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**DO INFORMAL WORKERS
MAKE AN UNDERCLASS?
AN ANALYSIS OF SUBJECTIVE
SOCIAL STATUS**

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DO INFORMAL WORKERS MAKE AN UNDERCLASS? AN ANALYSIS OF SUBJECTIVE SOCIAL STATUS²

This article addresses the elaboration of a new approach to informal employment research based on analyzing subjective social status. In spite of numerous studies conducted over the past 40 years many questions still exist in the field of informal employment research. The heterogeneous nature of activities incorporated into the concept of “informality” defines the ambiguity of its impact on the economy and society. Thus, little is actually known about the socioeconomic position of informal workers and the nature of informal employment. Is informality a kind of stratifying mechanism embedded in the social structure that changes the position of the informally employed, or not? The so-called “direct” approach based on analyzing levels of income was considered to be an inappropriate framework and thus indicated that the consequences of informal employment need to be further analyzed together with indirect – subjective – measures. The present paper discusses methodological issues and presents results concerning the subjective social position of informally employed workers in contrast to formal workers, the unemployed, and the economically inactive population. The study was carried out on the basis of a large nationally representative panel: the Russia Longitudinal Monitoring Survey of the Higher School of Economics (RLMS-HSE) for 2000-2010. The existence of three-tier informal employment in Russia is revealed with self-employment being better off than formal employment and informal wage and salary work. No significant difference between informal wage and salary work and formal employment in terms of subjective social status is found. Thereby, one can suppose that the difference between types of employment is not embedded in the social structure at all. Taken as an indirect indicator of the quality formal employment in Russia, this could point to the great weakness of labor market institutions and the idle channels of social mobility of formal employment in Russia.

JEL Classification: J23, J32, J42, J62.

Keywords: subjective social status, informal employment, self employment, segmented labor markets, panel data analysis, RLMS-HSE.

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Introduction

The transformation of the Russian economy in the 1990s was accompanied by a large increase in the scale of informal employment,³ most of it provided by two different sources: informal wage and salary work and household production of goods for sale. At present, informal employment in Russia also tends to grow. Available estimates show that the size of informal employment in Russia increased substantially for the first decade of the 21st century and now ranges between 1/5⁴ and 1/3 of total employment, depending on the definition used. For this reason, researchers and policy makers pay much attention to studies of informal employment.

The heterogeneous nature of activities incorporated into the concept of “informality” sets the stage for the ambiguity of its impact on the economy and on society. On the one hand, labor market participants involved in this type of employment are partially or totally excluded from the social protection system and thus compose one of the most vulnerable categories of workers [OECD Employment Outlook 2008]. Low-skilled wage and informal salaried employment is normally coupled with poor working conditions, low wages, lack of social rights, and related tax deductions. However, this kind of employment may be the only way to escape unemployment and poverty. On the other hand, the most advanced forms of micro-enterprises and highly qualified self-employment can be attributed to the so-called “top layer” of informal employment (“upper tier” according to the terminology of Gary Filds).

In spite of numerous studies on informal employment conducted over the past 40 years, little is actually known about its connection with social inequality. The possible effects of informal employment on the social stratification system and the processes of its formation are yet to be understood. In this article, a comparative analysis of the subjective social status of formal and informal labor market participants will be used in order to investigate possible differences in their perception of socioeconomic status.

³ Here I use the terms “informal employment” and “employment in the informal sector” interchangeably.

⁴In 2011 the informal sector in Russia employed about 12 million people, according to data from the Federal State Statistics Service (Rosstat).

Consequences of informal employment: review of research literature

The foundation of the present study is provided by a large body of literature on social stratification research, subjective social status, and informal employment.

The subject of informal employment has been at the heart of numerous discussions by leading economists and sociologists. However, studies from different fields of social science have made clear that there is no consensus about the nature of informal employment, its basic features, causes, and consequences. Informal employment appears to be very heterogeneous and researchers have used a variety of different definitions and conceptual frames in order to analyze it, which, in turn, has posed many theoretical and methodological problems.

The consequences of informality for social structure and social inequality have been intensely discussed by economists and sociologists for the past ten years. Most recently, studies in the field of informal employment research have concentrated on the dynamic approach, which analyzes the flows of workers who change their labor market status [Bosch and Maloney, 2005; Bosch and Goni and Maloney, 2007].⁵ This approach was advanced due to the emergence of panel household surveys in developed and less developed countries in the 2000s. Researchers using this approach strive to analyze the consequences of moving into the state of informal employment from other labor market states (unemployment, formal employment, economically inactive state). Some of them try to compare levels of income before and after workers moved into informal employment. The results usually show that formal workers are better off than informal workers [see, for example, Bernabe, 2002; Fields, 1990]. However, according to studies of Latin America conducted by William Maloney, the self-employed are more prosperous than formal workers, while informal wage and salary workers appear to be the most economically deprived group [Maloney, 2004]. With some exceptions, one can also include studies that focus on comparing income levels between two groups of workers without implementing the dynamic approach since they can still provide some information about the social status of informal workers. For example, Sinyavskaya et al compared levels of income in formal and informal groups in Russia and showed that in 2000 the mean wage for the informally employed at their main job was slightly higher than that of the formally employed, with irregular informal workers earning the least of all [Sinyavskaya et al, 2004]. In spite of its clear benefits, this “monetary” kind of analysis was highly criticized for several reasons. Firstly, the information about the income of the informally employed is often unregistered and unreported, which leads to

⁵ An approach based on analyzing panel data has clear methodological advantages. Applying fixed effect regression models on this type of data can help when controlling for unobservables and thus the endogeneity problem to some extent solve [Perry et al., 2007].

significant data collection bias. However, a much more important issue deals with the fact that this type of analysis proved incapable of taking into consideration possible non-monetary benefits and losses from informality, which could determine the choice of employment type [Maloney, 2004].

Another research direction within the dynamic approach is concerned with various subjective indicators: job and life satisfaction, fear of unemployment, subjective well-being, and subjective welfare [Perry et al., 2007; Ferrer-i-Carbonell and Gerxani, 2011; Beuran and Kalugina, 2006]. Here quite contradictory results were received. Job-satisfaction studies showed that in general formal workers usually appear to be more pleased with their current job and its features than those who are informally employed [Perry et al., 2007; Wachsberger et al., 2010]. Yet there are also interesting exceptions: In some Latin American countries the differences between these two groups of workers were insignificant [Pages and Madrigal, 2008; Cassar, 2010], while in Africa the self-employed expressed higher levels of job satisfaction when compared to formal workers [Falko et al., 2012]. For Russia, Andrei Aistov, Aleksander Larin, and Ludmila Leonova showed that informal wage and salary work is largely associated with low levels of life and job satisfaction [Aistov and Larin and Leonova, 2012; Aistov and Leonova, 2012], However, their analysis did not include a group of self-employed individuals.

In turn, subjective wealth, which is also addressed as subjective welfare, represents the individual's perception of his or her own financial state. The results received for different countries also appear to be very ambiguous. In Argentina, informal wage and salary workers have lower levels of subjective wealth than formal wage and salary workers – even when controlling for the objective level of one's own income and income of other household members – while in the Dominican Republic the perception of informal wage and salary workers did not differ from those of the self-employed and formal workers. At the same time, in both countries the subjective wealth of the informal self-employed did not differ from those of formal workers [Perry et al., 2007]. The reason for these differences may lie in the fact that Argentina is one of the most prosperous Latin American countries with its formal labor market providing both higher wages and a certain level of social protection. These two factors can influence the differences in the subjective wealth of formal and informal waged workers, while the similar difference of employment conditions may either be absent or purely nominal in a country like the Dominican Republic. On the other hand, informal self-employment and micro entrepreneurship, which involve tax evasion, may lead to an increase in subjective wealth in more advanced economies like Argentina, making them comparable to levels of formal employment [Cortes and Kessler, 2006].

Similar studies conducted in transition countries (Albania, Poland, Russia) also showed a lack of consistency. Informal employment in Albania appears to be associated with negative consequences in terms of subjective wealth for most informal workers [Ferrer-i-Carbonell and Gerxani, 2011]. This also holds for Poland [Molnar and Kapitany, 2010]. However, a small portion of the informally employed in Albania expressed higher levels of subjective welfare when compared to formal workers [Ferrer-i-Carbonell and Gerxani, 2011]. The main reason for this variance lies in differing attitudes towards tax evasion. Informal workers who believed that tax evasion would not affect their wealth in the future appeared to value their current welfare more, while the majority of informal workers still experienced negative consequences. The results of the study conducted in Russia on the basis of the Russian Longitudinal Monitoring Survey of the Higher School of Economics for the period 1994-2003 showed quite the opposite picture. The subjective social exclusion that was understood as a sense of acute permanent poverty – the lowest levels of subjective wealth – was negatively correlated with one having an informal employment status [Beuran and Kalugina, 2006]. At the same time, informal workers also tend to show greater confidence in their job-finding abilities than formal workers in the case that they lose their present job [Sinyavskaya, 2005].

When discussing analysis of subjective estimates, it is also important to stress that it requires serious attention to the biasedness of subjective measures of work-related features. On the one hand, they are exposed to numerous “latent functions” of work and employment, such as a sense of identity, self-esteem, and self-realization [Jahoda, 1981]. On the other hand, a broader range of factors, like previous experiences and cultural, contextual, and personality-related factors, largely influences subjective measures of any kind, as it was shown, for example, in the social stress model [Pearlin, 1989]. In the latter case, special econometric techniques could be employed in order to reduce this kind of bias. However, one should always be careful when comparing subjective estimates.

An alternative approach using subjective social status

The examples discussed above signify the possible inability of separate, unrelated indicators to take into account all the important changes that accompany a shift to informal employment in terms of social inequality. For this reason, it is important to conduct a new in-depth analysis of the consequences of informal employment using the integrate concept of subjective social status that is more directly linked to the issue of social stratification.⁶ The concept was initially elaborated in social stratification research as an instrument of class-

⁶ The only study that used the notion of subjective social status in its relation to informal employment was conducted by Benjamin Temkin [2009], however it did not constitute the prime focus of the researcher.

consciousness measurement [Centers, 1949; Jackman and Jackman, 1973]. In these studies, respondents were asked to describe their place in society, understood as a hierarchical order of classes. In further studies, more neutral categories were used in questionnaires in order to avoid possible bias related to ideological terms like “working class” and “middle class” [Goldman et al, 2005]. The most famous examples here are the Kelley-Evans scale of ten abstract “boxes” used in order to describe the position of those who are “up or down” in society [Kelley and Evans, 1995] or the 10-point McArthur scale that offers the respondent to evaluate his or her position in a given society [Adler et al, 2000].

