

While many 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, some do not have such conditions. Some 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 are more likely to be self-employed or part-time, those in the latter are more likely to be temporary or casual workers.

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Determinants of temporary employment for men and women in Russia

Draft (not to be cited)

Abstract

The paper deals with a new but rather spread phenomena on the Russian labour market – temporary employment. The main focus is gender differences of the determinants of temporary employment. The consequences of the growing temporary work are wide and deep as they affect wages, income inequality, social structure and cause many other social problems like social exclusion, dead-end for career mobility and etc. There are not many papers on this issue in transition countries as well as not in Russia. That is why it is reasonable to dwell on the factors and reasons for the increasing temporary work. The puzzle here is that in many European countries these are women who are most likely to have temporary work, but in Russia the men are. The general question for this paper is why? What determines the probability of being temporary employee for men and for women in Russia? The research is conducted on the huge representative dataset of NOBUS (about 125 thousand respondents), which State statistical centre with World Bank participation held in 2003.

Problem and goal

The great process of changing labour market is going all over the world. People became more mobile; they do not keep their first job for the whole life as it used to be in the middle of XX century. Now in order to have better payment and carrier growth you often have to move not only from one company to another but to move across the country or across the world. Many new forms of employment have appeared. Part-time employment, self-employment, fixed-term contracts, on-call work, temporary agencies – all these are the examples of atypical work. Not only the form of employment changed but also the working conditions have changed. On the one hand both

employers and employees got more freedom and choice but on the other hand they face with such problems as lower specific capital, smaller wages, worse social security and etc.

Temporary employment is the most growing form of employment both in many developed and transition countries. It is the situation when the relations between employee and employer are limited in time; it means that both actors know that the employment will be over at a particular day. The work for a certain period of time could have advantages and disadvantages both for employers and employees. For instance employers in this case are free from labour costs and could use this type of employment as screening for better staff, but they have no interest to invest in workers' human capital so they cannot have good specific capital in this case. For employees temporary work could be a way out of unemployment and a "stepping-stone" for permanent employment, but at the same time they are less paid and have no formal career perspectives or social benefits, job stability, again they lose possible investment into their human specific capital and etc.

The issue of temporary employment has more general implication in the literature devoted to the problem of job instability. On the one hand many economists consider too stable employment to be harmful for the whole economy when firms are not able to adopt their labour to the fast changing market. Insiders with long tenure have strong bargaining power that could increase the labour costs (Hashimoto 1981; Hall and Lazear 1984). Some European countries have too rigid and overregulated labour relations, what causes the growth of temporary employment (Cahuk and Postel-Vinay, 2001) and declines the opportunity for job search for unemployed and graduates (Castels 2000). The insider-outsider-theory stresses that closure processes thus diminish labour market dynamics (Lindbeck and Snower, 2001). From labour supply perspective, new employees have different values, they are rather mobile (Гидденс, 2003; Бек, 1997; Тофлер, 2001) the high rate of quits demonstrates the personal employees' wish to change the job (see Bergemann and Mertens, 2004).

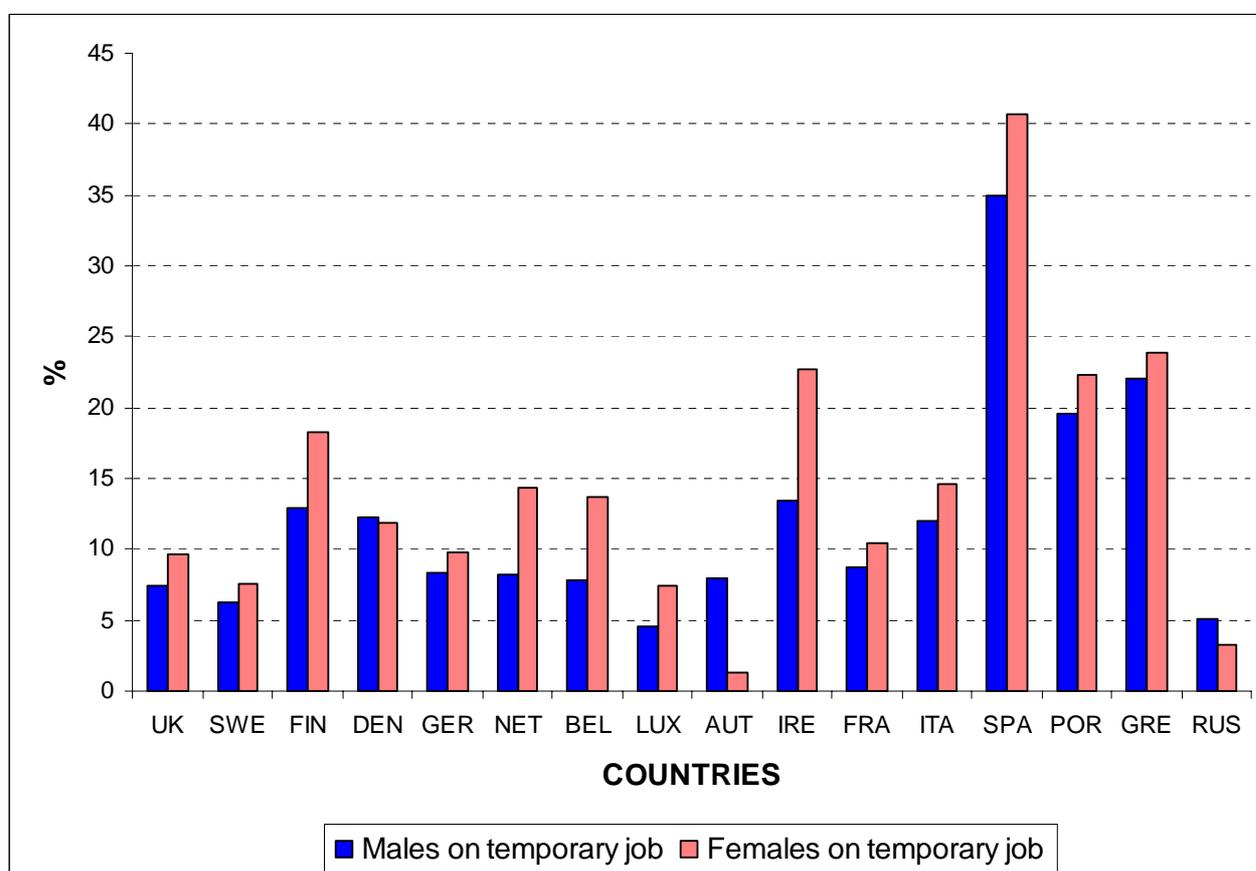
On the other hand instable employment has disadvantages as well. In terms of segmentation theory, the "bad" segment with uncertain employment, low payment, lack opportunities for career growth, almost no social security negatively affects social inequality and stratification system (Doeringer and Piore, 1971; Hudson, 1998; Sorensen 1983; Milgrom, Roberts, 1992; Kalleberg et al. 2000; Gerlach and Stephan, 2005) Frequent job switches and unemployment lead to the lack of human capital that negatively affects wages and opportunity to find a good job (Spence, 1973). Employees will only invest into firm-specific human capital under the perspective of a long-term employment (Becker, 1975) Unpalatable social and economic consequences are under hot debate in this context (Gregg and Wadsworth, 1994; Hogan and Ragan, 1995; St. Hippel and J. Stewart (1996); D. Rothstein (1996); M. Ferber and J. Waldfogel (1998); Klandermans and van Vuuren, 1999; Addison and Teixeira, 2000; Neumark, 2000; Cebian and others, 2000; Housman and

