Project on International Equity (PIE)

PIE Discussion Paper Series

PENSION REFORM IN RUSSIA: A CHALLENGE OF LOW PENSION AGE

Oxana Sinyavskaya (sinyavskaya@socpol.ru)
Independent Institute for Social Policy (Moscow, Russia)

Abstract
This paper examines the dynamics of effective pension age in Russia and in particular the role of special privileged early retirement programs in enlarging the number of pensioners in recent decades. When it is possible to receive a pension and continue to work, people often choose to draw the pension at the earliest possible age and continue to work as before. Binary logistic regression demonstrates that availability of pension benefits and disability status contributed significantly to the drop in employment of people at the ages below the normal pension age. Thus, while early retirement schemes do need to eliminate the right of getting earnings while drawing pensions, it should be possible to keep this option for people at the standard age. Reform of early pension schemes along with gradual increasing of normal pension age of women up to the age of 60 make alternative options of reducing liabilities of the state pension system.

JEL classification: H55, J26, J14

Key words: pension reform, old-age pensions, early retirement, working pensioners, ageing

I. Introduction

Long-term demographic forecasts show that Russia will face a rapid ageing in the future. The share of seniors will increase from 346 elderly people per 1000 active people in 2000 up to 623 or 747 per 1000 in 2050 according to different forecasting scenarios (Vishnevskiy et al., 2004). In 2050, 55 (59) year old and older people will comprise 32 to 36% of the total Russian population, while in 2002 their share amounts to only 21.5% (Ibid). Unlike the situation in many other countries, the population of Russia is ageing exclusively due to declining of fertility. In 2002, life expectancy at birth was 58.5 years for men and 72.0 for women (Ibid), much less that many CEE and CIS countries have. In 2050, it will vary from 57.0 to 73.7 years for men and from 71.5 to 83.9 years for women (Ibid). These demographic trends have set a huge pressure on the financial viability of the Russian pension system. The financial strain caused by demographic trends is aggravated by another trend. In Russia, the number of pensioners increases faster than the number of people in pension age due to expansion of early retirement schemes.

The following measures can be used to cope with the consequences of ageing in the pension sphere. Parametric changes of the existing defined-benefit PAYG systems include (1) increasing contribution rates and therefore incomes of the pension system, (2) decreasing benefit level (in terms of replacement rate), or (3) rising normal retirement age. Another decision is to change given defined-benefit PAYG system to a defined-contribution and funded one. Some authors have argued that it will be enough to conduct parametric reforms to change the support ratio (Chand & Jaeger, 1996; Barr, 2000). Others have proved that defined-benefit system creates considerable incentives to retire at the earliest possible date, while defined-contribution one at least in theory gives a big incentive to continue working longer (Disney & Whitehouse, 1999). As many countries launched radical pension reform in the second half of 1990s, there are no empirical evidences about how defined-contribution funded systems may effect pension and retirement behavior in reality.

Russia has the mandatory and almost universal public pension system. Pension reform aimed at creating a three-tiered system with a certain funded financing has been started since 2002. At the same time many parameters of the previous pension reform remained unchanged, including special early retirement programs and the right to get earnings while drawing pensions. Because of the recent reduction of the Unified Social Tax rate, which is partly used for the pension system, the Russian government is worried that the imbalance between incomes and liabilities of the pension system will be aggravated as the population is ageing.

The Russian pension system is bound to either increase contribution rates or further decrease replacement rates. The former are relatively high even now and their raising will have negative incentives for the Russian labor market. The latter are still too low. Therefore low pension age becomes a matter of policy concern. Benefits from introducing defined-contribution and a partially funded system are a matter of distant future. Thus, a possibility of increasing normal pension age is discussed from time to time. The most common argument against it is the low life expectancy of the Russian population.

In this research, we define retirement as the cessation of employment and thus distinguish retirement age (i.e. age of withdrawing from the labor force) from pension age (i.e. age of claiming for a state pension).

The objective of this paper is to shed light on the incentive effects of the Russian pension system on pension and retirement decisions. We examine effective pension ages and factors of individual employment decisions in Russia so as to provide policy recommendations with respect to regulating pension and retirement age. We focus on the impact of special early retirement schemes and combining work and pensions on the effective pension age and work incentives. In particular, we are interested in investigating what factors affect the employment of people in pre-pension ages. In

this paper, we do not provide any quantitative estimation of financial consequences of different scenarios that describe changing of the effective pension age.

The empirical analysis is based on micro data drawn from the National Sample Survey of Households' Wellbeing and Participation in Social Programs (NOBUS), a cross-sectional survey conducted in May 2003, which contains detailed information on households and individuals.

The structure of the paper is as follows. The next section provides an idea of the current situation in the pension sphere and pension reform in Russia. Section III describes data sources used. It is followed by a detailed analysis of the real situation with pension age (section IV). To demonstrate the distorting nature of the existing pension rules, we compare early pensioners with non-pensioners (section V). Section VI describes factors which affect employment of near-pension-age people in present Russia, while the section VII focuses on the dynamics and some characteristics of working pensioners. Section VIII addresses the issue of the price of the increasing pension ages in Russia. Finally, we discuss the results and possible policy recommendations (Section IX).

II. Basic characteristics of the Russian pension system and reform

II.1 The Russian pension system during the 1990s

Russia has a mandatory and nearly universal defined-benefit PAYG public pension system and a limited set of employer-based occupational and personal private pension programs that are not mandatory and too far from universal. Given their limited coverage, private pensions are not considered in this study, with the implicit assumption that only public pension payments affect the pension and retirement decisions.

The public pension system was finally designed in the 1950-1960s to be the only source of retirement incomes in the USSR. In 1991, Russia introduced its own state pension system, which preserved most of the features of the former soviet pension system. The new system has covered people working in private firms and own-account workers, eliminated differences in pension provision for urban and rural workers and provided social pensions for those who never worked.

There are two main types of pensions, depending on the working experience and seniority. People without a sufficient seniority receive social pension. Others get labor pension, including old age, disability, survival pensions and pension for long service.

All individuals with at least 20 (25) years of seniority could enter retirement with full benefits once they have reached the age of 55 (60), females and males respectively. These conditions had to provide old age replacement rate of 55% of the average individual salary for the last 2 or any best 5 years of service. Each additional year of work increased the pension by 1% up to 75% of the salary. At the same time a person over 55 or 60 year old had a right to continue to work receiving both the pension and wage/salary without any reduction.

People could claim for disability pensions as soon as they became disabled. Disability benefits were differentiated by the severity of disability, prior seniority and wage. People in pension age could change their disability pensions to the old-age ones if the latter were higher. They could combine work and pensions as well.

Privileged early retirement is performed through special schemes. The most widespread early pensions are given for working in the Far North and for working in hard and hazardous conditions (e.g., in chemical and oil industry, metallurgy, coalmines, transport, *etc.*)[1]. Workers with a certain period of special seniority (varied from 7.5 to 15 years) can retire with full benefits at the age of 45(50) or 50(55), females and males correspondingly. Pensions for long service (for miners, sailors,

[1] This system of early retirement pensions including those for long service was established in the early 1930s to develop the state labor market rather than for health protection reasons. It was used to attract the labor force to work in unfavorable conditions.

civil aviators, air traffic controllers, life-savers, cosmonauts, sportsmen as well as school teachers, rural medical workers, *etc.*) open a similar possibility. A person can claim for a pension for long service after a certain period of special service (from 15 to 30 years depending on the occupation) regardless of his/her age.

