EXPLAINING THE DYNAMICS IN PERCEPTIONS OF JOB INSECURITY IN RUSSIA[[1]](#footnote-1)

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ABSTRACT

Contrary to the experiences of other countries, perceptions of job insecurity in Russia were not correlated with the changes in unemployment during the last decade. We develop the theoretical framework that predicts that individual perceptions of job insecurity depend on regional unemployment rates and on the within-group variance of wage distribution faced by workers. We test this hypothesis using data from ten panel rounds of Russia Longitudinal Monitoring Survey. Our results indicate that while higher rates of unemployment make workers feel less job secure, the wage compression during recessions reduces their fears of losing a job. In periods of economic expansion the effect of lower unemployment rates is offset by the higher fears of losing better paying jobs.

**Keywords**: Unemployment, Job security, Business cycle, Russia

**JEL Classification**: J28, J30, J64

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1. **Introduction**

Between the 1998 and 2000, in the wake of fast recovery after the financial crisis of 1998 the unemployment rate in Russia declined from almost 14 percent to less than 9 percent. The strong economic growth of 2000 to 2007 brought unemployment further down to less than 6 percent. Meanwhile, the proportion of Russian workers who were afraid of losing their jobs decreased just slightly and never was below 50 percent.

Most of the studies on the fear of unemployment find strong correlation between unemployment rates and levels of the fear of losing a job. Schmidt (1999) for the US and Green, Felstead and Burchell (2000) for the UK show that the fear of unemployment moves in line with the actual unemployment. Even small changes in unemployment translate into significant changes of the level of fear. Clark, Knabe and Ratzel (2009) report similar relationship between the unemployment rates and the levels of perceived job insecurity in Germany. Clark and Postel-Vinay (2009), using data from 12 OECD countries, find that the regional unemployment rates sharply reduce perceived job security among the temporary workers, but increase that perception among permanent job holders. Though this positive relationship between the unemployment rates and the perceptions of job insecurity seems intuitively obvious and is confirmed by many empirical studies, it does not emerge as universal. In Russia, perceptions of job insecurity were not correlated with movements in the rates of unemployment over the last two decades. In this paper we offer an explanation to this phenomenon.

The fear of unemployment among Russian workers was explored in Gimpelson, Kapeliushnikov and Ratnikova (2003), Linz and Semykina (2008, 2010) and Gimpelson and Oshchepkov (2012). These papers report weak or no correlation between the levels of unemployment and the fear of unemployment early in the transition and find small positive correlation in the later years. While presenting a useful descriptive analysis and documenting the effects of individual characteristics on the perception of job insecurity, none of these papers offers a causal explanation for the persistence in fear of unemployment against large fluctuations in unemployment in Russia.

In our paper we develop a theoretical framework to analyze the dynamics in levels of fear of unemployment. This framework predicts that individual perceptions of job insecurity depend on regional unemployment rates and on the within-group variance of wage distribution faced by workers or “residual” wage inequality (e.g., Lemieux 2006). These two indicators move in the opposite directions over the business cycles resulting in no or low correlation between the fears of losing a job and the rates of unemployment. We test this hypothesis using data from ten panel rounds of the Russian Longitudinal Monitoring Survey. Our results indicate that while higher rates of unemployment make workers feel less job secure, the within-group compression of wage distribution (due to a decrease in the variable part of wages) during recessions reduces their fears of losing a job. In periods of economic expansion the effect of lower unemployment rates is partially offset by the higher fears of losing better paying jobs.

The countercyclical dynamics of subjective job insecurity may have important policy implications. The persistent fears of joblessness among workers feed public support for populist policies in the labor market. These fears are translated to politicians thus narrowing the political window of opportunities for needed economic reforms and strengthen the sub-optimal equilibrium with negative potential implications for both employment and unemployment.

The next section describes our data and defines main indicators used in the analysis. Section 3 provides information on the Russian labor market over the period of 2000-09. Section 4 describes the theoretical framework and formulates testable hypothesis. Section 5 explains the econometric methodology and Section 6 provides the results of the empirical analysis and simulations. The alternative explanations for our results are tested in Section 7. Section 8 sums up our major findings and suggests some policy implications.

1. **Data and main definitions**

For this study we use data from ten panel rounds of the Russian Longitudinal Monitoring Survey (RLMS-HSE) covering the 10-year period from Q4 2000 to Q4 2009. Our main sample contains information on 23,378 men and 26,233 women in the working age who were employed and earned wages in any of the ten rounds of the survey[[2]](#footnote-2).

Our measure of perception of job insecurity is provided by answers to two questions. The fear of losing a job (FLJ) question is formulated as follows: “*How concerned you are that you can lose your job? Are you (1) Very concerned; (2) Concerned to some degree; (3) Yes and No; (4) Little concerned; (5) Not at all concerned?* To simplify the interpretation of our results, we redefine answers to the FLJ question so that the higher ranks in the answers correspond to higher levels of fear.

The second question inquires about fear of not finding a job (FNFJ): *Imagine not a very pleasant situation: the enterprise where you are working now, for some reason will be closed tomorrow and all workers will be fired. How sure you are that you could find a job at least as good as your current one? Are you (1) Absolutely sure (2) Almost sure (3) Yes and No (4) Not very sure (5) No sure at all?* All working respondents older than 16 years of age were asked to answer these questions. Table 1 shows the proportion of respondents in each category for both questions by years of the survey.

We use earnings for the last 30 days on the main job as a measure of individual real wages. They were deflated to 2000 prices to insure inter-year comparability. The unemployment rates for our analysis are calculated in three different ways. The first measure of unemployment is an aggregate unemployment rate measured at the regional level. We also calculate the group-specific unemployment and non-employment rates using data from Russian Labor Force Survey (LFS). The survey collects information on about 265,000 individuals every year and is representative for each Russian region (RosStat, 2011). We form 496 unique combinations of the region, type of location (urban or rural), gender and education of the respondents in LFS and for each group and for each year, we calculated unemployment rate as a proportion of unemployed in economically active population in the group and non-employment rate as a proportion of non-employed in the total population in the group. We then impute these values of group-specific unemployment and non-employment rates to every respondent in our RLMS sample.

1. **Labor market dynamics and fear of unemployment in Russia**

Major labor market institutions in Russia were largely shaped in the first half of the 1990s. The Russian Government tried to build market compatible safety nets and, at the same time, to prevent massive downsizing of the labor force. The Russian employment protection legislation inheriting multiple rigidities from the old Soviet Labor Code remains strict though weakly enforced in practice. In 2000s, the government labor market policies were focused on providing better job protection to workers by improving enforcement of labor contracts and regulations (Vishnevskaya and Kapelushnikov, 2007).

The evolved institutional framework allowed for significant wage flexibility but left limited room for rapid employment adjustments. At the beginning of transition, in 90s, the fall in output led to a disproportionally small contraction of employment but to a sharp decline in real wages, and an increase in wage arrears and wage delays (Gimpelson and Kapelyushnikov, 2011). Contrary to the experience of other transition economies, massive unemployment was avoided. The unemployment rate reached its all-time high of around 14 percent only in early 1999 and then declined rapidly responding to the economic recovery and dropped below 6 percent by early 2008. The recovery after the crisis of 1998 had a broad positive impact on the labor market: wage arrears nearly dissipated; underemployment decreased and the number of annual hours worked increased. Hiring and vacancy rates stayed high and the real wages grew at 12-15 percent per annum between 2000 and 2008 (Rosstat, 2011).

Despite such a favorable environment worker’s perceptions of job insecurity stayed surprisingly high. The evolution of subjective perceptions of job insecurity in Russia during 2000-2009 is presented at Figure 1. The levels of subjective job insecurity were largely stable and high compared to other countries (Gimpelson and Monusova 2010). The proportion of respondents who were concerned or very concerned about losing their jobs was persistently above 50 percent (Table 1)[[3]](#footnote-3). Russians express fears of losing jobs at levels similar to workers in Latin America where the rigid employment protection legislations cover relatively small formal sector and the modern unemployment protection is almost non-existent (Graham, 2003).