Polivka, 2000; Cahuc and others 2001; Lindbeck and Snower, 2002; De Witte and Naswall, 2003; Соболева, 2004; Hubler D. and Hubler O., 2006).

Males and females have different reasons for taking part in temporary work. In west countries women tend to be more involved in temporary employment, see graph 1. Their motivation is often links to small children, family problems, and a wish to work part-time¹. For young men this temp work could be a chance to get a permanent job. Their productivity is higher usually than permanent workers have (Hubler D. and Hubler O., 2006). Children and family is not of such high importance for men while they take decision on working temporary.

Graph 1.

The average level of temporary employment for males and females from 1994 to 1999, (taken from Boeri, Del Boca and Pissarides (2005); the figures for Russia were estimated and added by the author on the basis of Russian LFS data)



Many scientists see the problem of temporary work in terms of “bad” and “good” jobs. In this case women will have more chance 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).

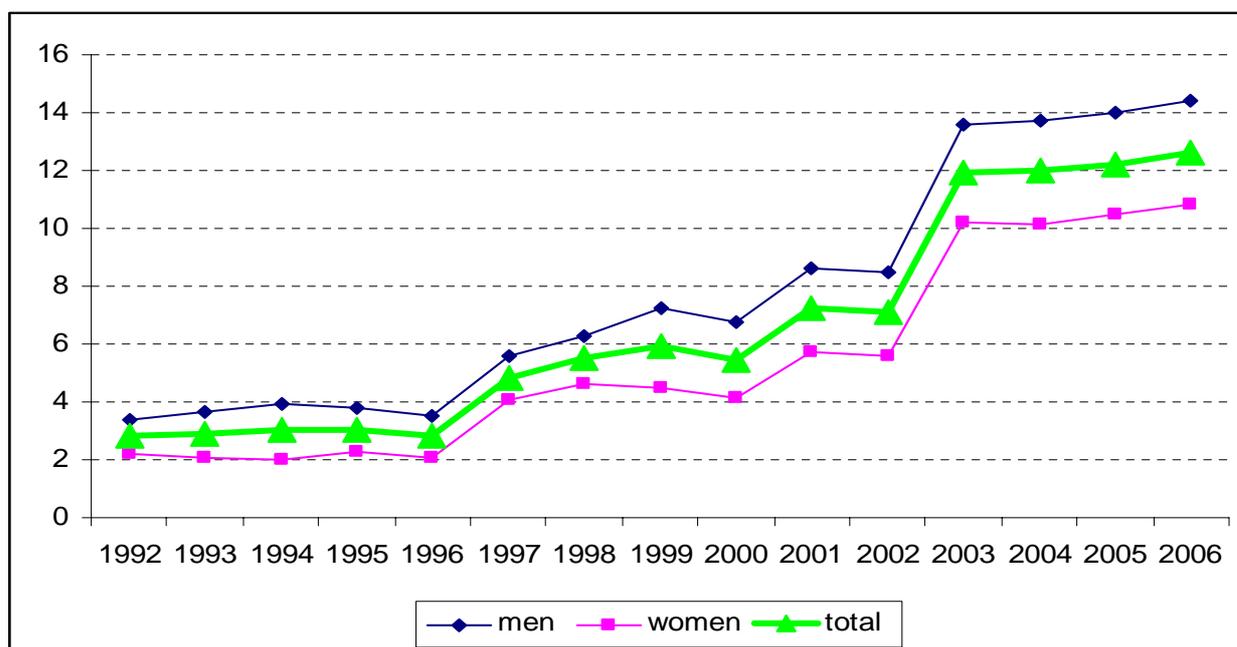
¹ Many temporary employees work part-time (Boeri, Del Boca and Pissarides, 2005)

Russia watched the constant growth of unstable employment since the beginning of 1990s. The rate of temporary employment increases gradually from 5% in the middle of 1990s to 13% in 2006 (see graph 2). The puzzle for Russia is that men are more likely to have temporary jobs. The question is why? What determines the choice of men and what factors effects the women's decision? Do family characteristics matter for women in Russia? May be, just structural changes explain the male predominance in temporary employment or may be family factor is not so important for women in Russia? These are the questions that the study is going to cover.