Pension rights were acquired through prior employment records. Employees as well as employers were obliged to pay contributions to the State Pension Fund, whose funds were separated from the state budget. During the 1990s the contribution rate to the pension system was 29%, including 28% paid for the employee by employer and 1% paid by employee him/herself. Farmers and own-account workers as well as certain professionals (lawyers, notaries) paid less. There were no additional contributions for early retirement schemes.

II.2 The ongoing pension reform

The pension reform was launched in Russia in January 2002. It proposes a system of three tiers (pillars):

- 1ST PILLAR: basic pension for all pensioners differentiated by age (below and over 80) and degree of disability; plus so called 'public pension provision' financed through general taxes, including social pensions for people without seniority;
- 2ND PILLAR: labor pensions both defined-contributions PAYG and funded; mandatory funded occupational pensions instead of PAYG privileged ones[2];
- 3RD PILLAR: voluntary occupational and individual private pensions.

The new system distinguishes between two major types of pensions – labor pensions and pensions from „public pension provision". In the former, benefits are earned through prior contributions over the entire working life. The latter are given to people with insufficient or no labor pensions or to some special professional groups and financed by the federal budget. An individual can claim only for one type of pension but sometimes s/he is permitted to get a pension from 'public pension provision' in addition to a labor pension.

Similarly to the previous legislation, labor pensions cover three groups – old age, disability, and survival pensions. Pensions for long service were included into old age pensions. Old age and disability pensions consist of three parts – basic, insurance (i.e. defined-contribution PAYG, or notional defined-contribution system (NDC)), and funded. Survival pensions include only two first parts.

Normal pension age has not been changed. The possibility of retiring is open to all individuals with a contribution period of at least five years at the age of 55 (60). It is assumed that after the new pension system matures, pension behavior will be determined by incentives to work longer so as to get higher benefit, rather than by legislative pension age.

An important issue of any radical pension reform, particularly in a country with such a mature and comprehensive pension system as Russia, is the way of financing the transition. Contributions to funded pillar reduce the amount of money to be paid to current pensioners. It was not proposed to use external sources of financing the transition to the new pension system. Instead, the reform was designed to keep relatively low differentiation of pension benefits and introduce the funded pillar gradually during a long period of time.

Whereas in the future insurance and funded pensions will be closely tied to contributions paid, for current pensioners some indirect limitations on the benefit size are kept. Benefits for present pensioners along with pension rights for those contributed to the prior system were recalculated

[2] The law on mandatory professional pension schemes was to be enacted since 2003 but it has not been adopted yet. This component of reform is therefore postponed.

according to the new law so that a person's salary was taken into account only in part not exceeding 120% of an average national salary, from which the pension contribution was paid[3].

Initially, participation in funded pillar was extended to females below 46 and males below 50. But in 2004, workers born in 1957(53)-1966 were completely excluded from participating in funded pillar. Those born after 1966 pay 3% of their wages to the funded pillar in 2002-2003, 4% in 2004-2007 and are expected to pay 6% since 2008. Respectively, contributions in favor of the "insurance" component of labor pension are equal 14% or less depending on the age and wage of a contributor. In total maximum rate of payments to the Pension Fund was equal to 28% from 2002 to 2004 and 20% since 2005, which covers payments for all parts of pension.

Several facts induce skepticism as to the perspectives of the ongoing funded reform. First, the design of the funded pillar is not perfect in terms of promoting personal responsibility for participation in the pension system. Employers make all the payments in favor of employees. Employee personally pays nothing. S/he receives information about employer's payments once a year and only once a year can make his/her choice of a managing company or a fund. All funded pillar funds belong to the state, i.e. they are in state ownership. Thus, the system is hardly to produce one's awareness of personal responsibility for funded pillar payments and gives only a few chances to change something. Second, there is a lack of information about opportunities offered by this reform to the individual, financial institutions involved in the reform and financial instruments available for investment of funded pillar funds. Unversed in financial operations, the Russian population demonstrates a lack of trust to the reform on the whole and private financial institutions in particular[4]. Hence, one can hardly suppose that funded pillar will play a significant role in influencing both financial stability of the pension system and individual behavior in labor and pension spheres even in the future.

With a weak funded pillar and ageing population, reforms of the parameters of the PAYG system become very important. As mentioned above, the new system is to introduce a NDC in perspective. But traditional models of influence of the NDC on retirement decisions are based on the assumption that a person cannot work when s/he starts to receive a pension. Therefore, s/he postpones retirement as long as his/her employment increases present value of pension benefit and therefore individual lifetime utility (Disney R., Whitehouse E., 1999; World Bank, 1999). The Russian legislation allows both receiving a pension, and continuing to work. After a year of additional work, a pensioner can recalculate his/her benefit. Thus, although it may increase retirement age, there are no incentives to postpone pension age even in the NDC system.

Under the new pension laws, a part of privileged pensions was expected to be gradually shifted to new professional pension programs since 2003. Another part, including pensions for work in the Far North regions, rescuers', teachers' and medicine workers' pensions, etc. is still to be a subject to common rules of the state pension insurance. Notwithstanding the fact that a Draft of the Law on Mandatory Professional Pension Schemes passed a first hearing in 2001, it has not been approved yet and therefore the reform of privileged pensions is postponed.

Summing up, one can assert that nothing has changed in respect to the number of pensioners in the future Russia. It means increasing pension liabilities along with demographic ageing. Together with reduced incomes of the pension system due to decrease in UST, it implies a permanent imbalance of pension system finances.

[3] It is essential to mention that for current pensioners a size of benefit after recalculation should not be lower than a benefit received before the reform.

[4] Only 1% of contributed population has chosen private managing companies and private pension funds in 2004. Others either decided to keep their money in the state managing company or did not make any decisions and thus remained in the state managing company.

III. The data set and the sample for analysis

The data we use for the analysis are drawn from the National Sample Survey of Households' Wellbeing and Participation in Social Programs (NOBUS) conducted by Goskomstat in May 2003, i.e. a year after the pension reform had started. The sample includes 117209 respondents from 44529 households from 79 Russian regions. This is a representative sample of the Russian population. The NOBUS is not a survey specifically designed to study pension provision and retirement but, nevertheless, it collects information on individual and household characteristics that allow to run a reliable empirical analysis of effective pension ages and employment decisions.

The NOBUS contains detailed information on each individual's demographic background, education, current health and disability status, current employment, pension provision, family structure, privileges and social programs and services, social assistance, individual and household incomes and wealth, household expenditures and housing status. For the purposes of our survey it is important that this survey collects detailed information about pension provision, including type of benefit and its amount, and a year when the person was entitled to pension. Types of pension benefits are given in accordance with current legislation. There is no retrospective information on employment, though, which does not allow a comprehensive investigation of retirement decisions.

The sample selected for the analysis includes women aged 50-54 and men aged 50-59[5]. We exclude people with survival and social pensions[6] from the sample because the right to get these pensions does not depend on individual strategies. Moreover, people who mentioned zero incomes (both individual and household's) have been also removed. Table A-1 shows the main characteristics of individuals in the sample.