Soon thereafter, subjective social status was adopted by other social sciences (economics, social psychology, and psychiatry) and became regarded as a very informative indicator of economic and social dynamics [Jackman, 1979; Kopp et al., 2005]. Subjective social status became widely used in multidisciplinary studies after a significant connection between these perceptions and the behavior of individuals in various spheres (from labor market behavior to consumption, physical, and mental health) and their relationship with other people was revealed [Della Fave, 1980; Shepelak, 1987]. Analyzing the relation between occupation and subjective social status is one of the most popular research directions in this regard [Goldman et al, 2005; Lindemann, 2007; Gross, 2003]. According to these studies, the most significant factors of subjective social status are usually occupation, satisfaction with one’s present material well-being, household income, a sense of financial security, and education [Jackman and Jackman, 1973; Knudsen 1988; Ostrove et al. 2000; Gross, 2003; Singh-Manoux et al, 2003]. It is important to note that the value of income in the process of subjective social status formation has increased substantially over the past decades due to its expanded role in determining consumption opportunities and lifestyle [Yamaguchi and Wang, 2002].

Important features of modern employment, such as its formal or informal characteristic in connection to subjective social status, appears to be insufficiently studied. However, clear methodological and theoretical benefits of the subjective social status concept make this type of research highly promising, as it could provide new insights into questions about the nature of informal employment. Is it a kind of stratifying mechanism that affects social structure by changing the position of those who become informally employed? If so, how drastic are these changes? In this article, the existence and magnitude of this phenomenon will be estimated for the first time.

Summing up the empirical results presented in the section devoted to the consequences of informal employment, one can formulate the following preliminary findings:

First, in more prosperous countries, subjective estimates of informal wage and salary workers are lower than that of formal workers and the self-employed.

Second, in less economically developed countries with purely nominal employment differences in formal and informal sectors, the gap in subjective measures is insignificant.

The gap in subjective estimates described in (a) can be supposed in four different situations:

1. Economic growth is transmitted into an increase of formal highly qualified jobs that are associated with higher subjective estimates, keeping other features constant.
2. Economic growth is based on the increase of informal low-skilled jobs that are associated with lower subjective estimates, keeping other features constant.
3. Economic growth is associated with the reduction of low-skilled formal jobs. This will lead to an increase in mean self-estimates for formal workers, thus enhancing the differences between formal and informal employment.
4. Economic growth leads to the reduction of more qualified informal jobs. It will result in a decrease of the mean subjective estimates of informal workers and thus contribute to an increase in the estimates gap.

Previous studies show that Russian economic growth in the 2000s was largely based on an increase in the level of informal wage and salary work [Gimpelson and Zudina, 2011]. This type of employment constitutes the low-skilled part of informal employment in Russia. This result was also confirmed by the author of the present study using data from RLMS-HSE for the same period. Based on this empirical finding, the first hypothesis concerning subjective estimates of informal workers in Russia can be formulated.

Hypothesis 1. Informal workers in Russia would constitute the most deprived category of the employed and thus the shift towards informal employment from a state of formal employment would be accompanied by a decrease in subjective social status.

It can also be supposed that the process of subjective social status formation can be different for men and women, as it proved to be true for other subjective assessments, such as well-being [Tesch-Romer, Motel-Klingebiel, and Tomasik, 2007], health [Sen, 1996], and thermal effects [Beshir and Ramsey, 1981]). Namely, it was found that women tend to exaggerate their negative subjective estimates. So the second hypothesis concerns gender differences in subjective social status estimation that can come either as a result of this psychological feature or due to relatively more disadvantageous informal jobs that women can be possibly engaged with.

Hypothesis 2. Women shifting into informal employment would experience a more pronounced decrease of their subjective social status than men.

Research design

Data and variables

The proposed type of informality research will focus on examining the subjective social status of informal workers. In order to understand the place of informal workers in the social inequality system, it is important to contrast the subjective social status of formal and informal workers and to understand the direction of the relationship between informal and formal employment and one's subjective social status.

Another essential side of the analysis is concerned with comparing the subjective social status of informal workers and the corresponding estimates of the unemployed and economically inactive population. It should clarify whether informal workers are better off than economically inactive people and unemployed in modern Russia in terms of subjective estimates of status or not.

It should also be highlighted here that the implementation of a dynamic approach, which analyzes the flows of workers who change their labor market status, is of particular importance for the proposed type of informality research that investigates the consequences of shifts between different positions on the labor market in terms of subjective social status dynamics.

Therefore, the Russia Longitudinal Monitoring Survey of the Higher School of Economics (RLMS-HSE)⁷ for the period of 2000-2010 was used as an empirical base for the research. This is a household survey conducted every year since 1992 by the North Carolina Population Centre at Chapel Hill in collaboration with various Russian research organizations, including the Higher School of Economics. It is based on a nationally representative sample of 4,000 households and, on average, each wave of RLMS-HSE for the period of 2000-2009 included information from 12,000-15,000 respondents, including children in the household. In 2010 the sample was expanded by 50%.

The information is collected using individual and household questionnaires. The first questionnaire includes a vast array of questions characterizing socio-demographic and professional features, work history and employment characteristics, health, social benefits, pension schemes, work and life satisfaction, and different subjective measures of social status. The household questionnaire is concerned with family structure, income sources, housing, expenditures, and consumption. RLMS-HSE is a panel survey, and thus allows the analysis of streams of workers who shift between formal and informal employment and the estimation of different panel regression models.

⁷ See <http://www.hse.ru/en/rlms/> for a detailed description of the project.

The sample of the present study was comprised of individuals older than 15 years, which corresponds to the lowest boundary of working age.⁸ The sample was not limited according to the highest boundary of working age (54 years for women and 59 years for men), since that would prevent an in-depth cross-section comparison of the subjective social status of informal workers and economically inactive individuals. The other point in this respect is that further sample limitations would lead to a loss of those individuals who were employed during some waves of the survey, but who then became retirees – tracing the dynamics of their self-evaluations would be difficult.

The indicator of informal employment was constructed based on the questions of the RLMS-HSE survey that are dedicated to the type of organization, form of labor activity, and its official registration. The procedures used were based on the methodology advanced by Fabian Slonimczyk [2011] and lead to a division into five different informal employment types:⁹

1. Firm owners – respondents who are involved in an entrepreneurial activity at their own firm, but their labor relations are not registered;
2. Individual entrepreneurs – respondents working outside established firms or organizations on their own account;
3. Informal wage and salary workers hired by private persons;
4. Informal wage and salary workers hired by formal firms and working without any signed written contract¹⁰
5. Irregular workers – respondents who do not have a main job but have been employed at least once in the past 30 days (gave somebody a lift, sewed something for sale).

Categories 1 and 2 were later combined into a group of “self-employed”, while categories 3 and 4 were integrated into a group of informal wage and salary workers. The last category was analyzed separately from others.

The category of unemployed was defined according to the ILO interpretation of unemployment. Thus, people who did not have a job at the given moment, had looked for one, and who were ready to begin working in case a job was found, were considered to be unemployed. People who did not have a job and were not unemployed were considered to be in an economically inactive state.

⁸ See Table 1 and Table 2 in Appendix 1 for a descriptive analysis of the sample for 2000 - 2010.

⁹ See Table 1 in Appendix 2 for the details of the informal employment variable construction.

¹⁰ Formal employment was defined as working at firms or organizations with a signed written contract. According to the RLMS-HSE definition, people were considered to be employed if they had a job or were on any type of a vacation (maternity leave, sick leave, annual leave).

The proposed type of informality research will examine the subjective perceptions of various aspects of social position included in the RLMS-HSE data:¹¹

1. self-positioning, according to a 9-point scale of material welfare, requiring a respondent to describe his or her social position in terms of level of poverty or wealth;
2. self-positioning according to a 9-point scale describing level of power;
3. self-positioning according to a 9-point scale of respect received from others¹²;

Therefore, the subjective social status here will be treated as the perception of one's multidimensional position in the social hierarchy in accordance with the Neo-Weberian tradition [Weber, 1966; Kluegel and Singleton and Starnes, 1977]. The selected subjective measures reflect an individual's assessments of the three main domains of social inequality proposed by Max Weber: class (defined in terms of material wealth), status (level of respect associated with a position in a society), and party (level of power at dispose).

In addition to these subjective measures, two scales of subjective positioning in a society were analyzed.

4. self-positioning according to a 5-point scale of confidence in one's own ability to provide financially in the future.
5. self-positioning according to a 5-point scale of present material welfare satisfaction.¹³

These subjective measures describe the "material" feature of social status and also are engaged in the empirical tradition of subjective social status research. The first scale characterizes assessment of one's own life chances, which is an important component of the formation of status groups in the Weberian sense. The second one can be possibly interpreted as an indirect indicator of compliance with one's own aspirations and achieved level of welfare. It is also influenced by expectations of future changes in well-being [Alwin, 1987], thus participating in the current subjective estimation of social status.

¹¹Traditional psychometric analysis was carried out on the basis of RLMS-HSE wave for 2008 in order to test the reliability of subjective social status scales. Cronbach's alpha value was about 0.7, which suggests an adequate reliability of scales. Additionally, the regression analysis of different subjective social status measures on education and occupation was conducted in order to test their criterion-related validity. Both characteristics appeared to be significant factors of different subjective social status measures.

