

**Getting Personal: The Use of Networks For Successful
Job Searches in Russia, 1985-2001***

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Since the publication of Granovetter's seminal book, *Getting a Job*, in 1974, stratification researchers and economic sociologists have devoted much attention to the role played by personal networks in the job search process. Most of the research on networks and labor market outcomes has focused on the United States or other market societies (see the review in Granovetter [(1974) 1995]). Little has systematically examined change over time.

We examine the role of personal networks and other search strategies in a "transition" society – i.e., contemporary Russia. We focus on the *dynamics* of the frequency, determinants, and consequences of network usage from 1985 through 2001, a 17-year period marked by dramatic institutional changes. Our large, representative sample and extensive work histories permit us to build upon and expand the findings of other studies that have examined the economic sociology of job searches in transition societies (Bian 1997, 2002; Clarke 1999; Yakubovich and Kozina 2000). These societies provide a unique opportunity to assess how job search processes are shaped by institutional context. We also contribute to the literature on post-Socialist stratification by illuminating the role played by personal networks in patterns of inequality in late-Soviet and post-Soviet Russia.

After a brief discussion of the theoretical issues informing our analyses, we examine whether the predominant forms of successful job search changed following the institutional transformations of Russia's economy and labor market associated with the collapse of the Soviet system and the process of market transition. By "successful" strategies, we refer to strategies that result in a new job. We find that the most noteworthy trend is a growth in the proportion of new jobs that are obtained using

personal networks. However, this growth came not at the expense of formal market institutions – at least one of which, the use of advertisements – also grew, but at the expense of unsolicited direct individual applications, which had been the predominant successful strategy during the late Soviet era.

Due to the emphasis on personal networks – often referred to as “social capital” – in the broader literature on search strategies, we focus the rest of our analyses on this method of getting a job. First, we examine what factors predict the use of personal networks in successful searches, with particular emphasis on the effects of age, gender, education, and membership in the Communist Party of the Soviet Union (CPSU), and on change over time in the effects of these factors. Next, we examine the effects of using personal networks on the quality of job obtained. We consider three different measures of job quality: 1) an occupational index based on the logged average earnings for each 4-digit ISCO occupation in Russian; 2) the probability that the new job is in a private sector firm, where wages are typically higher and wage arrears lower in contemporary Russia, and 3) current logged earnings. In each case, we first estimate the zero-order effects of personal networks and other strategies, then we control for other factors that we expect to influence the outcome, then we test for variation in the effects of personal networks by age, gender, education, and CPSU membership, as well as change over time in the main effect of personal networks and its interaction with these other four variables.

Theories and Hypotheses

Personal Networks and Labor Market Outcomes

Granovetter ([1974] 1995) argued that personal networks – especially the weak ties within them – provide superior information about job opportunities, as well as

possible influence over the decisions of employers. Therefore, jobs obtained through networks tend to be of better quality than those obtained through formal or individual means. From this perspective, network contacts are a form of “social resource” that can be deployed to improve opportunities in the labor market (Lin, Ensel, and Vaughn 1981). Much of the ensuing literature surrounding the use of ties has focused on differences in the returns to different types of ties (e.g. Bridges and Villemez 1986; Wegener 1991; Montgomery 1992).¹

These studies typically analyze only individuals who used some form of personal contact to obtain their current job, implicitly assuming rather than determining empirically that ties yield higher returns than other search methods. Marsden and Hurlbert (1988) directly tested for an earnings return to social networks and found no significant effect, net of other variables. Corcoran, Datcher, and Duncan (1980) did find an earnings return, at least at the outset of new jobs. Thus, the widespread belief that using social networks should be treated as a hypothesis to be assessed empirically rather than an established fact:

Hypotheses 1a-1c: The use of personal networks to obtain a new job positively affects a) the quality of the occupation of the new job; b) the probability that the new job is in the private sector²; c) current earnings.

¹ Our data do not permit us to distinguish between strong and weak ties, therefore we do not address this issue. We note, however, that although the theoretical logic underlying the “strength of weak ties” argument is compelling, empirical support for the claim is weak at best, especially when controls are introduced (see Bridges and Villemez 1986; Marsden and Hurlbert 1988; Wegener 1991). Bian’s recent research shows little significant effect of the strength of ties on other tie characteristics and on certain labor market outcomes in contemporary China (Bian 2002).

² In contemporary Russia, earnings are substantially higher in private sector firms (Gerber and Hout 1998; Gerber 2000, 2001).

Hypothesis 2: The “returns” to personal networks remain, net of other factors that affect occupational quality, access to the private sector, and earnings.

By evaluating the validity of these hypotheses in late-Soviet and post-Soviet Russia, we test the received wisdom that social networks in fact yield a better job and higher earnings.

