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**FREELANCE CONTRACTING
IN THE DIGITAL AGE:
INFORMALITY, VIRTUALITY
AND SOCIAL TIES**

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**FREELANCE CONTRACTING IN THE DIGITAL AGE:
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Based on a sample of 5,784 Russian-speaking respondents, this study provides the first quantitative evidence on freelance contracting via the Internet. We explore the extent to which these virtual business relations are formal or informal, and the role of social capital and networking. Our data suggest freelancers act under constant threat of malfeasance from clients. We address a number of questions associated with freelancers' business risks and how freelancers might mitigate them.

The logistic regression models reveal that the virtualization of relationships with clients is associated with greater moral hazard risks and fewer opportunities for dispute resolution. Formal written contracts do not prevent opportunistic behaviors by clients, though such contracts help resolve conflicts. Dealing with available social contacts and referrals decreases both the probability of extreme opportunism, causing financial losses, and the probability that disputes remain unresolved. Nevertheless, established social relations could be exploited by clients who can delay payments or insist on altering deadlines, work scope and specifications.

Thus, our findings contribute to existing literatures on social capital in freelance contracting and on the structure of occupational labor markets.

JEL Classification: Z13.

Keywords: freelancers, independent contractors, self-employment, Internet, opportunism, social capital

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Introduction

For several decades, commentators have been tracing the gradual erosion of internal labor markets and growing reliance of firms on various types of externalized labor (Handy 1989; Cappelli 1999; Beck 2000; Kalleberg 2011). Although many workers are forced into nonstandard work arrangements, for others, loosening attachment to organizations provides the opportunities to accommodate their wants, preferences and individualized lifestyles (Cohany 1998; Marler, Woodard Barringer, and Milkovich 2002). Highly skilled professionals in particular may experience increased work autonomy and greater financial gains by moving into open markets (Barley and Kunda 2004, 62; Osnowitz 2010, 54). Recent improvements in information and communication technologies (ICTs) provide new opportunities for individual work autonomy while facilitating effective coordination. In 1998, Malone and Laubacher (1998, 146) imagined the possibilities of an “e-lance economy” provided by the Internet:

The fundamental unit of such an economy is not the corporation but the individual. Tasks aren't assigned and controlled through a stable chain of management but rather are carried out autonomously by independent contractors. These electronically connected freelancers – e-lancers – join together into fluid and temporary networks to produce and sell goods and services. When the job is done – after a day, a month, a year – the network dissolves, and its members become independent agents again, circulating through the economy, seeking the next assignment.

This vision looked like futurist speculation, but soon became reality. Since the late 1990's, dedicated online marketplaces have been offering comprehensive technical infrastructure and institutional support for electronic freelancers and their clients.

Our knowledge of freelance contracting on the Internet is limited. Literature on professional contracting is either speculative or based on qualitative studies (Pink 2001; Barley and Kunda 2004; Osnowitz 2010). In this paper we explore the structure of e-markets for remote professional services and address several specific questions. Do formal written contract guarantee an adherence to established agreements? Does virtual communication really increase the risk of moral hazard? Could social ties prevent opportunistic behavior? To answer these questions we use unique quantitative data from the Russian Freelance Survey (2011) and logistic regression models.

This paper is organized as follows. First, we set up research framework by defining freelance contracting, overviewing the history and main features of freelance e-markets and discussing the risks of freelance contracting. Then, we formulate research questions, describe our data and methods. Finally, we present and discuss empirical findings.

Defining freelance contracting

Standard employment systems in advanced industrial societies are characterized by full-time work for an employer organization done on a fixed schedule, at employer-owned locations, under the employer's administrative control, with open-ended employment contract duration (Kalleberg, Reskin, and Hudson 2000, 257–258). Recently there has been a well-documented trend towards nonstandard work arrangements (Smith 1997; Kalleberg 2000; Connelly and Gallagher 2004; Ashford, George, and Blatt 2007) that externalize employment relationships, moving various aspects of work outside the organization (Pfeffer and Baron 1988; Kalleberg, Reynolds, and Marsden 2003; Ashford, George, and Blatt 2007). Firms increasingly rely on workers who are not their regular, full-time employees, such as on-call and day labor; workers from temporary and contract employment agencies; short-term and contingent workers; independent contracting ; and other forms of self-employment (Kalleberg, Reskin, and Hudson 2000, 258).

Existing literature disproportionately covers topics related to nonstandard employment (Kunda, Barley, and Evans 2002, 235–236). The largest body of literature focuses on employer rationales for using externalized labor and ignores individuals' experience (Davis-Blake and Uzzi 1993; Abraham, Taylor, and Benner 1996; Uzzi and Barsness 1998; Houseman 2001; Kalleberg, Reynolds, and Marsden 2003). Studies of relatively low-skilled occupations are more prevalent than those examining highly skilled professionals. Forms of nonstandard employment as part-time, temporary or casual workers are over-represented compared to independent contractors (Rogers 2000; Hatton 2011). Our study addresses these gaps, focusing on highly skilled professionals working as independent service providers. Many terms can describe the workers in this paper: independent contractors; contract professionals; consultants; free agents; and freelancers. Although often used interchangeably, they have different connotations in various occupational, cultural and legal contexts. We choose the term “freelancer” because our respondents describe themselves this way. We also want to separate freelancing from dependent forms of self-employment (Connelly and Gallagher 2006; Muehlberger 2007). Freelancers have minimal attachment to firms and represent an extreme form of externalized labor (Pfeffer & Baron 1988; Ashford et al. 2007). Conceptually and legally, freelancers are not engaged in employment relationships but act as autonomous independent service providers (Connelly and Gallagher 2004, 977; Gallagher 2008, 108). That is why we should avoid the term “employer” in favor of “client” or “customer”. Freelancers circulate widely, entering separate, relatively short-term business-like relationships with multiple clients.

A growing body of literature explores contract professionals across many occupational and institutional contexts: publishing (Storey, Salaman, and Platman 2005), television (Dex et al. 2000; Ursell 2000; Antcliff, Saundry, and Stuart 2007), film (Blair 2003; Apitzsch 2010), translation (Fraser and Arthur 2001), IT, and engineering (Kunda, Barley, and Evans 2002; McKeown 2005; Bidwell and Briscoe 2009; Tremblay and Genin 2010; Donnelly 2011). Not all these workers could be freelancers according to our definition. For instance, in Barley and Kunda's (2004) study of technical contractors, a majority of informants were hired through staffing agencies, worked for relatively long duration for a single firm and on these firms' premises. Ozniwicz's (2010) study of IT-professionals, writers and editors provides subjects that resemble ours.