¹² The questions were formulated as follows: 1) "There are people who are rich and who are poor. According to a 9-point scale ("ladder"), estimate your own position in society where 1 means poverty and 9 means wealth"; 2) "There are people who are powerless and people who have much power. According to a 9-point scale ("ladder"), estimate your own position in a society where 1 means being extremely powerless and 9 means having much power"; 3) "There are people who are not respected at all and people who receive much respect. According to a 9-point scale ("ladder") estimate your own position in a society where 1 means being not respected at all and 9 means receiving much respect";

¹³ The questions were formulated as follows: 1) Estimate your level of concern with not being able to provide yourself with necessities during the next 12 months according to a 5-point scale, where 1 is the highest level of concern and 5 is the lowest level of concern"; 2) Estimate your level of satisfaction with the present material welfare according to a 5-point scale, where 1 means being completely satisfied and 5 means being absolutely not satisfied" (this initial order was reversed - the values were recoded during the analysis).

The set of controlling variables that were used at the various stages of analysis is listed in Table 2 of Appendix 2.

Methodology

An analysis of the subjective social status of the informally employed was conducted in three consecutive stages. In the first stage the dynamics of mean estimates of the indicators of subjective social status were analyzed for each of the groups (self-employed, informal wage and salary workers, irregular workers, formal workers, the unemployed, and those that are out of the labor force).

In the second stage of analysis, an ordered probit model¹⁴ was estimated for each subjective social status measure on the basis of the RLMS-HSE 2000-2010 dataset in order to compare and contrast different labor market statuses, while controlling for other characteristics listed in Table 2 of Appendix 2. Five regression models were subsequently estimated varying the dependent variable – one of the subjective measures of interest (see Tables 1-5 in Appendix 3). The models were estimated for each of the eleven waves (2000-2010). The base category for the labor market status was formal employment.

The underlying relationship to be characterized by the ordered probit model is [Wooldridge, 2002]:

$$y_i^* = \beta X_i + \varepsilon_i, \quad (1)$$

where y^* is the exact but unobserved estimate of dependent variable (for example, the exact level of subjective power); X is the set of controlling variables, and β are regression coefficients which are estimated; ε_{it} is the random error with standard normal distribution.

Further suppose that while one cannot observe y^* , one instead can only observe the categories of response:

$$\begin{aligned} y = 0 & & \text{if } y^* \leq \alpha_1 \\ y = 1 & & \text{if } \alpha_1 < y^* \leq \alpha_2 \\ & & \vdots \\ y = J & & \text{if } y^* > \alpha_J \end{aligned} \quad (2)$$

The ordered probit technique will use the observations on y , which are a form of censored data on y^* , to fit the parameter estimates β .

¹⁴ All the analysis presented in the paper was conducted using Stata 11 software.

Discussing the results of ordered probit, it should be taken into account that special features of people engaged in any kind of entrepreneurship often mentioned in the respective studies, such as higher levels of self-esteem and an internal locus of control, can explain the significantly higher subjective social status of the self-employed [Spector et al., 2002]. More generally, there is the phenomenon of self-selection into particular occupations and industries [Blau, 1985], which can also be connected with individual preferences and psychological features affecting self-evaluation. One cannot fully control for these possible biases using only cross-sectional data. However, panel regression models with fixed effects can solve this problem at least to some extent. For this reason, in the next stage of the analysis all waves of RLMS-HSE were integrated into one panel database and OLS¹⁵ models for all labor market statuses using the same specification that was previously used with ordered probit were estimated.

The general specification of fixed effects models takes the form of:

$$y_{it} = \alpha_i + X_{it}\beta + \varepsilon_{it}, \quad (3)$$

where y_{it} is the value of the dependent variable (one of the subjective social status indicators) for an observation i in a particular moment t , X is the set of controlling variables, β – is the parameter estimates, α_i – is the individual effect of observation i that does not depend on t , and ε_{it} is the random error with standard normal distribution.

According to the formal Hausman test, the fixed effects model is more preferable than the pooled regression or the random effects model. An analysis of males and females was conducted separately.

It should be highlighted here that fixed effects models can only solve the part of estimation bias relating to the time-constant unobservables. However, the endogeneity problem of a different kind remains an important issue in this respect. It concerns the question of reverse causality (simultaneity) since the situation when the shock of subjective social status can lead to changes in the labor market position is also possible. In this case it would be correlated with the unobserved individual-level random effect. One of the possible ways of estimating simultaneous equation models is instrumental variable method. The Hausman-Taylor model, which can be described as a simultaneous equations model application to the panel data, can reduce this problem since it takes advantage of the panel structure by using instruments from within the panel (for further description and transformations of equations specification see Cameron and Trivedi [2005]). Thus, in order to conduct a robustness check of the fixed effects coefficients, I

¹⁵ OLS models were estimated in order to detect the presence of a significant connection between subjective social status measures and the type of labor market status on the panel data. I acknowledge the categorical nature of all dependent variables. However, due to the small size of the effects received, more accurate analysis was not required.

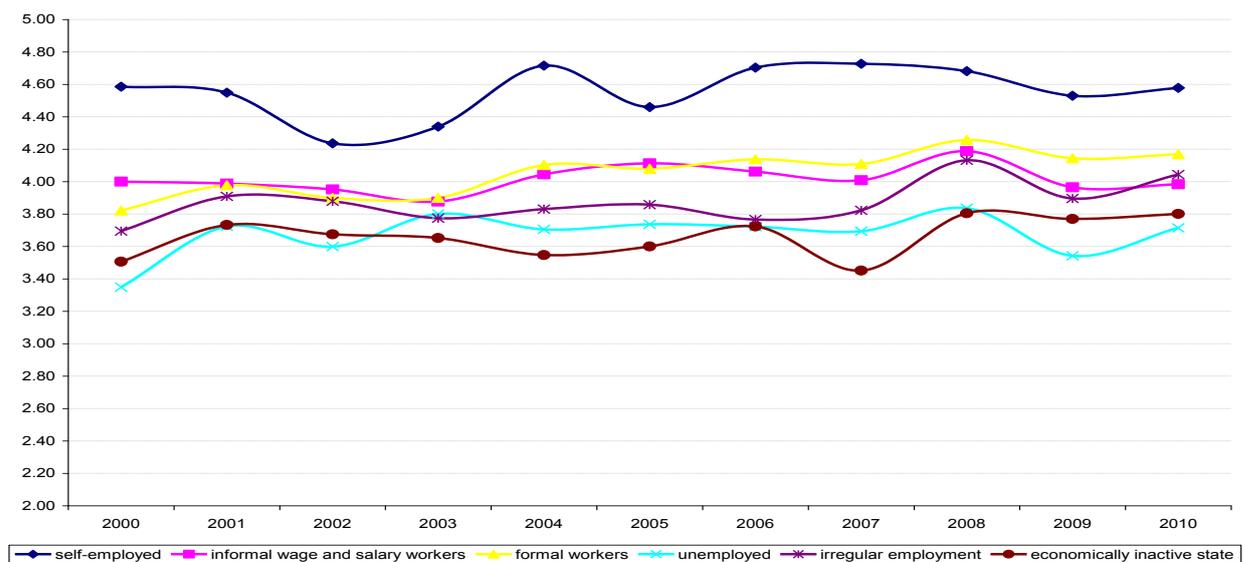
also estimate the Hausman-Taylor models for all labor market statuses, indicating the labor market status as an endogenous variable.¹⁶

Results

Subjective social status: does the type of employment matter?

A comparison of the mean estimates of subjective welfare (Fig.1) showed that the six categories (self-employed, informal wage and salary workers, irregular workers, formal workers, the unemployed, and individuals out of the labor force) are nearly on the same level (3.4-4.2, according to the 9-point scale). However, mean estimates of the self-employed are significantly higher when compared to the five other groups. The formal workers and informal wage and salary workers appear to be very similar. Estimates of irregular workers were lower than those of other employed categories, but generally higher than the estimates of the unemployed and economically inactive people.

Fig.1. Subjective welfare scale (from 1 to 9), 2000-2010



Source: RLMS-HSE

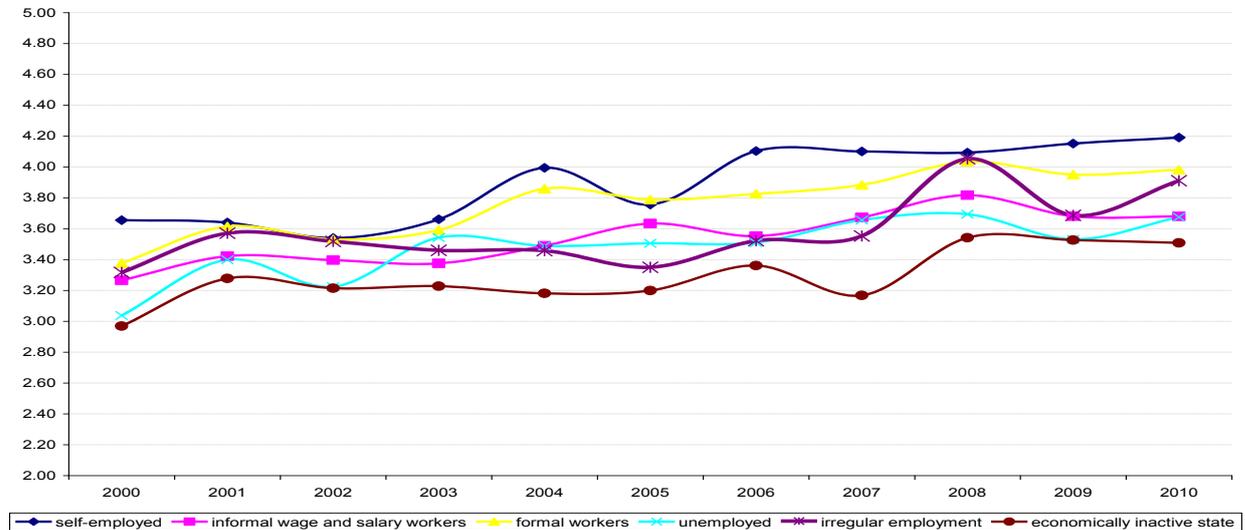
The statistical significance of differences between informal employment types and formal employment was confirmed by the results of an ordered probit regression estimation (see Table 1 in Appendix 3).

The mean estimates for the subjective power scale (Fig.2) are concentrated at the bottom of the scale (3.4-4.2) – they appear to be very low for the whole population. However, there is a small tendency to increase the means during the period analyzed. Mean estimates of the self-

¹⁶ The full set of endogenous variables also included education and subjective health.

employed are slightly higher when compared to five other groups, while the informal wage and salary workers tend to express lower subjective power estimates compared to formal workers. They view themselves as the most disempowered of the employed.

