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Temporary employment in Russia: why mostly men?

Tatiana Karabchuk

Abstract:

The paper deals with temporary employment in the Russian labour market. The main focus is the gender difference regarding determinants of temporary employment. Unlike most European countries, where women are more likely to have temporary work, in Russia men predominantly have this status, comparable to the situation in many developing countries. This paper seeks to understand why this is the case. The household survey of NOBUS (held in 2003 by State Statistical Centre with World Bank participation) is used to answer this question: the results suggest that gender differences in temporary employment do exist, and that the main factors that explain these differences are education, and marital status.

JEL Classification: J21, J41

Keywords: temporary employment, fixed-term contracts, unwritten agreements, gender, determinants of the probability, decomposition for gender differences, Russia

1. Introduction

Temporary employment has spread considerably in Russia since the collapse of the Soviet Union. If we compare the number of temporary workers in 2007 with the number of unemployed, we will see that the former exceeds the latter. It is incredible that while the problem of unemployment is widely discussed, the phenomenon of temporary employment has been largely neglected by both researchers and policy makers.

Politicians tend to perceive the employed as a homogeneous group of workers, but this is not so. Labour legislation for permanent and temporary employment is different, and moreover, employer and employee behavior is different as a result of labour contract relations: employers do not invest in temporary workers' training and do not pay them equivalent salary; while employees may work carelessly and be disloyal due to the fact that they do not accumulate specific capital. Previous research has shown that temporary workers are systematically paid less than permanent ones, typically hold positions which do not require high education and qualifications, face the future with greater uncertainty, and are at greater risk of social exclusion (see Booth, et al (2000), Gustafsson, et al. (2001), Booth, et al. (2002), Hagen (2002) and Graaf-Zijl (2005)).

Research on 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.

Looking at the situation in the world, we can 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 lowest rate (about 4-5%; see figure 1). This diversity continues later on, but the leaders in share of temporary workers changed (see figure 1). For example Poland could be added to the leaders' list as more than 28% of its labour force work on a temporary basis. Russia moved to the middle of the distribution among neighbors such as Norway, Greece, Turkey and Iceland.

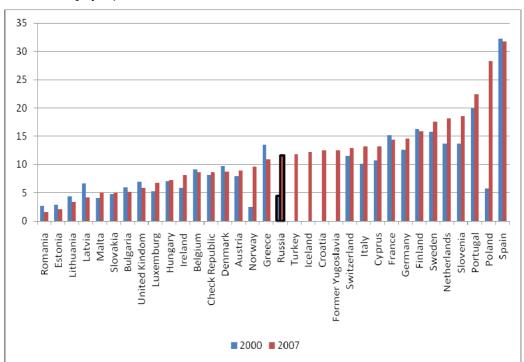


Figure 1. Temporary employment in 2000 and 2007 in European Countries and Russia (% of total number of employees)

Source: 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

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 2). Their motivation often links to childrearing, family problems, and a wish to work part-time (see Boeri, Del Boca and Pissarides (2005)). For young men this temporary work could be a chance to get a permanent job (see Hubler and Hubler (2006)). Children and family are not of such importance for them when they make a decision to work on temporary contracts.

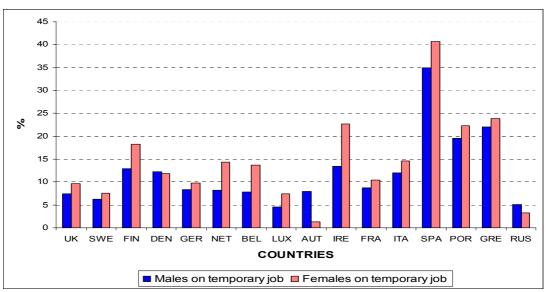


Figure 2. The average level of temporary employment for males and females from 1994 to 1999 in some European countries and Russia \mathbf{R}

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

The dynamics of temporary employment in Russia are given in Figure 3. 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.

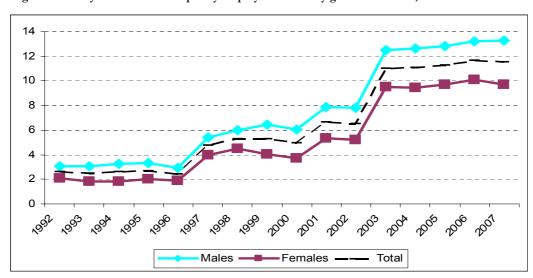


Figure 3. The dynamics of the temporary employment level by gender in Russia, 1992-2007

Source: authors calculations on LFS data, provided by Rosstat

Many researchers interpret the problem of temporary work in terms of "bad" and "good" jobs, and then consider temporary employment to be the former¹. In this case women will have more chances to be engaged in precarious work, as they usually face 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 (see Boeri, Del Boca, Pissarides (2005) and Tucker (2002)).