Moreover, the subjective perceptions of Russian workers seem to be very inertial and insensitive to the actual state of the labor market. The changes in the levels of FLJ are not correlated with the changes in the aggregate unemployment during the 2000 to 2009 period (see Gimpelson and Oshchepkov, 2012). The thick line on Figure 1 reflects the actual unemployment dynamics. The unemployment rates dropped by almost 50 percent between 2000 and 2007, but the proportion of respondents who were afraid of losing their jobs decreased from 69 percent to 53 percent only. The proportion of those who feared of not finding a job declined some more but it also stayed at the level above 40 percent (except the year 2007). A slight upward turn in both indicators that emerged in late 2008, when the economy started to slide into the new crisis returned to the previous trend in 2009.

Evidently, such high and persistent fears of unemployment do not conform well to government policies aimed at employment protection, strong economic growth and declining unemployment.[[4]](#footnote-4) In order to explain why perceptions of job insecurity stayed high one should take into account the price side of the labor market. The rapid wage growth in 2000s was associated with a reduction in unemployment benefits replacement ratio, which declined from 20 percent in 2000 to 7.4 percent in 2008.[[5]](#footnote-5) Consequently, the total costs of unemployment to workers increased, and this could raise worker’s concerns on losing a job. However, the impact of this factor should not be overestimated as the replacement ratio in the Russian labor market has always been low by international standarts. Moreover, as registered unemployment was always much less than the actual size of unemployment (estimated by ILO definition), the coverage of unemployed people by unemployment benefits remained low all the time.

In this paper we show that high and stable perceptions of job insecurity may be explained by high flexibility of wages in Russia. The more real wages rise in the period of economic growth, the more individuals will lose in the case of firing. This may offset positive impact of higher probability to find a new job when unemployment rates go down. However, this idea works if workers are uncertain whether they will be able to land a new job with the wages comparable to the wages at their old job.

Such an uncertainty exists in the Russian labor market because of the two-tier structure of wages. The two-tier wage structure emerged in the early 90s and soon became a systemic characteristic of the wage setting mechanism both in the private and public sectors. The tariff-based and rigidly contracted basic wage component constitutes, on average, about 60 percent of the wage bill. The other, more flexible wage component includes bonuses and wage premiums that are implicitly linked to financial performance of firms. The fluctuation of the firm’s profitability over the business cycle results in corresponding changes in the size of that component. The wage-setting mechanism in the public sector, though heavily regulated, follows similar two-tier approach with the variable part of the public sector wages linked to revenues of regional/municipal budgets that also vary procyclically (Gimpelson and Kapeliushnikov 2011).[[6]](#footnote-6) For example, in the crisis year of 1998, the variable wage component made up less than 40 percent of the total wage bill. In the prosperous years of 2005 and 2007 it exceeded 45 percent. These trends were observed across all sectors, including the over-regulated education and healthcare.[[7]](#footnote-7)

1. **Theoretical framework**

In this section, we develop a model which helps to understand how high wage flexibility may drive perceptions of job insecurity. The basic assumption in our model is that when answering the FLJ question individuals compare the current utility of being employed with the expected utility if unemployed. We also assume that the utility function depends on wages and some other factors that might include individual and household characteristics. Therefore, we can think of the fear of losing a job *Fi* as a difference between two utilities[[8]](#footnote-8):



When employed, the individual obtains utility:



where *wi* is a current wage and *Xi* is a set of other factors. Accounting for the two-tier wage structure, we can think of current wage *wi* as a sum of a fixed component (*wfixed*) and variable component (*µi)*, which includes bonuses and premiums depending on financial results of an enterprise.

When unemployed, an individual faces a stream of job offers that are independent random draws from the distribution of wages. The offers occur periodically and either accepted or rejected. Under these conditions of the standard job search theory (e.g., McCall, 1970; Mortensen, 1986) the individual will reject all offers below (and stays unemployed) and accept the offers above a certain threshold, which is an individual reservation wage. Therefore, the expected utility of an individual if fired consists of two parts:



where is the probability of finding an employment with a wage equal or greater than , that is also a function of a vector of characteristics Z*i*, and *b* is an amount of unemployment benefits. The first part in (2) is the product of the probability of finding a new employment and utility derived from expected earnings at the new job. The second part is the utility derived from unemployment benefits if the person fails to find gainful employment. The higher is the expected wage the less likely the individual finds a job with such a wage, i.e.,. At the opposite, the higher is the the expected wage the higher is the utility derived from the new employment. This determines an ambigous impact of *wi\** on the FLJ.

We further assume that when searching for a job an individual is not aware of the size of the variable wage component *µi* at the future job, i.e., E(*µi*)=0. She then expects that the wage at new job (*wi\**) will be the same as *wfixed* at the old job.

As a result, the fear of losing a job *Fi* , which is a difference between the utility of being employed and the expected utility if unemployed, may be expressed as follows:



Differentiating (3) with respect to,and *µi* results in:







This simple framework provides us with testable hypotheses about the effect of wages and the probability of finding a job on the fear of being unemployed. Under the standard assumptions about the form of the utility function *Ui*, the fear of losing a job is higher the higher is the variable wage component *µi*, () in (5). The fear is decreasing when the probability of finding a job goes up () as in (6). An individual is less afraid of being unemployed the smaller is the difference between his market wages and the benefits he might receive if unemployed.[[9]](#footnote-9) As we already mentioned, the effect of expected wages on the fear of losing a job is ambiguous.

This theoretical framework describes the dynamics of changes in the attitudes towards the event of losing a job over the business cycle. When the economy is expanding, the unemployment is low and the variable components of wages are high.[[10]](#footnote-10) On one hand, the individual is not afraid of losing a job as she can easily find a new employment. On the other hand, her fear of being fired is high, because she may lose her high-paying job with large wage due to variable component, which is not garanteed at the new job. In recessions, the unemployment is higher and the probability of finding a new job if laid off is lower. At the same time, the wages the individual can earn on the market are also low because the bonuses and premiums are reduced. It is harder to find a new job, but the current and the new jobs are less rewarding compared to the periods of economic growth.

1. **Econometric methodology**

The hypothesis outlined in the previous section can be tested empirically. Assume that the latent fear of losing a job for an individual *i* is a function of the set of characteristics:



where *εi* is a vector of unobserved factors that affect the fear of losing a job. The random component of wages *µi* can be estimated as a residual of the standard Mincer’s wage equation (Mincer 1974).



In the linearized form (7) can be rewritten as:



where π, γ, and β are unknown parameters. The observed answers to FLJQ are:



*θ*’s are unknown parameters to be estimated. The probability of observed answers to FLJQ is:



where Φ(∙) is a probability distribution function. Assuming that *εi* is i.i.d and distributed normally across the observations, the conditional probabilities for the answers to FLJQ can be estimated by the standard maximum likelihood ordered probit (OP) estimator. Relaxing the distributional assumptions, parameters of (11) can be estimated by semi-nonparametric maximum likelihood (SNPML) estimator proposed by Gallant and Nuchka (1987)[[11]](#footnote-11).

The estimation of the parameters in equations (9-10) could be complicated by the potential endogeneity of *µi* that arises both from the reverse causality and omitted variable argument, i.e., *µi* could be correlated with *εi* in (9). For example, risk-averse individuals might accept stable jobs with lower compensation (Blanchflower 1991; Aaronson and Sullivan 1999; Clark and Postel-Vinay 2009). Or, somebody with connections to the enterprise management can land the high paying and secure position.