Fig.2. Subjective power scale (from 1 to 9), 2000-2010



Source: RLMS-HSE

It is interesting to note that the estimates of the irregularly employed were very similar to those of the self-employed at the beginning of the period and at the end of it. Thus, the estimates of this group appear to be the most unstable of all.

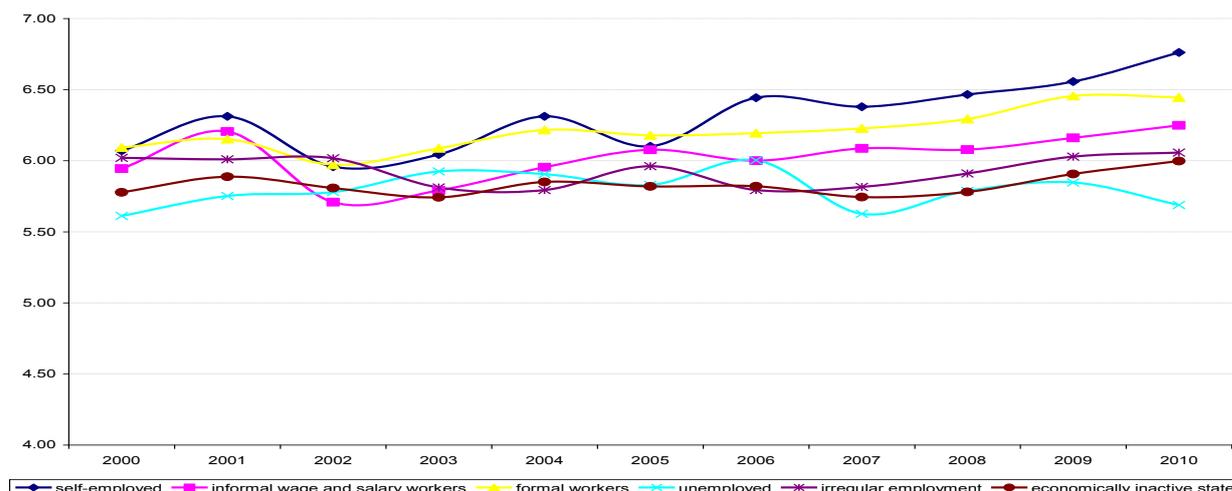
An ordered probit estimation (Table A2 in Appendix 3) showed that the self-employed in general are not different from formal workers in terms of estimating one's own power.¹⁷ The significance of the differences for informal workers and irregular workers compared to formal workers was confirmed.

In all groups the mean estimates for the subjective respect scale (Fig.3) are concentrated at the top part of the scale (5.5-6.8): They appear to be rather high for all workers.

The mean estimates also vary over time and tend to increase. The mean estimates of the self-employed are again higher when compared to the five other groups, while the estimates of informal wage and salary workers are lower than those of formal workers. The estimates of irregular workers are very unstable here, too. However, for most of the period they are among the lowest together with the estimates of unemployed and economically inactive individuals.

¹⁷ There are two exceptions: In 2006 and 2010 the self-employed demonstrated higher levels of subjective power compared than formal workers. These differences are absent in all other years.

Fig.3. Subjective respect scale (from 1 to 9), 2000-2010

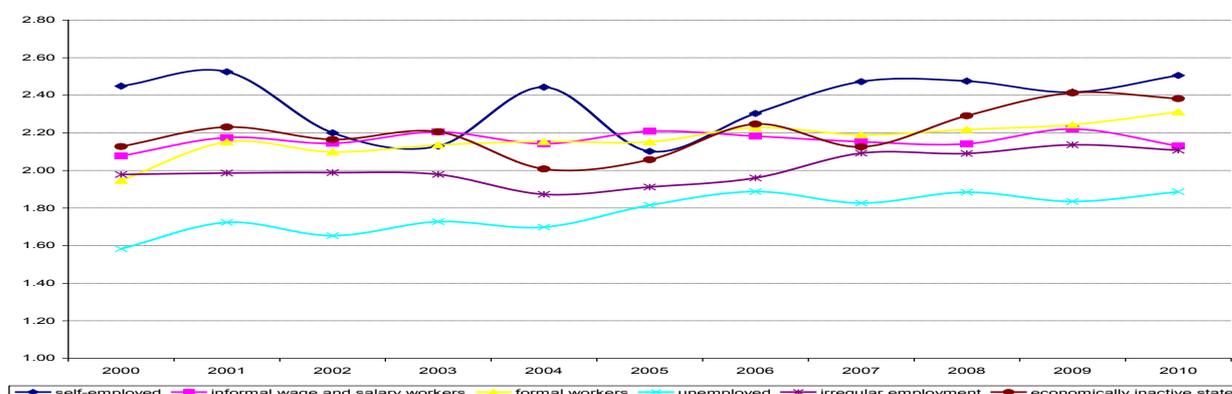


Source: RLMS-HSE

The ordered probit estimation generally confirmed these results, however the informal nature of self-employment does not seem to have a significant effect on respected evaluations (see Table 3 of Appendix 3).

The level of confidence in one’s future material welfare appears to be rather low in all six groups (1.6-2.6, with 1 signifying that one is “very concerned about future”) (Fig.4). The self-employed in general expressed a slightly higher level of confidence, yet it was rather unstable during the whole period and the difference was not significant throughout the years, as the ordered probit model shows (see Table 4 in Appendix 3). Informal wage and salary workers and formal workers were very similar in terms of this measure, which is supported by the ordered probit results. Estimates of the irregularly employed and unemployed are the lowest, yet they tended to increase over the past 10 years and thus were not significantly different from estimates of formal workers during all the years.

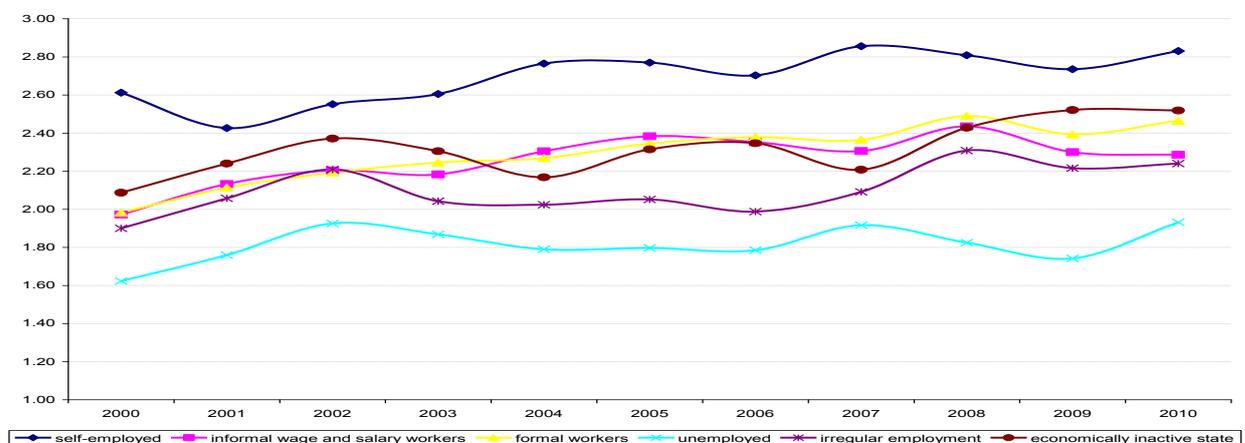
Fig.4. Subjective scale of confidence in the ability of self-provision with essentials (from 1 to 5), 2000-2010



Source: RLMS-HSE

The level of present material welfare satisfaction (Fig.5) was rather low in all three categories of workers, with the mean estimates concentrated around 1.6-2.8. In the period analyzed, one can notice an overall tendency to increase the low levels of satisfaction. The self-employed in general expressed significantly higher levels of satisfaction, while formal workers and informal wage and salary workers reported similar mean estimates. Estimates of irregular employed and unemployed are again the lowest and they vary around the same level for the whole period. The statistical significance of differences described between informal employment types and formal employment was confirmed by the results of ordered probit regression estimation (see Table 5 in Appendix 3).

Fig.5. Subjective scale of present material welfare satisfaction (from 1 to 5), 2000-2010



Source: RLMS-HSE

The effect of transitions

In the next step, fixed effects regressions were estimated in order to investigate those changes in the subjective social status that are exclusively attributable to labor market transitions. Another big advantage of this type of analysis refers to its ability to control possible self-selection bias connected with unobserved abilities, preferences, and psychological features.

Firstly, I will examine the models estimated for all labor market status changes out of formal employment. That is, formal employment is considered to be the state of origin for each of the transitions (see Table 1).

A fixed effects estimation showed that for *self-employed men* the difference between self-employment and formal work in terms of subjective level of confidence in future material welfare is insignificant. Yet subjective social status attributes, such as subjective wealth and the subjective level of present material welfare satisfaction, remain significantly different from those of formal workers. The direction of the relationship between self-employment and subjective

“material” features of social status also remains the same: Those who move to self-employment express significantly higher levels of wealth and satisfaction with their present state. However, the size of significant effects is rather small.

