponds to theoretical and empirical studies on Russia as well as other countries. In comparison with towns, the elderly are more likely to change their job in regional centers and/or urban villages depending on the model specification. The determinants of labour mobility in cities and small settlements are probably quite different but we do not focus on these differences in this study.

The human capital parameters – self-evaluation of health, disability status and educational level – do not have significant impact on the elderly’s labour mobility. On the one hand, poor health may push the elderly to find a less stressful job, on the other hand, better health allows them to look for a new job, thus the total effect of health on labour mobility can be insignificant. The insignificance of the elderly’s educational level on their labour mobility seems somewhat contrary to the previous studies on labour mobility in Russia. However, if we look at specific tenure this is significant in all models both as continuous and categorical variable[[7]](#footnote-7) (Table 2). Compared to the specific tenure less than 1 year, the maintenance of current employment relationships from 1-2 years to more than 20 years reduces the probability of the elderly’s labour mobility on average by 32.4% - 45.8%. It means that the elderly’s educational level does not determines their propensity to change job but the elderly’s experience at the current place of work does.

The probability of job change is higher in private enterprise (compared to state one, the average marginal effect is 9.2% depending on the model specification) and in construction, transportation /communication (by 15.3 – 18.5% and by 14.2 – 16.6% in comparison with the social sector). These results are quite similar to those examined in the Literature review. At the same time, according to our models, the elderly’s labour mobility does not depend on the enterprise size (Table 2). In some model specifications formal employment decreases the probability of job change approximately by 10.3%. The formal nature of the employment relationship is characterized by wider social guarantees, therefore it becomes more preferable for the elderly. Moreover, the majority of the elderly willing to change their job may rely mainly on informal employment (Kolosnitsyna & Gerasimenko, 2014). Thus, the Russian elderly tend to maintain formal employment relationships.

In all models for the whole sample, salaries related to minimal regional wages (MRW) do not have significant impact on the probability of the elderly’s job change. On the one hand, labour mobility is often associated with the possibility to get higher salaries at a new place of work (Maltseva, 2005). On the other hand, job change involves some financial risks related to future earnings, therefore the more well-off elderly, may afford such a risk (Doeringer, 1990; Feldman, 1994). Thus, the mixed influence of the size of salary on labour mobility could lead to its insignificance in the models. Furthermore, non-material aspects of job may play a more substantial role in the elderly’s employment. To reinforce this, general job satisfaction as well as its particular aspects is significant in our models. Complete satisfaction with working conditions reduces the probability of the elderly’s labour mobility by 12.2% in comparison with the situation of complete dissatisfaction (Table 2).

**Table 2 – Logistic regression of job change with testing the sectors of the economy, the whole sample (is not gender specific)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Model 1.1 | | Model 1.2 | |
| Coef. | Std. Err. | Coef. | Std. Err. |
| *Sector of the economy* (social sector – *ref*.) |  |  |  |  |
| Industry | 0,127 | (0,285) | 0,169 | (0,287) |
| Army, civil service | 0,318 | (0,326) | 0,345 | (0,309) |
| Construction | 0,955\* | (0,389) | 0,939\* | (0,368) |
| Transportation, communication | 0,896\*\* | (0,333) | 0,945\*\* | (0,333) |
| Agriculture | 0,124 | (0,565) | 0,186 | (0,541) |
| Commerce | 0,453 | (0,311) | 0,408 | (0,307) |
| Housing and communal services | 0,051 | (0,371) | 0,018 | (0,348) |
| Other | -0,561 | (0,519) | -0,329 | (0,453) |
| *Formal employment*  (informal – *ref*.) |  |  |  |  |
| Formal employment | -0,526 | (0,367) | -0,627\* | (0,344) |
| *Length of a working-day* (part-time – *ref*.) |  |  |  |  |
| Full-time job (more 35 hours a week) | -0,066 | (0,245) | -0,051 | (0,239) |
| *Length of specific tenure (*< 1 year *– ref.)* |  |  |  |  |
| 1-2 years | -1,539\*\*\* | (0,239) |  |  |
| 3-5 years | -1,833\*\*\* | (0,269) |  |  |

