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TEMPORARY EMPLOYMENT IN RUSSIA: WHY MOSTLY MEN?¹

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***Abstract:** The paper deals with temporary employment on the Russian labour market. The main focus is the gender differences of determinants for being temporary employed in Russia. The puzzle here is that Russia is completely different from European countries where women are most likely to have temporary work. The general question for the paper is why? The household survey of NOBUS (held in 2003 by State statistical centre with World Bank participation) is used to answer the question. The results of the survey prove that gender differences for the probability of temporary employment do exist and the main factors that explain these differences are education and marital status.*

Keywords: temporary employment, gender, determinants of the probability, decomposition for gender differences

JEL Classification Code: J21, J41

1. INTRODUCTION

Temporary employment has considerably spread in Russia after the break down of the Soviet Union. If we compare the number of temporary workers with the number of unemployed in 2007 we will see that the former exceeds the latter. It is incredible but while the problem of unemployed is highly discussed the phenomenon of temporary employment was practically neglected by both scientists and policy makers.

Politicians are tend to perceive all employed as a homogeneous bulk of workers, but it is not so. Labour legislation for permanent and temporary employment is different. Moreover the employers' and employees' behavior is different due to the limited labour contract relations: employers do not invest in temps' training, pay less money and etc.; employees could work carelessly and be disloyal as they are not interested in accumulating specific capital. As previous research showed temporary workers are always paid less than permanent ones, they usually hold positions which do not require high education and qualifications, they face with uncertainty in the future and finally temporary workers could comprise social exclusion (Booth, et al, 2000; Gustafsson, et al., 2001; Booth, et al., 2002; Hagen, 2002; Graaf-Zijl, 2005).

The research of temporary employment is of great value for the state as it deals with many social problems. In order to make the appropriate social policy decisions in this field we need to understand the mechanism of temporary employment formation.

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Looking at the situation in the world, we could see that Spain, Mexico, Portugal and Turkey had the highest rate of temporary employment (more than 20%) in 2000 while Russia, USA, Poland, Slovakia and Ireland had the smallest one (about 4-5%) (see figure 1). The diversity continues later on but the leaders in share of temporary workers changed (see figure 2). For example Poland could be added to the leaders' list as more than 28% of its labour force work on temporary basis. Russia moved to the middle of the distribution and got such neighbors as Norway, Greece, Turkey and Iceland.

Males and females have different reasons for taking part in temporary work. In most western countries women tend to be more involved in temporary employment than men (see figure 3). Their motivation often links to small children, family problems, and a wish to work part-time (Boeri, Del Boca and Pissarides, 2005). For young men this temp work could be a chance to get a permanent job (Hubler and Hubler, 2006). Children and family are not of such importance for them while they make a decision to work on temporary contracts.

The dynamics of temporary employment in Russia is given in Figure 4. During the last 16 years the proportion of temporary employment has gradually increased from 2,5% in 1992 to about 12% in 2007 in Russia. Now more than 8 million people are working on temporary basis in this country. Russian men are constantly more engaged in temporary employment than women. In 2007 the rate of temporary employment was about 14% for men and almost 10% for women.

Many scientists interpret the problem of temporary work in terms of "bad" and "good" jobs then they consider temporary employment to be the former². In this case women will have more chances to be engaged in precarious work, as they usually face with gender inequality in access to good and well-paid jobs. According to this approach it is possible to speak about gender discrimination in many European countries where women are overrepresented in temporary "bad" employment (Boeri, Del Boca, Pissarides, 2005; Tucker, 2002).

Could we speak about the absence of discrimination in Russia? Does the higher percentage of temporary employed men mean that women are not pressed out to bad instable jobs in the periphery³ of the labour market? What determines the work on temporary contract? Are there any differences for men and women? These questions are to be covered in the paper.

The main goal of the study is to determine the factors of temporary work for men and women in Russia. The contribution of the paper is that it adds to the literature describing Russian extreme case and explaining this phenomenon. The paper has the following structure. The literature review goes in the next paragraph. The third paragraph is devoted to the data description and methodology. The fourth paragraph contains the discussion of the results. Finally I give the conclusions.

² "While some workers engaged in non-standard work enjoy good incomes, job stability, adequate protections from health and safety risks in the workplaces and opportunities for training and development, many do not have such conditions. Many may be in '**precarious**' jobs, that is work with low wages, low job security, higher health and safety risks, little or no control over workplace conditions or hour of work, and limited opportunities for training and skill development. Evidence suggests that the former category is more likely to be self-employed or **temporary** workers" (Tucker, 2002)

³ See for example the theory of segmented labour markets in Doring and Piore (1971) and Lindbeck and Snower (1988).

2. LITERATURE REVIEW

The problem for all researchers who focus on temporary employment issue is that there are no unique and standard definitions. Frequently authors explain what they mean by temporary employment in accordance with the available data in a country and it is always difficult to compare the results between different countries. Despite such a diversity of the definitions there are more or less clear norms of determining the temporary employment.

European Labour Force Survey (LFS) gives the following explanation of what *temporary employment* means: “A job may be considered temporary if employer and employee agree that its end is determined by objective conditions such as a specific date, the completion of a task or the return of another employee who has been temporarily replaced (usually stated in a work contract of limited duration). Typical cases are: (a) persons with seasonal employment; (b) persons engaged by an agency or employment exchange and hired to a third party to perform a specific task (unless there is a written work contract of unlimited duration); (c) persons with specific training contracts”.

I follow the broader OECD definition that *temporary employment* is “*dependant employment of limited duration*”. All other jobs are referred to as ‘permanent’ jobs. Temporary employment includes a great variety of types⁴:

- ***Fixed-term contracts, that have a specified duration or a predetermined ending date.***
- Temporary agency workers, who are placed by a temporary work agency (TWA) to perform work at the premises of a third-party customer enterprise.
- ***Contracts for a specific task, a contract of work that lasts as long as is necessary to complete specified task.***
- Replacement contracts, for example to replace workers on leave for family-related reasons.
- Seasonal work, taking place only at certain periods of the year (e.g. harvesting).
- On-call work, which is performed only on an as-needed basis.
- ***Daily workers, who are hired on a daily basis.***
- Trainees, meaning apprentices and other workers with a training contract that qualifies them for a salary but does not guarantee them a permanent position at the end of the training period.
- Persons in job creation schemes, individuals hired under public programs to stimulate the employment of disadvantaged categories of workers (e.g. youth, the long-term unemployed, and the disabled), when these jobs are of limited duration.