We address this endogeneity by assuming that *µi* consists of time-invariant component *vi* and time-variant component *ρit*. A degree of risk aversion or personal networks are unobserved by the researcher, time-invariant factors that might affect both the individual’s fear of losing a job, his wages as well as his probability of finding a new job. We assume that the wage negotiations between the employee and the employer happened before the moment when the fear of losing a job is assessed through the survey interview. *ρit* is unknown to the individual at time of signing a job contract and thus is correlated neither with the agreed compensation nor with the fear of losing a job. We also assume that, conditional on time-invariant component *vi*, perceptions of job security are not correlated over time, i.e.:



Under these assumptions we can remove the source of endogeneity by utilizing the panel structure of our data and estimating the fixed effect (FE) wage regression:



where subscript *it* indicates an observation for individual *i* at time period *t*. We use the estimate of  from the FE regression to obtain the unbiased estimates of the parameters in equation (11).

The dependent variable in wage equations (8) and (13) is the logarithm of monthly earnings expressed in 2000 prices. We use three different concepts of regional levels of unemployment as variables that affect workers perception about the probability of finding a job if fired. The set of explanatory variables includes the individual’s age and age squared, marital status, level of education, work tenure in years and tenure squared, the size and composition of the household the respondent resides in, type of the locality, and year and regional dummies. The descriptive statistics for the explanatory variables used in our model are shown in Table 2.

1. **Results**

The results of estimations of (11) for different econometric specifications are presented in tables 3-5. Table 3 shows the estimations of the ordered probit with the wage residual imputed from OLS regression as in (8). The coefficients on the wage residual are positive and significant for both male and female workers. The coefficients on regional unemployment rate are positive for both genders but are significant only for female workers. Table 4 demonstrates the estimations of the ordered probit with wage residuals imputed from the FE regression as in (13). The sample size for these estimations is smaller as it includes individuals observed at least in two rounds of our survey. The coefficients on the wage residuals and on the regional unemployment have similar signs and magnitudes as in Table 3. Finally, Table 5 presents estimations of SNPML model with wage residuals imputed from the FE regression. This least restrictive model is our preferred specification that produces the coefficients consistent with the coefficients of the previous two estimations. The results of these three estimations confirm the predictions of our theoretical model. Respondents with higher wage residuals have higher levels of job insecurity. Individuals residing in the regions with higher unemployment are more afraid of losing their jobs, compared to individuals from the regions with less unemployment. Interestingly, Keane, Moffitt and Runkle (1988) report very similar results for US where they found that “*…those having a particularity good temporary wage draw appear to be more vulnerable to transitory negative employment shocks than those with a temporarily bad wage draw.*”

Figure 2 shows the non-parametric estimations of the relationship between the wages and wage residuals and the fear of losing a job. The top two panels indicate that both for male and female workers the levels of fear are higher the larger are the OLS and FE wage residuals. At the same time, fear of losing a job is declining for individuals with higher wages. These relationships are consistent with the predictions of our economic model. Because wages consist of expected wage part and the residual (variable) part, the negative effect of higher expected wages on fear of unemployment (higher expected wages result in lower fears) dominates the positive effect of potentially higher variable wage component.

The coefficients on other variables demonstrate the expected regularities. The fears of unemployment are increasing with age reaching maximum for 50 years old men and 45 years old women - results similar to findings by Gimpelson, Kapeliushnikov and Ratnikova (2003) and Linz and Semykina (2008), but opposite to those found in most of the literature on subjective measures of well-being (e.g., Clark, Oswald and Warr 1996). Better-educated workers are less afraid of losing their jobs compared with workers with lower education. Married men feel less security on the job than single men, but married women are less afraid of losing their jobs compare to single women. This might be explained by the different social norms of males and females in Russian society. Men are considered to be main breadwinners responsible for the wellbeing of the whole family. A loss of a job for a married man not only results in a largest shock to the family budget[[12]](#footnote-12), but also has serious psychological impact (Ashwin and Lytkina 2004). The fears of unemployment are the lowest in Moscow and Saint Petersburg and are higher the smaller is the size of locality the respondents reside in. Large urban areas typically have more jobs to offer, and in case of displacement, re-employment takes less time and associated with smaller losses in earnings. The larger share of pensioners and consequently the higher proportion of non-wage income in the household budget positively affect the perception of job security of men but have no effect on that perception among women.

The coefficients in the wage regressions are consistent with the results of previous studies. Wages are lower in the regions with higher unemployment; are increasing with age and educational level; married men earn more than single men; work tenure is positively correlated with monthly earnings; women living in Moscow and St. Petersburg earn more relative to women residing in smaller cities and towns.

We can use the Fear of Not Finding a Job (FNFJ) question to verify the results of FLJ estimation. We expect that respondents with higher wage residuals and those living in high-unemployment areas would be more concern with finding a job at least as good as the current one in case they are laid off. Table 6 shows the coefficients on wage residuals and regional levels of unemployment for three econometric specifications corresponding to those shown in Table 3-5 for FLJ question. The coefficients on wage residuals and regional unemployment rates are positive and significant in all three specifications confirming the results of FLJ estimations.

*Robustness tests*

To test the robustness of our results we re-estimate equations (10-13) with group-specific regional unemployment rates and non-employment rates derived from Russian LFS as described in Section 2. We show the results of these estimations in Table 7. The signs and magnitudes of the coefficients on the main variables of interest, the imputed wage residuals and unemployment/non-employment rates, are consistent with those of the coefficients in the main specification. Individuals with larger wage residuals and those residing in the areas of more unemployment report higher levels of job loss fears.

We estimated our econometric models on the pooled samples with a different number of rounds. These estimations are available from the authors on request. The results of these estimations are also consistent with our main findings.

*Simulations*

We illustrate the magnitudes of the effect of wage residuals by simulating the changes in the perceptions of job insecurity under the counterfactual scenario where the individual wage residuals are constant over the years of the survey and equal to the wage residuals in 2000. Figure 3 shows the observed and simulated trends in the proportion of male and female respondents who are concerned and very concerned about the prospects of losing their jobs and the unemployment rates. If our hypotheses are correct, we expect that after controlling for the changes in the wage residuals the simulated changes in the proportions of fearful individuals would follow changes in the unemployment rates more closely. Indeed, compared to the observed levels, the simulated levels of fear are lower for all years after the base year and are stronger correlated with the levels of unemployment. On the aggregate level, the correlation with the unemployment rate jumps from 0.012 for the observed levels of fears to 0.310 for the simulated level for male workers and that correlation increases from 0.262 to 0.767 for females. The intra-regional correlations, or the correlations between the regional levels of fear with the regional levels of unemployment, exhibit similar patters increasing from 0.371 to 0.560 for males and from 0.439 to 0.638 for females.

1. **Alternative explanations**

We can propose alternative explanations of the changes in the fear of losing a job. The first theory assumes that answering this question a respondent implicitly evaluates probability of losing (being fired) his/her job but no utility comparisons are involved in this reasoning. In this framework, the changes in the answers to FLJ question over time should be correlated with the changes in the levels of unemployment in the individual’s reference group. During recessions, when unemployment is high the respondents would perceive higher probability of losing their jobs and select higher values in FLJ question, thus indicating greater concerns. In the periods of economic growth, on the contrary, lower perceived probabilities of losing a job should be translated into lower values of the FLJ question. We find no empirical evidence supporting this hypothesis. Levels of job insecurity are only weakly, if at all, correlated with the aggregate levels of unemployment (Figure 1) and there are other factors, such as within-group wage inequality that are important in determining the dynamics of the fears of losing a job.