The rise of freelance e-markets

New work patterns and organizational models arise through ICTs which facilitate coordination of spatially dispersed economic agents (Malone 2004). Thomas W. Malone and Robert Laubacher combined the ideas of telework and electronic markets in the futurological portrayal of "e-lance economy" (Malone and Laubacher 1998). In this decentralized, project-based economy work tasks are carried out autonomously by independent contractors, who communicate electronically. For a new type of worker the authors coined the term "e-lancer" (electronic freelancer). They also reflected on the possible infrastructure that could facilitate the new business model: "When a project needs to be undertaken, requests for proposals will be transmitted or electronic want ads posted, individuals or small teams will respond, a network will be formed, and new workers will be brought on as their particular skills are needed. Once the project is done, the network will disband" (Malone and Laubacher 1998, 148).

A year later, inspired by Malone and Laubacher's vision, entrepreneurs founded Elance.com, the first online marketplace for remote freelance services. It was a major landmark in the institutionalization of electronic freelancing. There are numerous dedicated websites aimed at helping freelance service providers and potential buyers match each other (see Table 1). These marketplaces attract workers from all over the world, permitting a kind of "virtual migration" (Aneesh 2006; Horton 2010, 521). Freelancer.com reports more than 4 million verified users from 234 countries. Individuals, non-profit organizations, government bodies, small enterprises and large corporations use online marketplaces to outsource required skills.

Table 1 about here

The Internet has a great impact on job-search and recruitment, which is moving online, providing instant access to information align with 24/7 model (Singh and Finn 2003). Freelance marketplaces differ from other job-search websites in their focus on remote professional services. Usual areas of expertise comprise all sorts of IT related work, graphic design and multimedia, writing and editing, various business services (e.g. marketing, consulting, accounting, and legal). A lot of work done online by freelancers is also Internet-related: still growing cyberspace produces ongoing demand for development and maintenance of websites, content management, search engine optimization etc.

An ideal-type model of electronic freelancing assumes that all stages of business process are performed via the Internet without meeting face-to-face. These include not only finding clients and communicating with them, but also concluding contracts, providing deliverables and getting paid. Online marketplaces try to provide comprehensive technical and institutional support for this model facilitating development of the virtual labor markets (Horton 2010).

To use the site, freelancers create professional profiles and portfolios. Clients post descriptions of projects for which freelancers can bid. Search engines allow freelancers and clients to filtering databases of freelancers and available projects by various criteria. The most recent trend in the evolution of online marketplaces relates to developing online collaboration tools to manage remote teams and projects in the cloud.

To build reputations, websites display onsite work histories; accumulated reviews; recommendations; and ratings made by clients. Some websites test and certify skills of freelancers in an attempt to 'guarantee' quality work. To protect both parties, most sites have escrowservices that guarantee fulfillment of contractual obligations. Websites provide dispute assistance and arbitration also. Online marketplaces can earn revenue in various ways: through membership fees, ad valorem charges on contract payments, and charges for additional services (Horton 2010, 517).

There is a lack of empirical research on self-employed professionals working via the Internet. Literature on telework and distributed virtual teams focuses mainly on employees and organizations, which is surprising because robust evidence suggests self-employed workers are more involved in teleworking than employees (Bailey and Kurland 2002). In the UK, 41% of self-employed people were teleworkers in 2005, compared with only 4% of employees (Ruiz and Walling 2005, 421). Although two comprehensive sociological studies of freelancers and technical contractors address the role of the Internet, remote work patterns remain underexplored and online marketplaces are hardly mentioned (Barley and Kunda 2004; Osnowitz 2010). There

are several economic studies of freelance online-marketplaces that focus on price structures, auction mechanisms and mutual selection strategies (Snir and Hitt 2003; Banker and Hwang 2008; Radkevitch, Heck, and Koppius 2008; Horton 2010; Ögüt 2011).

In our previous papers, taking under scrutiny Russian-speaking freelance markets we thoroughly examined electronic freelancers as a new category of workers including some aspects of their relationships with clients (Shevchuk and Strebkov 2012; Strebkov and Shevchuk 2012). Here we will more closely investigate problems of opportunism and the role of social ties in successful contracting on the Internet.

Opportunities and risks of freelance contracting

Flexibilization of employment and outsourcing entails declining job security and increased risk for individuals (Beck 1992; Beck 2000; Bauman 2001). There is a vast literature on contingent and precarious nature of nonstandard work (Barker and Christensen 1998; Bergström and Storrie 2003; Vosko 2005; Kalleberg 2011). Although many workers are forced into nonstandard work arrangements, there has been evidence that significant proportion of workers voluntarily choose nonstandard jobs and are more satisfied than employees with their work and life (Cohany 1998; Marler, Woodard Barringer, and Milkovich 2002). The breakdown of “psychological contracts” between workers and organizations based on mutual expectation of continued employment relationships triggered the development of “portfolio” or “boundaryless” careers (Handy 1989; Arthur and Rousseau 1996; Rousseau 1995; Hall 2001). This is especially the case for highly skilled contract professionals who in addition to greater work autonomy and better work-life balance could expect greater financial pay-offs selling their expertise directly on the open market (Barley and Kunda 2004, 62; Osnowitz 2010, 54).

Neoliberal ideological shifts facilitate new work ethos for more flexible and externalized employment by stressing self-reliance, self-efficacy and marketization of talent. In this discourse of “the enterprising self”, every job is temporary and every worker is “self-employed”, a “free agent” or a “company of one” (Gay 1995; Peters 1999; McGovern and Russell 2001; Pink 2001; Storey, Salaman, and Platman 2005; Lane 2011). Idealized employees should face market risks and exploit opportunities. The notion of “job security” with a particular client organization is abandoned in favor of market-based “employability” (Bridges 1994).