So I determine **temporary employment as employment by explicit or implicit contract limited in time**. The available data I’m going to use allows marking out only three types⁵ of temporary work in Russia. They are the following: fixed-term contracts, contracts for a specific task and oral-based employment.

Scientists use different approaches to identify factors that influence temporary employment in a country. The closest one for us is labour supply approach. For example such explanations of temporary employment growth as global changes and technological progress (Mills and Blossfeld, 2005; Auer, 2005), institutional factors (Scarpetta, 1996; Uzzi and Barsness, 1998; Cebian et al, 2000; Cahuk and Postel-Vinay, 2001; Lindbeck and Snower,

⁴ OECD Employment Outlook, 2002

⁵ The compared types of temporary employment according to OECD list with types of temporary work that could be identified in Russia are bolded and italicized.

2002; Olsen and Kalleberg, 2004; Kahn, 2007; Salladerre and Hlaimi, 2007) and labour demand factors (Uzzi and Barsness, 1998; Housman, 2001; Employment Outlook, 2002) are not in our focus as the available individual employees' data set does not allow us to test all these assumptions.

No doubts, technological progress and globalization have influenced Russian labour market as the structural changes took place in economy. The production sector has shrunk dramatically while services have grown considerably. Such sectors as construction, public administration sales and some others (where males occupy most positions) have raised their shares. Very strict Russian employment protection legislation⁶ influences the percentage of the temporary employment as well. It is softened by bad law enforcement that causes the rise of temporary employment. So employers are interested in hiring temps in Russia as they could shorten labour costs in this way. Unfortunately these three blocks of explanations could not be checked within the paper because of the data I use.

The previous studies of labour supply approach illustrated that temporary workers are usually (except for UK) young and less educated people with lack of working experience (Polivka, 1996; Russo, Gorter, Molenaar, 1997; Booth, Francesconi, Frank, 2000; Hipple, 2001; Employment outlook, 2002, Valenzuela, 2003). The same conclusions were done by Salladerre and Hlaimi (2007), based on the European Social Survey. They claim that the younger the respondent is the more likely he/she will be a fixed-term employee, this supports the fact that temporary employment seems to become a stepping stone to a permanent job.

Many studies demonstrated that exactly women are more frequently associated with this kind of flexible labour arrangements (Hipple, 2001; Employment outlook, 2002; Boeri, Casey, Alach, 2004; Del Boca and Pissarides, 2005; Salladerre and Hlaimi, 2007). It is interesting that the birth of a child and change of marital status are the push factors to step into temporary employment (Wiens-Tuers and Hill, 2002; Boeri, Del Boca and Pissarides, 2005).

An episode of unemployment leads to a decline in the future probability to find an employment of unspecified duration, but raises the probability for temporary work (Chalmers, Kalb, 2000; Guell, 2000; Guell, Petrolongo, 2000; Booth, Francesconi, Frank, 2000; Salladerre and Hlaimi, 2007).

The most relevant publication for this paper was written by Boeri, Del Boca and Pissarides (2005). They hold the study for several European countries and analyzed temporary employment determinants from a gender perspective. They showed that males and females have different reasons to be temps. For instance, marital status, small kids and preference for shorter working hours were the main factors of temporary employment for women while they were not so important for men.

Unfortunately, the phenomenon of temporary work attracts not enough scientific attention in Russia. There are some highly valuable publications written by V. Gimpelson (2004, 2006, and 2007) and R. Kapelyushnikov (2001, 2006) on the topic of non-standard employment in Russia, but they do not cover the problem of determination of temporary work concerning gender dimension.

Taking into account all the existed research I suggest the following hypotheses to test for Russian case by regression analysis on the basis of the individual data set.

⁶ Permanent standard workers enjoy rather good protection in Russia: employers have to notice the employees about the redundancy in advance of 2 month; they also have to provide the severance pay to the redundant employees. At the same time the issue of temporary employment in Russia remains strictly regulated even after the New Labour Code of 2002 was introduced. However the list of cases when an employer could hire a temporary worker was broadened and self-employers were allowed to employ fixed-term contractors.

H1. It is statistically significant that the probability to be temporary workers is higher for men in Russia.

H2. Younger people are more likely to be temporary employees, as they do not have the necessary experience and acquired knowledge is not enough to get good well-paid permanent jobs. This is true both for men and women

H3. Employees with lower levels of education have better chances to be temporary workers. This is true both for men and women, but taking in account the fact that men are generally less educated than women enhances the influence of education factor for men.

H4. I assume that the number of small children will raise the probability to have a temporary contract especially for women. It is difficult for women to re-entre labour market after the child birth, as they face with the discrimination in access to good and well-paid jobs. So they more frequently agree to have less attractive temporary jobs. Such women could also work temporary because of the low level of their reserved wage rates.

H5. Having a spouse positively affects the probability of being temporary employee for men and negatively for women. Getting married men become more responsible and would agree to have any job to support their families. So in case they could not find a good permanent job, they would agree to be temporary workers. Women on the contrary will try to look for permanent job as they can afford to have a longer job matching period as they have the husbands' support.

In order to test these assumptions the empirical analysis is needed. Let me turn to the data description.

3. DATA AND METHODOLOGY

There are at least three data sets in Russia that could be used to investigate temporary employment. They are Labour Force Survey (LFS), conducted quarterly by the Rosstat; Russian Longitudinal Monitoring Survey (RLMS), hold yearly by the Institute of Sociology, Demoscope and HSE; and Household Survey of Social Welfare called NOBUS, conducted by the World Bank and Rosstat in 2003. Table 1 shows the advantages and disadvantages of these data sets. The possible identification of temporary workers and free access to NOBUS makes it the most appropriate for the research goals. However it is not a panel study. The Labour Force Survey has almost the same questionnaire as NOBUS, but unfortunately it is not officially opened.

The current research is based on the representative household survey NOBUS held by Russian Federal Statistical Service in Spring 2003. NOBUS consists of 117 thousand people and contains detailed information about many aspects of respondents' lives, including their labor market experiences, health and incomes. The part of the questionnaire about employment is taken from the Labour Force Survey, conducted by Rosstat.