Table 1. Results from the fixed effects models,¹⁸ all labor market statuses, RLMS-HSE, 2000-2010

	Subjective wealth		Subjective power		Subjective respect		Subjective level of confidence in future material welfare		Subjective level of present material welfare satisfaction	
	coef	se	coef	se	coef	se	coef	se	coef	se
<i>Model for males</i>										
<i>Labor market status</i>										
Formal employment	<i>base</i>									
Self-employment	0.181***	0.059	0.099	0.072	0.054	0.066	0.016	0.056	0.167***	0.046
Informal Wage and Salary work	-0.034	0.031	-0.083*	0.036	-0.091*	0.038	-0.070*	0.029	-0.02	0.025
Unemployment	-0.422***	0.038	-0.313***	0.044	-0.330***	0.046	-0.422***	0.033	-0.499***	0.028
Irregular employment	-0.173***	0.034	-0.166***	0.037	-0.092*	0.038	-0.200***	0.03	-0.256***	0.026
Economically inactive	-0.285***	0.029	-0.244***	0.033	-0.268***	0.036	-0.076***	0.026	-0.284***	0.023
Number of observations	48 955		48 468		47 823		49 324		49 534	
Number of groups	12 405		12 375		12 327		12 465		12 501	
Within R-square	0.015		0.016		0.008		0.012		0.033	
sigma u	1.314		1.724		1.443		1.064		1.132	
sigma e	1.12		1.302		1.335		1.028		0.893	
rho	0.579		0.637		0.539		0.517		0.616	
<i>Model for females</i>										
<i>Labor market status</i>										
Formal employment	<i>base</i>									
Self-employment	0.069	0.068	-0.119	0.083	-0.029	0.084	0.007	0.067	0.119*	0.057
Informal Wage and Salary work	-0.057	0.032	-0.136***	0.037	-0.039	0.038	0.019	0.028	-0.014	0.026
Unemployment	-0.172***	0.036	-0.203***	0.04	-0.234***	0.042	-0.267***	0.027	-0.251***	0.026
Irregular employment	-0.091**	0.037	-0.120***	0.042	-0.072	0.043	-0.099***	0.031	-0.157***	0.029
Economically inactive	-0.089***	0.024	-0.112***	0.027	-0.170***	0.028	-0.055***	0.021	-0.096***	0.019
Number of observations	66 995		66 051		65 194		67 545		67 792	
Number of groups	15 629		15 548		15 492		15 720		15 727	
Within R-square	0.013		0.018		0.007		0.013		0.031	
sigma u	1.198		1.352		1.437		1.031		0.925	
sigma e	1.101		1.263		1.323		0.959		0.865	
rho	0.542		0.534		0.541		0.536		0.533	

Note: *** p<0.001, ** p<0.01, * p<0.05 (2-tailed tests).

¹⁸ The set of controlling variables included education, age, marriage status, the natural log of average income per household member, subjective health, number of children in a household, dummy variable for the pension receivers, dummy variable for the student status, settlement type, federal district, year dummy variables.

There is no significant difference between self-employed and informal wage workers in terms of subjective power, subjective respect, and the level of confidence in future material welfare. So these indicators do not generally change in the case of transition between these types of employment.

Self-employed women expressed significantly higher levels of present material welfare satisfaction, however the size of the effect was smaller than similar estimates of men. Other measures of subjective social status remained the same for them.

Informal wage work for men results in significantly lower levels of respect, power, and confidence about their future welfare compared to the situation of their formal employment. In terms of other “material” subjective social status features (subjective wealth and subjective level of present material welfare satisfaction), informal wage and salary employment for men does not differ from formal employment.

In relation to the category of *informal wage and salary employment*, women consider themselves to be less powerful, and this is the only strong significant difference between the state of formal employment and informal wage and salary work for them. The size of the effect for women is bigger than for men (-0.136 points versus -0.08 points for men). Other measures of subjective social status showed no difference from those of the state of formal employment for women.

As it was stated above, *irregular employment* appears to be similar to unemployment and to an economically inactive state in terms of subjective social status. Even controlling for possible unobservable features, those who move to a state of irregular employment from formal employment experience a significant decline in the majority of measures of subjective social status. This holds both for men and women.¹⁹ In terms of the effect’s size, this makes them very similar to economically inactive individuals.

Estimation of the Hausman-Taylor models for all labor market statuses (see Table 2) using the same set of controlling variables can provide a robustness check for the estimates of fixed effects models.

Comparing Table 1 with Table 2, it can be noted that the Hausman-Taylor models confirm the results of the fixed effects models. The size of the effects remained virtually unchanged.

¹⁹ There is one exception: Contrary to men’s estimates, irregular working women do not express any significant decline in subjective respect.

Table 2. Results from the Hausman-Taylor models, all labor market statuses, RLMS-HSE, 2000-2010

	Subjective wealth		Subjective power		Subjective respect		Subjective level of confidence in future material welfare		Subjective level of present material welfare satisfaction	
	coef	se	coef	se	Coef	se	coef	se	coef	se
<i>Model for males</i>										
<i>Labor market status</i>										
Formal employment	<i>base</i>									
Self-employment	0.188***	0.049	0.108	0.056	0.053	0.06	0.016	0.046	0.167***	0.039
Informal Wage and Salary work	-0.036	0.027	-0.08*	0.031	-0.099***	0.034	-0.068***	0.026	-0.02	0.022
Unemployment	-0.431***	0.033	-0.317***	0.037	-0.342***	0.04	-0.419***	0.03	-0.498***	0.026
Irregular employment	-0.184***	0.028	-0.171***	0.032	-0.109***	0.035	-0.200***	0.026	-0.259***	0.022
Economically inactive	-0.299***	0.024	-0.253***	0.027	-0.283***	0.029	-0.069***	0.022	-0.280***	0.018
Number of observations	48 955		48 468		47 823		49 324		49 534	
Number of groups	12 405		12 375		12 327		12 465		12 501	
Wald Chi-square	1062.01***		1065.61***		687.01***		1129.01***		1721.29***	
sigma u	1.419		1.974		1.448		1.016		1.246	
sigma e	1.12		1.302		1.334		1.027		0.893	
rho	0.616		0.697		0.541		0.494		0.661	
<i>Model for females</i>										
<i>Labor market status</i>										
Formal employment	<i>base</i>									
Self-employment	0.066	0.061	-0.122	0.07	-0.035	0.075	0	0.053	0.115*	0.048
Informal Wage and Salary work	-0.057*	0.029	-0.132***	0.033	-0.048	0.035	0.022	0.025	-0.012	0.022
Unemployment	-0.171***	0.03	-0.200***	0.035	-0.239***	0.038	-0.259***	0.027	-0.245***	0.024
Irregular employment	-0.093***	0.031	-0.117***	0.036	-0.080*	0.039	-0.097***	0.027	-0.154***	0.025
Economically inactive	-0.099***	0.019	-0.121***	0.022	-0.181***	0.024	-0.046***	0.017	-0.087***	0.015
Number of observations	66 995		66 051		65 194		67 545		67 792	
Number of groups	15 629		15 548		15 492		15 720		15 727	
Wald Chi2-square	1784.88***		2246.85***		783.01***		1500.13***		2365.54***	
sigma u	1.285		1.412		1.486		1.02		0.94	
sigma e	1.101		1.262		1.322		0.958		0.865	
rho	0.577		0.556		0.558		0.531		0.531	

Note: *** p<0.001, ** p<0.01, * p<0.05 (2-tailed tests).

Discussion

Social scientists and policy makers have long been debating the connection between informal employment and social inequality. The heterogeneous nature of labor activities incorporated into the concept of “informality” defines the ambiguity of its impact on the

economy and society. While earlier research on the topic was concerned with analyzing separate unrelated indicators (like job satisfaction and subjective wealth), which made it difficult to compare results, the present study proposes a new approach that is based on an investigation of the integrate concept of subjective social status, which has never been widely used before in studies of this type. Thus, we are trying to widen the scope of analysis with an indicator that could better grasp the entire amount of informal employment consequences in terms of socio-economic studies.

Using Russian data for 2000-2010, no severe effect of informal employment on the system of social inequality in Russia is found, thus rejecting Hypothesis 1. Instead, one can refer only to more or less pronounced (yet statistically significant) differences. The existence of three-tier informal employment in Russia can be declared with self-employment being better off than informal wage and salary work and irregular workers representing the most deprived category of employment, similar in its social status estimates to economically inactive individuals. Comparing estimates of men and women, I can only partially confirm Hypothesis 2 by indicating that self-employed women comprise a more vulnerable employment group since they experience less benefits from their work in terms of subjective social status. There are no similar gender differences in subjective social status estimates for the categories of informal wage and salary workers and irregular workers.

The results of this analysis appear to be significant for studying labor markets, employment, and subjective social status. It is important to highlight here that the Russian population in general is characterized by low levels of subjective social status, regardless as to their labor market status or their employment's level of formality. In this respect the situation has not considerably changed since the late 1990s or the beginning of 2000s, when low levels of subjective social status were registered for the Russian population [Gross 2003; Kelley, Evans 2004]. According to the analysis presented above, the difference between categories of informal employment and those engaged in formal employment is mostly insignificant and the size of effects is very small. Furthermore, financial benefits are not associated with formal employment: It is self-employment that makes workers a slightly wealthier. And even the social benefit system does not improve the situation for formal workers, since their subjective social status is basically no different from those of informal wage and salary workers in terms of respect, power, and their confidence about the future.

This feature of the Russian labor market appears to be quite alarming and could possibly reveal a bias in the social stratification system. Moreover, it appears that an indirect indicator of Russia's *formal* labor market institutions was developed, testifying to the quality of Russian

remuneration and social benefit system (which formal employment should be closely associated with), the level of trust towards it, and worker expectations about the future.

The results received are largely explained by the peculiarities of the model of the Russian labor market, which is characterized by an unfavorable institutional environment and inefficient government regulation [Gimpelson and Kapeliushnikov, 2011]. Partial compliance with labor agreements and contracts, weak institutions for collective bargaining, uncertainty, and opacity of the Russian labor market all lead to the fact that formal employment loses most of its benefits for employees. Formal employment appears to be unable to provide institutionalized social protection for workers. As a result, formal contracts and regulations become impaired. Real labor rights for formal workers are determined by the will of the employer and the ratio of costs and benefits of compliance to formal labor standards [Zaslavskaya and Shabanova, 2002]. The so-called “deformalization of the formal” is one of the main processes that blur the boundaries between formal and informal labor markets in Russia [Barsukova, 2003].

The results presented above can serve as a basis for further studies on the connection between informal employment and social inequality. Among potential research directions, one can point to methodological advancements that relate to the biasedness of self-assessments, which constitute the weak point of any study that is founded on subjective scales. I tried to solve this problem at least in part by estimating fixed effects panel regressions and Hausman-Taylor models. Yet significant room for improvements still remains.

I conclude by stressing the value of the research presented for adequately understanding of informal employment and its consequences. Subjective social status indicators provide important information about social structure and social dynamics, which is not limited to the characteristics of incomes and living standards. While more and more people become engaged in various forms of informal employment worldwide, it becomes extremely important to understand their own assessments of their place in society. In the case of Russia, subjective social status analysis shows that it is not informal employment growth that becomes the main factor for preserving workers vulnerability, but formal labor market institutions that make them indifferent to employment type.