The second approach explains the changes in fear of losing a job by the personal trait (or disposition) theory. Traits are habitual patterns of thoughts and emotions that are stable over time but differ across individuals and influence individual behavior. In this approach, the answers to FLJ question reflect the common psychological background prevalent in the current population. Such background is formed over the long period of time by history, religion and culture and is not responsive to the short-run fluctuations in the economic conditions. This explanation for the trends and distribution of fear across countries was suggested by Treisman (2011)[[13]](#footnote-13) and can be used for explaining the persistently high levels of job insecurity in Russia. The personal trait theory implies that changes in the unemployment rates and in variances of wages have no effect on the changes in the fear of losing a job. Our estimations indicate that both regional unemployment rates and the variance in wages are important determinants of the individual perceptions of job insecurity.

Another explanation for the observed dynamics in fears of losing a job in Russia could be related to a possible non-random selection to unemployment of individuals with the highest perception of job insecurity (Stephens, 2004; Luechinger et al., 2009; Clark and Postel-Vinay 2009; Dickerson and Green, 2012). Then, during the recessions, the individuals who are the most concerned about losing their jobs are more likely to become unemployed, thus reducing the aggregate levels of fear. In the periods of economic growth, these people are hired back bringing in the pool of employed their heightened feelings of job insecurity. To test this hypothesis we estimate the probability of becoming unemployed in the current year as a function of the fears of losing a job in a previous year and the set of individual characteristics. The results of these estimations are shown in Table A1 in Appendix. For both males and females the coefficients on the dummy variable indicating that the respondents were concerned and very concerned about losing their job during the last year are as likely to become unemployed in the current year as the respondents with better perception of job security.

1. **Conclusion**

In this paper we explore factors affecting perceptions of job (in)security. In most countries for which empirical evidence is available such perceptions change cyclically: fear of unemployment tends to increase along with rise in unemployment and then declines when unemployment goes down. We document a counter-intuitive case observed in Russia over last two decades when the perceptions remain stable regardless of what actually happens on the labor market, and then offer an explanation.

Our theoretical framework is based on the assumption that for a worker the fear of losing a current job can be expressed as a difference between utility of being employed and the expected utility if she is unemployed. Modeling the utility of being employed we exploit the fact that wages in Russia typically have two-tier structure with a large and time-varying variable fraction. Wage rise if achieved through inflation of this variable part increases utility of the current job but also increases fear of losing this job. During economic crises, wages decline mostly due to the reduction in the variable part, what, in turn, may decrease utility of the job. Counter-cyclical movements of wages and unemployment rates are likely to offset each other in terms of their causal impact on subjective job insecurity.

Our empirical analysis is based on data from ten rounds of the Russian Longitudinal Monitoring Survey spanning from 2000 to 2009. The estimations support our theoretical expectation that respondents with higher wage premium (over the basic expected wage) have higher levels of subjective job insecurity while higher unemployment makes individuals more afraid of losing their job. These results are robust to a wide range of model specifications and estimation technique. Basing on these econometric findings, we also examine the counterfactual scenario for dynamics of fear under the assumption that the variable part of earnings (modeled as individual wage residuals) over time remains constant. The simulated levels of fear appear to be lower for all years after the base year and are better correlated with the levels of unemployment.

Persistent level of fear may have important politico-economic implications. Reforming labor market institutions in Russia should lead to more efficient allocation and utilization of labor but involves further deregulation and potential displacement. Because of the strong fears of unemployment in Russian population, these reforms may face additional resistance. Moreover, there is, and probably, will be social and political pressure for stricter job protection, making employers reluctant to hire new workers, leading to longer unemployment spells and higher unemployment (Luechinger et al., 2009). Politicians reacting to subjective perceptions of voters are likely to freeze or postpone economic reforms if these reforms bring more labor market volatility. Therefore, workers’ fear of unemployment becomes politicians’ fear and may stimulate the government to pursue populist political actions. This, in its turn, threatens to reduce the number of protected jobs further, causing thus even stronger fears.

For disentangling this vicious circle, systemic measures targeted at improving business climate in order to boost job creation should be a key priority. Strong inflow of jobs is the best social protection and can convince people that job loss is not a doomsday but just an episode which can open new opportunities.

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Table 1: Distribution of the answers to Fear of Losing Job question. The percent of responses by category in each year\*. RLMS 2000-2009.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | *How concerned you are that you can lose your job?* | | | | |
| Rounds of  RLMS | *Not concerned*  *at all* | *Not very*  *concerned* | *Yes and No* | *Somewhat*  *Concerned* | *Very*  *concerned* |
| 2000 | 14.10 | 16.61 | 10.73 | 24.40 | 34.15 |
| 2001 | 18.69 | 18.16 | 10.78 | 23.43 | 28.94 |
| 2002 | 17.80 | 18.23 | 10.81 | 26.27 | 26.90 |
| 2003 | 16.90 | 19.29 | 12.37 | 25.56 | 25.87 |
| 2004 | 16.28 | 18.99 | 11.85 | 27.27 | 25.61 |
| 2005 | 12.66 | 18.91 | 12.86 | 29.48 | 26.09 |
| 2006 | 14.12 | 19.35 | 14.16 | 29.24 | 23.12 |
| 2007 | 14.83 | 19.35 | 12.14 | 30.92 | 22.75 |
| 2008 | 12.66 | 17.71 | 11.49 | 31.52 | 26.63 |
| 2009 | 12.02 | 17.44 | 13.27 | 29.84 | 27.44 |
| Total | 14.79 | 18.45 | 12.17 | 28.21 | 26.39 |
|  | *How sure you are that you could find a job at least as good as your current one?* | | | | |
|  | *Absolutely*  *sure* | *Almost*  *sure* | *Yes and No* | *Not very*  *sure* | *Not sure*  *at all* |
| 2000 | 13.83 | 18.50 | 15.89 | 26.23 | 25.55 |
| 2001 | 19.71 | 20.52 | 14.48 | 23.95 | 21.34 |
| 2002 | 18.00 | 21.63 | 15.14 | 24.02 | 21.21 |
| 2003 | 16.03 | 23.91 | 15.55 | 25.26 | 19.26 |
| 2004 | 14.21 | 23.60 | 17.86 | 25.21 | 19.12 |
| 2005 | 12.75 | 26.07 | 17.52 | 25.32 | 18.35 |
| 2006 | 16.77 | 26.82 | 17.04 | 23.80 | 15.58 |
| 2007 | 16.81 | 30.34 | 16.75 | 22.48 | 13.61 |
| 2008 | 13.88 | 28.68 | 17.28 | 24.73 | 15.42 |
| 2009 | 14.25 | 25.12 | 17.78 | 22.80 | 20.05 |
| Total | 15.57 | 25.04 | 16.65 | 24.26 | 18.48 |

\* The answers to Fear of Losing Job, (but not Fear of not Finding a Job) question are redefined relative to the answers in the questionnaire so that the higher categories correspond to higher levels of fear.