Could we speak about the absence of discrimination in Russia? Does the higher percentage of temporarily employed men mean that women are not pressed out to unstable jobs in the periphery² of the labour market? What determines working on temporary contracts? Are there any differences for men and women? These are the questions to be covered in this paper.

The main goal of the study is to determine the factors explaining temporary work for men and women in Russia. The contribution of the paper is that it adds to the literature describing the unusual Russian case and thereby explaining this phenomenon more generally. Scholarly discussion of the Russian exception could be interesting and useful for some developing countries as well, such as Turkey or Brazil, where the probability for temporary employment is also higher among men. The paper also contributes to the EJCE issues in two ways: first, by highlighting the situation on the Russian labour market that was done before as there were only two articles devoted to Russian case about human capital (Algieri (2006)) and political economic situation (Rosefielde (2005)) and second, by discussing the determinants of temporary employment as there is also a lack of papers in the EJCE series on this urgent topic of job stability problem.

The paper has the following structure. The literature review follows in the next section. The third section is devoted to the data description and methodology. The fourth section contains a discussion of the results. Finally I give some conclusions.

2. Literature review

Researchers use different approaches to identify the factors that influence temporary employment in a country. The most familiar is perhaps the labour supply approach. For example, such explanations of temporary employment as

¹ "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" (see Tucker (2002))

² See for example the theory of segmented labour markets in Doringer and Piore (1971) and Lindbeck and Snower (1988).

global changes and technological progress (see Mills and Blosfeld (2005) and Auer (2005)), institutional factors (see Scarpetta (1996), Uzzi and Barsness (1998), Cebian et al (2000), Cahuk and Postel-Vinay (2001), Lindbeck and Snower (2002), Olsen and Kalleberg (2004), Kahn (2007), Salladerre and Hlaimi (2007)) and labour demand factors (see Uzzi and Barsness (1998), Housman (2001) and 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 the Russian labour market as structural changes took place in the economy. The manufacturing 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 expanded in size. Very strict Russian employment protection legislation³ influences the percentage of the temporary employment as well. It is softened by bad law enforcement that causes the rise of temporary employment. Russian employers are interested in hiring temporary workers as in this way they can reduce labour costs⁴. Unfortunately these explanations could not be checked within the paper, because of the data I use, so we will concentrate more on similar empirical studies that were done in this field.

Many studies demonstrated that exactly women are more frequently associated with this kind of flexible labour arrangement (see Hipple (2001), Employment Outlook2002), Boeri et al (2004), Del Boca and Pissarides (2005) and Salladerre and Hlaimi (2007)). It would be reasonable to suggest that Russia does not differ from other European countries in this respect, as the institutional background and culture are rather close. But the official statistics betray a different truth. More men are engaged in temporary work. Whether this difference is significant or not, we have to prove with the data analysis.

It is interesting that in Europe the birth of a child and change of marital status are the push factors to step into temporary employment for women (Wiens-Tuers and Hill (2002); Boeri, Del Boca and Pissarides (2005)). Boeri, Del Boca and Pissarides (2005) showed that males and females have different reasons to be temps. For instance, marital status, young children and preference for shorter working hours were the main factors behind temporary employment for women, while they were not so important for men. I follow the results from this

³ 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 introduces. 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.

⁴ The difference in employment protection, direct and indirect cost of hiring a permanent worker with respect to a temporary one makes it more convenient for a firm to employ workers for temporary contracts.

most relevant publication for my paper and assume that having kids has a positive effect on the probability of being a temporary worker in Russia (see H1). The explanation could be as follows: it is difficult for women to re-enter the labour market after childbirth, as they face 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 temporarily because of the low level of their reserved wage rates. For men the kids could mean more responsibility and wish to support family, so they agree to have any job in a situation of instability (a specific feature of the Russian economy) and are influenced by the fear of unemployment.

Another family factor – marital status – may have different effects for males and females in Russia. The explanatory logic for males is the same, as after having children, married men become more responsible, and would agree to have any job to support their families. So even that they could not find a good, permanent job, they would nonetheless agree to be temporary workers. This raises their probability of having a temporary contract. Women, on the contrary, due to cultural and physiological reasons, will try to look for permanent job, as they can afford to have a longer job searching period as long as they have the husbands' support. My second hypothesis is based on these assumptions (see H2).