The sample is restricted by the respondents' age (15-65 years old). The army people were also deleted from the sample as they comprised a small amount and were not under the focus. So the total number of employed equals to 46685 people, and almost 11% of them are temporary workers (see table 2)⁷. More than one third of temporary employees work without

⁷ NOBUS is rather representative for labour market in Russia. Comparing NOBUS with the data from LFS for 2003 we could see that the rates of temporary employment from these two sources are rather close to each other 11,8% (LFS data) and 10,8% (NOBUS data); the rates of temporary employment for men and women are also very much alike. LFS gives 13,5% for men and NOBUS shows 12,4%; the figures for females are 10,2% (LFS data) and 9,2% (NOBUS data)

written agreements, while the rest of them have fixed-term contracts or contracts for particular tasks.

The identification of the permanent and temporary workers is based on the four possible answers to the question about the respondents' type of hiring: 1) employment unlimited in time; 2) fixed-term employment; 3) contract for particular task; 4) oral-based employment. In accordance with this question I assigned individuals to one of the two categories: permanent employees or temporary workers. The temporary workers are those who answered that they are fixed-term contractors, contractors for particular tasks or hired by unwritten agreements.

After describing the structure of temporary employment I move step by step to reveal the differences of the probability to be a temporary worker for men and women in Russia. Firstly, I estimate probit regression model for all employed. Secondly, I assess this model adding the same variables multiplied by the female dummy. Thirdly, I apply the Fairlie decomposition technique for the probit model to identify and quantify the separate contributions to the gender differences. And the last step here was the estimation of the multinomial logit regression model (with 5 outcomes) separately for men and women.

Now let me dwell on each model that was used in more details.

1. The probit regression model of temporary employment for the total sample looks like this:

$$\Pr(Y_i = 1) = F(a + X_i * b + K_i * h + U_i * d + e), \quad (1)$$

Y is the dummy for temporary (=1) or permanent employment (=0).

a, h, b, d – vectors of coefficients,

X_i – set of personal characteristics of the respondent:

- dummy for sex (1 – female, 0 - male)
- dummies for five age groups of 10 years,
- dummies for three educational groups (lower than secondary, secondary + secondary professional, tertiary);

K_i – set of family characteristics:

- marital status (have a spouse -1; do not have a spouse- 0);
- number of children under 1 year old
- number of children from 1 to 3 years old
- number of children from 4 to 6 years old

U_i – set of the local labour market characteristics:

- type of the settlement (urban or rural);
- level of regional unemployment
- dummies for regions (43)

2. On the second step I add the interactions of all the variables with female dummy (*f*) (1 – female, 0 – male) to the probit specification:

$$\Pr(Y_i = 1) = F(a + X * b + K * h + U * d + f * X_i * b + f * K_i * h + f * U_i * d + e), \quad (2)$$

This step allows us to see if there is any impact of the female dummy for the factors included into the equation.

3. Next I evaluate the Fairlie decomposition for the probit model described above to reveal the gender differences of temporary work. The most common approach for identifying and quantifying the causes of gender differences is the technique of decomposing inter-group differences in mean levels of an outcome into those due to different observable characteristics

across groups and those due to different effects of characteristics of groups⁸. Usually the technique is attributed to Blinder (1973) and Oaxaca (1973), but it requires coefficient estimates only from linear regressions and cannot be applied directly if the outcome is binary. I have probit regression model with binary outcome in the paper, that is why I use the Fairlie's method of decomposing for logit or probit models. It was firstly described by Fairlie (1999) for analysis of the causes of the back/white gap in self-employment rates⁹.

$$\bar{Y}^W - \bar{Y}^M = \left[\sum_{i=1}^{N^W} \frac{F(X_i^W \beta^M)}{N^W} - \sum_{i=1}^{N^M} \frac{F(X_i^M \beta^M)}{N^M} \right] + \left[\sum_{i=1}^{N^W} \frac{F(X_i^W \beta^W)}{N^W} - \sum_{i=1}^{N^M} \frac{F(X_i^M \beta^W)}{N^M} \right]$$

F – cumulative distribution function from standard normal distribution

X – row vector of independent variables

β – vector of coefficient estimates for gender

I assume that the most valuable factors that explain the gender difference of having a temporary contract in Russia are education, marital status and children. See the hypotheses described above.

4. The fourth step of the research analysis is aimed on solving at least two methodological problems of the probit model applied. Firstly, dealing with the probit regression I use only the sample of employed (those who are unemployed or non-active are not observed). So the selectivity problem rises up.

Secondly temporary workers are very heterogeneous group with different educational levels, qualifications and incomes. Taking this into account I divide the subsample of temporary employees into two parts: 1) fixed-term contractors plus contractors for particular tasks and 2) oral-based agreements. The preliminary statistical analysis showed that these two groups differ in wages, education and qualifications. Those jobs on oral agreement comprise the worst conditions of the informal sector: low payment, no social security, uncertainty and etc.

In order to tackle these two problems I estimate multinomial logistic regression which has five possibilities for the outcome: 1) permanently employed, 2) fixed-employed, 3) employed by oral-agreements, 4) unemployed and 5) non-active. It is done in order to see the difference for those in really “bad” informal sector of precarious jobs and for those who could have rather good, well-paid temporary jobs. But this step does not eliminate all the heterogeneity problems we have here.

The evaluation of the multinomial logit regression is made separately for men and women. The equation looks like:

$$P(y_{it+1} = j | y_{it} = 0) = f(x'_{it} \beta), j = 0,1,2,3,4$$

The reference category for comparison is permanently employed. The list of the independent variables is the same as I take for the probit regression model.

⁸ Fairlie R. An Extension of the Blinder-Oaxaca Decomposition Technique to Logit and Probit Models. IZA Discussion Paper # 1917, January 2006

⁹ The thorough discussion of how to apply the non-linear decomposition technique is provided in Fairlie (2006).

4. RESEARCH RESULTS

According to the NOBUS data of 2003 the rate of temporary employment for men (12,4%) exceeds the rate of temporary employment for women (9,2%); the same is true if we divide temporary employment into two parts: for the fixed-term contracts , 8,0% and 5,6% accordingly, and the oral-based agreements, 4,3% and 3,6%, (see table 2).