Table 2: Descriptive statistics for the main variables used in the analysis. Pooled sample of working age adults, 2000-2009 RLMS.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Men** | | **Women** | |
|  | Coefficient | *Standard Error* | Coefficient | *Standard Error* |
| Log Real wage | 8.718 | *0.693* | 8.723 | *0.694* |
| Regional unemployment | 7.309 | *3.350* | 7.308 | *3.367* |
| *Individual Characteristics* |  |  |  |  |
| Age in year | 39.174 | *12.063* | 39.852 | *11.953* |
| Receives pension | 0.134 | *0.341* | 0.162 | *0.368* |
| *Education* |  |  |  |  |
| Incom. Secondary | 0.071 | *0.257* | 0.054 | *0.225* |
| Incom. secondary/vocational | 0.038 | *0.192* | 0.022 | *0.148* |
| Secondary School | 0.207 | *0.405* | 0.183 | *0.386* |
| Secondary + vocational | 0.177 | *0.382* | 0.139 | *0.346* |
| College degree | 0.250 | *0.433* | 0.313 | *0.464* |
| University and higher | 0.254 | *0.435* | 0.287 | *0.453* |
| Work tenure | 7.176 | *8.948* | 8.020 | *9.399* |
| Married | 0.721 | *0.448* | 0.645 | *0.478* |
| *Household Characteristics* |  |  |  |  |
| Log of household size | 1.130 | *0.428* | 1.087 | *0.445* |
| Share of children | 0.148 | *0.179* | 0.145 | *0.181* |
| Share of pensioners | 0.078 | *0.189* | 0.081 | *0.194* |
| *Type of locality* |  |  |  |  |
| Moscow/St. Petersburg | 0.132 | *0.339* | 0.135 | *0.342* |
| City | 0.330 | *0.470* | 0.331 | *0.471* |
| Town | 0.285 | *0.452* | 0.285 | *0.451* |
| Small Town | 0.054 | *0.226* | 0.057 | *0.232* |
| Village | 0.199 | *0.399* | 0.192 | *0.394* |
| *Federal Regions* |  |  |  |  |
| North-Western | 0.283 | *0.450* | 0.283 | *0.450* |
| Central | 0.114 | *0.318* | 0.122 | *0.328* |
| South | 0.133 | *0.339* | 0.129 | *0.335* |
| Volga river Region | 0.233 | *0.422* | 0.231 | *0.422* |
| Ural Region | 0.078 | *0.267* | 0.077 | *0.266* |
| Siberia | 0.117 | *0.322* | 0.120 | *0.325* |
| Far Eastern | 0.043 | *0.203* | 0.038 | *0.191* |
| *Yeas of RLMS* |  |  |  |  |
| 2000 | 0.070 | *0.256* | 0.070 | *0.255* |
| 2001 | 0.081 | *0.273* | 0.081 | *0.273* |
| 2002 | 0.086 | *0.280* | 0.086 | *0.280* |
| 2003 | 0.091 | *0.287* | 0.092 | *0.289* |
| 2004 | 0.095 | *0.294* | 0.095 | *0.294* |
| 2005 | 0.096 | *0.295* | 0.094 | *0.292* |
| 2006 | 0.117 | *0.321* | 0.117 | *0.322* |
| 2007 | 0.119 | *0.324* | 0.119 | *0.323* |
| 2008 | 0.123 | *0.329* | 0.123 | *0.329* |
| 2009 | 0.121 | *0.326* | 0.122 | *0.328* |
| Number of observations | 23,248 | | 23.378 | |

Table 3: Fear of Losing a Job. Ordered probit estimation and OLS estimation for wage equations for men and women. Pooled sample of working age adults, 2000-2009 RLMS.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Men** | | | | **Women** | | | |
|  | Ordered probit | | OLS  Wage regression | | Ordered probit | | OLS  Wage regression | |
|  | Coeff. | *Std.Err* | Coeff. | *Std.Err* | Coeff. | *Std.Err* | Coeff. | *Std.Err* |
| **Log Wage Residuals** | 0.042\*\*\* | *0.010* |  |  | 0.072\*\*\* | *0.010* |  |  |
| **Regional unemployment** | 0.004 | *0.004* | -0.010\*\*\* | *0.002* | 0.015\*\*\* | *0.003* | -0.011\*\*\* | *0.002* |
| *Individual Characteristics* |  |  |  |  |  |  |  |  |
| Age in year | 0.027\*\*\* | *0.004* | 0.038\*\*\* | *0.003* | 0.057\*\*\* | *0.004* | 0.047\*\*\* | *0.003* |
| Age squared/100 | -0.027\*\*\* | *0.006* | -0.051\*\*\* | *0.004* | -0.064\*\*\* | *0.006* | -0.064\*\*\* | *0.004* |
| Receives pension | -0.053\* | *0.030* | -0.114\*\*\* | *0.020* | -0.101\*\*\* | *0.027* | -0.027 | *0.017* |
| *Education* |  |  |  |  |  |  |  |  |
| Primary School | 0.270\*\* | *0.108* | -0.574\*\*\* | *0.072* | 0.079 | *0.172* | -0.601\*\*\* | *0.106* |
| Incomplete Secondary | 0.109\*\*\* | *0.029* | -0.431\*\*\* | *0.019* | 0.167\*\*\* | *0.032* | -0.549\*\*\* | *0.020* |
| Incom. secondary/vocational | 0.167\*\*\* | *0.034* | -0.343\*\*\* | *0.023* | 0.174\*\*\* | *0.046* | -0.553\*\*\* | *0.029* |
| Secondary School | 0.103\*\*\* | *0.021* | -0.281\*\*\* | *0.014* | 0.123\*\*\* | *0.020* | -0.415\*\*\* | *0.013* |
| Secondary + vocational | 0.080\*\*\* | *0.022* | -0.287\*\*\* | *0.015* | 0.131\*\*\* | *0.022* | -0.423\*\*\* | *0.014* |
| College degree | 0.113\*\*\* | *0.022* | -0.164\*\*\* | *0.015* | 0.110\*\*\* | *0.017* | -0.268\*\*\* | *0.011* |
| University and higher | *Reference category* | | | | | | | |
| Work tenure in years | 0.002 | *0.002* | 0.006\*\*\* | *0.002* | 0.008\*\*\* | *0.002* | 0.005\*\*\* | *0.001* |
| Work tenure squared | -0.000 | *0.000* | -0.000 | *0.000* | -0.000 | *0.000* | 0.000 | *0.000* |
| Married | 0.095\*\*\* | *0.022* | 0.149\*\*\* | *0.015* | -0.087\*\*\* | *0.015* | -0.008 | *0.010* |
| *Household Characteristics* |  |  |  |  |  |  |  |  |
| Log of household size | 0.042 | *0.063* | 0.095\*\* | *0.043* | -0.028 | *0.050* | -0.078\*\* | *0.031* |
| Log of household size2 | 0.002 | *0.027* | -0.037\*\* | *0.018* | 0.008 | *0.023* | 0.021 | *0.015* |
| Share of children | -0.016 | *0.047* | 0.124\*\*\* | *0.032* | -0.008 | *0.041* | -0.148\*\*\* | *0.026* |
| Share of pensioners | -0.126\*\*\* | *0.046* | -0.108\*\*\* | *0.031* | -0.056 | *0.041* | -0.140\*\*\* | *0.026* |
| *Type of locality* |  |  |  |  |  |  |  |  |
| Moscow and St. Petersburg | *Reference category* | | | | | | | |
| City | 0.058\* | *0.031* | 0.099\*\*\* | *0.022* | 0.142\*\*\* | *0.029* | -0.094\*\*\* | *0.019* |
| Town | 0.281\*\*\* | *0.033* | 0.152\*\*\* | *0.023* | 0.362\*\*\* | *0.031* | -0.078\*\*\* | *0.020* |
| Small Town | 0.330\*\*\* | *0.042* | 0.120\*\*\* | *0.030* | 0.325\*\*\* | *0.039* | -0.055\*\* | *0.025* |
| Village | 0.414\*\*\* | *0.033* | -0.133\*\*\* | *0.025* | 0.444\*\*\* | *0.031* | -0.269\*\*\* | *0.021* |
| Log Mean Regional Wage |  |  | 0.970\*\*\* | *0.019* |  |  | 0.828\*\*\* | *0.017* |
| Constant term |  |  | -0.299 | *0.206* |  |  | 1.063\*\*\* | *0.178* |
| Auxiliary parameter 1 | -0.252\*\* | *0.100* |  |  | 0.434\*\*\* | *0.095* |  |  |
| Auxiliary parameter 2 | 0.399\*\*\* | *0.100* |  |  | 1.033\*\*\* | *0.096* |  |  |
| Auxiliary parameter 3 | 0.733\*\*\* | *0.100* |  |  | 1.343\*\*\* | *0.096* |  |  |
| Auxiliary parameter 4 | 1.549\*\*\* | *0.100* |  |  | 2.078\*\*\* | *0.096* |  |  |
| Number of observations | 23,248 | | 23.378 | | 26,166 | | 26,233 | |
| Log-likelihood | -35,856.26 | | -26,656.06 | | -39,692.96 | | -27,910.70 | |
| Adjusted/Pseudo R2 | 0.017 | | 0.528 | | 0.021 | | 0.573 | |

Note: \* is significant at 10% level; \*\* is significant at 5% level; \*\*\* is significant at 1% level. Standard errors are estimated by bootstrapping. Coefficients for year dummies and region dummies are omitted.