IV. Actual pension age in modern Russia

In this section, we describe dynamics of effective pension ages in Russia with a special attention to the 1990s. As we said above, the normal pension age in Russia is 55 years old for women and 60 for men. Effective (i.e. actual) pension age is lower, though. In line with the NOBUS data, figure 1 indicates that average pension age decreases for younger cohorts of pensioners. And this fall is extremely evident for people receiving pensions for the last 10-15 years. However, the average pension age of those receiving normal old-age pensions is very close to the official normal pension age: 53.7-54.5 for females and 58.5-59.0 for males. As for people receiving privileged pensions for working in Far North regions, their average pension age is 49.8 for females and 53.4 for males; for those working in hard and hazardous conditions – 47.9 and 51.2 years old respectively. Average pension age for recipients of disability pension is 43.6. Thus, declining of the average pension age is a result of expansion of early retirement and disability pensions.

Figure 2 shows that the number of pensioners has increased by 15.7 million (70% of the initial number) since 1970. Whereas during the 1970-80s this growth was mainly explained by the demographic ageing, the last decade demonstrated exceeding growth of the number of pensioners compared to the number of people in pension ages. Let us compare, for instance, figures for 2001, i.e. the year with maximum number of pensioners and the last year before the pension reform, with those for 1991[7], the last year before liberalization of prices. The total number of people in pension age has increased by 4%, while the total number of pensioners – by 13.5%. Among the latter, the number of disabled pensioners increased by 43.2% and the number of pensioners for long service

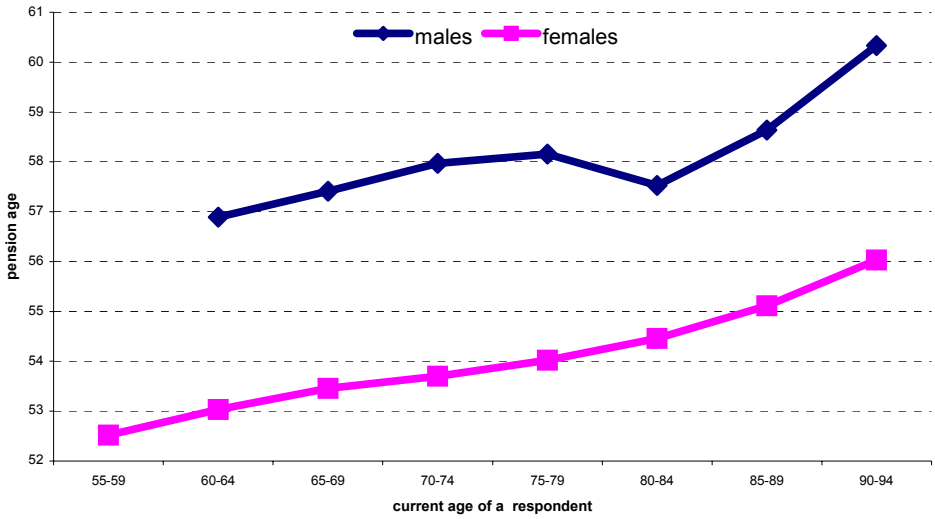
[5] In the ages below 50 there are only few pensioners, while almost all people who turned 55 (60) years old receive pensions.

[6] Most of social pensioners of these ages are people with disabilities since childhood or youth who never worked.

[7] The following comparisons are based on the author's calculation on the Goskomstat data (1999, 2003a).

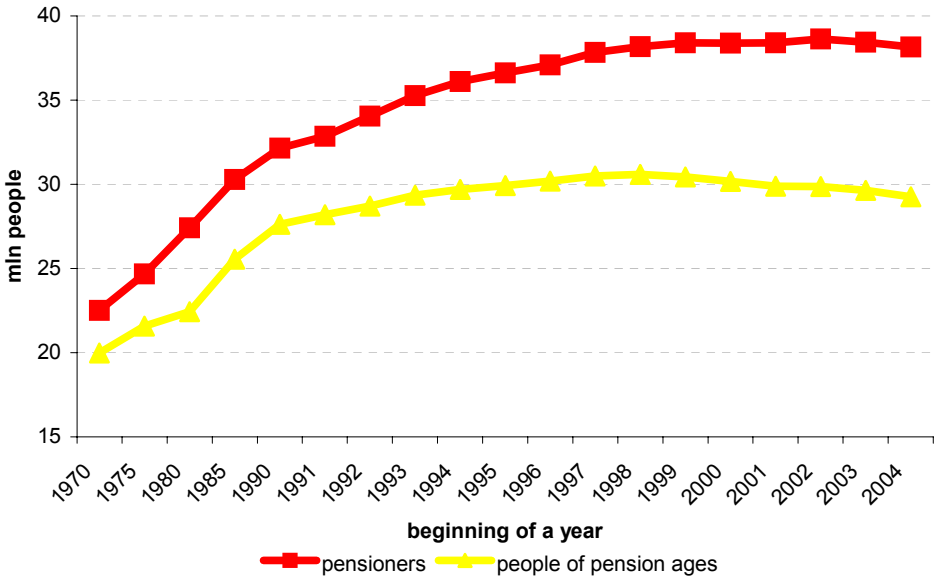
by 702.4%. The latter was induced by the introduction of pensions for long service for teachers and rural medical personnel in 1996[8].

Figure 1: Average pension age for people receiving labor pensions for old age and disability



Source: Author's calculations based on the NOBUS data

Figure 2: Number of pensioners, people of pension ages (55/60 and over for females/males respectively) and of 50 years old and above (mln), 1970—2004 (for the beginning of the year)



Source: Goskomstat, 1999, p. 59; Federal Service for State Statistics, 2004, p. 79

Hence, Russia has experienced a fast growth of early pensioners which caused a decline of the average pension age. The outcomes of this process are enormous. By the NOBUS, 26% of all pensioners are below the normal retirement age. Nearly 24% of all new labor pensioners received special early retirement pensions (Ministry of Labor data). Should no reform be undertaken, the Russian pension system will either transform into universal social assistance to the majority of population or most likely collapse.

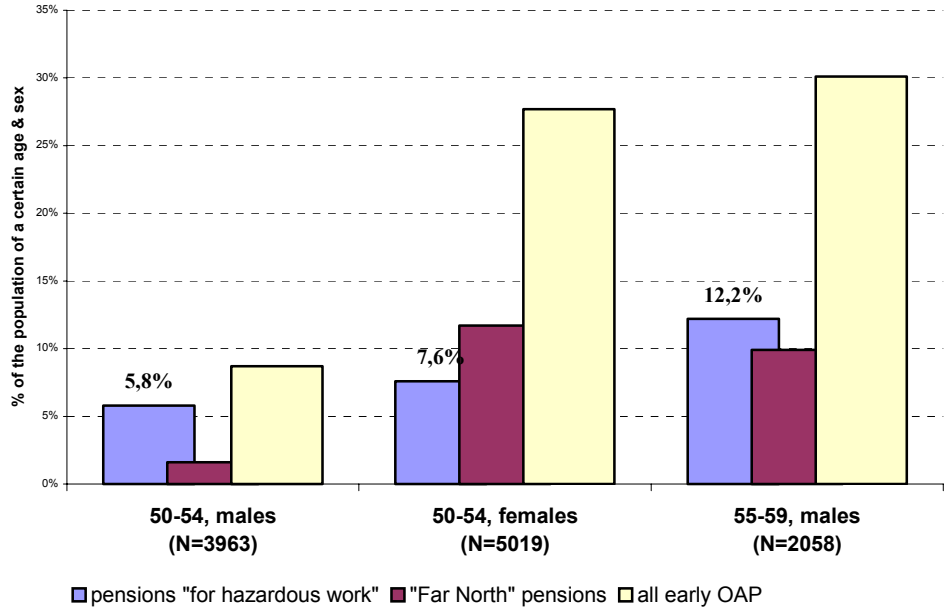
[8] Unlike other pensioners for long service these two groups can continue working at the same working place while drawing pension.