References

Adler N. et al. (2000). Relationship of Subjective and Objective Social Status With Psychological and Physiological Functioning: Preliminary Data in Healthy White Women// *Health Psychology*. Vol.19. No.6. PP. 586-592

- Aistov A., and A.Larin with L.Leonova (2012) Informal employment and life satisfaction [Neformal'naya zanyatist' i udovletvorennost' zhizn'u]// Prikladnaya econometrica. No. 2. PP. 17-36
- Aistov A., and L.Leonova (2012) Life and job satisfaction: its connection to unregistered employment [Udovletvorennost' zhizn'u I rabotoi, svyaz s nezaregistrirovannoi zanyatost'u]. Working paper series WP15 of Higher School of Economics. WP15/2011/04.
- Alwin D.F. (1987) Distributive Justice and Satisfaction with Material Well-Being //American Sociological Review. Vo. 52. No. 1. P. 83–95.
- Barsukova S. (2003) Formal and informal job placement: paradoxical similarity against the obvious differences [Formal'noe i neformal'noe trudoustroistvo: paradoksal'noe shodstvo na fone ochevidnogo razlichiya]// Sociologicheskie issledovaniya. Vo. 7. PP. 3-15.
- Bernabe S. (2002) Informal Employment in Countries in Transition: A conceptual framework. Center for Analysis of Social Exclusion Paper 56. London School of Economics.
- Beshir M.Y. and J.D. Ramsey (1981) Comparison between male and female subjective estimates of thermal effects and sensations// Applied ergonomics. Vo. 12. No.1. PP. 29-33.
- Beuran M., and E. Kalugina (2006). Social exclusion and the informal sector: the case of Russia. Centre d'Economie de la Sorbonne, Université de Paris 1, CNRS.
- Blau D.M. (1985) Self-Employment and Self-Selection in Developing Country Labor Markets// Southern Economic Journal. Vo. 52. No.2. PP. 351-363
- Bosch M., and W. F. Maloney (2005). Labor Market Dynamics in Developing Countries: Comparative labor markets analysis using continuous time Markov Processes. Policy Research Working Paper 3583, World Bank., Washington, DC.
- Bosch M., and E. Goni with W. Maloney (2007). The Determinants of Rising Informality in Brazil: Evidence from Gross Worker Flows// The World Bank Latin America and Caribbean Region. Policy Research Working Paper 4375. October.
- Cameron A.C., and P.K. Trivedi (2005) Microeconometrics. Methods and Applications. New York: Cambridge University Press
- Cassar L. (2010) Revisiting Informality: Evidence from Employment Characteristics and Job satisfaction in Chile. Oxford Poverty and Human Development Initiative (OPHI) Working Papers. WP No. 41 (November).
- Centers R. (1949) The psychology of social classes: A study of class consciousness. Princeton: Princeton University Press.
- Cortes R., and G. Kessler (2006) Argentina's Welfare Regime: Protection, Social Capital and Citizenship, 1991-2005. In: *Welfare Regimes and Social Actors in Inter-Regional Perspective: The Americas, Africa, and Asia*. Online conference materials.
- Della Fave L.R. (1980) The Meek Shall Not Inherit the Earth: Self-Evaluation and the Legitimacy of Stratification// American Sociological review. Dec. Vo.45. No.6. PP.955-971

- Evans P. (1989) Predatory, Developmental, and Other Apparatuses: A Comparative Political Economy Perspective on the Third World State// *Sociological Forum*. No. 4. PP. 561–587
- Falko P. (2012) Determinants of income in informal self-employment: new evidence from a long African Panel. In *6th IZA/World Bank Conference: Employment and Development*. Online conference materials.
- Ferrer-i-Carbonell A., and K. Gerxhani K. (2011) Financial Satisfaction and (in)formal Sector in a Transition Country. *Social Indicators Research*. Vo. 102. No.2. PP. 315–331.
- Fields G.S. (1990) Labour market modeling and the urban informal sector: theory and evidence/ The informal sector revisited. Ed. by D.Turnham, B. Salome, A.Schwarz. OECD. Paris.
- Gimpelson V. E., and R.I. Kapeliushnikov (2011) Labor Market Adjustment: is Russia Different? Working paper series WP3 of Higher School of Economics. WP3/2011/04.
- Gimpelson V.E., and A.A. Zudina (2011) Informal Workers in the Russian Economy: Who Are They and How Many? [Neformali v rossiskoi ekonomike: skol'ko ih I kto oni]// *Voprosi ekonomiki*. No.10. PP. 53-76.
- Goldman N. et al. (2005) Measuring subjective social status: A case study of older Taiwanese. Office of Population Research Princeton University. Working paper series. Working Paper No. 2005-02
- Gross M. (2003) Educational systems and perceived social inequality: the institutional base for class formation// *European Societies*. No.2. Vo. 5. PP. 193-225
- Jackman M.R. (1979) The subjective meaning of social class identification in the United States// *Public Opinion Quarterly*. No. 43. Vo. 4. PP. 443-462
- Jackman M.R., and R.W. Jackman (1973) An interpretation of the relation between objective and subjective social status// *American Sociological Review*. Vo. 38. PP. 569-582
- Jahoda M. (1981) Work, Employment, and Unemployment: Values, Theories, and Approaches in Social Research// *American Psychologist*. Vo.36. No. 2. PP. 184-191
- Kelley J., and M.D.R. Evans (1995) Class and class conflict in six Western nations// *American Sociological Review*. No. 60. PP. 157-78.
- Kelley J., and M.D.R. Evans (2004) Subjective Social Location: Data from 21 Nations// *International Journal of Public Opinion Research*. Vo.16. No.1. PP. 3–38
- Kluegel J.R., and R. Singleton with C.E. Starnes (1977) Subjective class identification: a multiple indicator approach// *American Sociological Review*. No.42. PP. 599-611.
- Knudsen K. (1988) Class identification in Norway: explanatory factors and life-cycle differences// *Acta Sociologica*. Vo. 31, No. 1.PP. 69–79
- Kopp M.S. et al. (2005) Low socioeconomic status of the opposite sex is a risk factor for middle aged mortality// *Journal of Epidemiology and Community Health*. Vo. 59. No.8. PP. 675-678.

Lehmann H., and N. Pignatti (2008). Informal Employment Relationships and Labor Market Segmentation in Transition Economies: Evidence from Ukraine. ESCIRRU Working Paper No. 03, January.

Lindemann K. (2007). The Impact of Objective Characteristics on Subjective Social Position// *Trames*. No. 11. PP. 54-68

Maloney W.F. (2004). Informality Revisited// *World Development*. Vol. 32, No. 7, pp. 1159–1178.

Molnar G., and Z. Kapitany (2010) Unreported Income, Education and Subjective Well-Being. Institute of Economics, Hungarian Academy of Sciences. IEHAS Discussion Papers. DP No. 1027.

OECD Employment Outlook. (2008) Chapter 2. “Declaring Work or Staying Underground: Informal Employment in Seven OECD Countries”

Ostrove J.M. et al. (2000). Objective and subjective assessments of socioeconomic status and their relationship to self-rated health in an ethnically diverse sample of pregnant women// *Health Psychology*. Vo. 19. No. 6. PP. 613–618.

Pages C., and L. Madrigal (2008) Is informality a good measure of job quality?: evidence from job satisfaction data// Inter-American Development Bank. Research Department. Working Paper № 654. December.

Pearlin L.I. (1989) The Sociological Study of Stress// *Journal of Health and Social Behavior*. Vo.30. No.3. PP.241-256.

Perry et al. (2007) Informality: exit and exclusion. The World Bank/ Latin America and the Caribbean studies report.

Sen K. (1996) Gender. In S. Ebrahim, & A. Kalache (Eds.), *Epidemiology in old age* (pp. 210–220). London: BMJ.

Shepelak N.J. (1987). The Role of Self-Explanations and Self-Evaluations in Legitimizing Inequality// *American Sociological Review*. Aug., Vo.52. No.4. PP. 495-503

Singh-Manoux A. et al. (2003) Subjective social status: its determinants and its association with measures of ill-health in the Whitehall II study// *Social Science & Medicine*. Vo. 56. No.6. PP. 1321–1333.

Sinyavskaya O. et al. (2004). Informal employment in Russia: methodological approaches and empirical estimates [Neforma'naya zanyatost' v Rossii: metodologicheskie podhodi i empiricheskie ocenki]. Report at the NISP seminar.

Sinyavskaya O. (2005). Informal employment in modern Russia: its definition, scale and dynamics [Neformal'naya zanyatost' v sovremennoi Rossii: izmerenie, mashtabi, dinamika]. IISP Working Papers. WP5/2005/01

Slonimczyk F. (2011). The Effect of Taxation on Informal Employment: Evidence from the Russian Flat Tax Reform: Working paper WP3/2011/05

- Spector P.E. et al. (2002) Locus of Control and Well-being at Work: How Generalizable are Western Findings?// *Academy of Management Journal*. Vo.45. No.2. PP. 453-466.
- Temkin B. (2009) Informal Self-Employment in Developing Countries: Entrepreneurship or Survivalist Strategy? Some Implications for Public Policy// *Analyses of Social Issues and Public Policy*. Vo. 9. No.1. PP. 135-156
- Tesch-Romer C., and A. Motel-Klingebiel with M.J. Tomasik. (2008). Gender Differences in Subjective Well-Being: Comparing Societies with Respect to Gender Equality// *Social Indicators Research*. Vo. 85. PP. 329-349
- Wachsberger J-M. et al. 2010. Job Satisfaction and Informal Sector in Vietnam. In: *International Conference about the Informal Sector & Informal Employment: Statistical Measurement, Economic Implications and Public Policies*. Online conference materials.
- Weber M. (1966) Class, Status and Party. In: Bendix R., Lipset S. M. (eds) *Class, Status and Power*. New York: Free Press; 21-28
- Yamaguchi K. and Y. Wang. (2002) Class identification of married employed women and men in America// *American Journal of Sociology*. Vo. 108, No. 2. PP. 440–475.
- Zaslavskaya T. and M. Shabanova. (2002) Unlawful labour practices and social transformations in Russia [Неправовые трудовые практики и социальные трансформации в России]// *Sociologicheskie issledovaniya*. Vo.6. PP. 3-17