**Table 2 (continued)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 6-10 years | -1,827\*\*\* | (0,261) |  |  |
| 11-20 years | -2,272\*\*\* | (0,269) |  |  |
| > 20 years | -2,471\*\*\* | (0,277) |  |  |
| *Length of specific tenure (continuous)* |  |  | -0,045\*\*\* | (0,008) |
| *Enterprise size* (microenterprise (<15 workers) – *ref*.) |  |  |  |  |
| Small enterprise (16-100 workers) | 0,086 | (0,236) | 0,594 | (0,236) |
| Medium-size enterprise (101-250 workers) | -0,119 | (0,321) | -0,187 | (0,313) |
| Large enterprise (> 250 workers) | -0,046 | (0,298) | -0,039 | (0,293) |
| No answer | 0,059 | (0,229) | 0,125 | (0,227) |
| Question wasn’t asked (does not work in the organization) | - | - | - | - |
| *Enterprise ownership* (state ownership *– ref.)* |  |  |  |  |
| Private ownership | 0,579\*\* | (0,218) | 0,569\*\* | (0,212) |
| Mixed ownership | 0,3327 | (0,342) | 0,322 | (0,329) |
| No answer | -0,050 | (0,345) | -0,061 | (0,349) |
| *Satisfaction with working conditions* (completely dissatisfied – *ref*.) |  |  |  |  |
| Completely satisfied | -0,732\* | (0,399) | -0,827\* | (0,391) |
| Rather satisfied | -0,466 | (0,347) | -0,523 | (0,329) |
| Yes and no | -0,093 | (0,349) | -0,119 | (0,331) |
| Rather dissatisfied | 0,096 | (0,332) | 0,035 | (0,317) |
| *Satisfaction with salaries* (completely dissatisfied – *ref*.) |  |  |  |  |
| Completely satisfied | 0,618 | (0,394) | 0,517 | (0,399) |
| Rather satisfied | -0,273 | (0,236) | -0,196 | (0,232) |
| Yes and no | -0,348 | (0,214) | -0,306 | (0,209) |
| Rather dissatisfied | -0,135 | (0,187) | -0,149 | (0,185) |
| *Satisfaction with job opportunities* (completely dissatisfied – *ref*.) |  |  |  |  |
| Completely satisfied | -0,316 | (0,389) | -0,218 | (0,387) |
| Rather satisfied | -0,279 | (0,277) | -0,311 | (0,269) |
| Yes and no | -0,041 | (0,263) | -0,101 | (0,253) |
| Rather dissatisfied | -0,038 | (0,261) | -0,048 | (0,251) |
| *Employer's monetary debt to the employee* (no – *ref*.) |  |  |  |  |
| Question wasn’t asked (does not work in the organization) | -0,528 | (0,331) | 0,511 | (0,247) |
| Yes | 0,115 | (0,727) | 0,299 | (0,639) |
| *Reduction of salaries and hours of work (no – ref.)* |  |  |  |  |
| Question wasn’t asked (does not work in the organization) | - | - | - | - |
| Yes | 0,100 | (0,299) | 0,288 | (0,803) |
| *Enforced unpaid leave* (no – *ref*.) |  |  |  |  |
| Question wasn’t asked (does not work in the organization) | - | - | - | - |

**Table 2 (continued)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Yes | 0,296 | (0,424) | 0,314 | (0,399) |
| *The ratio of pensioner’s salary to minimal wage* (5-6 MVR – *ref*.) |  |  |  |  |
| *Satisfaction with work in general* (completely dissatisfied – *ref*.) |  |  |  |  |
| Completely satisfied | -0,989\*\* | (0,370) | -1,024\*\* | (0,373) |
| Rather satisfied | -1,007\*\* | (0,342) | -1,033\*\* | (0,345) |
| Yes and no | -0,543 | (0,341) | -0,554 | (0,343) |
| Rather dissatisfied | -0,632\* | (0,353) | -0,651 | (0,351) |
| <1 MRW | 0,356 | (0,414) | 0,416 | (0,404) |
| 1-2 MRW | 0,209 | (0,330) | 0,254 | (0,319) |
| 2-3 MRW | 0,017 | (0,323) | 0,081 | (0,313) |
| 3-4 MRW | 0,281 | (0,319) | 0,289 | (0,309) |
| 4-5 MRW | 0,151 | (0,345) | 0,085 | (0,335) |
| 5-6 MRW | 0,353 | (0,371) | 0,307 | (0,371) |

Significance: \*\*\* p ≤ 0.001, \*\* p ≤ 0.01, \* p ≤ 0.1

Control variables: gender, age, type of settlement, the elderly’s education and health, disability, entitlement period for early retirement, marital status

This is not presented in the tables but professional groups such as: skilled workers of agriculture, forestry and fish farming, unskilled workers of all sectors – are less likely to change their job in comparison with skilled labour workers engaged in manual labour and using machines and mechanisms (the average marginal effect equals 7.8%).