Table 3 shows the structure of Russian employment by gender and by such characteristics as education, professional group and industry. It is worth to emphasize that the level of education among employed Russian women is generally higher than that among employed men. About 57% of employed males take low qualified positions like graft workers, operators and etc, while only 27% of employed females are concentrated here. Such industries as agriculture, fishing, manufacturing, construction and transport are more popular among males. While the most part of employed women is engaged in public sector and trade.

Now let us turn to the statistics for temps. It is interesting that only 14,4% of temps have higher education, what is true both for men and women (see table 4). Only 20% of temporary workers occupy such positions as clerks and higher, all the rest are placed in low qualified positions. It means that temporary workers are less educated and less qualified. It allows us to suppose that men have better chances to become temporary workers in Russia as they have generally lower level of education lower professional qualifications than women. This could be additional illustration to the third hypothesis to explain why men are more likely to be temporary workers in Russia.

Turning to the industry structure of permanent and temporary employment in the table 4 we could see that most of the temporary employees are concentrated in trade (34,6%), budget sector (15,1%) and construction (12,7%). The biggest proportion of male temps work in trade (21%) and in construction (20,5%). Rather high percentage of them work in budget sector (14,5%) and agriculture (13,1%). Temporary employment covers jobs in those industries where men do prevail, such as construction, agriculture and public administration (except trade). So another assumption to explain the male predominance in temporary work is professional and industry segregation.

The results from the regression analysis are placed in table 5. The 1st specification includes such independent variables as gender, age, education, marital status, number of children, type of the settlement and regional unemployment rate. The second one consists of all the same variables plus interactions of each variable with female dummy.

Let me start with the brief description of the determinants of the temporary employment in Russia. According to the estimates of the probit regression model, the probability of being a temporary employee is higher for males than for females. Young, less educated employees tend to have more chances for temporary contracts. The possibility of temporary employment declines if a respondent has a spouse. In case a person lives in a city and there is high unemployment rate in a region than the probability to become a temporary worker increases.

The second specification (see table 5) shows us the differences of the determinants of temporary employment for men and women. By including the interactions with female dummy we get the effect of being a woman. Firstly, I should emphasize that influence of female dummy on the possibility of being a temporary worker remains constantly negative. Secondly, such factors as older age groups, marital status, number of very small children and type of settlement play different role for men and women in choosing the type of contract.

Russian males of 45-65 year old are less likely to be temps comparing with men from the middle age group. While Russian females on the contrary have better chances to be temporary workers in case they are older than 44 or younger than 35. The negative impact of

tertiary education for women becomes stronger. It means that my assumption that men are more likely to be temps because of a lower level of education proves to be true. Such a determinant as marital status becomes insignificant for women while the number of children of less than 1 year old and a type of settlement become significant and rather strong. Those females who live in the cities have higher possibility to work temporary. Women with small children are unlikely to have temporary contracts. So the 4th hypothesis about positive influence of small children didn't come true. This outcome is different from the previous research, done in other countries, where women tend to have temporary job in case they have small children (Boeri, Del Boca and Pissarides, 2005).

The results of Fairlie decomposition for temporary employment showed that gender difference equals to 0,031 (table 6). As it was expected one of the largest factors explaining this gender difference is education (about 11%) and another one is marital status (-13,4%). It is definitely important for women to have or not to have a spouse when they make a decision to work temporary. Married women are less likely to be temporary employees while married men on the contrary have better chances to work on temporary basis. This outcome speaks for the third hypothesis that having a spouse has different impact on the probability of temporary employed for men and women: positive for men and negative for women. The regional unemployment rate and the number of small children in a family explain a small portion of the gender gap (2,5% and 1,5% correspondently). Finally, age and type of settlement explain virtually none of the gender gap. The decomposition revealed that group differences in all of the included characteristics explain roughly 29,5% of the gender gap in temporary employment. It means that unobserved characteristics which were not included into the model explain the rest part.

It is worth to mention once again that we deal with heterogeneity problem and sample selection bias here. That is why it is necessary to dwell on the results of the multinomial logistic regression with five possible outcomes. The reference category is permanent employment.

Russian men are more likely to have fixed-term employment (comparing with permanent one) in case of young age (up to 35 years old) and high regional unemployment rate (table 7). These are the only two factors which proved to be significant for males concerning the probability of fixed-term contracts. Dealing with oral-based agreements we have several more. Men in Russia tend to work on oral-based agreements if they are too young (up to 25 years old), less educated, have small children under 1 year old and in case of high regional unemployment rate. The probability for such informal employment decreases if a man has tertiary education or has a wife. This means that males with families tend to have permanent employment but not the most unstable oral-based work. So the determinants that are insignificant for more attractive fixed-contracts have rather strong influence on the probability for oral-based contracts (they are education, number of children less than 1 year old and marital status). I could suppose that family factors are important for men when they chose between permanent and informal employment but not when they chose between fixed term contracts and permanent ones.

The results of multinomial regressions slightly differ for women (table 8). Females of younger age (up to 34 years old) have higher probability to be fixed-term contractors or work on oral-based agreements than to be permanently employed. On the contrary women of older age (45-54 years old) would rather be permanently employed than have any type of temporary job. Like men only those women with primary education level tend to be employed on oral-based agreements. University diploma raises the probability to be permanently employed females. Having a spouse decrease the probability of being temporary employed, they would

rather be permanent employees. Women who have small children have lower chances to work on oral-based agreements. Such a result is close to those results for men. It is easier for a female to find a temporary job than a permanent one in case they live in the cities. The regional unemployment rate increases the possibility of working on oral-based agreement comparing to having a permanent job. We could see that the determinants of fixed-term contracts and oral-based agreements are very close for women unlike for men.

To sum up the results I should say that the probability to be a temporary worker in Russia is significantly higher for men than for women. It determines by such personal factors as young age, low level of education, marital status and number of small children. The most part of the observed gender differences is explained by education and marital status. Finally I'd like to emphasize that the results of all the models applied to explain the determinants of temporary employment for men and women in Russia go in line with each other. When I do multinomial regressions I have slightly different factors explaining the probability of being fixed-term contractors and working on oral-based agreements. This is true for both men and women.