V. Privileged pensioners

Here, we will analyze in what ages privileged early pensions concentrate and whether early pensioners are worse in terms of health as compared to normal ones. There is no information on the distribution of privileged pension across the population in the official statistics. In sample surveys, the number of observations is often too small, thus preventing from studying any features of privileged pensioners in pre-pension age. In this respect, the NOBUS survey is a good exception.

It is clear that at the age of 5 years below the normal retirement age more than a quarter of men and women receive early old-age pension. Figure 3 indicates the shares of early pensioners in the population of 50-54(59) years old. It is evident that males get early pension more often than females. Among them, pensions for working in hard and hazardous conditions are more frequent than pensions for working in Far North regions. The former embrace a majority of early old-age pensions received by men aged 50-54 and from 30 to 40% of all early old-age pensions received by women aged 50-54 and men aged 55-59 respectively. As we mentioned above, if the proposed reform of privileged pensions had started, only this category of early pensions would have been transferred from the state pension system to private occupational ones.

Figure 3: Shares of early old-age pensioners in the population of 50-54(59) years old



Source: NOBUS

In May 2003, an average old-age pension was equal to 1621 rubles (about 53 USD). An average old-age pension received by people in pre-pension ages was 1773 rubles, while a pension for working in hard conditions – 1675 rubles and a pension for working in Far North regions – 1994 rubles. Thus, early pensioners are not discriminated at all in terms of benefit size. Moreover, nearly half of them receive earnings while drawing pensions (Table 2).

It is often said that pensions for working in hard and hazardous conditions are a sort of insurance against risks of loss of capacities for work before achieving normal pension age. It is true only in part. Firstly, special surveys of job conditions and of working population aimed at revealing professional risks related to certain jobs were conducted long ago and thus cannot reflect the current situation. Since that time working conditions could have been improved, some jobs disappeared and new ones appeared. Secondly, present lists of jobs, occupations, branches with harmful working conditions reflect the results of lobbyists' efforts rather than real assessment of working conditions.

According to the NOBUS data, there are differences in health between privileged pensioners and non-pensioners in pre-pension ages (Table 1). Almost one tenth of privileged pensioners assess

their current state of health as good or very good (excellent). And 49% of men and 39% of women receiving privileged pension did not apply for medical care mostly because of the absence of health problems. Taking into account that a majority of them continue to work (Table 2), one can hardly assert that privileged pensions are a really good instrument of insurance against the risk to lose the ability to work.

Table 1

Comparisons of early old age pensioners with non-pensioners by health features (females aged 50-54, males aged 50-59), May 2003

	Males		Females	
	non-pensioners	**early old age pensioners**	**non-pensioners**	**early old age pensioners**
N, respondents	4121	997	3067	1403
Average age, years (st.dev.)	53.1 (2.393)	55.1 (2.466)	51.9 (1.416)	52.1 (1.390)
Subjective assessment of the current health status (column %):				
• good and very good	21.5%	11.1%	14.3%	9.6%
• average	66.9%	68.4%	68.4%	69.8%
• bad	10.5%	18.9%	16.3%	18.7%
• too bad	1.1%	1.6%	1.0%	1.9%
Characteristics of health for the last 12 months (column %):				
• did not apply for medical care	60.5%	48.6%	46.6%	39.3%
• applied for medical care	28.9%	33.9%	41.5%	44.6%
• applied for medical care and received an appointment card for hospitalization	10.6%	17.5%	11.9%	16.1%

Source: NOBUS

What are the reasons why the reform of privileged pensions is delayed? In 2001, both the parliament and the government presented their drafts of the law on mandatory occupational pension schemes. Both drafts proposed to create defined-contribution funded mandatory occupational pension programs at the enterprises with workers previously covered by special early retirement programs. According to both drafts, these programs should be a part of collective agreements. Two forms of payment were assumed, including monthly benefits up to the standard pension age or lump-sum payments. But additional contribution rates for these occupational programs were twice higher in the governmental proposal. Eligibility criteria for private pension funds became the second stumbling-block because the governmental draft prohibited programs created with participation of the pension funds affiliated with the employers.

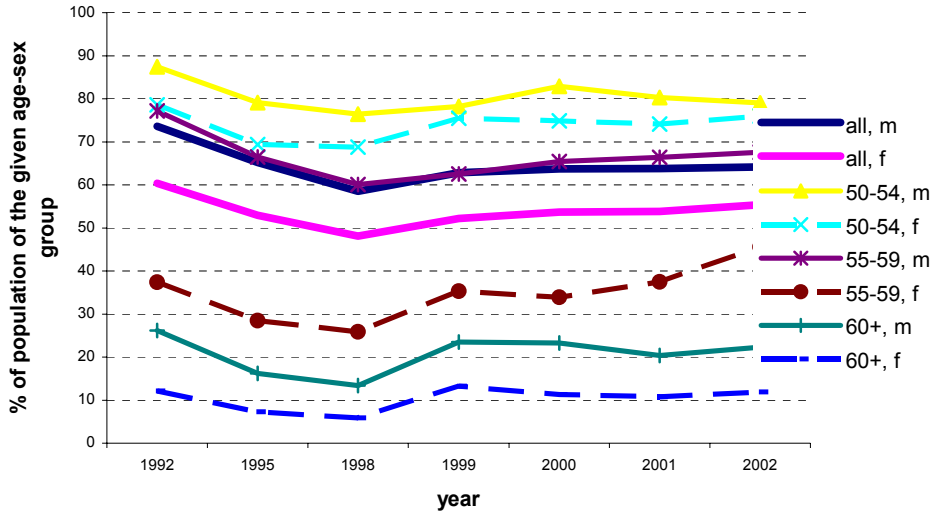
In our opinion, the fact that the situation has not changed since that time is favorable for both employers and trade unions. We suppose, it is necessary to solve this issue as soon as possible because of the future ageing and the negative labor distortions of the early retirement schemes. A compromise solution might consist in a gradual transition in the course of which the state and the employers would co-finance additional costs related to these occupational programs. By the end of such a transition, clear criteria of characterizing a working place as a risky one should be developed.

VI. Factors affecting employment in pre-pension ages in Russia

According to official data, people in pre-pension age actively participate in the labor market. For instance, labor force participation rates were 80.4% for women of 50-54 years old and 72.0% for men of 55-59 years old (Goskomstat, 2003b). General unemployment rates (measured in accordance with ILO methodology) in these groups are lower than the average one, although duration of unemployment is much higher as compared to other age groups.