Unlike the discussed above models, the low level of education significantly reduces the probability of labour mobility for men. Type of the enterprise ownership plays a role only for labour mobility of women (Table 3). Complete satisfaction with working conditions reduces the probability of job changing on the average by 14.4% and 9.7% for men and women correspondingly in comparison with complete dissatisfaction (model 2.1 in Table 3). The unexplained result about the positive impact of complete satisfaction with wage on the elderly’s labour activity remains significant only for men (model 2.1 in Table 3). Finally, general job satisfaction is significant only for women (model 2.2 in Table 3).

Models with professional groups and general job satisfaction show that the probability of job change among men is higher for middle-level specialists, officials, employees of office and customer service, among women – for the group of military, legislators, high-level officials, top and middle managers.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 3 – Logistic regression of job change with testing the sectors of the economy, by gender** | | | | | | | | |
| Variable | Model 2.1 | | | | Model 2.2 | | | |
| Men | | Women | | Men | | Women | |
| Coef. | Std. Err. | Coef. | Std. Err. | Coef. | Std. Err. | Coef. | Std. Err. |
| *Sector of the economy* (social sector – *ref*.) |  |  |  |  |  |  |  |  |
| Industry | 0,413 | (0,510) | 0,100 | (0,353) | 0,484 | (0,510) | 0,203 | (0,360) |
| Army, civil service | 0,575 | (0,673) | 0,302 | (0,403) | 0,583 | (0,643) | 0,282 | (0,393) |
| Construction | 1,369\* | (0,620) | -0,369 | (0,676) | 1,526\* | (0,598) | -0,058 | (0,689) |
| Transportation, communication | 1,415\* | (0,595) | 0,539 | (0,461) | 1,434\* | (0,590) | 0,576 | (0,449) |
| Agriculture | -1,489 | (1,170) | 0,931 | (0,611) | -1,482 | (1,170) | 0,930 | (0,587) |
| Commerce | 0,635 | (0,759) | 0,300 | (0,351) | 0,692 | (0,730) | 0,320 | (0,350) |
| Housing and communal services | 0,286 | (0,714) | 0,020 | (0,466) | 0,289 | (0,694) | 0,107 | (0,429) |
| Other | -1,510 | (1,242) | -0,238 | (0,523) | -1,264 | (1,161) | -0,254 | (0,515) |
| *Length of specific tenure (*< 1 year *– ref.)* |  |  |  |  |  |  |  |  |
| 1-2 years | -1,063\* | (0,454) | -1,962\*\*\* | (0,327) | -1,164\*\* | (0,431) | -1,912\*\*\* | (0,317) |
| 3-5 years | -2,590\*\*\* | (0,525) | -1,665\*\*\* | (0,344) | -2,555\*\*\* | (0,502) | -1,575\*\*\* | (0,338) |
| 6-10 years | -2,216\*\*\* | (0,486) | -1,815\*\*\* | (0,345) | -2,057\*\*\* | (0,467) | -1,778\*\*\* | (0,332) |
| 11-20 years | -26684\*\*\* | (0,538) | -2,291\*\*\* | (0,354) | -2,543\*\*\* | (0,506) | -2,204\*\*\* | (0,336) |
| > 20 years | -2,833\*\*\* | (0,587) | -2,464\*\*\* | (0,335) | -2,708\*\*\* | (0,548) | -2,379\*\*\* | (0,329) |
| *Enterprise ownership* (state ownership *– ref.)* |  |  |  |  |  |  |  |  |
| Private ownership | 0,567 | (0,356) | 0,657\* | (0,285) | 0,474 | (0,327) | 0,634\* | (0,279) |
| Mixed ownership | 0,079 | (0,507) | 0,365 | (0,472) | -0,063 | (0,536) | 0,329 | (0,462) |
| No answer | 0,021 | (0,575) | -0,121 | (0,471) | -0,069 | (0,586) | -0,129 | (0,486) |
| *Satisfaction with working conditions* (dissatisfied – *ref*.) |  |  |  |  |  |  |  |  |
| Completely satisfied | -0,953\* | (0,531) | -0,781\* | (0,383) |  |  |  |  |
| Rather satisfied | -0,935\* | (0,443) | -0,368 | (0,256) |  |  |  |  |