Contract professionals may have higher motivation, income and satisfaction, but their work could be still insecure and precarious (Barley and Kunda 2004; McKeown 2005; Osnowitz 2010). They feel anxiety about employability and unstable incomes generated by periods of

employment and downtime. Freelancers must cultivate human capital to mitigate uncertain and volatile markets, under a constant threat of skill obsolescence or losing their market value . Non-standard workers in general – and freelancers in particular – are poorly covered by social security systems which are aimed mainly at standard employment . Initially hoping for improved work-life balance, they could finally come in its deterioration due to overworking.

Compared to standard employment, greater risks are also connected with contracting itself. Having many clients and short-term business-like relations, freelancers face risks of moral hazard. Clients' opportunistic behavior could include non-payments, payment delays, changing work requirements or deadlines for deliverables. These topics are poorly covered by available literature. This may be because much of the research on professional contracting focuses on relatively stable institutional environments. For example, Barley and Kunda (2004) stress the growing influence of staffing agencies in shaping relationships between professional contractors and firms in the USA. Freelance contracting on the Internet is loosely structured institutionally and lacks legal enforcement. The risks for freelance contracting in such an environment still need close investigation.

The study

The basic economic notion of regular employment or business relationship in the market economy presuppose that actors conclude written contracts, meet face-to-face and find each other on the open market. In this study, we deal with freelance contracting on the Internet which is largely informal, virtual and shaped by social networks (Shevchuk and Strebkov 2012). We address a number of questions associated with risks of contracting and the ways a freelancer could mitigate them.

First: small-scale economic activity and underdeveloped legal procedures for Internet economies entail greater informality. Our data on freelance contracting in the Russian-speaking segment of Internet revealed that only about one out of ten freelancers and clients usually conclude formal written contracts (Shevchuk and Strebkov 2012). Thus, we ask what role do official formal contracts and legal enforcement play in freelance contracting? Could formal contracts prevent client-side opportunistic behavior? Does fixing agreements through informal, written correspondence (e.g. e-mails) matter? Does formalization of agreements through official contracts or written correspondence help resolve disputes between contracting parties?

Second: remote virtual communications create additional risks for contracting parties. In cyberspace trust can be elusive. Necessary information could be absent or fabricated.

Communication process cannot be controlled as a contracting party could suddenly go offline or disappear into cyberspace once for all. Do virtualized relationships between contracting parties have greater moral hazard risks? Alternatively, could meetings face-to-face decrease risks? Could disputes be effectively resolved via virtual as compared to face-to-face communication?

Third: conceptually, relationships between buyers and sellers in general, and in labor markets in particular, can be either transactional (arm's length) or relational (embedded). Whether relational contracting is good for freelancers is one of our concerns. Dealing with strangers in open markets is generally more risky than transacting with people one knows. We tested whether established social relationships with clients form a better basis for resolving conflict situations for freelancers. Research on social capital has demonstrated that trusted social networks can provide individuals with information of higher quality, business referrals and some social control (Granovetter 1995; Yakubovich and Kozina 2000; Yakubovich 2005). The literature of professional contracting also stress the important role of social networks in terms of risk coping strategies (Barley and Kunda 2004; Osnowitz 2006; Antcliff, Saundry, and Stuart 2007; Apitzsch 2010). Our study investigates whether such social capital findings are relevant to freelancers contracting on the Internet. We also address how freelancers find jobs, and whether open online markets are more risky than having regular clients and finding new ones through referrals. Might social capital and social ties generate opportunistic behavior?

Methods, sample and data collection

Traditionally standard employees have been the most accessible samples for employment surveys whereas researching nonstandard workers has been difficult due to their relatively peripheral status and intermittent physical presence in many locations, which has made them less accessible to researchers. (Ashford et al. 2007, 76).

In Russia, the overall number of self-employed professionals working via the Internet is very small and hardly ever falls into any nation-wide surveys, which also do not cover many specific aspects of freelance activity (Shevchuk and Strebkov 2012). To research our target group we used standardized online surveys and non-probability convenience sampling which is appropriate for surveys of specific groups (Bradley 1999; Schillewaert, Langerak, and Duhamel 1998; Fink 2002, 16–18). A Russian language web questionnaire was hosted on the website Free-Lance.Ru the largest online marketplace for Russian-speaking freelancers. At the time of our survey, Free-Lance.Ru reported about 750,000 registered profiles of both freelancers and

clients (although not all were active users). Other similar websites lagged far behind in terms of membership.

The survey started on 25 February, 2011 and proceeded through March. Two approaches were used to recruit participants. First, Free-Lance.Ru administrators sent subscribers an e-mail message describing the study's aims. Users were invited to self-administer the survey by clicking on a link to access the questionnaire. After 12 days a reminder e-mail was sent. An information banner was also placed on the Free-Lance.Ru website. Next the invitation with a link was placed on different Russian-language communities devoted to freelance work in social media such as LiveJournal, Facebook, Vkontakte and so on. Participation in this study was voluntary. We neither suggested nor provided any incentives for participants.

The questionnaire included more than 50 items covering a wide range of work and life topics with special block on freelancer-client relationship (Shevchuk and Strebkov 2012). Over a month 15,737 individuals viewed or attempted the online survey. We received 12,467 questionnaires reflecting a completion rate of 69.5%. To ensure data quality, we excluded data collected from incomplete responses (N = 1,389) or careless and misleading answers (N = 135). For the purpose of this study, we limited analysis to those respondents with complete information on all the variables in the basic regression model. First we excluded from the data set potential (future) freelancers (N = 1,885), beginners (N = 1,040), irregular (N = 270) and former freelancers (N = 569) because they did not fit the target sample. Second, we excluded those active freelancers with missing data (N = 1,395). Our analytic sample included 5,784 respondents.

Among our respondents, 61% were male and 39% female. The average age of respondents was 28.6 years; 59% were married or had a partner; 36% had a least one child living at home. Parents reported an average of 1.3 children; 61% of respondents had a university degree. Average work tenure was 7.8 years and freelance tenure was 2.6 years. On average, respondents worked 51.6 hours per week. Their median monthly post-tax income was close to 765 USD dollars. Participants in this study represented many countries, the most prominent of which were Russia (70%), Ukraine (11%), and Belarus (3%). Professional fields of respondents included: graphic design and creative arts (38), websites (29), writing and editing (29), computer programming (20), advertising, marketing and consulting (12), translating (10), photography (8), engineering and manufacturing (5), audio/video (5), other (3).