Dynamics of the employment rates of elderly people had several stages. From the very outset of the transition, their employment has declined (Fig. 4). Then there was a surprising growth of employment rates in 1999, which in part can be explained by the income effect on labor supply because of a sharp drop in non-labor incomes[9]. After that all figures apart from employment rates of women of 55-59 years old have become stabilized. We might hypothesize that augmentation of employment of females aged 55-59 is a result of changes in pension legislation removed any bans from employment of pensioners. Nevertheless, it is evident that achieving normal pension ages on average decreases probability of employment.

Figure 4: Employment rates by age and sex, LFS data



Source: Goskomstat, 2003b, p. 63

The NOBUS data allow us to look at employment rates of pensioners and non-pensioners even in pre-pension ages (Table 2)[10]. Micro-data confirm that getting a pension reduces chances to be employed. Employment rates are higher for those received privileged pensions as compared to other pensioners but less than for non-pensioners[11]. Besides, it is apparent that among pensioners women have higher employment rates than men, while among non-pensioners quite the contrary is true.

[9] See the discussion about other reasons of unexpected growth of labor force and employment rates in 1999 in Gimpelson (2001).

[10] Official statistics publishes only aggregate data on the share of working pensioners in the total number of different types of pensioners regardless of their age. In the end of 2002, 16.9% of all pensioners and 18.5% of old age ones had a job (Goskomstat, 2003a).

[11] According to official statistics, the highest levels of employment were observed among pensioners for long service, which reached 79% of the total number of this group in the end of 1990s (Ibid).

Table 2

Shares of employed people in different social and demographic groups (% to total number of people at a given age and sex and certain status in pension system), 2003

	50-54 y.o.		55-59 y.o.
	males	females	males
Non-pensioners	86,0	82,8	84,5
Pensioners, including:	46,3	54,2	45,3
privileged old age pensioners for working in hazardous conditions	65,9	58,9	51,8
privileged old age pensioners for working in Far North regions	57,8	66,1	60,8
disability pensioners	23,5	23,0	20,5

Source: NOBUS

Starting from the theory of labor supply (Roshchin & Rasumova, 2000; Disney, Whitehouse, 1999) and basic observations of employment rates of men and women in pre-pension ages (see above), we assume the following:

- the size of pension benefit will reduce employment probabilities (income effect) affecting more noticeably men than women;
- other non-labor incomes will decrease employment probabilities (income effect) as well but affecting more women than men;
- we cannot predict the sign of the impact of other family members' wages on employment probability; but it could be negative for women (income effect);
- regional rates of general unemployment will reduce employment probabilities (discouraged worker effect), more seriously for men than women;
- lower education and poorer health will reduce employment probabilities;
- marriage, household size and the number of young children[12] might reduce employment probabilities for women but not for men.

To test these assumptions, a binary logistic-regression was used with dependent variable taking on value '1' when a person is employed and '0' when s/he is not employed. Finally we used the following model:

$\Pr(y_t = 1) = \Lambda(u) = \frac{e^u}{1+e^u}$, where

$$u = \beta_0 + \beta_1 Ln(rpens) + \beta_2 Ln(onli) + \beta_3 Ln(wohh) + \beta_4 regunr_{tot} + \beta_5 gender + \beta_6 educ + \beta_7 subhlth + \\ + \beta_8 disab + \beta_9 freg + \beta_{10} settlem + \beta_{11} married + \beta_{12} hhsize + \beta_{13} nchild ,$$

where: $Ln(rpens)$ – natural log of respondent's pension, $Ln(onli)$ – natural log of respondent's other non-labor incomes, $Ln(wohh)$ – natural log of wages of other household members, $regunr_{tot}$ [13] – regional rate of general unemployment (both sexes), $gender$ – dummy variable taking 0 for 'males' and 1 for 'females', $educ$ – categorical variable of education level taking 0 for 'higher education', $subhlth$ – categorical variable representing subjective estimates of respondent's health (by his/her own assessment) with 0 for 'average health', $disab$ – dummy variable taking 0 for 'non-disabled' and 1 for 'disabled', $freg$ – categorical variable of federal districts (regions) with 0 for 'Central region', $settlem$ – categorical variable of type of settlement taking 0 for a 'city with more than 1 mln people', $married$ – dummy variable with 1 for 'married' and 0 for 'other states', $hhsize$ – number of people in the household, $nchild$ – number of children from 0 to 10 years old in the household.

[12] In Russia, it is still widespread that grandmothers help to raise children (so called 'babushki').

[13] In equations used for men and women separately, we replaced regional unemployment rates of both sexes with regional men's and women's unemployment rates respectively.

The analysis has shown that there is a significant income effect of non-labor incomes to labor supply of people in pre-pension ages. In other words, receiving pension reduces probability of employment to a greater extent for men than women (Table A-2). Other things being equal, the higher regional unemployment rate, the less is the probability of employment. Similarly, the lower the education level or the worse subjective estimates of health, the less is the probability of employment. Furthermore, negative effects of education and health on employment are most noticeable. Disability itself reduces probabilities of employment. Thus, one can conclude that employment probability depends on non-labor incomes, which determine individual budget constraints, and characteristics of individual human capital, including education, health and disability. Moreover, education shapes individual utility function as well.

Characteristics of marital status and household shed more light on to prediction of non-employment than employment. In the equation which includes both men and women, only marital status is significant at 5% with a negative sign. Married men have higher probabilities to be employed (significant at 1%). On the contrary, probability of employment is less for married women who live in large households. Surprisingly, the impact of children in the household on employment is insignificant for both sexes and for men, and weakly significant for women. We can suggest that the effect of children is absorbed by the effect of the size of households. Namely, in large households, there are more opportunities of differentiating household members according to their labor productivity. Therefore, people less productive in labor market leave paid employment for household work regardless of other factors, including children. A household demographic composition may also influence the direction and strength of the relations between children in the household and employment of elderly people. Finally, pensioners and non-pensioners might differ by the impact of this parameter. Also, contrary to expectations, wage of other household members affect employment positively in all the three equations. This result should be tested further by analyzing separately employment probabilities of people from different types of household and by distinguishing wage of a respondent's partner (spouse) from wages of other household members, as their influence can be controversial.

VII. Working pensioners

In this section, we will concentrate on the employment characteristics of working pensioners. Most of working pensioners in pre-pension ages receive some type of early old-age pension. According to NOBUS data, 93% of employed pensioners as compared to 88% of non-pensioners, are employees. Most of them work at the same job as before getting the pension (Table 3). As the majority of pensioners in question get pension for 5 years or less, we can assume that only a quarter of them changed their job when they become pensioners. Some of the pensioners had to change the place of employment (e.g., military personnel, miners) which corresponds to a relatively higher share of people with tenure less than a year among pensioners. Searching a new job becomes more and more difficult with age, though. Some of the elderly people are less competitive on the modern labor market; others have no experience of searching a job. It leads to longer duration of unemployment of old age people. Thus, for many pensioners, continuing to work at the same place is the only option to keep employment.