5. CONCLUSIONS

The paper was aimed at disclosing the determinants of temporary employment for men and women in Russia. It answers at least three main questions:

1. Who are the temporary workers in Russia?
2. What determines to be temporary employee for men and for women?
3. What explains the gender difference in these determinants?

Following the OECD definition I determine the temporary employment as **employment by an explicit or implicit contract limited in time**. About 12% of all employees in Russia have temporary contracts it means that they get almost no social security, suffer from the lack of career opportunities and receive smaller wages. More over temporary workers always feel uncertain about their future what could lead to the different social problems (for example low birth rates and etc), that is why it is very important to investigate the factors of the temporary employment growth in a country.

The statistical data provided by ROSSTAT show that the level of temporary employment has been constantly growing in Russia since 2000 and now it is around 14% for males and 10% for females. The temporary workers in Russia are mostly young, low educated and low qualified people working in construction, trade, public sector and agriculture. This finding is in line with the previous research in many other countries (Employment Outlook, 2002), while male predominance in the temporary employment is an extreme case.

Empirical analysis on Russian labour market allows giving the following explanations for this fact. Firstly, this could be caused by structural economic changes and industry segregation in the country: the majority of temporary workers are engaged in male industries such as public administration, fishing, construction and trade. Secondly, temporary employees in Russia as well as in many other European countries are less educated (usually they have only primary or secondary education) and have lower qualifications (they occupy non-qualified blue-color positions as a rule). Women in Russia have better education on average and occupy higher positions than men (except top management), that is why they have less chance to be temporary employed. Significant impact of education factor that was revealed in the regression models showed that this assumption could be true. Thirdly, it was showed that official or unofficial marriages increase the possibility of temporary employment for men and

cut down for women. This finding is within the theoretical framework and does not go against the previous results.

On the whole the applied econometric model confirms the higher probability to work temporary for men. The determinants of temporary employment are different for men and women in Russia. With the help of Fairlie decomposition I assess the gender difference and found out that such factors as education and marital status explain the largest part of the gap. It is interesting that having small children decreases the probability of being temporary workers for women in Russia. While in many European countries exactly small children make women work on temporary basis.

To dwell on the practical contribution of the study I should mention that this research is the first attempt to investigate temporary employment in Russia. No doubts it will be the first ground to create the public, politic and scientific discussion on this topic. The deep analysis of the temporary employment determinants helps to disclose the mechanisms of “bad” jobs segment creation and income inequality growth among employed population concerning gender differences.

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Table 1. The comparison of the Russian data sets for labour studies: LFS, RLMS and NOBUS

	LFS	RLMS	NOBUS
Representative for Russia	+	+	+
Related question for identification of a temporary employee	+	-	+
Panel survey	-	+	-
Any retrospective information about job	-	-	-
Free access to the data	-	+	+

Table 2. The number, rate and structure of employment types by gender, NOBUS data, 2003

Type of employment	Number of observations	% of all employed (NOBUS Data)	Number of observations		Rate		Structure	
			Women	Men	Women	Men	Women	Men
Total employment	46685	100						
Permanent	41686	89,3	22267	19419	90,8	87,6	53,4	46,6
Temporary:	4999	10,8	2257	2742	9,2	12,4	45,1	54,9
Fixed-term	3144	6,8	1363	1781	5,6	8,0	43,4	56,6
Oral-based	1855	4,0	894	961	3,6	4,3	48,2	51,8

Table 3. The structure of employment by gender and education, professional qualification and industry, %, NOBUS data, 2003

	Women	Men
Education		
Primary	27,1	37,1
Secondary	48,4	44,2
Tertiary	24,5	18,6
Professional groups		
Senior managers	2,1	4,5
Professionals	17,7	11,0
Technicians	24,8	14,8
Clerks	9,5	1,7
service workers	18,4	10,8
Skilled agricultural workers	2,3	6,9
craft workers	7,8	25,4
Operators	3,1	10,7
Elementary occupations	14,3	14,1
Industry		
Agriculture, hunting, forestry and fishing	6,5	12,8
Mining, quarrying and manufacturing	14,3	21,3
Electricity, gas and water supply	2,4	5,4
Construction	2,9	11,3
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods, hotels and restaurants	16,6	8,4
Transport, storage and communications	6,0	13,3
Financial intermediation, real estate, renting and business activities	2,9	1,8
Public administration and defense; compulsory social security, education, health, social work, other community, social and personal service activities	39,7	17,6
Other activities	8,6	8,1

Table 4. The structure of temporary/permanent employment by education, professional qualification and industry in Russia, %, NOBUS data, 2003

	Permanent			Temporary		
	total	men	women	total	men	women
Education						
Primary	30,8	36,2	26,1	40,3	43,2	36,7
Secondary	46,5	44,5	48,3	45,3	42,4	48,9
Tertiary	22,6	19,2	25,6	14,4	14,4	14,4
Professional groups						
Senior managers	2,8	3,4	2,3	1,6	2,3	0,7
Professionals	15,8	12,2	18,7	6,2	5,6	6,8
Technicians	21,6	16,2	26,2	10,8	10,7	11,0
Clerks	6,0	1,8	9,7	4,4	1,8	7,4
Service workers	12,9	9,3	15,9	27,6	13,0	44,3
Skilled agricultural workers	4,2	6,4	2,4	3,3	4,8	1,5
Graft workers	16,9	27,3	8,0	14,0	21,3	5,6
Operators	7,1	11,7	3,2	4,5	7,2	1,4
Elementary occupations	12,7	11,7	13,6	27,7	33,2	21,4
Industry						
Agriculture, hunting, forestry and fishing	9,5	12,8	6,6	9,8	13,1	5,9
Mining, quarrying and manufacturing	18,6	22,9	14,9	9,5	10,6	8,2
Electricity, gas and water supply	4,1	5,9	2,5	1,6	1,7	1,5
Construction	6,2	10,0	2,9	12,7	20,5	3,2
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods, hotels and restaurants	10,1	6,7	13,1	34,6	21,0	51,0
Transport, storage and communications	9,8	13,9	6,3	6,4	8,9	3,4
Financial intermediation, real estate, renting and business activities	2,5	1,8	3,0	1,7	1,7	1,7
Public administration and defense; compulsory social security, education, health, social work, other community, social and personal service activities	30,9	18,0	42,1	15,1	14,5	15,8
Other activities	8,3	8,1	8,5	8,6	8,1	9,3