We also directly test claims made about Russian society and about the role of social capital in post-Socialist stratification. Many observers view Russian society as one where networks play an unusually important role in social and economic life, as they served as the basis for relations of trust and reciprocal obligation that helped individuals cope with the Soviet-era economic scarcities and an atmosphere of low generalized trust that continues to prevail (McDaniel 1996; Ledeneva 1998; Yakubovich and Kozina 2000; Guseva and Rona-Tas 2001). These claims are difficult to document empirically, but they clearly imply that social networks provide an advantage on the labor market in Russia. Studies of post-socialist stratification frequently claim that social capital has especially strong influence on material opportunities in the context of market transition (Rona-Tas 1994; Hanley, Yershova, and Anderson 1995; Rona-Tas and Guseva 2001). However, these studies do not directly measure social resources; instead, they treat membership in the Communist Party as a proxy for social capital. Ours is the first study to our knowledge to directly measure the labor market returns to social capital.

Variation in the Effects of Networks

The general literature on networks also emphasizes variations in the quality of network resources by characteristics such as gender (McPherson and Smith-Lovin 1982; Campbell 1988; Munch, McPherson, and Smith-Lovin 1997), education and occupational

status (Marsden and Hurlbert 1988; Wegener 1991), and race (Mouw 2002). We do not have direct measures of network quality. However, variations in network quality should show up as variations in the returns to networks. If, for example, Russian women have poorer-quality network resources than Russian men, it would follow that female returns to networks are lower than male returns. We focus on possible variations in the returns to networks by gender, age, education, and CPSU membership.

We expect that the quality of women's networks with respect to labor market opportunities will be lower in Russia than the quality of men's networks, for the same reasons that explain the gender gap in network quality in the United States (e.g. McPherson and Smith-Lovin 1982; Campbell 1988):

Hypothesis 3a: Russian women have lower labor market returns to networks than do Russian men.

We would expect the quality of younger workers' networks to be lower than that of older workers, because younger workers have had less time to cultivate work-related ties:

Hypothesis 3b: Younger Russian workers have lower labor market returns to networks than older workers.

The higher the status or one's contacts, the greater the returns to using them for information and influence in the job market (Lin, Ensel, and Vaughn 1981; Wegener 1991). Education is a good proxy for status, and the social homophily principle implies that the highly educated will have more ties with other highly educated people than do less educated people:

Hypothesis 3c: College educated Russians have higher labor market returns to networks than Russians without college.

Finally, the claims described that Communist Party members do better in post-Socialist societies due to their superior social capital (Rona-Tas 1994; Hanley, Yershova, and Anderson 1995; Rona-Tas and Guseva 2001) imply that their networks are of better quality for the purpose of securing labor market opportunities:

Hypothesis 3d: CPSU members have higher labor market returns to networks than do non-Party members.

This hypothesis is especially important to test, because the “social capital” explanation of Communist Party members’ advantages has been challenged. Gerber (2000b, 2001b, 2002b) argues that the returns to Party membership reflect not social capital but higher average stocks of unobserved human capital on the part of Party members that resulted from the processes governing selection into the Party. The “social capital” and “selection” explanations have not been adjudicated using explicit measures of the social capital of Party members vs. non-Party members.

Determinants of Successful Search Strategies

Some studies have examined factors that influence the probability of using networks to find a job (Granovetter [1974] 1995; Corcoran, Datcher, and Duncan 1980; Marsden and Hurlbert 1988). A straightforward rational choice perspective implies that those with more favorable networks will be more likely to use them. Therefore, we might derive parallel hypotheses to those referring to the variations in returns to networks. However, the literature tends to suggest the opposite effects: older, better-educated, and higher status workers are *less* likely to use networks even though they

presumably have better-quality networks. These findings imply that the use of networks rather than other means of obtaining a new job depends more on the quality of other resources rather than on the quality of networks (see Montgomery 1992; Mouw 2002).

Reasoning along these lines leads to a different set of expectations. Russian women are openly discriminated against in job advertisements (Ashwin and Yakubovich 2002) and women have lower job-to-job mobility in post-Soviet Russia than men (Gerber 2002b; Gerber and Mayorova 2003). This means that women who want new jobs have fewer opportunities to attain such jobs by responding to ads or sending in unsolicited applications:

Hypothesis 4a: Russian women who obtain new jobs are more likely to have used networks to do so than are Russian men.

A similar logic applies to younger workers, who probably lack the occupation-specific skills and experience emphasized by employers and thus might be more likely to have used networks to find new jobs.

Hypothesis 4b: Younger Russians who obtain new jobs are more likely to have used networks to do so than are older Russians.

The highly educated presumably can better rely on their formal qualifications, and thus are less in need of personal networks.

Hypothesis 4c: College-educated Russians who obtain new jobs are less likely to have used networks to do so than are Russians with less education.

Finally, if CPSU membership “signals” employers that an applicant has high unobserved human capital (Gerber 2000b), then the same applies to them:

Hypothesis 4d: Former CPSU members who obtain new jobs are more likely to have used networks to do so than are Russians who were not members of the CPSU.