As non-labor incomes of pensioners are higher and stable, they can choose more flexible working time as compared to non-pensioners. By NOBUS, male pensioners usually work on average 1.6 hours per week less than male non-pensioners, while female pensioners 2.3 hours less than female non-pensioners. Partly it may explain why employment probabilities do not depend significantly on the number of children: old women with small children in the household ("babushki") can continue to work with reduced hours. But the other explanation relates to the fact that there are more people employed in education, science and health care among female pensioners. All these activities are characterized by a flexible working schedule. Thus, less working hours may be occupation- specific (i.e. exogenous), rather than a result of individual choice.

Table 3

Distribution of employees, pensioners and non-pensioners, by the tenure in last employment (column %), 2003, NOBUS

	Non-pensioners	Pensioners		
		all	for working in hard conditions	for working in Far North regions
N, respondents	5741	1803	495	536
Less than a year	7.1%	7.4%	8.1%	7.8%
1-3 years	10.9%	7.8%	7.9%	7.3%
3-5 years	8.4%	8.0%	6.3%	9.9%
5-10 years	14.9%	12.0%	10.3%	12.5%
10 years and more	58.7%	64.8%	67.5%	62.5%

Source: NOBUS

There is a widespread misleading perception that pensioners occupy low-qualified jobs. It is partly true for very old people over 60 but not for pensioners of pre-pension ages. Of course, most of them work as employees in the state sector, i.e. on positions that are not prestigious and demanded and therefore poorly paid. But these are jobs in education, health care, and public administration and many of them require higher education (Table 4). The fact that pensioners are less frequently employed in agriculture is likely to have the only explanation: rural pensioners leave agricultural firms for their own plots, and informal employment in agriculture even increases with age. A relatively high share of employed in manufacturing among early pensioners confirms our proposition that the majority of privileged pensioners do not leave their jobs after getting pensions. The same is especially true of pensioners working as teachers and medical workers. Furthermore, there are more specialists with higher and secondary education among pensioners as compared to non-pensioners (Table 5). Contrary to expectations, non-pensioners and pensioners have similar shares of unskilled labor.

As most of the jobs occupied by pensioners in the state sector are low-paid, one can say that the current pension system subsidizes ineffective jobs in the Russian labor market and impedes the reform of the budget sphere as well. It also prevents from improving working conditions at private enterprises because currently ‘bad’ jobs are paid through general contributions.

Table 4

Distribution of working pensioners and non-pensioners of 50-59 y.o. by industries (column percentage)

branch	non-pensioners		pensioners	
	males	females	males	females
agriculture, forestry & hunting	15,38	9,26	5,33	4,25
mineral resource industry	2,70	1,34	**7,23**	2,37
manufacturing industry	19,16	15,64	19,08	12,35
construction	12,06	4,02	6,52	3,06
wholesale & retail trade, maintenance	6,16	12,60	3,32	7,81
transport, communications	14,62	7,29	11,85	5,73
public administration & defense, social security	5,05	8,23	**12,56**	7,11
Education	4,46	12,72	**10,43**	**27,08**
health care & social services	2,84	11,42	4,74	**16,30**
housing & communal services	8,09	8,98	8,41	8,70
other	9,48	8,51	10,55	5,24
Total N	*3523*	*2539*	*844*	*1012*

Source: NOBUS

Table 5

Distribution of working pensioners and non-pensioners of 50-59 y.o. by occupations (column percentage)

occupation	non-pensioners		pensioners	
	males	females	males	females
managers, public officials & legislators	5,73	3,86	5,46	5,04
professionals with higher education	12,63	17,05	**21,00**	**18,58**
specialists with secondary education	13,88	22,32	**15,54**	**27,37**
office non-manual workers	0,79	9,13	2,61	6,52
service sector workers	8,20	16,02	6,52	13,04
skilled agricultural workers	7,21	3,15	2,49	0,89
manufacturing workers	25,94	9,09	24,56	7,31
operators, machinists, etc.	11,61	2,80	8,78	4,45
unskilled labor	13,45	16,10	11,39	16,70
military personnel	0,57	0,47	1,66	0,10
Total N	*3524*	*2540*	*843*	*1012*

Source: NOBUS

VIII. What is the prospects of the reform of pension age in Russia?

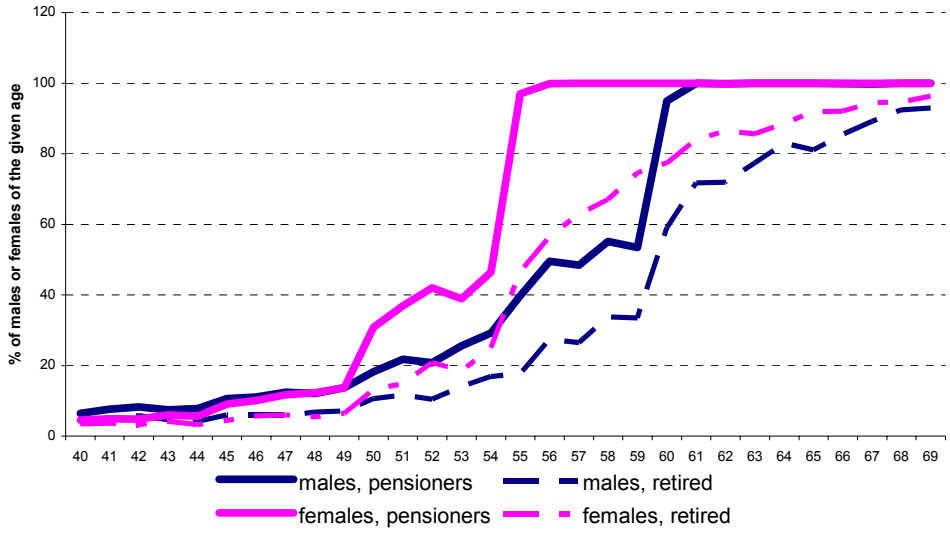
This section concludes our discussion of the current situation with pension age in Russia and offers some forecasts for the future. The issue raised here is the cost of the increasing of pension age.

It is obvious that the right to combine work and pension leads to differences in pension and retirement age in Russia (Fig. 5). The NOBUS does not allow to estimate the real retirement age of the respondents. Nevertheless, we can compare shares of all pensioners in the population of the given age and sex with shares of working pensioners.