Table 5. Determinants of the temporary employment in Russia, marginal effects of probit regression model, specification 1, NOBUS data, 2003

Total temporary employment	Specification 1		Specification 2 (*female)	
	Marg. ef.	St. er.	Marg. ef.	St. er.
Female (0- be male, 1 - be female)	-0,029***	0,003	-0,064***	0,012
15-24 years old	0,071***	0,006	0,040***	0,008
25-34 years old	0,025***	0,004	0,013**	0,006
35-44 years old				
45-54 years old	-0,033***	0,004	-0,040***	0,005
55-65 years old	-0,020***	0,005	-0,034***	0,007
Primary level of education	0,026***	0,003	0,021***	0,004
Secondary level of education				
Tertiary level of education	-0,029***	0,003	-0,014***	0,005
Being married/cohabiting	-0,032***	0,004	-0,030***	0,006
Number of children of 1 and less years old	0,002	0,007	0,019**	0,009
Number of children from 2 to 3 years old	-0,003	0,006	0,004	0,008
Number of children from 4 to 6 years old	0,002	0,005	0,003	0,007
Living in the city	0,015***	0,003	0,006	0,004
Regional unemployment rate	0,002***	0,000	0,002***	0,001
15-24 years old*female dummy			0,060***	0,013
25-34 years old*female dummy			0,024***	0,009

Temporary employment in Russia: why mostly men?

35-44 years old*female dummy				
45-54 years old*female dummy			0,017**	0,009
55-65 years old*female dummy			0,040**	0,016
Primary level of education*female dummy			0,010	0,007
Secondary level of education*female dummy				
Tertiary level of education*female dummy			-0,028***	0,007
Being married/cohabiting *female dummy			-0,006	0,007
Number of children of 1 and less years old*female dummy			-0,048***	0,015
Number of children from 2 to 3 years old*female dummy			-0,021*	0,012
Number of children from 4 to 6 years old			-0,005	0,010
Living in the city*female dummy			0,020***	0,007
Regional unemployment rate*female dummy			0,001	0,001
Control for regions		yes		yes
Number of observations		45 357		45 357
Pseudo R2		0,045		0,048

note: *** p<0.01, ** p<0.05, * p<0.1

Table 6. Results of Fairlie decomposition of gender differences for the probability of being temporary employed in Russia, NOBUS data, 2003

Total gender difference	0,031583		
Explained gender difference	0,002044		
Pr(Y!=0 G=0) =	0,123404		
Pr(Y!=0 G=1) =	0,091821		
Total number of observations	45357		
Number of observations (male)	21539		
Number of observations (female)	23818		
	Coefficient	Stand. Er.	%
Age	-0,00016	0,000647	-0,5
Education	0,003438	0,000859	10,9
Being married/cohabiting	-0,0042227	0,0008511	-13,4
Number of children of 1 and less years old	0,0004726	0,0002315	1,5
Number of children from 2 to 3 years old	0,0000312	0,0000566	0,1
Number of children from 4 to 6 years old	-0,0000174	0,0000353	-0,1
Living in the city	-0,0001551	0,0001186	-0,5
Regional unemployment rate	0,0007857	0,0001395	2,5
All included variables			29,5
Control for regions	yes	yes	yes

Table 7. Coefficients of multinomial logistic regression for men in Russia, NOBUS data, 2003

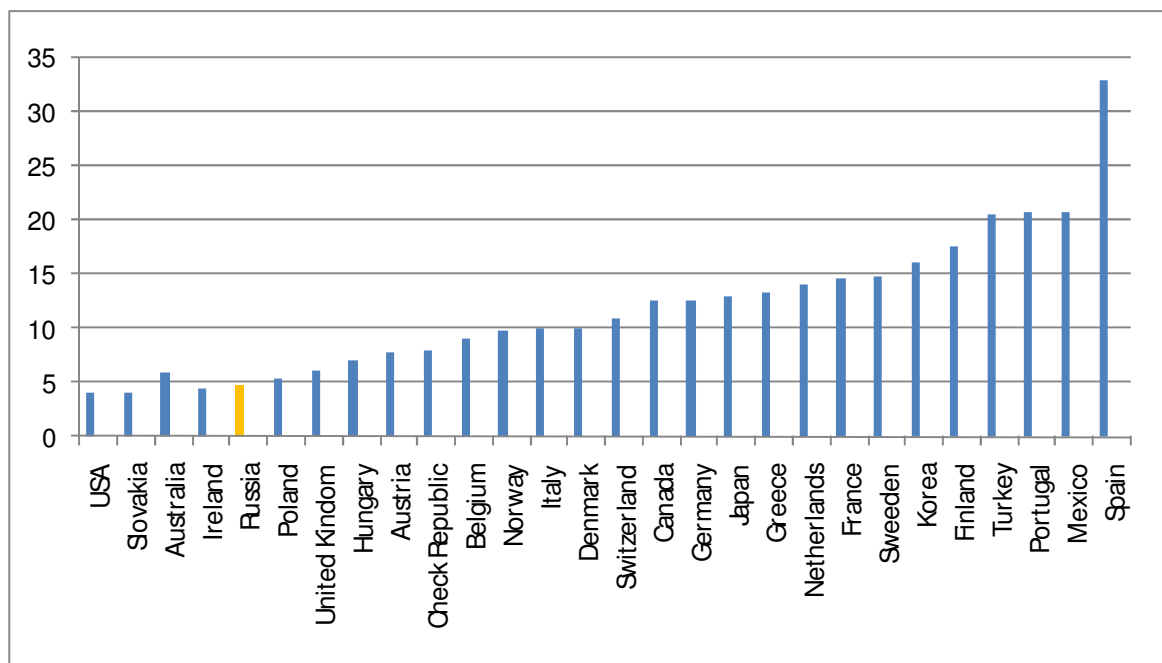
Based category – be permanently employed	Fixed-term contracts		Oral-based agreements		Unemployment		Non-activity	
	Coeff.	St. er.	Coeff.	St. er.	Coeff.	St. er.	Coeff.	St. er.
15-24 years old	0,478***	0,093	<i>0,215*</i>	0,116	0,296***	0,090	0,478***	0,093
25-34 years old	0,255***	0,073	-0,059	0,099	-0,045	0,080	0,255***	0,073
35-44 years old								
45-54 years old	-0,459***	0,078	-0,495***	0,103	-0,062	0,077	-0,459***	0,078
55-65 years old	-0,334***	0,117	-0,594***	0,178	-0,361***	0,138	-0,334***	0,117
Primary level of education	0,051	0,057	0,403***	0,071	0,487***	0,057	0,051	0,057
Secondary level of education								
Tertiary level of education	0,090	0,071	-0,896***	0,140	-0,404***	0,095	0,090	0,071
Being married/cohabiting	-0,091	0,074	-0,611***	0,096	-0,962***	0,072	-0,091	0,074