**Table 3 (continued)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Yes and no | -0,584 | (0,445) | 0,006 | (0,242) |  |  |  |  |
| *Satisfaction with salaries* (completely dissatisfied – *ref*.) |  |  |  |  |  |  |  |  |
| Completely satisfied | 1,484\* | (0,598) | 0,196 | (0,503) |  |  |  |  |
| Rather satisfied | -0,240 | (0,416) | -0,383 | (0,295) |  |  |  |  |
| Yes and no | 0,009 | (0,409) | -0,626\* | (0,274) |  |  |  |  |
| Rather dissatisfied | 0,187 | (0,392) | -0,315 | (0,223) |  |  |  |  |
| *Satisfaction with work in general* (dissatisfied – *ref*.) |  |  |  |  |  |  |  |  |
| Completely satisfied |  |  |  |  | -0,167 | (0,489) | -0,718\* | (0,303) |
| Rather satisfied |  |  |  |  | -0,564 | (0,392) | -0,509\* | (0,242) |
| Yes and no |  |  |  |  | 0,148 | (0,405) | -0,070 | (0,254) |

Significance: \*\*\* p ≤ 0.001, \*\* p ≤ 0.01, \* p ≤ 0.1

Control variables: gender, age, type of settlement, the elderly’s education and health, disability, entitlement period for early retirement, marital status, formal / employment, length of a working-day, enterprise size, satisfaction with job opportunities, employer's monetary debt to the employee, reduction of salary and hours of work, enforced unpaid leave, ratio of pensioner’s salary to minimal wage

## *The elderly’s labour mobility and other factors of employment in older age (the second equation)*

As in the case of labour mobility, the probability to maintain the employment decreases with age. The elderly’s poor and very poor health (self-evaluation) also impedes their employment that corresponds to the existing studies on the elderly’s employment in Russia and other countries (OECD, 1998; Sinyavskaya, 2005; Kovrova, 2007; Góra et al., 2010 and many others). The type of settlement is insignificant in the majority of models specifications.

Educational level seems to be a significant determinant of the elderly’s employment (OECD, 1998; Levin, 2015) but none of our models has showed its significance. At the same time, the longer the duration of the current employment relationships is, the higher the probability to maintain the employment in older age. In other words, specific capital plays a more important role in maintaining the employment in older age that educational level.

Working in the industry, construction, transportation and communication, agriculture and commerce reduces the probability of continuing employment: on the average by 7.4%, 13.9%, 11.2%, 11.4% and 6.8% respectively compared to working in the social sector (Table 4). Low salaries (less than 1 MRW, 1-2 MRW, 2-3 MRW) compared with the highest salaries (more 6 MRW) reduce the probability to maintain employment after retirement on the average by 6.9 – 13.5% depending on the size of salary and the model specification.

Working in the army and civil services has the positive influence on older men’s employment but does the negative impact on older women’s employment. Positive influence on the employment of men is provided by belonging to the group of specialists of the higher qualification level. Employment in large enterprises (more than 250 people) as well as mixed ownership of the enterprise contributes only to men’s employment in older age. For women, full-time job is associated with maintaining of their employment.