In this section, we are not very interested in retirement ages of people below the normal pension age. One can assume that the difference between these two groups at the age above the normal pension age shows potentialities for increasing pension age. Although we should remember that pension as an additional and significant source of non-labor income reduces probabilities of employment and thus, actual participation rates could be higher. Figure 5 proves that the number of pensioners and those of them already retired almost do not differ at the age of 69 but even at the age

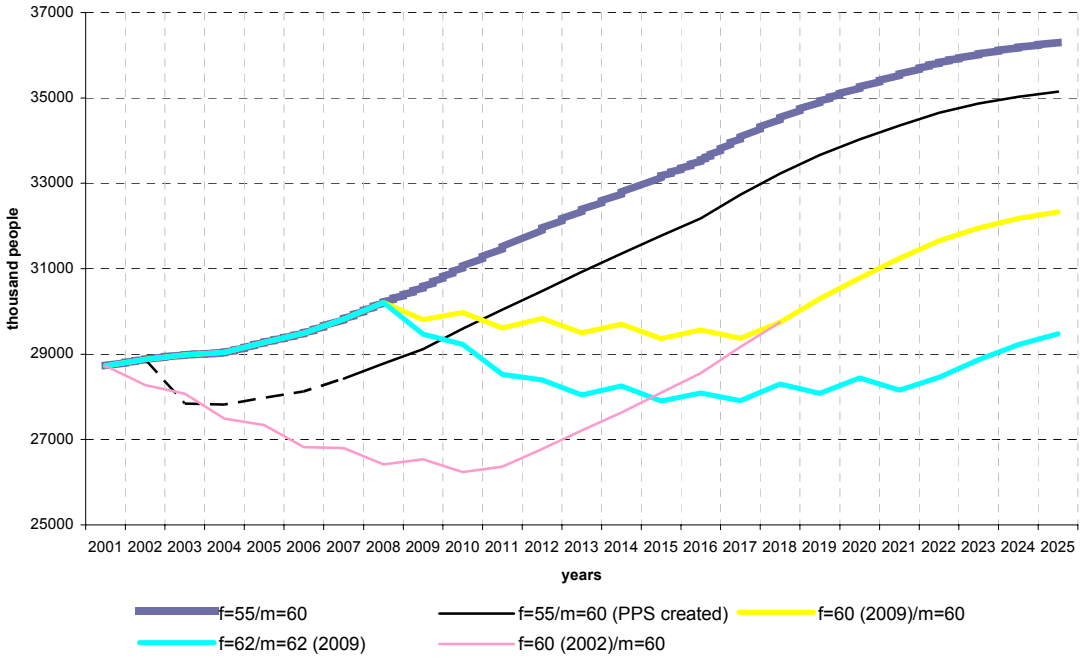
of 65 there are only a few working pensioners. The difference between these indicators is higher for women than for men, and for the women is the largest before 60. Together with higher mortality of male population accompanied by higher levels of their disability (Table 6), even in pre-pension ages, we can suggest that it is better both in economic and social terms to consider a possibility of equalizing normal pension ages of men and women than to increase it for both sexes. Moreover, in majority of developed countries normal pension (retirement) ages have been already equalized for both sexes and Russia can follow this way.

Figure 5: Shares of people receiving pensions and retired in the total number of people of a certain age and sex



Source: NOBUS

Figure 6: Number of old-age pensioners by different scenarios of changes in the legal normal pension age (medium demographic forecast)



Source: Author's calculations based on the Goskomstat's Long-term demographic forecast and NOBUS data

The proponents of the increasing of normal pension age demonstrate the benefits that the pension system will receive from this step. Figure 6 shows the dynamics of the number of old-age pensioners by different scenarios of pension age and years of launching this reform. It is clear that

the number of old age pensioners will decrease by almost 5 million even if pension ages for men and women are simply equalized at the level of 60 years old. Benefits from decreasing the number of old age pensioners due to increasing the normal pension age up to 62 or 65 are much higher.

For policy, it is very important that the effect of increasing the normal pension age comes rather quickly (figure 6). If only women's pension age was raised by 0.5 years old every year since 2002, then by 2004 it would be 1.5 million old age pensioners less (4.0% of the total number of pensioners), by 2008 – 3.8 million pensioners less, and by 2012 – 5.2 million less.

At the same time, the advantages of increasing the normal pension age for men are much less in terms of the number of old age pensioners, at least in the nearest future. This is explained by the early over-mortality of Russian men during their active ages. Nevertheless, there are very strong financial arguments for increasing normal pension ages if not for all, but at least for women.

Table 6

Potential changes in disability ratios in near-pension ages

age	males				females			
	non-disabled	disabled	potentially disabled[1]	all	non-disabled	disabled	potentially disabled	all
50	88,24	8,76	3,00	100	88,45	6,61	4,94	100
51	86,68	9,01	4,31	100	89,57	6,51	3,92	100
52	87,91	7,51	4,58	100	85,64	8,43	5,93	100
53	85,91	10,51	3,58	100	86,37	7,86	5,77	100
54	85,38	10,80	3,82	100	85,80	9,43	4,77	100
55	86,06	9,72	4,22	100	84,34	9,34	6,32	100
56	83,81	11,32	4,87	100	88,04	7,08	4,88	100
57	82,13	14,13	3,73	100	84,09	9,30	6,61	100
58	83,64	13,01	3,35	100	83,84	9,32	6,85	100
59	79,19	14,48	6,33	100	85,49	7,89	6,62	100

Notes: [1] – potentially disabled are respondents with very poor health, who visited doctors during the last 12 months and were recommended to be hospitalized
Source: NOBUS

There are several arguments against the increasing of the pension age. Firstly, the life expectancy in Russia is low as compared not only to developed countries but to many transition ones. At birth life expectancy of men was 58.8 years old and of women – 72.0 in 2003. Thus, oversimplifying one may say that people do not survive till their pension ages. It is not quite true of course because at the age of 50 men are expected to live 18.1 years additionally, while women – 26.2. But the high mortality in rather young ages is accompanied with poor health and therefore disability, which can diminish the positive effects of this measure. Secondly, one has to be sure that if the normal pension age is raised, the actual pension age will increase as well. People can use different options to retire earlier including disability pension, unemployment benefits, and early pensions if the latter are provided by the national legislation. Thirdly, decreasing the number of old age pensioners due to changes in pension age does not necessary bring about an increase in the number of the employed population, whereas the reform in question makes sense only if the number of contributors will rise simultaneously.

We have assessed the potential increase in disability using the NOBUS data. Only people who assessed their current health as very poor and received an appointment to hospitalization were considered as potentially disabled, although we think that it is the minimum estimate. The results are presented in Table 6, which shows that this increase might be quite significant and more noticeable for women than men. At the same time, we should not overestimate this danger because of possible restrictions of the rules for entitlement of the disability status, on the one hand, and of their relative financial unimportance in comparison with potential benefits from reduction the number of old-age pensioners, on the other. As we have shown above (Figure 3), the shares of early

old-age pensioners in the population at the ages below the standard ones are higher than possible shares of people with disabilities (Table 6).

IX. Concluding remarks

This paper has investigated the dynamics of effective pension ages, factors attributed to the low pension ages and determinants of employment in pre-pension ages in Russia using micro-data from the National Sample Survey of Households' Wellbeing and Participation in Social Programs (NOBUS) conducted in May 2003.

The results of our analysis have shown that due to the right to combine work and pensions, pensioners in Russia claim for a pension as early as they can do it. Therefore, a wide variety of special early retirement schemes, that allow to receive pension in its full size, reduce effective pension age.

Sometimes it is assumed that receiving earnings while drawing pensions increase the presence of the elderly people in the labor market and thus is useful for social reasons. Our investigation shows the opposite. Pension benefits as an important source of non-labor income reduce the probability of employment. Thus, labor supply in old ages could be higher in the absence of the option in question.

The benefits from potential increasing of normal pension ages are very high in terms of reducing the number of pensioners and therefore liabilities of the state pension system. At the same time, in the given demographic conditions even gradual rising of the standard ages of males has more disadvantages than advantages. Both demographic indicators (life expectancy and disability status) and labor force participation testify to the necessity of raising pension ages of women up to the age of men.