Graph 2.

The dynamics of the temporary employment level by gender in Russia, 1992-2006

(LFS data, author's estimates)



Unfortunately, the phenomenon of temporary work attracts not so much scientific attention in Russia. There are some highly valuable publications written by V. Gimpelson (2004, 2006, 2007) and R. Kapelyushnikov (2001, 2006, 2007) on the topic of non-standard employment in Russia. There were also several other papers by Russian scientists (Рязанцев и Письменная, 2005; Карабчук, 2006) but they do not cover the problem of determination of temporary work concerning gender dimension. So the goal of this research is to fill the gap.

The distinctive features of this research are the following. First of all the tackled task hasn't been raised before in Russian scientific literature: to throw the light on the determinants of temporary work for men and women. Secondly, I'm going to use the NOBUS database, which is rather huge relevant and representative for the whole Russia, and it has not been used much for the investigation of employment before. Thirdly, the modern methods of econometric evaluations will be used here: the probit regression for assessing the probability of temporary employment with correction on the selection bias.

Literature review

The problem of temporary work is highly targeted by many foreign economists, sociologists, psychologists and politicians as well. Polivka (1989; 1996), Sipple (2001), Blanchard and Landier (2001) and Valenzuela (2003) worked under the definitions, frameworks and description of contingent/temporary workers. A good overview of the theoretical approaches to the problem of precarious jobs was done by Tucker (2002). Chalmers and Kalb (2000); Booth, Francesconi and Frank (2000; 2002); Guell and Petrolongo (2000) draw their attention to the role of temporary jobs in transition to permanent employment. Much more papers consider the consequences and social implications of contingent work: Sipple and Stewart (1996); Ferber and Waldfogel (1998); Rothstein (1996). Housman (2001) disclosed the reasons of using temporary staff for employers. This is not the full list of authors that applied to the problem of non-permanent work.

What is temporary work? The problem for all the researchers who focus on temporary employment issue is that there are no unique and standard definitions here. Every author explains what he means by temporary employment frequently according to the available data to describe the phenomena in the country and it is always difficult to compare the results between different countries. Despite of such definitions' diversity of concepts there are more or less clear norms of determining the temporary employment in the literature.

Here are the two major definitions that are used in the literature; they are derived from the main organizations that produce norms in research of the labour market. The International Labour Organization (ILO) defines 'precarious' workers as either:

- workers whose contract of employment leads to the classification of the incumbent as belonging to the groups of "casual" workers;
- "short-term workers" or "seasonal workers";
- Workers whose contract of employment will allow the employing enterprise or person to terminate the contract at short notice and/or at will, the specific circumstances to be determined by national legislation and custom

The ILO defines "casual" workers as having an explicit or implicit contract of employment which is not expected to continue for more than a short period.

The OECD refers to temporary employment as an umbrella term for all "dependant employment of limited duration", which includes fixed-term contracts, temporary agency work, seasonal work, on-call work and trainees. All other jobs are referred to as 'permanent' jobs. Temporary employment includes a great variety of types. OECD suggested the following list²:

- ***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).

² OECD Employment Outlook, 2002

- *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.

The available data I'm going to use in this research allows us to mark out only three types³ of temporary work in Russia. They are fixed-term contracts, contracts for a specific task and employment on the basis of oral arrangements (the latter is informal employment).

It is reasonable to speak about two concepts of temporary work in this paper: contingent work and informal employment. This division of the approaches to deal with temporary work helps us to understand the heterogeneity problem of such workers. As in case of informal employment we usually have low-paid, less educated, less qualified (usually migrants) secondary sector without any social guarantees. In case of fixed-term contract we could deal with the highly educated, well-qualified professionals with good payment but again without any guarantees for long-term employment.

Nonpermanent and contingent work. The labour market becomes more and more flexible: employment relationship has changed from predominantly secure (full-time employment for an indefinite period, with a single employer) to insecure (self-employed, part-time, temporary, subcontract) (Kalleberg, 2000). In response to these changes a new category of workers emerged known as contingent workers (see Бек, 1997, Кастельс 2000).

The term “contingent work” was first coined by Audrey Freedman at the 1985 conference on employment security to describe a management technique of employing workers only when there was an immediate and direct demand for their services (Polivka, 1996). Since its initial usage the term has been applied to a wide range of employment practices including part-time work, temporary help service employment, employee leasing, self-employment, contracting out, employment in the business service sector, and home-based work.

The Bureau of Labour Statistics worked out a conceptual definition in 1989: “Contingent work is any job in which an individual does not have an explicit or implicit contract for long-term employment” (Polivka, 1989). Its focus is on job security and unpredictability in hours of work, the job defined, as contingent, should **not** be a permanent job.

Contingent employment have often been identified as the most precarious form of non-standard employment. It is often associated with a shortfall in protection in terms of employment rights, benefits and other forms of protection (Tucker, 2002). Why then it is growing and why both employers and employees find it attractive? Employers, as Houseman (2001) finds, hire contingent workers for the following reasons: to accommodate workload fluctuations, fill temporary absences, meet employees' requests for part-time hours, screen workers for permanent positions, and save on wages and benefit costs. Employers also use contingent workers in order to avoid paying benefits or employment taxes, to reduce workers'

³ The compared types of those OECD listed above with types of temporary work that could be identified in Russia are bolded and italicized.

compensation costs, to prevent workers' attempts to unionize, or to lay off workers more easily. Finally, the ease and flexibility in hiring contingent workers makes this supply of workers especially attractive.