Men who have changed their job during the previous three years are more likely to maintain their employment. It means that labour mobility can be considered as an active strategy of older men in the labour market. According to our models, women’s decision to continue working depends on their satisfaction with job in general as well as with working conditions while men’s one does not. The employer’s monetary debt to the employee has a significant negative impact only on men’s employment. At the same time, the size of salary related to minimal regional wage is more sensitive to women’s rather than men’s employment. Thus, women pay more attention on the size of salary; they are ready to continue working if they satisfy with their job. Men have a motivation to continue working in case of quite high salary (2-3 minimal regional wages) and if their earnings are stable.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 4 – Logistic regression of pensioners’ employment with testing the sectors of the economy, by gender** | | | | | | | | |
| Variable | Model 3.1 | | | | Model 3.2 | | | |
| Men | | Women | | Men | | Women | |
| Coef. | Std. Err. | Coef. | Std. Err. | Coef. | Std. Err. | Coef. | Std. Err. |
| *Sector of the economy* (social sector – *ref*.) |  |  |  |  |  |  |  |  |
| Industry | -0,380 | (0,485) | -0,077 | (0,372) | -0,489 | (0,455) | -0,191 | (0,366) |
| Army, civil service | 1,053\* | (0,575) | -0,831\* | (0,333) | 0,905\* | (0,547) | -0,825\* | (0,338) |
| Construction | -0,540 | (0,532) | -1,285\* | (0,566) | -0,815 | (0,499) | -1,300\* | (0,547) |
| Transportation, communication | 0,266 | (0,601) | -1,297\*\*\* | (0,346) | 0,219 | (0,571) | -1,303\*\*\* | (0,334) |
| Agriculture | -0,253 | (0,711) | -1,163\* | (0,496) | -0,361 | (0,662) | -1,327\*\* | (0,476) |
| Commerce | -0,147 | (0,638) | -0,439 | (0,331) | -0,390 | (0,606) | -0,465 | (0,334) |
| Housing and communal services | 0,589 | (0,590) | -0,340 | (0,473) | 0,501 | (0,608) | -0,276 | (0,474) |
| Other | 2,131\* | (0,864) | -0,605 | (0,399) | 2,149\* | (1,126) | -0,612 | (0,400) |
| *Formal employment*  (informal – *ref*.) |  |  |  |  |  |  |  |  |
| Formal employment | -0,033 | (0,574) | 0,589 | (0,395) | -0,064 | (0,578) | 0,550 | (0,389) |
| *Length of a working-day* (part-time – *ref*.) |  |  |  |  |  |  |  |  |
| Full-time job (more 35 hours a week) | -0,261 | (0,514) | 0,452\* | (0,231) | -0,198 | (0,475) | 0,444\* | (0,223) |
| *Length of specific tenure (*< 1 year *– ref.)* |  |  |  |  |  |  |  |  |
| 1-2 years | -0,002 | (0,549) | 0,440 | (0,384) | -0,002 | (0,501) | 0,419 | (0,376) |
| 3-5 years | 0,366 | (0,560) | 0,585 | (0,425) | 0,484 | (0,535) | 0,516 | (0,415) |
| 6-10 years | 1,042\* | (0,577) | 0,373 | (0,414) | 1,096\* | (0,550) | 0,276 | (0,406) |
| 11-20 years | 0,793 | (0,546) | 0,671 | (0,411) | 0,871\* | (0,520) | 0,552 | (0,399) |
| > 20 years | 1,554\* | (0,601) | 0,849\* | (0,418) | 1,567\*\* | (0,590) | 0,742\* | (0,411) |
| *Enterprise size* (microenterprise (<15 workers) – *ref*.) |  |  |  |  |  |  |  |  |
| Small enterprise (16-100 workers) | 0,659 | (0,498) | -0,051 | (0,264) | 0,737\* | (0,452) | -0,066 | (0,262) |
| Medium-size enterprise (101-250 workers) | 0,327 | (0,569) | 0,425 | (0,413) | 0,537 | (0,533) | 0,333 | (0,391) |
| Large enterprise (> 250 workers) | 1,161\* | (0,589) | 0,302 | (0,413) | 1,256\* | (0,555) | 0,392 | (0,402) |