Respondents had different employment situations. For 51% freelancing was their only source of income, including students and women who had to look after small children. For 40%

it was their second job coupled with organizational employment, and 8% also managed their own business with hired employees.

We do not have reliable information about the size and social-demographic structure of our target group. The only information we have is the professional structure of freelancers reported on the Free-Lance.Ru immediately prior to the data collection. We used this information as the sampling frame for the study. In fact, the professional characteristics of the final sample closely resembled the characteristics of the overall population of Free-lance.ru.

An analysis of the cases with missing data (chi-square tests for categorical variables and t-tests for scale variables) shows that there were no significant differences in the age, marital status, level of education, country of residence, scope of professional skills, years of freelance tenure, number of clients and number of working hours per week. However, freelancers with missing data were more likely to be men (66%), people with lower incomes (median value equals \$665) and individuals having a regular job besides freelancing (46%).

Definition and Measurement of Variables

Dependent Variables

To assess the quality of relationships between freelancers and their clients, and the ultimate success of contracting, two variables were used: (1) facing problems caused by violation of established agreements during the last year and (2) being successful in solving these problems.

The fact of *facing violation of established agreements* was measured with a multiple-choice question: “*In the year 2010 did you face one or more situations where a client broke an initial agreement? If yes, in what way? (Select all that apply)*”. The possible answers for respondents were:

- Changes in initial requirements and specification
- Reduction of time to perform the order
- Cancellation of the order without compensation
- Payment delay
- Fully or partially unpaid fee
- Client disappeared
- Other situation (specify below)
- I did not face any of the situations list above, nor did I hear of any such situations

- I did not face any of the situations list above, but did hear of such situations

One can consider three of these situations – cancellation of the order without compensation; fully or partially unpaid fee; and disappearance of the client – as more serious than others, accompanied by direct financial losses. . So we constructed a dummy variable to characterize the degree of seriousness of these problems. It was scored 1 for respondents who experienced at least one of the “serious” problems listed above and 0 otherwise. In our regression analysis we considered the dummy variable as a dependent variable first, then analyzed each item separately.

The fact of being successful in solving their problems was measured with another multiple-choice question: “*When the initial agreements were broken by the client, did you manage to solve the problem? If yes, how did you manage to do this? (Select all that apply)*”. The possible answers for respondents were:

- Yes, through negotiations with the client
- Yes, the administration of an online marketplace service helped resolve the dispute
- Yes, through legal means
- Yes, through threats or physical means
- Yes, some other way (specify below)
- No, problems were never solved by the means listed above

Those respondents who hadn’t being in some conflict situations during last year (who checked one of the last two items in the previous question) had to skip this question.

Based on this question, we constructed new dummy variable coded 1 for respondents solving their problems successfully in any way, and 0 otherwise (‘no, problems were never solved by the means listed above’).

Percentages of dependent variables are presented in Table 2.

Table 2 about here

Independent Variables

We used the question about ways of getting new projects as an indicator of their embeddedness into some social networks. This multiple-choice question was: “*How do you usually get projects? (Select all that apply)*”. The respondents might choose any of the following items:

- I work with regular clients
- By referrals from former clients
- By referrals from friends and acquaintances
- I use online freelance marketplaces
- I use my own website
- I use forums, blogs, social networks on the Internet
- Other sources (specify below)

We divided all freelancers into three groups. The first group contained respondents who usually use exclusively “social ties” to get new jobs, such as regular clients; referrals from former clients; referrals from friends and acquaintances. The second group included people who usually use exclusively open market to get new jobs: online freelance marketplaces; their own web-site; or forums, blogs, social networking websites on the Internet. Finally, the third and the largest group consisted of freelancers who combine “social” and “market” ways of getting new projects. The category “other sources” was excluded.

So, in the regression analysis we included two dummies (1, 0) for people using “social” and ‘mixed” ways during job-searching respectively. Those respondents who usually use only “market” ways were considered as the reference category. Also we considered each item in this question separately, as an independent dummy variable.

To measure *the formalization of agreements* we use the question “*In what form do you usually make an agreement with your clients?*” followed by four alternative items:

- We draw up an official written contract
- We don't draw up an official contract but fix all the details in e-mail or informal, written correspondence with the client
- We have only a verbal agreement
- Other type of agreement (specify below)

In this case we created two dummies (1, 0): “We draw up an official written contract” and “We don't draw up an official contract but fix all the details in e-mail or informal, written correspondence with the client”. The category “We have only a verbal agreement” was considered as a reference group. The category “Other type of agreement” was excluded from the analysis.

The level of *virtualization of the relations* between a freelancer and a client was assessed by the question: “*Do you meet with your clients (face-to-face) while working on a project (e.g., to sign the agreement, discuss different questions, hand-over deliverables)?*” Responses were

made on a five-point Likert scale (1 = I never meet with my clients; 2 = I don't meet with my clients in most cases; 3 = I meet with my clients in about half of the cases; 4 = I meet with clients in most cases; 5 = I always meet with my clients) with lower scores indicating higher levels of virtualization. To ease the interpretation of the multivariate analyses, we recoded the measure into a 0 to 1 scale, with 1 indicating absence or rarity of the face-to-face contacts between freelancers and clients (positions 1 and 2 on the Likert scale) and 0 covering all other situations (positions 3, 4 and 5).

Control Variables

Gender, age, and education were used as regular control variables in all statistical analyses.

Gender was represented by a dummy variable (1 = female).

Age was measured as number of years from birth (continuous variable); a squared term for age was included to tap nonlinear effects.

For measuring *education* we used the item “What is the highest level of education you have successfully completed?” (university degree or no degree). Education was operationalized by a dummy variable with 0 as “absence of university education” and 1 as “some university education”.

Freelance tenure was calculated from the item “In what year did you begin working as a freelancer?” as 2010 minus the answered year. Total work tenure was excluded from the regression analysis because it was highly correlated with the age of respondents ($r = 0.860$). The correlation between freelance tenure and the age was significantly less ($r = 0.362$).

The most important thing to be controlled in the consideration of the relations between freelancers and clients is the intensity of their contacts. So we included in the models *logged number of clients* with whom a respondent worked with during 2010 (including only paid work).