Workers find their respective advantages from contingent employment as well. First, some workers prefer to have more free time for personal purposes than they can possibly have in permanent employment; they also prefer a flexible schedule due to school, family, or other obligations. Second, contingent work often permits holding several concurrent jobs at once what allows having additional income. Third, this is the only way out for those who are unable to find a steady job and they hope that work in this market will lead to permanent employment. Fourth, as they get a job of this kind, people can easily quit it if something does not suit them, or bargain for a definite remuneration (Valenzuela, 2003).

Informal employment. Firstly we should emphasize that all informal labor relations cannot be permanent, they all are limited in time. So we can refer informal employment to temporary work.

Informal employment is a part of the "hidden", "shadow" economy (Williams and Windebank, 2003). This employment includes work in both legal activities (when production and services are unregistered by or hidden from the state for tax, social security and/or labour law purposes; or where payments received by individuals are not declared to the authorities) and illegal activities (such as prostitution, the manufacture and sale of illicit goods, and drug peddling).

According to Castells and Portes, there is one central feature that characterizes informal work: "it is unregulated by the institutions of society, in a legal and social environment" (Castells and Portes, 1989). Valenzuela (2003) is right to say that because of the absence of institutional regulations, different work processes are ignored, changed, or amended. For example, labour may be clandestine, undeclared, paid below the minimum wage, or employed under circumstances that society's norms would not otherwise allow.

Nevertheless, informal employment gives advantages both for an employer and for an employee. The employer in this case frees himself from the payment of taxes, thus reducing costs. Whereas the employee receives, as a rule, the higher payment than he would earn in formal employment (usually informally employed do not have a proper education and great abilities for career growth what makes them vulnerable on the labour market; often they are immigrants). Therefore, we can see the reasons why people prefer this kind of employment.

According to the NOBUS data the rate of informal workers makes up around 39% of all temporary employed (or 3,8% of all employed). Such temporary work on the basis of oral arrangements has all the characteristics of informal employment. It is unregulated by the federal and regional government. The payment is overwhelmingly undeclared and employment relationship is not registered. All this makes such informal temporary workers vulnerable and low-paid but they find the same reasons for participation in this employment as workers do in informal sector.

To control for the deep heterogeneity of the temporary employees in Russia I divide the sample of temporary worker on fixed-term contractors (plus those contractors on the particular tasks) and informal temporary employees that is oral-based employment.

Existed research

Here are brief results from existed international research on the determinants of temporary employment. They all are subscribed to three main labour market sides: labour demand, labour supply and institutional context.

1. labour demand:

- Housman (2001) disclosed the reasons of using temporary staff for employers in the USA. The main factors were listed: size of enterprise, territory, trade unions, system of incentives, seasonal aspect.
- Uzzi and Barsness (1998) found out that management in Britain use temporary workers not only to gain flexibility to meet product market uncertainty, but to buffer the firm against labour uncertainty that may be unrelated to instability in the firm's product markets or its level of unionization. They also revealed that the relationship between unionized labour and the use of temporary workers varies curvilinearly with the level of unionization. The firms with moderate levels of unionization hire more temporary workers, while the enterprises with high and low level of unionization use temporary contracts much less. Their results suggests that a variety of governance mechanisms – bureaucratic, human, and technical – have a disproportionately strong enabling effect on use of temporary employment. The results also imply that , although firms may face strong pressures to adopt contingent employment structures for the purpose of lowering costs and increasing flexibility there are “hidden managerial costs” associated with the use of contingent workers. As Housman Uzzi and Barsness came up with the conclusion that fixed-term contractors appear to be affected by organizational structures: size, age, unionization, bureaucratic controls as well as recent changes in organizational design and job-related technologies.
- An interesting comparison of the temporary work determinants in the USA and in Norway was made by Olsen and Kalleberg (2004). They found out that Norwegian establishments make greater use of non-standard arrangements than in the US establishments; they argue that this is due in part to the greater overall restrictive labour legislation. They also found that certain institutional factors have similar impact in both countries. For instance, highly unionized establishments tend to have the lowest use of non-standard arrangements.

2. labour supply:

- The most relevant publication about temporary employment and gender issue was written by Boeri, Del Boca and Pissarides (2005). They hold the study for several European countries and revealed that 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.
- OECD provides a rather deep and complicated analysis of temporary work as well they dwell on the factors of the probability of being on non-permanent contract (Employment outlook 2002). According to their results the major determinants of temporary work are age, gender, education, experience, family characteristics.

- Using the USA household data Farber (1999) speculates that previous job loss or spells of inactivity have a strong impact on the probability of being temporary employees.
- Economists Wiens-Tuers and Hill conducted a relevant study on the factors of temporary work in the US, they tried to answer the question: Is movement into temporary work a response to a set of choices or a set of constraints? The paper demonstrates that both push and pull factors are at work although how they operate is not clear. The investigators sum up that a personal event like birth of a child, change of marital status are the push factors as well as low income and welfare.
- Karabchuk (2006) does a research of casual (the most unstable temporary form of employment on RLMS data) employment in Russia. The author got the similar results with OECD contribution: gender and education, and previous past experience of casual work were the main influencing factors. The regional rate of unemployment caused the growth of casual employment at the local labour market as well.
- Rather new paper was submitted by Salladerre and Hlaimi (2007) based on the European Social Survey, which is totally devoted to the issue of the factors of fixed-term contracts in 19 European countries. The main conclusions were as follows the younger the respondent the more likely he/she will be a fixed-term employee, this supports the fact that temporary employment seems to become the stepping stone to a permanent job. The probability of being in a fixed-term contract is negatively correlated with the trade-union membership. An episode of unemployment leads to a decline in the future probability to find an employment of unspecified duration. The most important for us result from this paper is that women are more frequently associated with this kind of flexible labour relations. The researchers also stress that fixed-term employment usually comprised from immigrants.
- The paper of Casey and Alach (2004) threw the light on the reasons for choosing the temporary work for women on qualitative research level.