Number of children of 1 and less years old	0,091	0,113	0,404***	0,139	0,182	0,131	0,091	0,113
Number of children from 2 to 3 years old	0,021	0,101	0,083	0,139	0,028	0,117	0,021	0,101
Number of children from 4 to 6 years old	0,040	0,085	-0,005	0,115	0,119	0,089	0,040	0,085
Living in the city	0,102	0,063	-0,039	0,077	-0,370***	0,056	0,102	0,063
Regional unemployment rate	0,029***	0,010	0,037***	0,011	0,078***	0,007	0,029***	0,010
Control for regions								
Constanta	-2,844***	0,139	-2,991***	0,166	-2,504***	0,117	-1,120***	0,077
Number of observations	33 428							
Pseudo R2	0,165							

Table 8. Coefficients of multinomial logistic regression for women in Russia, NOBUS data, 2003

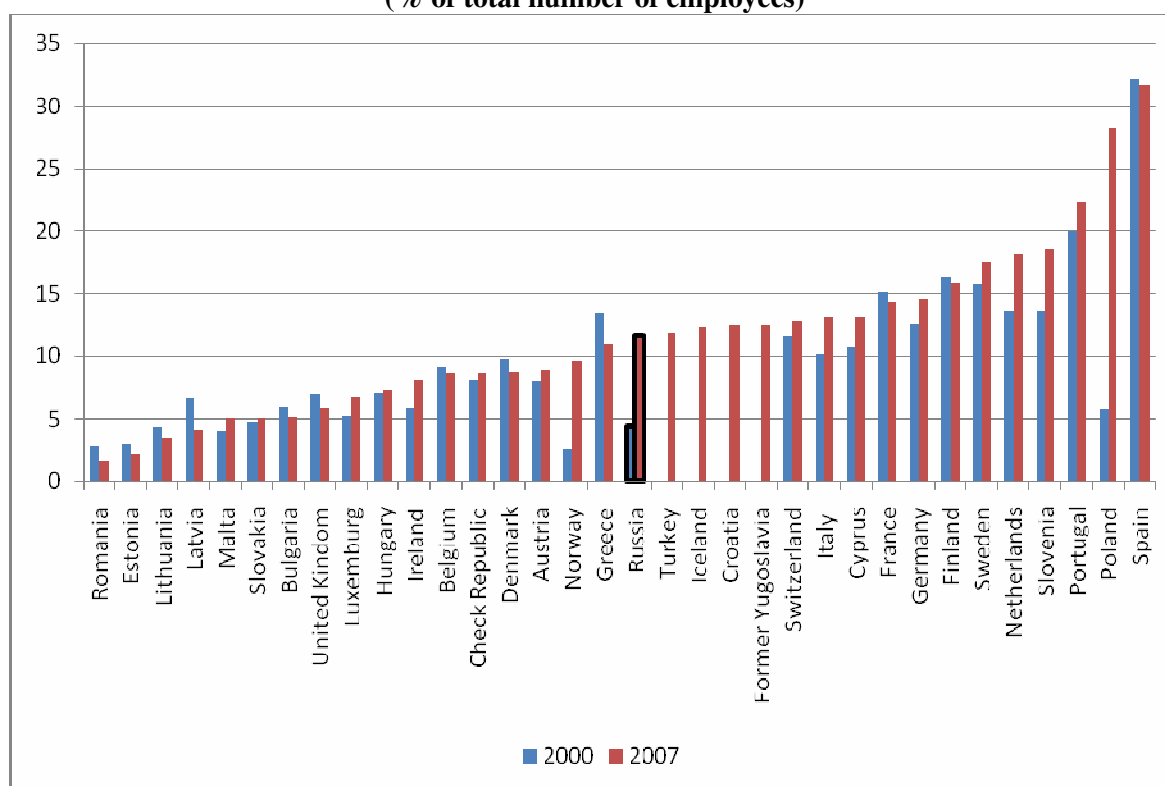
Based category – be permanently employed	Fixed-term contracts		Oral-based agreements		Unemployment		Non-activity	
	Coeff.	St. er.	Coeff.	St. er.	Coeff.	St. er.	Coeff.	St. er.
15-24 years old	0,940***	0,092	0,772***	0,111	0,914***	0,083	2,202***	0,043
25-34 years old	0,383***	0,085	0,430***	0,101	0,307***	0,076	0,434***	0,045
35-44 years old								
45-54 years old	-0,214**	0,086	-0,449***	0,108	-0,078	0,075	0,375***	0,041
55-65 years old	0,183	0,130	-0,309*	0,186	-0,820***	0,185	2,902***	0,046
Primary level of education	0,016	0,068	0,545***	0,075	0,505***	0,056	0,970***	0,028
Secondary level of education								
Tertiary level of education	-0,297***	0,077	-1,168***	0,133	-0,706***	0,088	-0,817***	0,043
Being married/cohabiting	-0,312***	0,065	-0,402***	0,082	-0,144**	0,061	-0,090***	0,029
Number of children of 1 and less years old	0,032	0,156	-1,091***	0,322	-0,048	0,152	0,879***	0,067
Number of children from 2 to 3 years old	-0,003	0,118	-0,226	0,167	<i>0,167*</i>	0,100	0,192***	0,060
Number of children from 4 to 6 years old	-0,055	0,100	0,169	0,109	0,061	0,082	-0,116**	0,050
Living in the city	0,199***	0,073	0,441***	0,090	-0,292***	0,056	-0,334***	0,029
Regional unemployment rate	0,002	0,014	0,034***	0,007	0,068***	0,006	0,055***	0,005
Control for regions								
Constanta	-3,068***	0,155	-3,767***	0,154	-3,202***	0,110	-1,955***	0,063
Number of observations	41 031							
Pseudo R2	0,190							