The actual *level of income* was measured by a single item: “What was your total monthly post-tax income (in RUB) in 2010 including freelance and all other paid activities?” with six response categories ranging from poor (less than RUB 10,000) to very high (RUB 100,001 or more). We considered the poorest category as the reference group and aggregated three richest categories into one because very few people in our data set had monthly post-tax income over RUB 75,000 (8 percent). Accordingly we had three dummies for income groups: (1) RUB 10,001 - 25,000 per month; (2) RUB 25,001 - 50,000 per month; and (3) More than RUB 50,000

per month. Means and standard deviations or percentages of control and independent variables are presented in Table 3.

Table 3 about here

In the first stage of our analysis we also included in the statistical model some other variables that we suspected might be relevant: country or region of residence, area of expertise, self-reported level of professional mastery. None had significant interrelation with the dependent dummies, so we decided to exclude them from the analysis to present more easily interpretable and parsimonious models with only 6 control variables described above. The results of the regressions containing 6 and 10 control variables were consistent. None of the alternative specifications substantially changed the results reported here.

Method

We used a binomial logistic regression because dependent variables were dichotomous. This technique does not have limiting assumptions about data normality. The 0.05 level of significance was selected to discuss significant relationships highlighted by significant models. The control group was a man, 28.6 years old (average age for the sample), with a university education, a monthly post-tax income between 10,000 and 25,000 RUB, a freelance tenure of 2.6 years (mean value) and having deals with 8 clients during his last year (mean logged value also). All analyses were conducted using SPSS software version 15.0.

Results

Table 4 and Table 5 for the multivariate analyses present the odds ratios, which were calculated from coefficients in logistic regressions, and robust standard errors with coefficients' statistical significance. Table 4 shows the results of logistic regression analysis to see how the adding independent variables related to the *amount of social capital*, *level of formalization* and level of *virtualization* of relationships between freelancers and their clients makes a significant contribution to the prediction of getting into "serious" problems and being successful in resolving the problems. In the first and the third regression models (Model 1 and Model 3) we examined the effects of three major strategies of getting new jobs on the probability of having

and resolving problems. In the other two models (Model 2 and Model 4) we considered different job seeking channels separately. The regression results in Table 5 show the effect of predictors on the odds to be involved into all six different kinds of problems both “serious” (with direct financial losses) and “not-serious”.

Table 4, 5 about here

Agreement violations: having on or more “serious” problems

We consider the first two models connected with direct financial losses caused by client’s opportunism.

Control variables

The only control variables that are significant in the Models 1 and 2 are freelance tenure, logged number of clients and monthly post-tax income. There are no significant effects for gender, age or education. It is beyond the scope of this paper to examine these findings.

Formal contract vs. informal agreements

The form of an agreement between freelancers and clients does not make much difference. It is surprising that regardless of whether they have signed a written contract or they have only a verbal agreement, freelancers have approximately equal probability to be involved in conflict situations with “serious” consequences. This means that official contracts do not decrease risk of financial losses for independent contractors. It can’t diminish the probability of disappearance of the client, cancellation of the order without compensation or fully or partially unpaid fee. Table 4 shows that existence of a written contract, or even an informal written correspondence, significantly raises the odds of encountering “non-serious” problems such as changes in initial requirements and specifications (1.49 and 1.45 times respectively) or payment delay (1.34 and 1.22), compared with a situation when only a verbal agreement exists.

Face-to-face vs. virtual communication

Freelancers who use primarily virtual communications with their clients versus face-to-face communications are more likely to be involved into a conflict situation with “serious” consequences (their odds are 1.16 times higher). The absence or rarity of direct encounters between contractors results in the greater odds of the client’s disappearance (1.68) or fully or partially unpaid fee (1.16).

Open market vs. social ties

These results strongly suggest that the most serious problems between freelancers and their clients are associated with involvement into arm-length market relations. The odds of facing serious problems are 1.39 times greater if a person uses online freelance marketplaces for getting a new job. Accordingly, if freelancers use a “social” strategy, the odds of reporting serious problems are significantly lower (0.66 times) compared with a person using a “market” strategy. Meanwhile, using a “mixed” strategy doesn’t diminish significantly the probability to have no serious problems in comparison with a “market” strategy. We conclude that it is online freelance marketplaces which are the main sources of serious problems for independent contractors.

Freelancers using online marketplaces for job searches are more likely to face issues such as disappearance of a client (1.35), fully or partially unpaid fee (1.48), changes in initial requirements and specification (1.40) and payment delay (1.23). Moreover, among all six considered ways of getting a new job, only online marketplaces increase the odds the most upsetting problems such as the client’s disappearance or a fully or partially unpaid fee.

Contrariwise, freelancers relying only on their social ties are less likely to face client disappearance (0.70) or fully or partially unpaid fee (0.75). At the same time, their odds of experiencing payment delay are 1.40 times greater than those of people with a “market” strategy. More detailed analysis shows that it is freelancers working with regular clients who have the greatest problems with payment delays; their odds are 1.49 times greater. This suggests clients exploit social ties making worse conditions for their permanent contractors, hoping that they will be patient in light of long-term ties. Using other forms of social ties, namely referrals from former clients and referrals from friends and acquaintances, significantly increases the odds of changing initial requirements and specifications, net of all other predictors (1.49 and 1.35 times respectively).

Being successful in resolving the problems

Control variables

Among control variables only gender and level of monthly income have statistically significant effects on the probability of success in resolving problems with clients. Men and people with higher incomes are more likely to resolve a dispute through negotiations or by other means than women and low-income persons. Interestingly, highly-educated individuals and those with more freelance experience do not appear to have statistically significant differences in the odds successfully resolving problems compared with less experienced workers.

Formal contract vs. informal agreements

According to Model 3, existence of a written contract between a freelancer and a client substantially increases the odds of successful resolving problems, if they occur (1.87 times). At the same time, informal written correspondence does not appear to generate statistically significant differences compared with agreements in verbal form.

Face-to-face vs. virtual communication

Freelancers who meet their clients face-to-face are more likely to resolve the conflict than those who rely mainly on virtual communications. The odds are lower (0.69) for the people using only or mainly virtual contacts with clients.