3. Institutions:

- Labor legislation: Lindbeck and Snower (1988); Bentolila and Dolado (1994); Cahuk and Postel-Vinay (2001); Vishnevskaya (2002); OECD Employment outlook 2002.
- Gender segmentation/segregation: Malteva and Roshchin (2006); Boeri, Del Boca and Pissarides (2005): overrepresentation of women in “bad” jobs – evidence of gender discrimination in Southern Europe.
- The operational mechanisms of appearance and growth of non-standard employment in Russia were described in the book edited by Gimpelson and Kapelyushnikov

Hypotheses

I'd like to test four main hypotheses here:

H1. The family factor does matter for Russian women as well for women in other European countries. The Russian women with small children (up to six years old) are less likely to have temporary employment. The explanations could be the following: first of all they objectively have less opportunities

and advantages of getting a good job, as they have to reenter the labour market after the child birth and often they have to change the job with more convenient conditions (time flexibility, distance, paid seek live and etc.). They had a break in economic activity and as a rule it is time-consuming to gain the level of skills they had had before the child birth. The employers understand that such women had worse human capital and that small children often need too much mother care. In this case usually they find jobs in budget sector with low payment but more comfortable conditions of shorter working day and paid seek lives. That could be proved by preliminary cross statistics – 21% from all temporary employed are concentrated here (table 3 in the Annex).

H2. The lack of education and lack of professional qualifications explain the high probability of being temporary employees for men. This hypothesis is based on the theory of human capital, which assumes that the bigger human capital an employee has the more he gets as a payment and the better job he has. According the countries' educational structure, women have higher education then men, so exactly males are likely to have jobs in the “bad” periphery of the labour market.

H3. The work place characteristics have a significant impact on the temporary employment. The higher probability of temporary employment for men is explained by industry-sector factor. The temporary employment predominantly concentrates in those sectors where men dominate over women (construction,). The bigger the enterprise the more rigid enforcement it has from the state organizations, trade unions or collective agreements. The better it follows the rigid labour laws which restricts the hiring on temporary contracts the less temporary employees it has. So the size of the company has negative effect on the temporary work. The state ownership has negative influence on temporary employment as well.

H4. The economic situation on the local labour market clearly influence the probability of being temporary employed. The unemployment rate in the region positively affects temporary work. The employees would keep the jobs they have because of the fear of unemployment. The higher wages are in the region the better payment is for permanent employees, the more bargaining power the insiders have, the less opportunities outsiders dispose to get “good” jobs in the primary sector. These assumptions are fare both for men and women.

Methodology

Data

I use here the Household Survey of Social Welfare (NOBUS) held by Russian Federal Statistical Service in Spring 2003. The representative sample for the Russian Federation consists of about 125 thousands people. The NOBUS contains detailed information about many aspects of respondent's lives, including their labor market experiences, health and incomes.

The next table show all the advantages and disadvantages of available acknowledged data sets in Russia that let us identify the temporary employees. They are Labour Force Survey, Russian Longitudinal Monitoring Survey and NOBUS. The possibility of identification of temporary workers and the access to NOBUS makes it the most applicable for the research goals. It is not a panel study and it does not have any information on the past job experience. The famous among the scientists RLMS does not contain the question on type of the contract that is why it is impossible to define temporary employment there, the only

question it has is about casual/self-employment employment (whether people provide any services from time to time by themselves). The Labour Force Survey has almost the same questionnaire as NOBUS, unfortunately it is not officially opened and it does not contain any information on incomes.

Table 1. The comparison of the three available data sets to implement the research

	Labour Force Survey (by RSC)	RLMS	NOBUS
Representative for Russia	+	+	+
Related question for identification of temporary employee	+	-	+
Panel survey	-	+	-
Any retrospective information about job	-	-	-
Related questions about incomes	-	+	+
Free access to the data	-	+	+

There are sample restrictions I brought in: I make all the estimations for the respondents aged 15-65 years old that are currently employed (according to the ILO definition), but to control for selection bias I use all the sample (including non-active and unemployed). The age intervals are standardly used in the research of employment. The age will be controlled in the econometric models, and the author plans to divide sample for three parts (before 25; 26-55; 55-65) to understand the age differences in the determination of temporary employment. I also deleted the army from the sample as they comprise a small amount and are not under the focus.

Table 2. The structure of the sample by the status on the labour market

Labour market status	Number of observations	% of all sample
Employed ⁴	50335	61,3
Unemployed ⁵	3373	4,1
Non-active	28420	34,6

The identification of permanent and temporary workers is based on the answers to questions about their type of hiring (four possible answers: 1) unlimited in time employment; 2) fixed-term employment; 3) contract for particular task; 4) oral-based employment). I assigned individuals to one of the two categories: permanent employees or temporary workers. To the temporary workers I refer fixed-term contractors, contractors for particular tasks and oral-based employment. Later on I divide the subsample of temporary employees into two parts: fixed-term contractors plus contractors for particular tasks and oral-based employment. It was done in order to see the difference⁶ (if it exists) for those in really “bad” informal sector of precarious jobs and for those who could have a rather good, well-paid temporary job. But it does not

⁴ According to ILO definition, employed – are those who work on the current week of the survey and get money for their work.

⁵ According to ILO definition, unemployed – are those who do not have any paid job, want to have a job, seek for it and are able to start working on the current week.

⁶ As we know from Booth and others: Temporary workers are highly heterogeneous in terms of their monetary remuneration and labour supply

eliminate all the heterogeneity we have here, different variables will be included in the econometric analysis to control for this.