Figure 1. Temporary employment in 2000 in OECD countries and Russia
(% of total number of employees)



Sources: OECD Employment Outlook 2002, Russian LFS

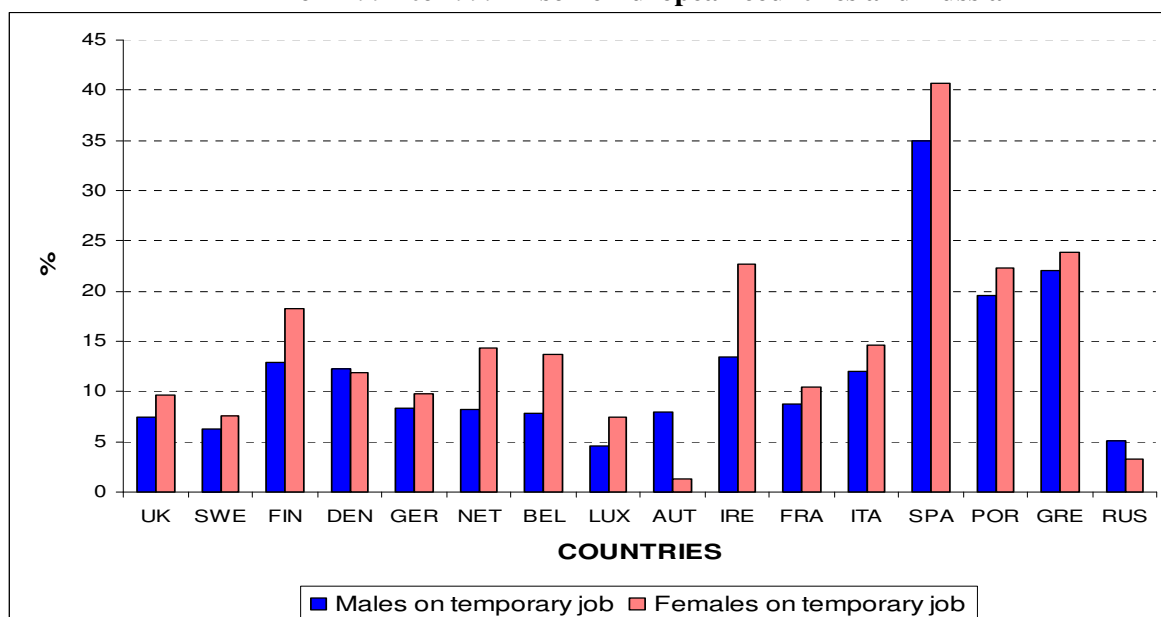
Figure 2. Temporary employment in 2000 and 2007 in European Countries and Russia
(% of total number of employees)



Sources: European LFS (Eurostat data on line) and Russian LFS

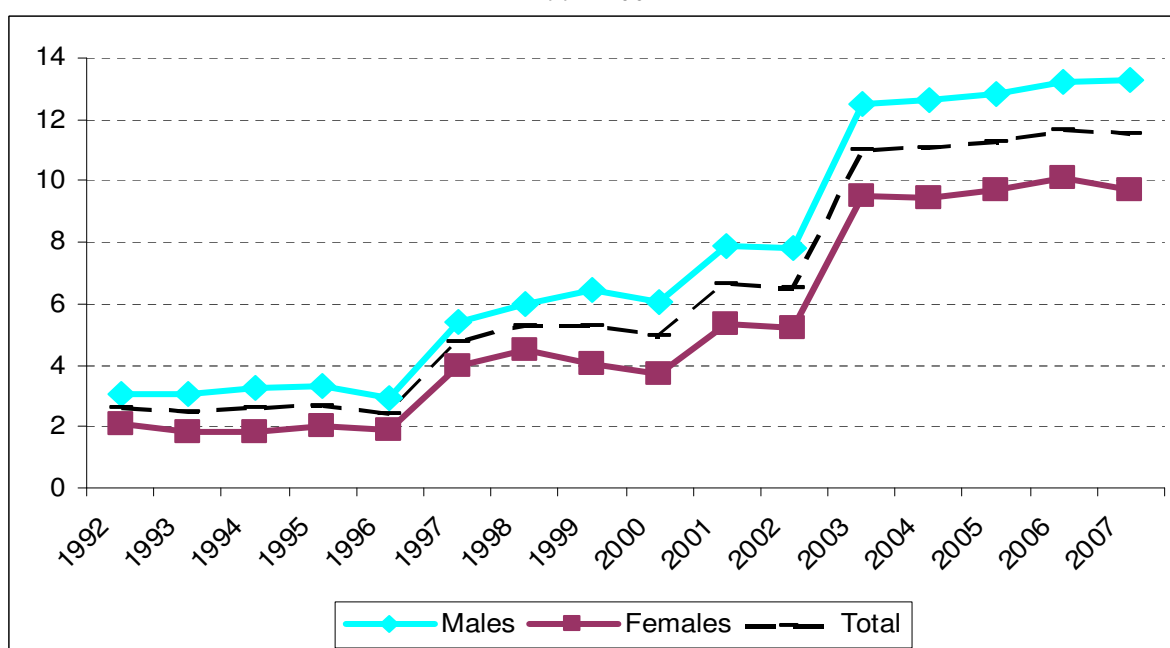
<http://epp.eurostat.ec.europa.eu/tgm/graph.do?tab=graph&plugin=1&pcode=tps00073&language=en&toolbox=sort>

Figure 3. The average level of temporary employment for males and females from 1994 to 1999 in some European countries and Russia



Sources: Boeri, Del Boca and Pissarides (2005); the figures for Russia were estimated and added by the author on the basis of LFS data.

Figure 4. The dynamics of the temporary employment level by gender in Russia, 1992-2007



Source: authors calculations on LFS data, provided by Rosstat