**Table 4 (continued)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No answer | 0,643 | (0,497) | -0,138 | (0,275) | 0,690 | (0,440) | -0,114 | (0,271) |
| Question wasn’t asked (does not work in the organization) | - | - | - | - | 0,408 | (0,985) | 0,392 | (0,643) |
| *Enterprise ownership* (state ownership *– ref.)* |  |  |  |  |  |  |  |  |
| Private ownership | 0,321 | (0,349) | 0,123 | (0,282) | 0,353 | (0,323) | 0,158 | (0,285) |
| Mixed ownership | 1,522\* | (0,662) | -0,150 | (0,446) | 1,467\* | (0,600) | -0,133 | (0,445) |
| No answer | -0,002 | (0,719) | -0,600 | (0,487) | 0,125 | (0,690) | -0,507 | (0,482) |
| *Satisfaction with working conditions* (dissatisfied – *ref*.) |  |  |  |  |  |  |  |  |
| Completely satisfied | 0,377 | (0,589) | 0,440 | (0,405) |  |  |  |  |
| Rather satisfied | 0,170 | (0,400) | 0,783\*\* | (0,296) |  |  |  |  |
| Yes and no | -0,086 | (0,436) | 0,712\* | (0,319) |  |  |  |  |
| *Satisfaction with salaries* (completely dissatisfied – *ref*.) |  |  |  |  |  |  |  |  |
| Completely satisfied | 0,226 | (0,653) | -0,194 | (0,503) |  |  |  |  |
| Rather satisfied | -0,223 | (0,421) | -0,375 | (0,341) |  |  |  |  |
| Yes and no | 0,016 | (0,393) | -0,478 | (0,332) |  |  |  |  |
| Rather dissatisfied | 0,423 | (0,410) | -0,186 | (0,311) |  |  |  |  |
| *Satisfaction with job opportunities* (completely dissatisfied – *ref*.) |  |  |  |  |  |  |  |  |
| Completely satisfied | -0,619 | (0,617) | 0,288 | (0,483) |  |  |  |  |
| Rather satisfied | 0,189 | (0,543) | -0,531 | (0,359) |  |  |  |  |
| Yes and no | -0,563 | (0,496) | -0,300 | (0,355) |  |  |  |  |
| Rather dissatisfied | 0,456 | (0,634) | 0,043 | (0,394) |  |  |  |  |
| *Employer's monetary debt to the employee* (no – *ref*.) |  |  |  |  |  |  |  |  |
| Question wasn’t asked (does not work in the organization) | 0,292 | (0,986) | 0,530 | (0,659) |  |  |  |  |

**Table 4 (continued)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Yes | -1,350\*\* | (0,460) | 0,293 | (0,619) |  |  |  |  |
| *Reduction of salaries and hours of work (no – ref.)* |  |  |  |  |  |  |  |  |
| Question wasn’t asked (does not work in the organization) | - | - | - | - |  |  |  |  |
| Yes | -0,078 | (0,450) | -0,274 | (0,360) |  |  |  |  |
| *Enforced unpaid leave* (no – *ref*.) |  |  |  |  |  |  |  |  |
| Question wasn’t asked (does not work in the organization) | - | - | - | - |  |  |  |  |
| Yes | -0,313 | (0,740) | -0,895\* | (0,452) |  |  |  |  |
| *Satisfaction with work in general* (dissatisfied – *ref*.) |  |  |  |  |  |  |  |  |
| Completely satisfied |  |  |  |  | 0,151 | (0,513) | 0,585\* | (0,332) |
| Rather satisfied |  |  |  |  | 0,295 | (0,411) | 0,494\* | (0,289) |
| Yes and no |  |  |  |  | -0,382 | (0,444) | 0,754\* | (0,330) |
| *The ratio of pensioner’s salary to minimal wage* (5 and more MVR – *ref*.) |  |  |  |  |  |  |  |  |
| <2 MVR | -0,690 | (0,452) | -1,098\*\* | (0,379) | -0,544 | (0,429) | -0,992\*\* | (0,360) |
| 2-3 MVR | -0,703\* | (0,408) | -0,957\* | (0,370) | -0,696\* | (0,386) | -0,865\* | (0,356) |
| 3-5 MVR | -0,389 | (0,435) | -0,347 | (0,398) | -0,258 | (0,419) | -0,370 | (0,387) |
| *Changing job* (profession) (no – *ref*.) |  |  |  |  |  |  |  |  |
| Changing job (profession) | 0,863\* | (0,402) | 0,153 | (0,317) | 0,940\* | (0,425) | 0,052 | (0,313) |

Significance: \*\*\* p ≤ 0.001, \*\* p ≤ 0.01, \* p ≤ 0.1

Control variables: gender, age, type of settlement, the elderly’s education and health, disability, entitlement period for early retirement, marital status

# Conclusion

This paper focuses on the phenomenon of labour mobility, primarily in older age. In recent years Russia is experiencing the growth of pensioners’ employment rate, both for men and women. At the same time, the population of pre-retirement and retirement ages often face some obstacles in the labour market: worsening health, decreasing productivity, competition with younger workers. This research has raised the question whether labour mobility could be the strategy to maintain employment in older age. We have explored the factors of the elderly’s labour mobility as well as its impact on the employment in older age.