Table 3. The structure of the sample by type of employment

	Number of observations	% of all employed	% of temporary employment
Total employment	46685	100	
Permanent employees	41686	89,3	
Temporary employed:	4999	10.8	100
Fixed-term contractors	2413	5,2	48,3
Contractors for particular tasks	731	1,6	14,6
Oral-based employees	1855	4,0	37,1

Estimation

Probability of temporary work. Using probit regression models I estimate the impact of different factors on the probability of being temporary employed for total population and then separately for men and women. The dependent variable here is the dummy indicator for temporary (=1) or permanent employment (=0). The specification below will also be estimated separately for fixed-term contracts and for oral-based temporary workers in order to see the difference in the such a diverse group of temporary employees.

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

a - Constanta

h, b, c, d – vectors of coefficients,

X_i – set of personal characteristics of the respondent:

- gender (only for total specification),
- dummies for five age groups of 10 years,
- dummies for four educational groups (lower then secondary, secondary + professional, tertiary);
- dummies for professional occupation (7groups)

K_i – set of family characteristics:

- marital status (have a spouse -1; do not have a spouse- 0);
- number of children under 15 years old in the family

Z_i – set of work place characteristics:

- industry sector (9 dummies);
- type of enterprise's ownership (private or state)

U_i – set of the local labour market characteristics:

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

When we deal with probit regression here we only use the sample of employed, those who are unemployed or non-active are not observed. So we face with the selectivity problem. That is why I control for the selection process into employment using Heckmann correction model. To have better understanding and greater explanation power I predict marginal effects. The variables that I want to include into the selection equation are the following:

- gender (for total specification),
- dummies for five age groups of 10 years,
- dummies for four educational groups (lower then secondary, secondary + professional, tertiary);
- marital status (have a spouse -1; do not have a spouse- 0);
- number of children under 1 year old in the family

- number of children from 1 to 3 years old in the family
- number of children from 4 to 6 years old in the family
- pension

The main argument here is that small children usually prevent women from reentering labour market status until they go to school and become more independent. In case the spouse is unemployed the other one should enter the labour market in order to have the source of earnings.

Expected research outputs

The following preliminary results could be shown. According to Russian LFS, the share of temporary employment was constantly increasing in the period of 1992-2006 despite economic growth (see the graph 2 above). By 2001 temporary employment became comparable with the level of unemployment. According to the NOBUS data of 2003, temporary workers make up about 10,8 % of the employed.

The most interesting thing here is that temporary work has more male features in the face. From the tables 1 of the Annex we can conclude that non-permanent work is more common among men rather among women. The structural difference also speaks for male temporary work (about 10 percentage points).

Women are better educated than men: there is smaller share of those females with low education and higher the percentage of those with university diploma comparing with men (see table 2 and 3 in the Annex). The proportion of temporary employees with secondary and secondary professional education is the biggest, there not so man temporary contractors with high level education. Only one fifth of temporary workers have the occupation higher than clerks, other 80% are concentrated in the lower positions like workers of agriculture, service workers and non-qualified labor (see table 3 in the Annex). So we may see that the human capital could play a significant role as a factor of temporary employment.

The level of temporary employment (see the table 3 in the Annex) shows us that temporary contracts are the most spread in trade (34,6) and budget sector (21,2%), the third place is for construction (12,7%). If we look at the previous table 2 in the Annex, we will see that trade is a women's sector (65,4%) while construction (78,1%) is totally men's. The rate of those men who employed in construction is about 11%, while the same rate for women is only 2,3% (see table 3 in the Annex). These descriptive results could obviously preliminarily confirm the hypothesis 3, but we need the proper assurance by econometric techniques. As now we have some controversies here as trade budget sectors are the most frequent industries for men, and we have seen that exactly these industries have the biggest rate of temporary workers comparing with other sectors. The probationary explanation could be that the construction is much bigger in numbers of employees than the trade sector.

As a result and main contribution of the research I expect to have a clear picture of what is going on with the temporary employment on the Russian labour market in the aspects of the gender issue. The tested hypotheses allow us to make conclusions for further policy implications.

Practical contribution of research

Labor markets in transition economies actively use non-standard forms of employment. The share of traditional form of employment, that means hired full-time and long-term hired employment, is shrinking. Permanent employees are still the main body of employment but this form of employment is far

from being the only solution for fruitful economic production. The temporary work is the most fast-growing and widespread type of non-standard employment.

The core thing here is that temporary work means the limited in time labour relations when both an employer and an employee know the conditions beforehand. There is no need for any external conditions to stop the labor relations and to fire an employee. The consequences of such employment are very important, as the behavior of labour market actors will be different. So the employers will treat the temporary workers differently from the way they treat permanent employees. As well the temporary workers will behave in another way from that if they were permanently hired. This different behavior both of employers and employees is the subject of the debate.

Although the temporary work continues to expand **many analysts and politicians still keep thinking** all the employed as standard employees with full-time employment and unlimited in time contract what may cause not very pleasant consequences. Temporary work raises problems of another type. The same efforts organized by the state have different impact on permanent and non-permanent employment. However this is not so safe, we should understand the nature of temporary work to treat it in the right way.

Usually temporary employment is characterized as precarious work with low payment, no investment in the human capital, no career opportunities, no guarantees for further employment. That means that people engaged in such activities could not plan their future for many years ahead, they are not interested in the acquiring specific skills what makes no positive effect on wages. The problem of social exclusion can arise here, as well as working poverty. The issue especially important for young women and men who want to have a family but cannot afford it because of no assurance in their future incomes from such temporary employment.

More over temporary employed are not homogeneous. Therefore, there can be no definite assessment of this phenomenon. Non-permanent work plays different roles for different categories of the population. For example, for pensioners it's a source of additional income. It is very hard to live on the average pension, and casual and temporary employment is a necessity for elder people. Pensioners may also do odd jobs just in order to be busy. For students fixed-term employment offers a convenient combination of work and studies and plays a role of probationary period (employers monitor the young employees to chose the best for future work).