Table 4: Fear of Losing Job. Ordered probit estimations and Fixed Effect regressions for wage equations for men and women. Pooled sample of working age adults, 2000-2009, RLMS.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Men** | | | | **Women** | | | |
|  | Ordered Probit | | FE  Wage regression | | Ordered Probit | | FE  Wage regression | |
|  | Coeff. | *Std.Err* | Coeff. | *Std.Err* | Coeff. | *Std.Err* | Coeff. | *Std.Err* |
| **Log Wage Residuals** | 0.030\*\* | *0.015* |  |  | 0.084\*\*\* | *0.016* |  |  |
| **Regional unemployment** | 0.003 | *0.004* | 0.003 | *0.004* | 0.016\*\*\* | *0.003* | -0.000 | *0.003* |
| *Individual Characteristics* |  |  |  |  |  |  |  |  |
| Age in year | 0.026\*\*\* | *0.005* | 0.092\*\*\* | *0.018* | 0.059\*\*\* | *0.005* | 0.110\*\*\* | *0.020* |
| Age squared/100 | -0.021\*\*\* | *0.000* | -0.001\*\*\* | *0.000* | -0.001\*\*\* | *0.000* | -0.001\*\*\* | *0.000* |
| Receives pension | -0.048 | *0.030* | -0.104\*\*\* | *0.030* | -0.102\*\*\* | *0.027* | -0.092\*\*\* | *0.020* |
| *Education* |  |  |  |  |  |  |  |  |
| Primary School | 0.359\*\*\* | *0.112* | -0.049 | *0.130* | 0.162 | *0.181* | -0.029 | *0.192* |
| Incomplete secondary | 0.104\*\*\* | *0.030* | -0.117\*\* | *0.046* | 0.167\*\*\* | *0.033* | -0.145\*\*\* | *0.043* |
| Incom. secondary/vocational | 0.171\*\*\* | *0.034* | -0.093\*\* | *0.045* | 0.169\*\*\* | *0.047* | -0.206\*\*\* | *0.045* |
| Secondary School | 0.104\*\*\* | *0.022* | -0.122\*\*\* | *0.038* | 0.122\*\*\* | *0.021* | -0.149\*\*\* | *0.029* |
| Secondary + vocational | 0.078\*\*\* | *0.022* | -0.103\*\*\* | *0.039* | 0.136\*\*\* | *0.023* | -0.126\*\*\* | *0.031* |
| College degree | 0.119\*\*\* | *0.023* | -0.030 | *0.037* | 0.121\*\*\* | *0.018* | -0.085\*\*\* | *0.026* |
| University and higher | *Reference category* | | | | | | | |
| Work tenure in years | 0.002 | *0.002* | -0.006\*\* | *0.002* | 0.007\*\*\* | *0.002* | -0.006\*\*\* | *0.002* |
| Work tenure squared | -0.000 | *0.000* | 0.000\*\* | *0.000* | -0.000 | *0.000* | 0.000\*\*\* | *0.000* |
| Married | 0.100\*\*\* | *0.023* | 0.003 | *0.025* | -0.086\*\*\* | *0.016* | 0.014 | *0.016* |
| *Household Characteristics* |  |  |  |  |  |  |  |  |
| Log of household size | -0.023 | *0.066* | -0.021 | *0.065* | -0.017 | *0.052* | -0.043 | *0.044* |
| Log of household size2 | 0.030 | *0.028* | -0.029 | *0.028* | 0.001 | *0.024* | 0.013 | *0.021* |
| Share of children | -0.016 | *0.049* | 0.153\*\*\* | *0.048* | -0.018 | *0.042* | -0.050 | *0.036* |
| Share of pensioners | -0.131\*\*\* | *0.047* | 0.050 | *0.052* | -0.053 | *0.042* | 0.005 | *0.037* |
| *Type of locality* |  |  |  |  |  |  |  |  |
| Moscow and St. Petersburg | *Reference category* | | | | | | | |
| City | 0.077\*\* | *0.032* |  |  | 0.150\*\*\* | *0.030* |  |  |
| Town | 0.296\*\*\* | *0.034* |  |  | 0.364\*\*\* | *0.032* |  |  |
| Small Town | 0.350\*\*\* | *0.043* | 2.257\*\*\* | *0.680* | 0.318\*\*\* | *0.040* |  |  |
| Village | 0.432\*\*\* | *0.034* |  |  | 0.445\*\*\* | *0.032* |  |  |
| Log Mean Regional Wage |  |  | 0.841\*\*\* | *0.048* |  |  | 0.415\*\*\* | *0.038* |
| Constant term |  |  | -0.196 | *0.852* |  |  | 2.960\*\*\* | *0.909* |
| Auxiliary parameter 1 | -0.313\*\*\* | *0.106* |  |  | 0.495\*\*\* | *0.100* |  |  |
| Auxiliary parameter 2 | 0.338\*\*\* | *0.106* |  |  | 1.095\*\*\* | *0.100* |  |  |
| Auxiliary parameter 3 | 0.672\*\*\* | *0.106* |  |  | 1.404\*\*\* | *0.100* |  |  |
| Auxiliary parameter 4 | 1.491\*\*\* | *0.106* |  |  | 2.139\*\*\* | *0.101* |  |  |
| Number of observations | 21,882 | | 21,997 | | 24,754 | | 24,862 | |
| Log-likelihood | -32,868.80 | | -15,346.02 | | -36,951.24 | | -14,417.77 | |
| Adjusted/Pseudo R2 | 0.017 | | 0.353 | | 0.020 | | 0.499 | |

Note: \* is significant at 10% level; \*\* is significant at 5% level; \*\*\* is significant at 1% level. Standard errors are estimated by bootstrapping. Coefficients for year dummies and region dummies are omitted.