To answer these questions we have constructed two independent logistic regressions using panel RLMS data (2010 – 2016). In our research framework we have defined labour mobility as job and/or profession change as well as the post-retirement re-introduction to the labour market. The inclusion of the last group of the elderly may increase the proportion of those with experienced labour mobility, but we consider this as the elderly’s ‘active strategy’ in the labour market.

The propensity to labour mobility is mainly determined by the elderly’s accumulated specific human capital rather than general human capital. Health status and educational level (except the last one for men) have no significant influence on the probability of labour mobility in older age so our first hypothesis was rejected. At the same time, long-term employment relations decrease the probability of the elderly’s labour mobility. Thus, the second hypothesis is confirmed: specific tenure contributes to maintain the current job at older age.

The elderly’s labour mobility quite depends on job characteristics – the sector of the economy, the enterprise ownership, the nature of employment relationships (formal / informal) that corresponds to the previous studies on labour mobility in Russia (Maltseva, 2009; Gimpelson, Kapeliushunikov, Otshepkov, 2017). The elderly do not tend to change stable job with social guarantees. At the same time, according to one of our model specifications, skilled workers of agriculture, forestry and fish farming, unskilled workers of all sectors are also less likely to change their job. We explain this unexpected result by the fact that this group of workers is forced to keep the current job because they cannot find another one, more stable and comfortable. Thus, the third hypothesis is generally confirmed: the workers of state enterprises, large enterprises, budget sectors of the economy do not prefer to change their job.

The size of salary related to minimal regional wages does not significantly influence the probability of labour mobility in older age. Probably it is necessary to test other specifications of this variable: the ratio of pensioner’s salary to average regional wage or the size of pension. The existing studies on labour mobility usually take into account the actual or expected size of salary at a new job so adding this variable into our models could be the direction for further research. Unlike material aspects of the job, general job satisfaction as well as satisfaction with working conditions significantly contributes to comfort of the elderly’s employment. Thus, the last hypothesis is partly confirmed: job satisfaction reduces the probability of job changing while higher salaries have no significant effect.

As for the third hypothesis, none of our models have shown the significance of early retirement for the elderly’s labour mobility therefore this hypothesis was rejected.

We can consider the elderly’s labour mobility as the strategy to maintain their employment only partially. In the model for the whole sample, and for women, labour mobility is insignificant. As for men, the changing of job during the previous three years increases the probability of maintaining employment.

This research is still in progress. In the next step, we plan to expand the number of factors of the elderly’s labour mobility by including some household characteristics: its composition and household income per capita, because the elderly’s decision on labour mobility depends not only on individual preferences but also on family circumstances.

In panel data the selection proceeds in stages: in every wave of the panel some respondents are lost due to mortality, change of living place, etc. Proportions of men and women in the sample vary in comparative quantity, and the panel does not adequately represent the general population. In order to exploit the potential of panel data it is important to assess the biases – attrition – by two methods: Heckman correction for attrition and inverse probability weights. In this research we did not use the methods of attrition, but it will be the next step.

At this stage of the research, two independent logistic regression models were built. Another version for working with panel data may be a system of simultaneous equations, which can solve the problem of endogeneity of changing job and/or profession and employment, if the interdependence of these variables is proved. In addition we plan to apply survival analysis to our data with due regard to the attrition people from panels. It will require a choice of algorithm and approach in the processing of sample survey data.

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1. http://www.gks.ru [↑](#footnote-ref-1)
2. The same [↑](#footnote-ref-2)
3. Russian Longitudinal Monitoring Survey – Higher School of Economics (RLMS) [↑](#footnote-ref-3)
4. <https://www.hse.ru/en/rlms/>

   5 http://www.cpc.unc.edu/projects/rlms-hse [↑](#footnote-ref-4)
5. 55 and 60 years for women and men correspondingly [↑](#footnote-ref-5)
6. Rosstat: http://www.gks.ru/wps/wcm/connect/rosstat\_main/rosstat/en/main/ [↑](#footnote-ref-6)
7. Continuous variable is measured as the number of years of specific tenure; categorical variable includes the following categories: less than 1 year, 1-2 years, 3-5 years, 6-10 years, 11-20 years, more than 20 years [↑](#footnote-ref-7)