Appendix 1

Table 1. Characteristics of the sample of respondents older than 15 years, RLMS-HSE, 2000 - 2010, % by column.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number of observations	9073	10098	10497	10635	9538	9274	12491	11097	11864	11816	17118
Gender											
Men	43,01	42,63	42,91	43,02	42,28	42,26	42,76	42,23	42,09	42,19	42,24
Women	56,99	57,37	57,09	56,98	57,72	57,74	57,24	57,77	57,91	57,81	57,76
Settlement type											
regional centre	32,86	28,99	28,44	27,95	28,49	28,37	29,42	30,33	29,92	29,66	30,93
city	26,90	24,84	24,35	25,26	25,93	26,09	26,38	26,56	26,13	25,80	26,22
urban-type village / village	34,93	32,43	32,18	33,25	31,36	32,51	32,24	31,22	32,48	33,01	32,63
capital	5,31	13,75	15,03	13,54	14,23	13,03	11,96	11,90	11,46	11,53	10,22
Education											
Incomplete secondary school or none	27,56	25,69	25,23	24,74	19,98	18,48	22,35	17,50	20,35	20,21	15,49
Incomplete secondary school + vocational training	4,18	3,81	3,85	4,20	4,42	3,87	3,94	4,25	3,73	3,62	3,48
Secondary school (complete)	21,59	21,96	22,05	22,04	20,54	20,96	20,06	19,2	19,78	18,41	21,42
Secondary school complete + vocational training	12,25	13,27	12,79	12,82	14,35	13,53	12,99	14,16	12,83	13,57	14,02
Secondary vocational	19,43	18,82	19,21	19,16	21,63	23,66	21,71	23,78	23,51	23,47	22,44
Higher education	14,98	16,44	16,87	17,04	19,08	19,49	18,95	21,1	19,8	20,72	23,14
Age groups											
15-29	28,54	28,96	29,2	29,57	23,13	23,25	28,88	22,81	27,66	27,48	25,28
30-39	16,07	16,1	15,58	16,22	18,44	18,89	17,38	19,12	17,95	18,38	19,44
40-49	18,55	18,38	18,54	18	19,65	18,89	16,78	17,89	15,9	15,33	15,83
50-59	11,25	11,17	11,77	12,66	15,17	15,8	15,04	17,22	16,03	16,03	17,48
60+	25,59	25,39	24,91	23,55	23,61	23,17	21,92	22,96	22,47	22,78	21,97
Marriage status											
married/has a partner	61,67	60,72	59,71	59,85	65,03	64,39	58,16	63,81	58,58	60,24	63,66
single (including divorced, widowed and separated)	38,33	39,28	40,29	40,15	34,97	35,61	41,84	36,19	41,42	39,76	36,34
Labor market status											
Self-employed	1,42	1,27	1,66	1,63	1,99	1,7	1,36	1,83	1,81	1,62	1,8
Informal wage and salary work	3,39	1,74	3,51	4,11	5,91	5,59	5,96	6,22	5,46	6,65	6,48
Formal employment	44,57	47,4	45,3	45,68	50,21	50,86	46,65	53,27	49,34	47,95	50,95

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Unemployment	4,37	4,18	3,9	3,59	3,47	3,22	2,96	2,51	2,65	3,15	3,6
Irregular employment	5,57	5,61	5,29	5,45	5,14	4,36	5,23	3,87	4,03	4,47	3,66
Economically inactive	40,69	39,81	40,34	39,53	33,28	34,27	37,85	32,29	36,71	36,16	33,51
<i>Subjective health</i>											
bad	41,94	43,6	42,19	41,33	42,61	39,13	39,16	40,48	35,98	35,35	35,01
good	58,06	56,4	57,81	58,67	57,39	60,87	60,84	59,52	64,02	64,65	64,99
Pension receiver											
yes	32,4	31,49	31,5	31,36	33,84	33,65	31,23	34,15	31,82	32,2	32,84
no	67,6	68,51	68,5	68,64	66,16	66,35	68,77	65,85	68,18	67,8	67,16

Table 2. Subjective social status estimates: means and standard deviations for the sample of respondents older than 15 years, RLMS-HSE, 2000 - 2010

Subjective measures of social status in RLMS-HSE	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010	
	mean	st. dev.																				
<i>Subjective wealth (9-point scale)</i>	3,66	1,54	3,85	1,46	3,79	1,42	3,79	1,45	3,88	1,46	3,89	1,43	3,94	1,44	3,88	1,43	4,07	1,45	3,97	1,41	4,01	1,39
<i>Subjective power (9-point scale)</i>	3,16	1,75	3,45	1,72	3,37	1,61	3,41	1,64	3,58	1,70	3,54	1,63	3,60	1,64	3,63	1,61	3,82	1,65	3,75	1,60	3,77	1,61
<i>Subjective respect (9-point scale)</i>	5,94	1,82	6,03	1,74	5,90	1,68	5,92	1,70	6,06	1,65	6,03	1,66	6,02	1,67	6,04	1,67	6,09	1,67	6,21	1,67	6,26	1,66
<i>Subjective level of confidence in future material well-being (5-point scale)</i>	2,02	1,25	2,15	1,26	2,11	1,24	2,14	1,25	2,08	1,20	2,10	1,19	2,20	1,24	2,16	1,20	2,23	1,26	2,28	1,22	2,30	1,26
<i>Subjective level of present material well-being satisfaction (5-point scale)</i>	2,00	1,03	2,15	1,06	2,26	1,12	2,24	1,09	2,22	1,07	2,31	1,08	2,32	1,12	2,30	1,11	2,43	1,14	2,40	1,14	2,44	1,14

Appendix 2

Table 1. Construction of variable for informal employment

<u>Types of informal labor activity</u>	RLMS-HSE questions used to distinguish groups			
<i>Informal entrepreneurs</i>	Do you work at an enterprise or organization? We mean any organization or enterprise where more than one person works, no matter if it is private or state-owned. For example, any establishment, factory, farm, collective farm, state farm, farming industry, store, army, government service, or other organization.	Are you personally an owner or co-owner of the enterprise where you work?	In your opinion, are you doing entrepreneurial work at this job?	Tell me, please: are you employed in this job officially, in other words, by labor book, labor agreement, or contract?
	YES	YES	YES	NO
<i>Individual entrepreneurs</i>	Do you work at an enterprise or organization? We mean any organization or enterprise where more than one person works, no matter if it is private or state-owned. For example, any establishment, factory, farm, collective farm, state farm, farming industry, store, army, government service, or other organization.	At this job are you...(a) involved in an employer's or individual labor activity or (b) work for a private individual?		
	NO	A)		
<i>Informal wage and salary workers hired by private persons</i>	Do you work at an enterprise or organization? We mean any organization or enterprise where more than one person works, no matter if it is private or state-owned. For example, any establishment, factory, farm, collective farm, state farm, farming industry, store, army, government service, or other organization.	At this job are you...(a) involved in an employer's or individual labor activity or (b) work for a private individual?		
	NO	B)		
<i>Informal wage and salary workers hired by formal firms</i>	Do you work at an enterprise or organization? We mean any organization or enterprise where more than one person works, no matter if it is private or state-owned. For example, any establishment, factory, farm, collective farm, state farm, farming industry, store, army, government service, or other organization.	In your opinion, are you doing entrepreneurial work at this job?	Tell me, please: are you employed in this job officially, in other words, by labor book, labor agreement, or contract?	
	YES	NO	NO	

**Types of
informal
labor activity**

RLMS-HSE questions used to distinguish groups

	Are you employed at the moment (you have a job or are on a maternity or annual paid leave), or not?	Did you do some work for money for the past 30 days? Perhaps, you sewed a dress for someone or gave someone a ride in a car?
<i>Irregular workers</i>	NO	YES

Table 2. The set of controlling variables, their values, and description of construction

<i>Variable</i>	<i>Description</i>
1. Gender	
2. Level of education	Values were defined as: incomplete secondary school or none; incomplete secondary school + vocational training; secondary school (complete); secondary school (complete) + vocational training; secondary vocational education; higher education.
3. Age	Values were defined as: 15-29; 30-39; 40-49; 50-59; 60+
4. Marriage status	defined as a dummy variable for having a partner (no matter whether the relationship was registered or not; single status included widowed, divorced, and separated individuals)
5. Natural log of average income per household member	with average income variable constructed as the sum of all financial revenues received by a household in a given month, deflated with the regional consumer price index
6. Subjective health	dummy variable was based on the question about an individual's health problems over for the past 30 days ²⁰
7. Number of children in a household	child was defined as an individual younger than 18 years old
8. Dummy variable for the fact of receiving pension of any kind	including all kind of pensions (retirees, the disabled, veterans, and so on)
9. Dummy variable for the status of student	
10. Settlement type	Values were defined as: regional centre; city; village/urban-type village; capital
11. Federal district	
12. Labor market status – the explanatory variable of interest.	Values were defined as: formal employment; informal wage and salary work; self-employment; irregular employment; unemployment; out of labor force

²⁰ I include this variable as a control, assuming that differences in health status can influence an individual's perception of his or her own place in society.

Appendix 3

Table 1. Subjective wealth, results from ordered probit estimation, RLMS-HSE, 2000-2010

Labor market status	Subjective wealth																					
	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010	
	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se
Formal employment	<i>base</i>																					
Self-employment	0.39***	0.1	0.39***	0.09	0.13	0.07	0.30***	0.08	0.38***	0.07	0.26***	0.08	0.38***	0.09	0.43***	0.07	0.27***	0.08	0.29***	0.09	0.28***	0.07
Informal Wage and Salary Work	0.06	0.06	-0.01	0.08	0.03	0.06	-0.01	0.05	-0.07	0.05	0.01	0.05	-0.05	0.04	-0.06	0.04	-0.02	0.04	-0.1*	0.04	-0.14***	0.04
Unemployment	-0.36***	0.06	-0.23***	0.06	-0.20***	0.06	-0.12*	0.07	-0.28***	0.07	-0.27***	0.07	-0.31***	0.06	-0.18**	0.07	-0.28***	0.07	-0.38***	0.06	-0.29***	0.04
Irregular employment	-0.08	0.05	-0.03	0.05	-0.02	0.05	-0.05	0.05	-0.19***	0.06	-0.09	0.06	-0.21***	0.05	-0.10*	0.06	-0.13*	0.06	-0.13***	0.05	-0.06	0.05
Economically inactive	-0.06	0.04	-0.01	0.03	0	0.03	0.01	0.03	-0.17***	0.04	-0.13***	0.04	-0.11***	0.03	-0.22***	0.03	-0.16***	0.03	-0.12***	0.03	-0.17***	0.03
Number of observations	8418		9547		9848		9940		9109		8864		11704		10358		11220		10934		16098	
Wald Chi-square	901.288***		850.21***		909.701***		958.826***		985.502***		878.196***		1410.155***		1276.433***		1219.42***		939.449***		1263.466***	
Pseudo R-square	0.031		0.027		0.028		0.029		0.033		0.029		0.036		0.036		0.032		0.025		0.023	

Note: *** p<0.001, ** p<0.01, * p<0.05 (2-tailed tests).