The previous studies of labour supply approach illustrated that temporary workers are usually (except for the UK) younger and less educated people (except for the UK, Spain and Italy) with lack of working experience (see Polivka (1996), Russo et al (1997), Booth et al (2000), Hipple (2001), Employment outlook (2002) and Valenzuela (2003)). The same conclusions were reached 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. So my hypotheses 3 and 4 come from these results. I suggest that this could also be true in Russia that young men and women have better chances to be temporary employed as they have more barriers to take a permanent well paid job from scratch. The same is true for the low educated people, due to the nature of the temporary work (it concentrates mostly in the sectors with no requirements for higher education and high qualifications). More over exactly men have lower educational level in Russia (see table 3), so they should be more likely to get into temporary work. This important factor should have considerable explanation power in the difference of the probability to be a temp for men and women.

Another valuable determinant of temporary work is the past experience of unemployment. Previous studies show that an episode of unemployment leads to a decline in the future probability of finding an employment of unlimited duration, but raises the probability for temporary work (Chalmersa and Kalb (2000), Guell (2000), Guell and Petrolongo (2000), Booth et al (2000), Salladerre and Hlaimi (2007)). Due to the data nature this important factor of unemployment experience could not be tested in this paper, as we need the panel data to trace the labour history of the respondents.

As for the national literature the phenomenon of temporary work attracts not enough scholarly 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, but they do not cover the problem of determination of temporary work concerning the gender dimension. So this paper aims at filling the gap and contributing to the literature by testing the made assumptions by regression analysis on the basis of micro level data set.

3. Methodology

I start with simple models and 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 variable. 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.

Here are the hypothesizes to test in this section:

- H1. The high number of small children will raise the probability to have a temporary contract, especially for women.
- H2. Having a spouse positively affects the probability of being temporary employee for men, and negatively for women.
- H3. Younger people are more likely to be temporary employees, as they do not have the necessary experience and the acquired knowledge is not enough to get good well-paid permanent jobs.
- H4. Employees with lower levels of education have better chances to be temporary workers.

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

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

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

$$Pr(Y_i = 1) = F(a + X * b + K * h + U * d + f * X_i * b + f * K_i * h + f * U_i * d + e),$$
(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 groups⁵. 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 rates⁶.

⁵ See Farlie (2006)

⁶ The thorough discussion of how to apply the non-linear decomposition technique is provided in Fairlie (2006).

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

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.

Now let me turn to the data description.

4. Data

The problem for all researchers who focus on temporary employment 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 temporary employment.

The 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 "*hired employment of limited duration*". All other jobs are referred to as 'permanent' jobs. Temporary employment includes a great variety of types⁷:

- 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 contact that qualifies them for a salary but does not guarantee them a permanent position at the end of the training period.

⁷ OECD Employment Outlook (2002)

• 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 types⁸ of temporary work in Russia. They are the following: fixed-term contracts, contracts for a specific task and oral-based employment.

There are at least three representative data sets that could be used to investigate temporary employment in Russia. They are Labour Force Survey (LFS), conducted quarterly by the Rosstat; Russian Longitudinal Monitoring Survey (RLMS), conducted 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, NOBUS has the same questionnaire for labour issues as the Labour Force Survey, which it is not officially available.

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	-	+	+

The current research is based on the representative household survey NOBUS conducted by the 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

Available online at http://eaces.liuc.it

⁸ 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.

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). Those in the army were also deleted from the sample as they comprised a small number and were not under the focus. So the total number of employed equal 46,685 people, and almost 11% of them are temporary workers (see table 2)9. More than one third of temporary employees work without written agreements, while the rest of them have fixed-term contracts or contracts for particular tasks.

Table 2 - The number.	rate and structure of emr	ployment types by gender	r in Russia, NOBUS data, 2003
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	% of all	Number of observations		Rate		Structure		
Type of employment	Number of observations	employed (NOBUS Data)	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
Unwritten	1855	4.0	894	961	3.6	4.3	48.2	51.8

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) unwritten agreement. 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.

Available online at http://eaces.liuc.it

⁹ NOBUS is rather representative for labour market in Russia. Comparing NOBUS with the data from the 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)

5. 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 unwritten agreements, 4.3% and 3.6%, (see table 2, % of all employed).

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 or operators, while only 27% of employed females are concentrated here. This result could work on the hypotheses 4 and 5, that the gender gap in the probability of temporary employment could be explained by the country educational differences and qualification segregation. 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 fifth hypothesis to explain why men are more likely to be temporary workers in Russia.