For the able-bodied population temporary employment can be negative: earnings are not stable, social guarantees are usually absent, and there is lack of professional growth. An increase of bad-quality jobs leads to a possible increase of poverty. One of the ways to improve the situation is to liberalize labor legislation in Russia. If labor costs were reduced considerably, employers would have more stimuli to create new permanent jobs. Other measures that may encourage this process are outside the labor market policy. These include for example the improvement of the investment environment in the country and the introduction of more transparent rules in the market.

Many international surveys report that usually temporary workers find their employment less favorable than standard employment (European Foundation, 2002; OECD, 2002; Dawkins, Simpson and Maddeen, 1997). Job insecurity and the associated financial insecurity are highlighted as disadvantages faced by temporary workers. In most countries, non-standard workers do not benefit from the same

statutory rights as permanent workers and in many cases are worse off in terms of remuneration, especially when they are not party to collective agreements (Tucker, 2002).

Policy implications from this research are rather important here as we face with a wide range of problems when we speak about temporary employment as a whole and especially with the gender focus. The broader context of the problem could be summarized as follows:

- Often temporary jobs are qualified as “bad” jobs, what means bad payment, lack of security, no investment in human capital, less opportunity for carrier growth, bad working conditions. All these negatively affect the people social feelings, lead to stresses and anxiety in the society.
- Wage differences (segmented labour market) cause the rise of income inequality that contributes to poverty increase.
- Too rigid labour market legislation causes the lack of vacancies for permanent position and the growth of temporary posts. The insiders obtain the greater bargaining power. Those who want to enter the labour market have fewer opportunities to be hired for good permanent employment, what causes long-term unemployment and problem of “social exclusion” arise here.
- Overrepresented women in temporary employment treated as “bad”, secondary, periphery sector means gender inequality in access to “good” jobs and rise of gender wage gap. Being shortly employed women face a problem of combining family roles and work with all bad consequences for fertility rates.

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Annex

Table 1. Number, level and structure of employment types by gender (NOBUS data, 2003)

Type of employment	Number of observations		Level		Structure		
	Women	Men	Women	Men	Women	Men	
Permanent	22267	19419	90,8	87,6	53,4	46,6	100
Temporary:	2257	2742	9,2	12,4	45,1	54,9	100
Fixed-term	1363	1781	5,6	8,0	43,4	56,6	100
Oral-based	894	961	3,6	4,3	48,2	51,8	100

Table 2. The level of temporary and permanent employment by education, professional-qualification system and industry's structure (sample of only employed, %, NOBUS data, 2003)

	Structure of employment by type			Structure of employment by gender		
	Permanent	Temporary		Women	Men	
Education:						
Primary	87,1	12,9	100	42,2	57,8	100
Secondary	87,2	12,8	100	45,0	55,0	100
Secondary + professional	90,1	9,9	100	57,0	43,0	100
Tertiary	92,9	7,1	100	57,9	42,1	100
Professional qualification:						
Managers	93,9	6,1	100	39,4	60,6	100
High level professionals	95,7	4,3	100	63,2	36,8	100
Middle level professionals	94,5	5,5	100	64,1	35,9	100
Clerks, servants	92,2	7,8	100	85,4	14,6	100
Workers of services sector	80,1	19,9	100	66,9	33,1	100
Workers of agriculture	91,8	8,2	100	30,5	69,5	100
Industry workers	91,2	8,8	100	25,1	74,9	100
Operators	93,2	6,8	100	23,2	76,8	100
Non-qualified workers	79,9	20,1	100	52,5	47,5	100
Industry						
agriculture	88,9	11,1	100	35,8	64,2	100
industry	94,2	5,8	100	42,6	57,4	100
electricity	95,5	4,5	100	33,4	66,6	100
construction	80,3	19,7	100	21,9	78,1	100
trade	71,0	29,0	100	65,4	34,6	100
transport	92,8	7,2	100	32,3	67,7	100
financing and real estate	92,4	7,6	100	61,9	38,1	100
budget sector (education, health, science)	93,8	6,2	100	67,6	32,4	100
other	63,1	36,9	100	50,0	50,0	100

Table 3. The structure of temporary/permanent employment by education, professional qualification and industry (sample of only employed, %, NOBUS data, 2003)

	Permanent	Temporary	Women	Men
	100%	100%	100%	100%
Education				
Primary	4,9	6,3	9,11	11,24
Secondary	30,0	38,4	31,18	38,39
Secondary + professional	40,9	39,2	40,05	33,46
Tertiary	24,2	16,0	19,67	16,91
Professional qualification				
Managers	2,8	1,6	2,6	4,5
High level professionals	15,8	6,2	17,1	11,0
Middle level professionals	21,6	10,8	23,9	14,8
Clerks, servants	6,0	4,4	9,2	1,7
Workers of services sector	12,9	27,6	19,7	10,8
Workers of agriculture	4,2	3,3	2,8	6,9
Industry workers	16,9	14,0	7,7	25,4
Operators	7,1	4,5	2,9	10,7
Non-qualified workers	12,7	27,7	14,2	14,1
Industry				
agriculture	9,5	9,8	7,2	13,9
industry	18,6	9,5	13,8	20,1
electricity	4,1	1,6	2,3	5,0
construction	6,2	12,7	2,9	11,1
trade	10,1	34,6	18,5	10,5
transport	9,8	6,4	5,8	13,1
financing and real estate	2,5	1,7	3,0	2,0
budget sector (education, health, science)	38,7	21,2	45,7	23,6
other	0,5	2,5	0,7	0,7

Table 4. Marginal effects of probit regression for temporary employment for men and women in the age of 15-65 years, NOBUS dataset