Table 5: Fear of Losing Job. Semi-nonparametric Maximum Likelihood estimations and Fixed Effect regression estimations for wage equations for men and women. Pooled sample of working age adults, 2000-2009, RLMS.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Men** | | | | **Women** | | | |
|  | SNPML | | FE  Wage regression | | SNPML | | FE  Wage regression | |
|  | Coeff. | *Std.Err* | Coeff. | *Std.Err* | Coeff. | *Std.Err* | Coeff. | *Std.Err* |
| **Log Wage Residuals** | 0.036\* | *0.019* |  |  | 0.077\*\*\* | *0.017* |  |  |
| **Regional unemployment** | 0.007 | *0.005* | 0.003 | *0.004* | 0.017\*\*\* | *0.004* | -0.000 | *0.003* |
| *Individual Characteristics* |  |  |  |  |  |  |  |  |
| Age in year | 0.030\*\*\* | *0.006* | 0.092\*\*\* | *0.018* | 0.057\*\*\* | *0.005* | 0.110\*\*\* | *0.020* |
| Age squared/100 | -0.030\*\*\* | *0.007* | -0.001\*\*\* | *0.000* | -0.062\*\*\* | *0.006* | -0.001\*\*\* | *0.000* |
| Receives pension | -0.037 | *0.039* | -0.104\*\*\* | *0.030* | -0.116\*\*\* | *0.030* | -0.092\*\*\* | *0.020* |
| *Education* |  |  |  |  |  |  |  |  |
| Primary School | 0.393\*\*\* | *0.149* | -0.049 | *0.130* | 0.136 | *0.174* | -0.029 | *0.192* |
| Incomplete secondary | 0.131\*\*\* | *0.038* | -0.117\*\* | *0.046* | 0.196\*\*\* | *0.037* | -0.145\*\*\* | *0.043* |
| Incom. secondary/vocational | 0.203\*\*\* | *0.043* | -0.093\*\* | *0.045* | 0.160\*\*\* | *0.051* | -0.206\*\*\* | *0.045* |
| Secondary School | 0.143\*\*\* | *0.029* | -0.122\*\*\* | *0.038* | 0.122\*\*\* | *0.023* | -0.149\*\*\* | *0.029* |
| Secondary + vocational | 0.112\*\*\* | *0.028* | -0.103\*\*\* | *0.039* | 0.148\*\*\* | *0.026* | -0.126\*\*\* | *0.031* |
| College degree | 0.145\*\*\* | *0.029* | -0.030 | *0.037* | 0.127\*\*\* | *0.020* | -0.085\*\*\* | *0.026* |
| University and higher | *Reference category* | | | | | | | |
| Work tenure in years | 0.002 | *0.003* | -0.006\*\* | *0.002* | 0.007\*\*\* | *0.002* | -0.006\*\*\* | *0.002* |
| Work tenure squared | 0.000 | *0.000* | 0.000\*\* | *0.000* | -0.000 | *0.000* | 0.000\*\*\* | *0.000* |
| Married | 0.143\*\*\* | *0.029* | 0.003 | *0.025* | -0.090\*\*\* | *0.018* | 0.014 | *0.016* |
| *Household Characteristics* |  |  |  |  |  |  |  |  |
| Log of household size | -0.037 | *0.084* | -0.021 | *0.065* | -0.003 | *0.054* | -0.043 | *0.044* |
| Log of household size2 | 0.048 | *0.036* | -0.029 | *0.028* | -0.006 | *0.025* | 0.013 | *0.021* |
| Share of children | -0.030 | *0.061* | 0.153\*\*\* | *0.048* | -0.011 | *0.045* | -0.050 | *0.036* |
| Share of pensioners | -0.192\*\*\* | *0.060* | 0.050 | *0.052* | -0.071 | *0.045* | 0.005 | *0.037* |
| *Type of locality* |  |  |  |  |  |  |  |  |
| Moscow and St. Petersburg | *Reference category* | | | | | | | |
| City | 0.092\*\* | *0.041* |  |  | 0.180\*\*\* | *0.033* |  |  |
| Town | 0.366\*\*\* | *0.045* |  |  | 0.405\*\*\* | *0.041* |  |  |
| Small Town | 0.479\*\*\* | *0.061* | 2.257\*\*\* | *0.680* | 0.369\*\*\* | *0.049* |  |  |
| Village | 0.585\*\*\* | *0.050* |  |  | 0.513\*\*\* | *0.047* |  |  |
| Log Mean Regional Wage |  |  | 0.841\*\*\* | *0.048* |  |  | 0.415\*\*\* | *0.038* |
| Constant term |  |  | -0.196 | *0.852* |  |  | 2.960\*\*\* | *0.909* |
| Auxiliary parameter 1 | Fixed |  |  |  | Fixed |  |  |  |
| Auxiliary parameter 2 | 0.648\*\*\* | *0.043* |  |  | 1.248\*\*\* | *0.050* |  |  |
| Auxiliary parameter 3 | 1.139\*\*\* | *0.065* |  |  | 1.616\*\*\* | *0.075* |  |  |
| Auxiliary parameter 4 | 2.117\*\*\* | *0.097* |  |  | 2.375\*\*\* | *0.121* |  |  |
| Number of observations | 21,341 | | 21,997 | | 24,352 | | 24,862 | |
| Log-likelihood | -32,824.11 | | -15,346.02 | | -36,910.81 | | -14,417.77 | |
| Adjusted/Pseudo R2 |  | | 0.353 | |  | | 0.499 | |

Note: \* is significant at 10% level; \*\* is significant at 5% level; \*\*\* is significant at 1% level. Standard errors are estimated by bootstrapping. Coefficients for year dummies and region dummies are omitted.

Table 6: Fear of not finding a job at least as good as the current one. Pooled sample of working age adults, 2000-2009, RLMS.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Men** | | **Women** | |
|  | Coefficient | *Standard Error* | Coefficient | *Standard Error* |
|  | *Ordered probit with wage residual from OLS regression* | | | |
| Wage Residuals | 0.011 | *0.010* | 0.079\*\*\* | *0.010* |
| Regional unemployment | 0.013\*\*\* | *0.004* | 0.024\*\*\* | *0.004* |
|  | *Ordered probit with wage residual from FE regression* | | | |
| Wage Residuals | 0.053\*\*\* | *0.016* | 0.106\*\*\* | *0.017* |
| Regional unemployment | 0.015\*\*\* | *0.004* | 0.024\*\*\* | *0.004* |
|  | *SNPML with wage residual from FE regression* | | | |
| Wage Residuals | 0.052\*\*\* | *0.020* | 0.138\*\*\* | *0.029* |
| Regional unemployment | 0.019\*\*\* | *0.006* | 0.038\*\*\* | *0.007* |

Note: \* is significant at 10% level; \*\* is significant at 5% level; \*\*\* is significant at 1% level. Standard errors are estimated by bootstrapping. Coefficients for other explanatory variables are omitted.

Table 7: Fear of losing a job. Specifications with unemployment rates imputed from Russia LFS. Pooled sample of working age adults, 2000-2009, RLMS.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Group-specific Unemployment** | | | | **Group-specific Non-Employment** | | | |
|  | **Men** | | **Women** | | **Men** | | **Women** | |
|  | Coeff. | *Std. Err.* | Coeff. | *Std. Err.* | Coeff. | *Std. Err.* | Coeff. | *Std. Err.* |
|  | *Ordered probit with wage residual from OLS regression* | | | | | | | |
| Wage Residuals | 0.040\*\*\* | *0.010* | 0.080\*\*\* | *0.010* | 0.040\*\*\* | *0.010* | 0.079\*\*\* | *0.010* |
| Regional unemployment | 0.000 | *0.001* | 0.002\*\* | *0.001* | 0.003\*\*\* | *0.001* | 0.004\*\*\* | *0.001* |
|  | *Ordered probit with wage residual from FE regression* | | | | | | | |
| Wage Residuals | 0.033\*\* | *0.015* | 0.091\*\*\* | *0.017* | 0.033\*\* | *0.015* | 0.091\*\*\* | *0.017* |
| Regional unemployment | 0.001 | *0.001* | 0.002\*\* | *0.001* | 0.003\*\*\* | *0.001* | 0.004\*\*\* | *0.001* |
|  | *SNPML with wage residual from FE regression* | | | | | | | |
| Wage Residuals | 0.039\*\* | *0.019* | 0.084\*\*\* | *0.019* | 0.039\*\* | *0.019* | 0.086\*\*\* | *0.020* |
| Regional unemployment | 0.001 | *0.002* | 0.002\* | *0.001* | 0.004\*\*\* | *0.001* | 0.003\*\* | *0.001* |

Note: \* is significant at 10% level; \*\* is significant at 5% level; \*\*\* is significant at 1% level. Standard errors are estimated by bootstrapping. Coefficients for other explanatory variables are omitted.



Figure 1: Changes in the perceptions of job security and unemployment rates normalized to the levels in 2000 for males and female and for rounds of RLMS.