Open market vs. social ties

Using both “social” and “mixed” strategies to get new jobs appears to greatly influence an individual’s abilities to resolve problems with clients. The odds are considerably higher for people relying on their social networks, no matter whether they use only social ties (1.67) or also some market ways (1.53). More deep analysis (Model 4) shows work with regular clients and work by referrals from former clients that contribute a great deal to increasing the odds of solving problems (1.37 and 1.34 times respectively). Using referrals from friends and acquaintances also shows a significant effect, but in this case improving the odds is less (1.20) compared with two other “social” forms of job searching.

Discussion

Based on the large sample of 5,784 Russian-speaking respondents this study provides the first quantitative evidence on freelance contracting via the Internet, filling a gap in the literature. Our analysis involves not one particular industry or occupational group as in many prior studies of contract work, but the wide range of expertise present in e-markets for freelance services, such as IT and engineering, graphic design and creative arts, writing and editing, marketing and consulting. Electronic freelancing is a very attractive research object in the new world of work as it represents a limit case for many popular concepts such as externalization, the boundaryless career, free agency and telework. Freelance e-markets are organized differently from those described in literature on contracting and project-based work (Baumann 2002; Blair, Culkin, and Randle 2003; Barley and Kunda 2004; O’Mahony and Bechky 2006; Apitzsch 2010). They lack local proximity of industrial districts (e.g. Silicon Valley or Hollywood), third party intermediaries such as staffing firms (especially in the USA) or institutionalized professional

control (as in medicine and law). At first glance, freelance e-markets resemble a neoclassical spot-market with dyadic and literally arm-length (remote) interactions between sellers and buyers in the absence of interfering institutions. However, the real world of electronic freelancing is far from the ideal model with anonymous buyers and sellers, and is largely shaped by social networks. Our study revealed that freelancers prefer to get jobs from regular clients than from open markets supported by solid infrastructure such as online-marketplaces. There has been robust evidence that obtaining new jobs in traditional labor markets is also very personalized both in the well-established market economies and in Russia as well (Granovetter 1995; Yakubovich and Kozina 2000; Yakubovich 2005). Yet in the case of electronic freelancing we encounter a certain paradox. Almost all our respondents (97%) are registered users of some online marketplace, but only half actually use it to obtain clients.

The results of our study provide a possible explanation for that contradiction. Our data reveals that virtualization of relationships with clients is associated with greater risks of moral hazard and fewer opportunities for dispute resolution. Formal written contracts do not prevent opportunistic client behavior. However, dealing with available social contacts and referrals decreases the probability of financial losses caused by client opportunism. Thus, our findings agree with previous findings in the literature on social networks and risk mitigation. Earlier studies revealed that relying on social networks helps individuals maintain employability, enhance professional skills and prevent social isolation (Barley and Kunda 2004; Osnowitz 2006; Antcliff, Saundry, and Stuart 2007; Apitzsch 2010). We provide evidence that social capital helps to avoid the most dangerous forms of client's opportunism, entailing direct financial losses. Nevertheless, we also found out that established social relations could be exploited by clients who can delay payments or insist on altering deadlines, work scope and specifications.

Another conclusion contributes to debates about jobs quality in the new economy: whether nonstandard employment of highly-skilled professionals should be treated as insecure and precarious (Smith 2001; McKeown 2005). Our data on Russian-speaking freelancers working via the Internet reveal high levels of insecurity and precarity in terms of agreements reliability. Thus, electronic freelancer acts under the constant threat of malfeasance from clients.

We can also apply our results to general discussions of production models. Electronic freelancers do not fit the popular image of atomized global actors surfing the Internet for jobs. Every third respondent in our study relied exclusively on social ties and did not work through anonymous markets at all. Such work practices are embedded in interpersonal social networks,

resembling medieval artisans and providing the evidence for reemergence of craft production (Piore and Sabel 1986; Barley and Kunda 2004, 8)

Our study has several limitations. First, it was conducted in the unique historical, cultural and institutional context of Russia and other former soviet economies (Shevchuk and Strebkov 2012). Second, Russian websites slightly lag behind their English-language counterparts in institutional support for online markets. However, we believe that our results are sufficiently representative, as electronic freelancing is a new global work model based on particular technological and institutional solutions. Comparative perspectives would be a good addition for the agenda of future research.

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Appendix

Table 1. Leading online marketplaces for freelancers

	Year of foundation	Working language	Registered users
Freelancer.com	2004	Eng.	4,000,000
Elance.com	1999	Eng.	3,000,000
oDesk.com	2003	Eng.	2,700,000
Guru.com	2000	Eng.	1,000,000
Free-lance.ru	2005	Rus.	1,200,000
vWorker.com	2001	Eng.	600,000

Table 2. Percentages of Dependent Variables

	N	Percentage
Getting into conflict situations with clients	4201	72.6
Client disappeared	1689	29.2
Fully or partially unpaid fee	1567	27.1
Cancellation of the order without compensation	968	16.7
Changes in initial requirements and specification	2561	44.3
Payment delay	2483	42.9
Reduction of time to perform the order	606	10.5
Other situation (specify below)	24	0.4
Having one or more “serious” problems	2647	45.8
Having only “non-serious” problems (one or more)	1554	26.9
I did not face any of the situations list above, nor did I hear of any such situations	1299	22.5
I did not face any of the situations list above, but did hear of such situations	284	4.9
Being successful in resolving their problems	2540	60.5
Yes, through negotiations with the client	2366	56.3
Yes, the administration of an online marketplace service helped resolve the dispute	151	3.6
Yes, through legal means	44	1.0
Yes, through threats or physical means	165	3.9
Yes, some other way (specify below)	90	2.1
No, problems were never solved by the means listed above	1661	39.5