Set of controlling variables included gender, education, age, marriage status, natural log of average income per household member, subjective health, number of children in a household, dummy variable for the pension receivers, dummy variable for the student status, settlement type, federal district.

Table 2. Subjective power, results from ordered probit estimation, RLMS-HSE, 2000-2010

Labor market status	Subjective power																					
	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010	
	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se
Formal employment	<i>base</i>																					
Self-employment	0.05	0.11	-0.05	0.12	-0.08	0.08	0.01	0.08	0.08	0.08	0.04	0.08	0.14	0.09	0.12	0.08	0.01	0.08	0.13	0.09	0.11	0.07
Informal Wage and Salary Work	-0.12	0.07	-0.13	0.07	-0.07	0.06	-0.1	0.05	-0.25***	0.05	-0.08	0.05	-0.17***	0.04	-0.11*	0.04	-0.11***	0.04	-0.12***	0.04	-0.20***	0.03
Unemployment	-0.26***	0.06	-0.24***	0.06	-0.24***	0.06	-0.1	0.06	-0.2***	0.06	-0.17*	0.07	-0.25***	0.06	-0.08	0.06	-0.22***	0.06	-0.22***	0.06	-0.18***	0.04
Irregular employment	-0.05	0.06	-0.03	0.05	-0.08	0.05	-0.13*	0.05	-0.25***	0.06	-0.21***	0.06	-0.20***	0.05	-0.17***	0.06	-0.09	0.06	-0.14***	0.05	-0.06	0.05
Economically inactive	-0.07*	0.04	0.02	0.03	-0.03	0.03	-0.05	0.03	-0.15***	0.04	-0.11***	0.04	-0.11***	0.03	-0.21***	0.04	-0.14***	0.03	-0.1***	0.03	-0.15***	0.03
Number of observations	8248		9364		9704		9796		9024		8754		11530		10269		11075		10853		15987	
Wald Chi-square	905.527***		1031.388***		999.583***		1152.267***		1057.751***		996.014***		1327.875***		1245.035***		1353.023***		1074.32***		1584.535***	
Pseudo R-square	0.029		0.03		0.027		0.032		0.032		0.03		0.032		0.033		0.033		0.026		0.026	

Note: *** p<0.001, ** p<0.01, * p<0.05 (2-tailed tests).

Set of controlling variables included gender, education, age, marriage status, natural log of average income per household member, subjective health, number of children in a household, dummy variable for the pension receivers, dummy variable for the student status, settlement type, federal district.

Table 3. Subjective respect, results from ordered probit estimation, RLMS-HSE, 2000-2010

Labor market status	Subjective respect																					
	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010	
	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se
Formal employment	base																					
Self-employment	-0.04	0.1	0.1	0.1	-0.03	0.08	-0.01	0.08	0.03	0.07	-0.04	0.08	0.16*	0.08	0.04	0.08	0.1	0.08	0.1	0.08	0.23***	0.06
Informal Wage and Salary Work	-0.04	0.06	0.1	0.08	-0.13*	0.06	-0.12*	0.05	-0.13***	0.05	-0.01	0.05	-0.1*	0.04	-0.04	0.04	-0.09*	0.04	-0.09*	0.04	-0.06	0.03
Unemployment	-0.23***	0.06	-0.24	0.06	-0.11*	0.06	-0.11	0.06	-0.17***	0.06	-0.15*	0.07	-0.11	0.06	-0.27***	0.06	-0.20***	0.07	-0.23***	0.06	-0.35***	0.05
Irregular employment	0.01	0.06	-0.05	0.05	-0.01	0.05	-0.18***	0.05	-0.26***	0.05	-0.08	0.06	-0.19***	0.05	-0.13*	0.06	-0.18***	0.05	-0.14***	0.05	-0.14***	0.05
Economically inactive	-0.16***	0.04	-0.12***	0.03	-0.1***	0.03	-0.16***	0.03	-0.18***	0.04	-0.17***	0.04	-0.18***	0.03	-0.17***	0.03	-0.26***	0.03	-0.28***	0.03	-0.28***	0.03
Number of observations	8020		9252		9658		9745		8932		8647		11353		10122		10872		10723		15784	
Wald Chi-square	351.064***		302.437***		312.643***		476.367***		385.594***		391.335***		512.477***		497.687***		739.87***		584.346***		755.857***	
Pseudo R-square	0.012		0.009		0.009		0.013		0.011		0.012		0.012		0.013		0.018		0.016		0.013	

Note: *** p<0.001, ** p<0.01, * p<0.05 (2-tailed tests).

Set of controlling variables included gender, education, age, marriage status, natural log of average income per household member, subjective health, number of children in a household, dummy variable for the pension receivers, dummy variable for the student status, settlement type, federal district.

Table 4. Subjective level of confidence in future material well-being, results from ordered probit estimation, RLMS-HSE, 2000-2010

Labor market status	Subjective level of confidence in future material well-being																					
	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010	
	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se
Formal employment	<i>base</i>																					
Self-employment	0.37***	0.11	0.34***	0.12	0.09	0.09	0.04	0.09	0.27***	0.08	-0.01	0.09	0.13	0.1	0.32***	0.09	0.23***	0.08	0.22*	0.09	0.16*	0.07
Informal Wage and Salary Work	0.04	0.07	0.08	0.09	0.02	0.06	0.05	0.06	-0.05	0.05	0.04	0.05	-0.04	0.04	-0.01	0.05	-0.07	0.05	0	0.04	-0.14***	0.04
Unemployment	-0.46***	0.07	-0.44***	0.06	-0.45***	0.07	-0.41***	0.07	-0.42***	0.07	-0.35***	0.08	-0.38***	0.07	-0.24***	0.07	-0.41***	0.07	-0.42***	0.06	-0.34***	0.05
Irregular employment	0.02	0.06	-0.12*	0.06	-0.04	0.06	-0.07	0.06	-0.14*	0.06	-0.12	0.06	-0.22***	0.05	0.07	0.06	-0.09	0.06	-0.13*	0.05	-0.10	0.05
Economically inactive	0.21***	0.037	0.09***	0.03	0.01***	0.03	0.07*	0.03	-0.07	0.04	-0.01	0.04	0.04	0.03	0.06	0.04	0.07*	0.03	0.12***	0.03	0.01	0.03
Number of observations	8478		9600		9887		10024		9172		8910		11809		10454		11278		11066		16281	
Wald Chi-square	719.253***		809.552***		771.243***		998.825***		828.733***		659.806***		1109.417***		737.168***		825.765***		746.256***		1066.752***	
Pseudo R-square	0.033		0.032		0.03		0.036		0.035		0.028		0.034		0.026		0.026		0.023		0.023	

Note: *** p<0.001, ** p<0.01, * p<0.05 (2-tailed tests).

Set of controlling variables included gender, education, age, marriage status, natural log of average income per household member, subjective health, number of children in a household, dummy variable for the pension receivers, dummy variable for the student status, settlement type, federal district.

Table 5. Subjective level of satisfaction with present material well-being, results from ordered probit estimation, RLMS-HSE, 2000-2010

Labor market status	Subjective level of present material well-being satisfaction																					
	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010	
	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se	coef	se
Formal employment	<i>base</i>																					
Self-employment	0.41***	0.1	0.31***	0.11	0.29***	0.08	0.37***	0.08	0.46***	0.07	0.44***	0.09	0.30***	0.09	0.46***	0.07	0.27***	0.08	0.32***	0.09	0.29***	0.07
Informal Wage and Salary Work	-0.07	0.07	0.04	0.08	0.04	0.06	-0.05	0.05	0	0.05	0	0.05	-0.04	0.04	-0.05	0.04	-0.04	0.04	-0.08*	0.04	-0.16***	0.04
Unemployment	-0.46***	0.06	-0.41***	0.06	-0.29***	0.06	-0.39***	0.06	-0.51***	0.07	-0.64***	0.08	-0.67***	0.07	-0.38***	0.08	-0.7***	0.07	-0.66***	0.07	-0.53***	0.05
Irregular employment	-0.14*	0.06	-0.07	0.05	0.04	0.05	-0.17***	0.06	-0.23***	0.06	-0.22***	0.06	-0.34***	0.05	-0.17***	0.06	-0.23***	0.06	-0.18***	0.05	-0.24***	0.05
Economically inactive	0.02	0.04	0.07	0.03	0.09***	0.03	0.02	0.03	-0.11***	0.04	-0.08*	0.04	-0.08*	0.03	-0.15***	0.04	-0.18***	0.03	-0.02	0.03	-0.15***	0.03
Number of observations	8518		9687		9922		10095		9192		8945		11854		10479		11309		11102		16315	
Wald Chi-square	584.51***		737.321***		686.33***		783.298***		686.785***		609.83***		773.311***		559.055***		680.195***		676.852***		1110.921***	
Pseudo R-square	0.03		0.032		0.028		0.03		0.029		0.027		0.024		0.02		0.021		0.023		0.026	

Note: *** p<0.001, ** p<0.01, * p<0.05 (2-tailed tests).

Set of controlling variables included gender, education, age, marriage status, natural log of average income per household member, subjective health, number of children in a household, dummy variable for the pension receivers, dummy variable for the student status, settlement type, federal district.

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