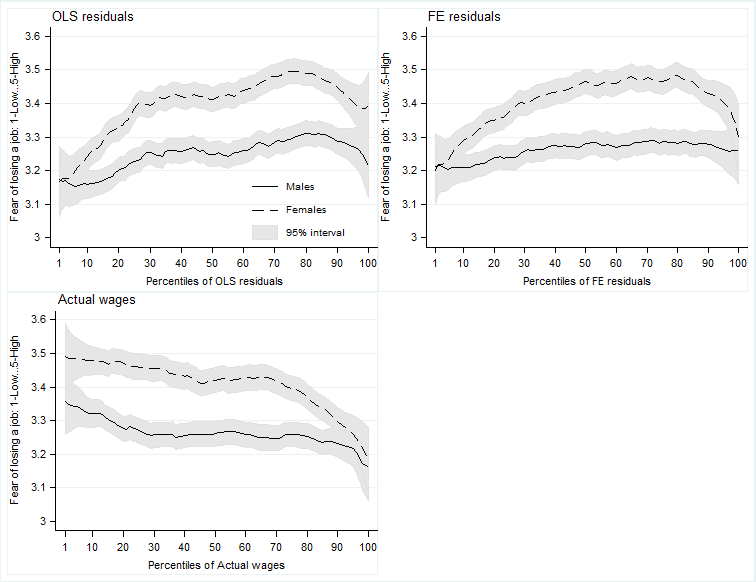


Figure 2: Does the fear of losing a job depend on the wage residuals or actual wages? Nonparametric smoothing estimation for men and women. Pooled sample of working age adults RLMS 2000-2001.



Figure 3: Changes in the actual and simulated fears of losing a job for males and females and changes in unemployment rate normalized to the levels in 2000 for rounds of RLMS.

**Appendix**

Table A1: Are the respondents most fearful of losing their jobs more likely to become unemployed? Probit estimations of employment status for men and women.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Men | | Women | |
|  | Coeff. | *Std.Err* | Coeff. | *Std.Err* |
| **Fear of losing a job (4,5) last year** | -0.024 | *0.041* | -0.006 | *0.042* |
| Regional unemployment | 0.039\*\*\* | *0.008* | 0.011 | *0.009* |
| *Individual Characteristics* |  |  |  |  |
| Age in year | -0.020 | *0.015* | -0.048\*\* | *0.019* |
| Age squared/100 | 0.022 | *0.020* | 0.044\* | *0.026* |
| Receives pension | 0.211\*\*\* | *0.076* | -0.153 | *0.113* |
| *Education* |  |  |  |  |
| Primary or Incomplete secondary | 0.311\*\*\* | *0.079* | 0.260\*\*\* | *0.092* |
| Vocational | 0.105 | *0.100* | 0.223\* | *0.135* |
| Secondary School | 0.172\*\*\* | *0.066* | 0.227\*\*\* | *0.063* |
| Secondary + vocational | 0.125\* | *0.067* | 0.223\*\*\* | *0.066* |
| College degree | 0.077 | *0.073* | 0.039 | *0.060* |
| University and higher | *Reference category* | | | |
| Married | -0.325\*\*\* | *0.059* | -0.062 | *0.048* |
| *Household Characteristics* |  |  |  |  |
| Log of household size | 0.179 | *0.175* | -0.258 | *0.158* |
| Log of household size2 | -0.068 | *0.075* | 0.102 | *0.072* |
| Share of children | -0.168 | *0.143* | -0.222\* | *0.130* |
| Share of pensioners | 0.245 | *0.150* | -0.047 | *0.187* |
| *Type of locality* |  |  |  |  |
| Moscow and St. Petersburg | *Reference category* | | | |
| City | -0.174\* | *0.091* | 0.003 | *0.093* |
| Town | -0.027 | *0.092* | -0.066 | *0.098* |
| Small Town | -0.003 | *0.119* | 0.017 | *0.122* |
| Village | -0.031 | *0.094* | -0.063 | *0.099* |
| Constant term | -1.987\*\*\* | *0.325* | -0.872\*\* | *0.346* |
| Number of observations | 19,839 | | 21,607 | |
| Log-likelihood | -2,067.59 | | -1,949.83 | |
| Adjusted/Pseudo R2 | 0.041 | | 0.035 | |

Note: \* is significant at 10% level; \*\* is significant at 5% level; \*\*\* is significant at 1% level. Coefficients for year dummies and region dummies are omitted.

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2. The working age for men in Russia is from 18 to 59 years, and for women from 18 to 54 year. See the RLMS-HSE web site for details on data access and sample design: <http://www.cpc.unc.edu/projects/rlms-hse>. [↑](#footnote-ref-2)
3. The proportion of workers who was afraid of losing their jobs in USA and UK in 1990s was less than 10 percent (Aaronson and Sullivan, 1999; Campbell et al. 2007). [↑](#footnote-ref-3)
4. Another feature of the Russian labor market is the contraction of employment in the corporate sector. The share of workers in large- and medium-size organizations where the Labor Code was enforceable declined gradually over the whole period from two thirds to half of all employed in the Russian economy, while the share of temporary or casual jobs and jobs in the informal sector were on the rise (Gimpelson and Kapeliushnikov, 2011; OECD, 2011). That shift of the labor force to the informal sector with a weak enforcement of the Labor Code increased the number of unprotected workers and potentially could support perceptions of job insecurity. However, perceptions of workers employed in informal sector are *lower* than those of formal sector employees (see Gimpelson and Oshchepkov, 2012). [↑](#footnote-ref-4)
5. Though unemployment benefits were raised notably in the beginning of 2009 as an anti-crisis measure, the replacement ratio remained low at 12.4%. [↑](#footnote-ref-5)
6. The variable component in the two-tier wage structure works as a risk-sharing mechanism in the face of high uncertainty in the market environment (Bigsten et al. 2003) assuming an implicit contract between risk-averse workers and risk-averse employers. In a downturn, the variable fraction of wage payment shrinks, containing total labor costs but workers are likely to enjoy an additional wage premium in the upturn. Caroli and Garcia-Penalosa (2002) argue that as an economy grows endogenous changes in workers risk aversion induces changes in the wage structure. During the periods of economic growth the individual incomes increase, the degree of risk-aversion of workers falls and they chose contracts with higher proportion of variable wages. In the recessions, more risk-averse workers are more willing to accept fixed-wage contracts as a form of insurance. [↑](#footnote-ref-6)
7. In the US, only about 40 percent of workers are on a performance pay, and the median share of performance pay in total earnings is about 4.4 percent (Lemieux et al., 2007). [↑](#footnote-ref-7)
8. Nickell et al., (2002) define the job insecurity as an expected loss in income if unemployed compared to the current state. Green et al., (2000) relate job insecurity with the costs of job loss. Similarly to our model, these costs depend on wages on the current job, benefits while unemployed, duration of unemployment and expected wages on the next job. Luechinger et al., (2009) point that the negative effect of unemployment on people’s well-being is driven mostly by worries about economic distress as a result of losing their job. [↑](#footnote-ref-8)
9. This result finds empirical confirmation in Clark and Postel-Vital (2009) who report that feelings of job security are positively related with the size of unemployment benefits in OECD countries. [↑](#footnote-ref-9)
10. The theoretical model and empirical analysis in Robin (2011) demonstrate the pro-cyclical dynamics of the wage inequality in upper part of wage distribution. [↑](#footnote-ref-10)
11. This estimator is implemented as STATA command ***sneop*** (Stewart, 2004). [↑](#footnote-ref-11)
12. Wages of male workers were, on average, 20 percent higher than the wages of female workers in Russia in 2000s (Dohmen, Lehmann and Zaiceva 2008). [↑](#footnote-ref-12)
13. Treisman (2011) does not explicitly discuss fears of unemployment and his work focuses on the levels of fear rather than on the changes. [↑](#footnote-ref-13)