Table 3. Means or Percentages of Independent and Control Variables

	N	Mean or percentage	SD
Ways of getting new jobs by freelancers (%)			
I work with regular clients	4081	70.6	
By referrals from former clients	2981	51.5	
By referrals from friends and acquaintances	2345	40.5	
I use online freelance marketplaces	2923	50.5	
I use my own web-site	828	14.3	
I use forums, blogs, social networks on the Internet	1111	19.2	
Type of strategy (%)			
“Market” strategy (ref)	736	12.7	
“Mixed” strategy	3091	53.4	
“Social” strategy	1957	33.8	
The form of an agreement with clients (%)			
We have only a verbal agreement (ref)	1969	34.0	
We don't draw up an official contract but fix all the details in e-mail or informal, written correspondence with the client	2983	51.6	
We draw up an official written contract	673	11.6	
Do you meet with your clients (face-to-face) while working on a project? (%)			
I meet with my clients always / in most cases / in about half of the cases (ref)	1987	34.4	
I don't meet with my clients in most cases / I never meet with my clients	3797	65.6	
Gender (%)			
Male (ref)	3505	60.6	
Female	2279	39.4	
Age (years)	5784	28.62	8.42
Education status (%)			
Absence of university education (ref)	2228	38.5	
Some university education	3556	61.5	
Freelance tenure (years)	5784	2.62	3.50
Number of clients in 2010	5784	13.70	17.44
Logged number of clients in 2010	5784	2.07	1.02
Monthly post-tax income (%)			
Less than 10,000 RUB / month (ref)	1082	18.7	
10,000 - 25,000 RUB / month	2080	36.0	
25,000 - 50,000 RUB / month	1597	27.6	
More than 50,000 RUB / month	1025	17.7	

Table 4. Regression Coefficients for Having “Serious” Problems and Being Successful in Resolving the Problems

	Having one or more “serious” problems				Being successful in resolving the problems			
	Model 1		Model 2		Model 3		Model 4	
	e ^B	S.E.	e ^B	S.E.	e ^B	S.E.	e ^B	S.E.
Female (male – ref)	.91	.06	.91	.06	.77	.07***	.79	.07**
Age	.96	.02	.97	.02	1.04	.02	1.03	.02
Age ²	1.00	.00	1.00	.00	1.00	.00*	1.00	.00
University education (absence of the university education – ref)	.96	.06	.95	.06	.98	.07	1.00	.08
Freelance tenure	1.02	.01*	1.02	.01*	1.01	.01	.99	.01
Logged number of clients in 2010	1.63	.03***	1.64	.03***	1.07	.03	1.02	.04
Monthly post-tax income (less than 10,000 RUB / month – ref)								
10,000 – 25,000 RUB / month	.82	.08*	.82	.08*	1.46	.09***	1.45	.09***
25,000 – 50,000 RUB / month	.69	.09***	.69	.09***	1.73	.10***	1.64	.10***
More than 50,000 RUB / month	.56	.10***	.56	.10***	2.66	.13***	2.46	.13***
Type of strategy (“Market” strategy – ref)								
“Mixed” strategy	.90	.09			1.53	.10***		
“Social” strategy	.66	.09***			1.67	.11***		
Ways of getting new jobs by freelancers								
Work with regular clients			.94	.06			1.37	.08***
Referrals from former clients			.95	.07			1.34	.08***
Referrals from friends and acquaintances			1.00	.07			1.20	.08*
Online freelance marketplaces			1.39	.06***			.97	.08
His (her) own web-site			1.05	.08			1.18	.10
Forums, blogs, social networks on the Internet			1.10	.07			1.10	.09
The form of an agreement with clients (verbal form – ref)								
Informal written correspondence	1.02	.06	1.02	.06	1.14	.07	1.12	.07
Official written contract	.91	.10	.93	.10	1.87	.13***	1.83	.13***
Virtual contacts with clients (face-to-face contacts – ref)	1.16	.07*	1.12	.07	.69	.08***	.74	.09**
(Constant)	.80	.32	.58	.32	.38	.38*	.45	.38*
N	5784		5784		4201		4201	
Nagelkerke R Square	.107		.108		.091		.102	
L.R. X2 (df)	480.3 (14) ***		485.1 (18) ***		293.4 (14) ***		329.6 (18) ***	

Note. *p < .05, **p < .01, ***p < .001.

Table 5. Regression Coefficients for Getting into Some Conflict Situations with Clients (Separately for Each Problem)

Dependent Variable	Client disappeared		Fully or partially unpaid fee		Cancellation of the order without compensation		Changes in initial requirements and specification		Payment delay		Reduction of time to perform the order	
	e ^B	S.E.	e ^B	S.E.	e ^B	S.E.	e ^B	S.E.	e ^B	S.E.	e ^B	S.E.
Female (male – ref)	.93	.07	.96	.07	.98	.08	.51	.06***	.95	.06	1.18	.09
Age	.91	.02***	1.03	.02	.98	.02	1.07	.02**	1.03	.02	1.01	.03
Age ²	1.00	.00***	1.00	.00	1.00	.00	1.00	.00***	1.00	.00	1.00	.00
University education (absence of the university education – ref)	.93	.07	.97	.07	.76	.08**	.79	.06***	.84	.06**	.88	.10
Freelance tenure	1.00	.01	1.03	.01**	1.04	.01***	1.04	.01***	1.03	.01***	1.06	.01***
Logged number of clients in 2010	1.62	.03***	1.47	.03***	1.46	.04***	1.43	.03***	1.57	.03***	1.28	.04***
Monthly post-tax income (less than 10,000 RUB / month – ref)												
10,000 – 25,000 RUB / month	.81	.08*	.81	.09*	1.05	.10	1.33	.08**	.97	.08	.99	.13
25,000 – 50,000 RUB / month	.62	.10***	.70	.10***	.92	.12	1.33	.09**	.98	.09	1.09	.14
More than 50,000 RUB / month	.56	.11***	.56	.11***	.76	.13*	1.16	.10	.87	.10	.94	.16
Type of strategy (“Market” strategy – ref)												
“Mixed” strategy	.94	.09	1.01	.10	1.13	.12	1.51	.09***	1.50	.09***	1.28	.16
“Social” strategy	.70	.10***	.75	.11**	.87	.13	1.18	.10	1.40	.10**	1.37	.17
The form of an agreement with clients (verbal form – ref)												
Informal written correspondence	.98	.07	1.02	.07	1.08	.08	1.45	.06***	1.22	.06**	1.32	.10**
Official written contract	.90	.12	.87	.11	.96	.13	1.49	.10***	1.34	.10**	1.18	.15
Virtual contacts with clients (face-to-face contacts – ref)	1.68	.08***	1.16	.07*	.80	.08**	.74	.07***	1.12	.06	.72	.10**
(Constant)	.73	.35	.12	.36***	.14	.41***	.13	.35***	.13	.33***	.05	.54***
N	5784		5784		5784		5784		5784		5784	
Nagelkerke R Square	.129		.064		.053		.128		.084		.034	
L.R. X2 (df)	546.4 (14) ***		261.8 (14) ***		184.8 (14) ***		581.5 (14) ***		375.5 (14) ***		97.1 (14) ***	

Note. *p < .05, **p < .01, ***p < .001.