	Men		Women	
	Coeff.	St. er.	Coeff.	St. er.
Age group:				
15-25 years old	0,025***	0,007	0,049***	0,007
26-35 years old	0,006	0,005	0,019***	0,005
36-45 years old				
46-55 years old	-0,023***	0,005	-0,008**	0,004
56-65 years old	-0,014*	0,007	0,020**	0,008
Education:				
Lower then secondary	-0,000	0,007	0,009*	0,005
Secondary + professional	-0,002	0,007	0,001	0,005
Tertiary				
Having a spouse	-0,015***	0,005	-0,015***	0,003
Number of children	0,004	0,003	-0,000	0,002
Urban	0,006	0,005	0,003	0,004
Level of unemployment in the region	0,003***	0,001	0,003***	0,000
Part-time (less then 30 hours)	0,128***	0,017	0,053***	0,008
State ownership	-0,154***	0,005	-0,135***	0,006
Occupation:				
Managers	0,050***	0,019	-0,004	0,014
High level professionals				
Middle level professionals	0,025**	0,011	0,006	0,007
Clerks, servants, workers of service sector	0,055***	0,013	0,038***	0,007
Qualified workers	0,020**	0,010	0,019**	0,009
Non-qualified workers	0,144***	0,017	0,063***	0,010
Industry:				
agriculture industry	0,047***	0,010	0,024**	0,010
electricity	0,023	0,014	0,042**	0,018
construction	0,165***	0,013	0,055***	0,015
trade	0,159***	0,014	0,121***	0,011
transport	0,073***	0,011	0,037***	0,012
financing and real estate	0,089***	0,025	0,037**	0,016
budget sector (education, health, science)	0,111***	0,014	0,040***	0,008
other	0,113***	0,015	0,076***	0,012
Regional dummies	yes	yes	yes	yes
Number of observations	20 294		23 330	
Pseudo R2	0,202		0,232	

Significance at: 0,01 - ***; 0,05 - **; 0,1 - *

Table 5. Coefficients of probit regression with Heckman correction for temporary employment for men in the age of 15-65 years, NOBUS dataset

	Main equation		Selection equation	
	Coeff.	St. er.	Coeff.	St. er.
Age group:				
15-25 years old	0,091*	0,054	-0,791***	0,029
26-35 years old	0,053	0,036	0,106***	0,029
36-45 years old				

46-55 years old	-0,175***	0,039	0,041	0,026
56-65 years old	-0,195***	0,069	-0,295***	0,035
Education:				
Lower then secondary	-0,048	0,053	-0,755***	0,028
Secondary + professional	-0,027	0,047	-0,328***	0,029
Tertiary				
Having a spouse	-0,052	0,043	0,671***	0,023
Number of children	0,027	0,019		
Urban	0,066*	0,036	0,353***	0,018
Level of unemployment in the region	0,020***	0,005	-0,035***	0,002
Part-time (less then 30 hours)	0,611***	0,069		
State ownership	-0,971***	0,033		
Occupation:				
Managers	0,289***	0,051		
High level professionals				
Middle level professionals	0,152*	0,080		
Clerks, servants, workers of service sector	0,791***	0,045		
Qualified workers	0,752***	0,049		
Non-qualified workers	0,468***	0,100		
Industry:	0,589***	0,058		
agriculture	0,582***	0,059		
industry				
electricity	0,295***	0,087		
construction				
trade	0,167***	0,064		
transport	0,330***	0,067		
financing and real estate	0,140**	0,062		
budget sector (education, health, science)	0,128*	0,072		
other	0,718***	0,065		
Extra variables in the selection equation				
Number of children with age of less then 1 year			0,125***	0,046
Number of children with age of 1 to 3 years			0,077*	0,040
Number of children with age of 4 to 6 years			-0,011	0,033
Getting a pension			-1,361***	0,027
Regional dummies		yes		
Constanta	-1,791***	0,091	1,029***	0,042
athrho	0,180**	0,082		
Number of observations		32 184		

Significance at: 0,01 - ***; 0,05 - **; 0,1 - *

Table 5. Coefficients of probit regression with Heckman correction for temporary employment for women in the age of 15-65 years, NOBUS dataset

	Main equation		Selection equation	
	Coeff.	St. er.	Coeff.	St. er.
Age group:				
15-25 years old	0,303***	0,088	-1,189***	0,024
26-35 years old	0,157***	0,039	-0,238***	0,024

36-45 years old				
46-55 years old	-0,081**	0,039	0,098***	0,023
56-65 years old	0,077	0,122	-0,596***	0,034
Education:				
Lower then secondary	0,038	0,068	-0,925***	0,022
Secondary + professional	-0,008	0,046	-0,406***	0,022
Tertiary				
Having a spouse	-0,139***	0,028	-0,020	0,016
Number of children	-0,005	0,021		
Urban	0,043	0,038	0,237***	0,016
Level of unemployment in the region	0,022***	0,005	-0,036***	0,002
Part-time (less then 30 hours)	0,385***	0,052		
State ownership	-0,953***	0,037		
Occupation:				
Managers	0,202***	0,068		
High level professionals				
Middle level professionals	0,317***	0,105		
Clerks, servants, workers of service sector	0,393***	0,081		
Qualified workers	0,771***	0,050		
Non-qualified workers	0,293***	0,074		
Industry:				
agriculture	0,202***	0,068		
industry				
electricity	0,317***	0,105		
construction	0,393***	0,081		
trade	0,771***	0,050		
transport	0,293***	0,074		
financing and real estate	0,288***	0,097		
budget sector (education, health, science)	0,356***	0,058		
other	0,521***	0,062		
Extra variables in the selection equation				
Number of children with age of less then 1 year			-0,479***	0,034
Number of children with age of 1 to 3 years			-0,134***	0,029
Number of children with age of 4 to 6 years			0,043*	0,025
Getting a pension			-1,046***	0,026
Constanta	-1,880***	0,090	1,620***	0,034
Regional dummies	yes			
athrho	0,105	0,118	1,620***	0,034
Number of observations		40543		

Significance at: 0,01 - ***; 0,05 - **; 0,1 - *