Thus, we propose the following. First of all, the reform of privileged pensions should be started as soon as possible. Second, it should be accompanied by a gradual increase of the retirement ages of women in Russia up to the age of 60. Third, the right to combine work and pensions should be either eliminated at all or prohibited for pensioners below normal pension ages. All these steps should be accompanied by active labor market policies aimed at reducing probabilities of unemployment among elderly people.

X. References

Barr, N. (2000). Reforming Pensions: Myths, Truths, and Policy Choices, *Working Paper* No. WP/00/139, IMF, August.

Chand S., and Jaeger A. (1996). Aging Populations and Public Pension Schemes. – IMF, Washington, DC, *Occasional Paper 147*, December.

Disney R., Whitehouse E. (1999). Pension Plan and Retirement Incentives, Pension Reform Primer Series, *Social Protection Discussion Paper* No. 9924, World Bank, Washington, DC.

Federal Service for State Statistics (2004). Statisticheskiy bulleten. October 2004, M.

Gimpelson, V.Ye. (2001). Ekonomicheskaya aktivnost naselenia Rossii v 1990-e gody: Preprint WP3/2002/01. M.: GU-VSHE.

Goskomstat Rossii (2003a). Sozialnoe polozhenie i uroven zhisni naselenia Rossii. 2003: Stat.sb., M.

Goskomstat Rossii (2003b). Trud i saniatost v Rossii. 2003: Stat.sb., M.

Goskomstat (1999) Rossiiskiy statisticheskiy ezhegodnik: Stat.sb., M.

Lumsdaine, R.L. (1996). Factors Affecting Labor Supply Decisions and Retirement Income // Assesssing Knowledge of Retirement Behavior, 1996. P. 61—122.

Roshchin, S., Rasumova, T. (2000). Ekonomika truda: ekonomicheskaia teoria truda: Uchebnoe posobie. M.: INFRA-M.

Vishnevskiy, A. G. (ed.) et al. (2004). Naselenie Rossii 2002. The 10th annual demographic report. M.: KDU.

World Bank (1999). Retirement: Can Pension Reform Reverse the Trend to Earlier Retirement? Pension Reform Primer, *Briefing*, Washington, DC

Zakharov, S., Rakhmanova G. (1997). Demographicheskij Kontekst Pensionnogo Obespechenija, in Maleva T. (ed.), 1997, *Sovremennye Problemy Pensionnoj Sfery: Kommentarii Ekonomistov i Demographov*, Carnegie Moscow Center Research Paper, Issue 16. Moscow, 32—59

APPENDICES

Table A-1

Main characteristics of the sample, NOBUS, females 50-54, males 50-59, 2003

	Cases	%
TOTAL	**10894**	**100**
GENDER		
male	5960	54.7
female	4934	45.3
AGE		
50	1809	16.6
51	1810	16.6
52	1747	16.0
53	1762	16.2
54	1722	15.8
55	544	5.0
56	636	5.8
57	374	3.4
58	269	2.5
59	221	2.0
EDUCATION		
primary or less	231	2.1
general	1329	12.2
secondary school	2447	22.5
primary vocational	1118	10.3
secondary vocational	3435	31.5
higher and postgraduate	2334	21.4
MARITAL STATUS		
married	8553	78.5
widow	886	8.1
divorced	1142	10.5
never married	313	2.9
HOUSEHOLD SIZE		
1	854	7.8
2	3815	35.0
3	3326	30.5
4	1776	16.3
5	842	7.7
6 and more	281	2.6
EMPLOYED	7924	72.7
PENSIONERS	3706	34.0
including:		
- for hard working conditions	860	7.9
- for work in the Far North	855	7.8

Source: Author's calculations based on the NOBUS data

Table A-2

Binary logistic regression: probability to be employed

Variables list	B (S.E.)		
	both sexes	**males**	**females**
LN OF RESPONDENT'S PENSION	-0,188*** (0,008)	-0,232*** (0,012)	-0,151*** (0,012)
LN OF OTHER INDIVIDUAL NON-LABOR INCOMES	-0,150*** (0,013)	-0,112*** (0,018)	-0,188*** (0,019)
LN OF WAGES OF OTHER HH MEMBERS	0,071*** (0,007)	0,085*** (0,010)	0,061*** (0,011)
REGIONAL UNEMPLOYMENT RATE (total, males, females respectively)	-0,038*** (0,008)	-0,044*** (0,010)	-0,028** (0,012)
GENDER (FEMALES)	-0,098* (0,054)	-	-
EDUCATION	***	***	***
elementary or less	-1,289*** (0,170)	-1,132*** (0,221)	-1,423*** (0,274)
general	-1,202*** (0,094)	-0,971*** (0,126)	-1,437*** (0,145)
secondary school	-0,907*** (0,082)	-0,729*** (0,113)	-1,112*** (0,123)
primary vocational	-0,714*** (0,101)	-0,537*** (0,135)	-0,902*** (0,157)
secondary vocational	-0,422*** (0,079)	-0,253** (0,112)	-0,638*** (0,116)
SUBJECTIVE HEALTH	***	***	***
good & excellent	-0,033 (0,078)	0,125 (0,105)	-0,225* (0,119)
bad	-0,799*** (0,065)	-0,793*** (0,094)	-0,819*** (0,091)
too bad	-1,834*** (0,181)	-2,108*** (0,255)	-1,588*** (0,259)
DISABILITY	-0,941*** (0,095)	-0,846*** (0,126)	-1,003*** (0,148)
FEDERAL REGIONS	***	**	***
North-Western	0,315*** (0,095)	0,309** (0,131)	0,267* (0,139)
Southern	-0,016 (0,109)	0,137 (0,144)	-0,221 (0,166)
Volga district	0,246*** (0,088)	0,164 (0,120)	0,325** (0,131)
Ural	0,038 (0,108)	0,121 (0,152)	-0,091 (0,156)
Siberian	-0,050 (0,097)	-0,037 (0,132)	-0,127 (0,148)
Far Eastern	0,306*** (0,092)	0,401*** (0,127)	0,154 (0,137)
SETTLEMENT	***	***	***
100 thousands - 1 mln	0,741*** (0,115)	0,975*** (0,163)	0,549*** (0,164)
20-100 thousands	0,567*** (0,068)	0,682*** (0,096)	0,488*** (0,099)
less than 20 thousands, urban-type community	0,476*** (0,078)	0,693*** (0,110)	0,266** (0,114)
rural area	0,490*** (0,082)	0,500*** (0,114)	0,488*** (0,121)
MARRIED	-0,170** (0,070)	0,324*** (0,115)	-0,399*** (0,090)
HOUSEHOLD SIZE	-0,050* (0,029)	-0,034 (0,040)	-0,110*** (0,043)
NUMBER OF CHILDREN 0-10	-0,113 (0,08)	0,045 (0,114)	-0,204* (0,116)
Constant	2,454*** (0,134)	1,775*** (0,183)	2,889*** (0,189)
Nagelkerke R square	0,347	0,392	0,320
N	**10894**	**5960**	**4934**

Notes: *** - significant at 1%; ** - significant at 5%; * - significant at 10%

Source: Author's calculations based on the NOBUS data