Fig. 1. Probability of Getting into One or More “Serious” Problems (percent)

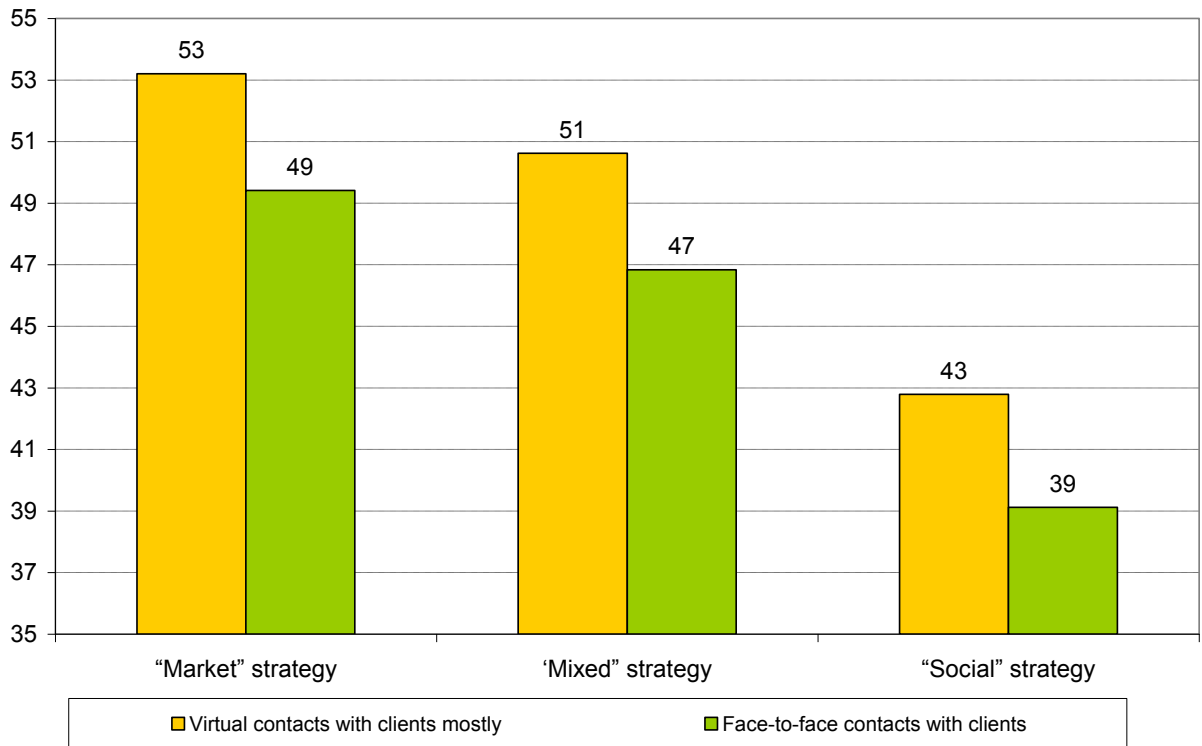
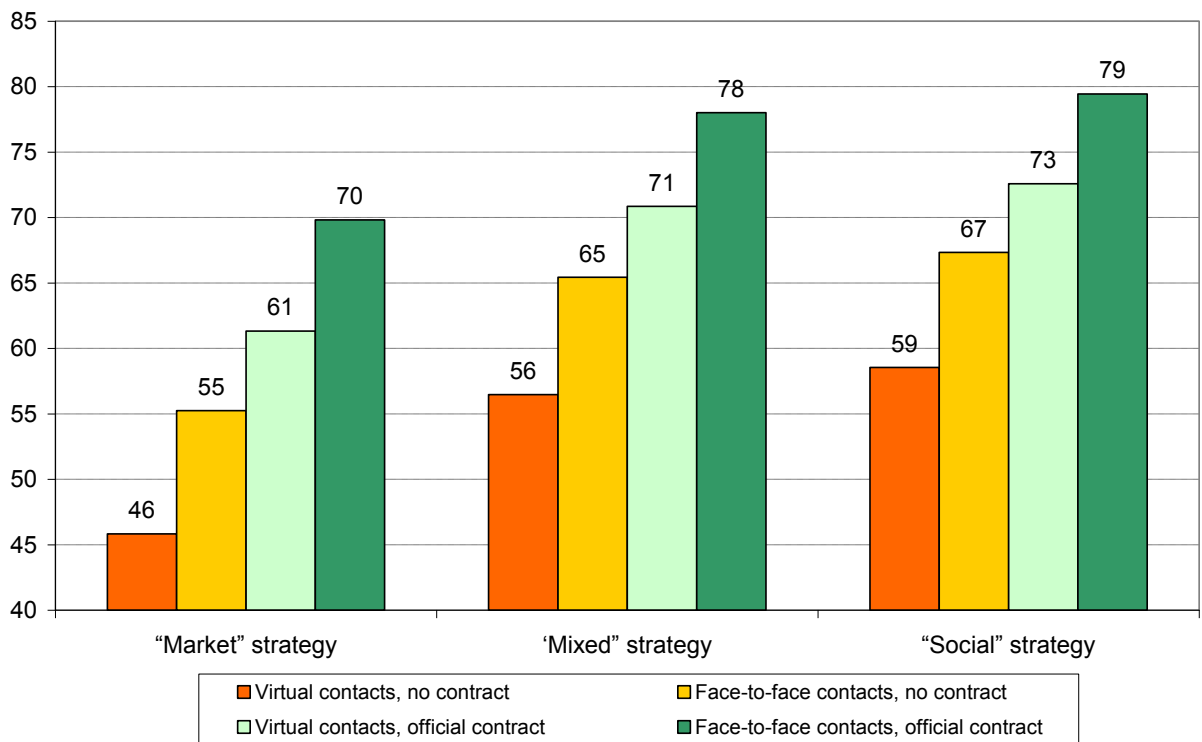


Fig. 2. Probability of Being Successful in Resolving the Problems



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