Table 3 - The structure of employment by gender and education, professional qualification and industry in Russia, %, 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
graft 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

Turning to the industry structure of permanent and temporary employment in Table 4 we can 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.

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

	Permanent			Tempo	orary	
	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

The results from the regression analysis are placed in table 5. The first 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.

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

Total tamparary ampleyment	Specification	n 1	Specification (*female)	
Total temporary employment	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
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	1			

Let me start with the brief description of the determinants of temporary employment in Russia. According to the estimated probit regression model, the

probability of being a temporary employee is higher for males than for females. The significance tests showed that the first hypothesis is true. Men are more likely to have a temporary contract in Russia than women.

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 see 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 compared 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 their 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 types of settlement become significant and rather strong. Those females who live in the cities have higher possibility for temporary work. Women with small children are unlikely to have temporary contracts. So the second hypothesis about positive influence of small children is not proven. This outcome is different from the previous research conducted in other countries, where women tend to have temporary jobs in case they have small children (see Boeri, Del Boca and Pissarides (2005)).

The results of the Fairlie decomposition for temporary employment showed that the gender difference equals 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 for temporary work. 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 number of small children in a family explain a small portion of the gender gap (1.5%). Again we did not get the significant proof for the second hypothesis.

Another interesting finding from the control variables is that the regional unemployment rate also explains some variation (2.5%). 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.

The reason that only 30% of the gender difference was explained in the model could be that the model did not grasp the personal preferences and psychological factors. I would assume that due to the Russian economy specifics women prefer to have permanent jobs as the stability of high value for them. Unfortunately the existed data do not allow us to test this assumption more individual surveys are needed here.

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		
Explained probability for males	0.123404		
Explained probability for females	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

It is worthwhile to mention once again that we deal with a 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 (compared with permanent employment) in the case of youth (up to the age of 35 years) and a higher 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 unwritten agreements we have several more. Men in Russia tend to work on unwritten agreements if they are young (up to 25 years old), less educated, have small children (under 1 year old) and if there is a 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 unwritten agreement. So the determinants that are insignificant for more attractive fixed-contracts have rather strong influence on the probability for unwritten 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.

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

Based category – be permanently	Fixed-terr contracts			Unemplo	yment	Non-activity		
employed	Coeff.	St. er.	Coeff.	St. er.	Coeff.	St. er.	Coeff.	St. er.
15-24 years old	0.478***	0.093	0.215*	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						

The results of the 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 then to be permanently employed. On the contrary women of older age (45-54 years old) would rather be permanently employed then have any type of temporary job. Like men only those women with primary education tend to be employed on unwritten agreements. A university diploma raises the probability to be permanently employed for females.

Married persons 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.

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

Based category – be permanently	Fixed-terr contracts			Unemployment		Non-activity		
<u>employed</u>	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	0.167*	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	<u> </u>		<u> </u>	1	<u> </u>	ı	
Pseudo R2	0.190							

To sum up the results, the probability to be a temporary worker in Russia is significantly higher for men than for women. It is determined by such personal factors as young age, low level of education, marital status and the number of small children. The most part of the observed gender difference is explained by

education and marital status. Finally it is important 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 conducting multinomial regressions different factors explain the probability of being fixed-term contractors and working on oral-based agreements. This is true for both men and women.

6. Conclusions

The paper was aimed at elucidating 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, which means that they get almost no social security, suffer from the lack of career opportunities, and receive smaller wages. Moreover temporary workers may feel uncertain about their future which 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. Temporary workers in Russia are mostly young, low educated and low qualified people working in construction, trade, the public sector, and agriculture. This finding is in line with the previous research in many other countries (see Employment Outlook (2002)), while male predominance in the temporary employment is an unusual case.

Empirical analysis of the Russian labour market gives 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 (as a rule, they occupy non-qualified blue-color positions). Women in Russia have better education on average and occupy higher positions than men (except top management), which is why they have less chance to be temporarily employed. The significant impact of the education factor that was revealed in the regression models and Fairlie

decomposition showed that this assumption is true. Thirdly, it was showed that official or unofficial marriages increase the possibility of temporary employment for men and reduce it 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 for temporary work 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 (see Boeri, Del-Boca and Pissarides (2005)).

A practical contribution of the study is that it is the first attempt to investigate the gender attributes of temporary employment in Russia. No doubts it will be an initial basis for further public, political and scholarly discussion on this topic.

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