Changing Institutional Context

Despite the growing interest in how institutional arrangements affect stratification processes (Kerckhoff 1995), there has been little or no attention to how institutions affect job search strategies.³ The Soviet Union collapsed at the end of 1991 and the Russian government introduced a series of radical market reforms in January 1992 (for details, see Blasi, Kroumova, and Kruse 1997). The dramatic change in institutional setting within Russia offers a unique opportunity – because we have job history data spanning the late-Soviet and post-Soviet periods – to examine whether and how institutional context shapes the prevalence of different job search strategies, the labor market returns to personal networks, and the variations in these returns by individual characteristics.

Earlier studies of Russia based on limited samples have found that the use of networks to find jobs persists or even increases as a result of market transition (Clarke 1999; Yakubovich and Kozina 2000). These studies argue that state socialist labor market institutions (such as administrative job assignments by state organs) declined due to the collapse of the Soviet system, but market institutions (such as job advertisements and private employment agencies) were slow to emerge in their place. The resulting vacuum left networks as the primary basis for finding jobs. This account overlooks the fact that individual application – not state assignment – was the primary method of successful job search in the Soviet era. Obviously state assignments should diminish

³Granovetter ([1974] 1995) reviews findings on the use of networks in variety of countries, but systematic comparisons of the use of or returns to networks in different institutional contexts are lacking.

following the collapse of the Soviet system, but it is not clear why the disappearance of administrative assignments should lead networks to supplant individual application

A more compelling theoretical rationale for predicting this pattern can be derived if we focus on the employer side of the hiring process rather than the applicant side. Soft budget constraints, taut plans, poor technology, an extensive pattern of growth, and endemic shortages all produced a general labor shortage in the Soviet Union (Kornai 1981). Russia's market transition produced, if incompletely, a shift from a supply-constrained to a demand-constrained labor market (see Gerber 2002b). When labor is in short supply and budget constraints are soft, unsolicited individual applications for jobs are more likely to lead to hires, because firms generally wish to hire more workers and the costs of making "bad" hires are low. When there is a labor surplus and budget constraints are hardening, employers have both the opportunity and incentive to be more selective in evaluating applicants. As the "stakes" involved in the search process are raised, employers should become more hesitant to take on applicants with whom they are not linked by a contact, particularly if the application is unsolicited.

Hypothesis 5a: In the course of market transition, the proportion of hires effected via individual application declines.

Correspondingly, they should also rely more on networks as a basis for information about and trust in potential employees:

Hypothesis 5b: In the course of market transition, the proportion of hires effected via personal networks increases.

In short, networks insure employers against uncertainty under both socialism and capitalism, but uncertainty is greater threat to employers in the former than in the latter.

Moreover, because search costs increase in a market context, they should also increasingly use advertisements as a way to filter out unqualified applicants:

Hypothesis 5c: In the course of market transition, the proportion of hires effected via job advertisements increases.

Finally, if private property is associated with tighter budget constraints than state property, then private employers should be more reliant on personal networks in making hiring decisions. This implies Hypothesis 2b above. This institutional argument – which links employer preferences for networks to the competitive pressures and hard budget constraints associated with markets and private property – also might explain Bian’s (2002) findings that the use of either indirect or direct ties in job searches increased the probability of finding a private sector job in reform-era China.

The institutional changes associated with market transition might also affect the overall labor market returns to networks, as well as the variations in returns by gender, age, education, and CPSU membership. The logic underlying Hypotheses 5a-5c also implies that as market transition progresses, good jobs are increasingly allocated through networks, leaving only bad jobs to be filled via formal means or individual application:

Hypothesis 6: The labor market returns to networks increase over the course of market transition.

Growing discrimination against women on the labor market implies that the women who obtain jobs through formal means or direct application will, increasingly, land in the poorest quality jobs; the importance of networks as a means for securing a reasonably high quality job may increase faster for women than for men:

Hypothesis 7a: The labor market returns to networks increase in the course of market transition for women, relative to the returns for men.

If, as Nee argues (Nee 1989, 1991, 1996; Cao and Nee 2000), market transition increases the premium on human capital, then more experienced (older) and better educated workers should be able to reap advantages from their formal qualifications, implying that formal search processes should yield relatively better results for them over time:

Hypotheses 7b-7c: The labor market returns to networks decrease in the course of market transition for older and college educated workers, relative to the returns for younger and less educated workers.

The collapse of the CPSU in 1991 might have decreased the quality CPSU members' networks relative to the quality of non-members networks by removing any direct political or administrative advantage of CPSU membership:

Hypothesis 7d: The labor market returns to networks decrease in the course of market transition for CPSU members, relative to the returns for non-members.

Data, Measures, and Methods

Our data come from a brand new survey, the *Survey of Stratification and Migration Dynamics in Russia* (SSMDR), conducted in Russia from September 2001 – January 2002. The vehicle for the survey was the bi-monthly “monitoring” surveys conducted by the All Russian Center for Public Opinion Research (VTsIOM), which are based on multi-staged cluster samples drawn in 41 of Russia's 89 provinces. A special bloc of questions obtaining detailed employment/job histories spanning December 1984 to the time of the survey was added to the three monitoring surveys conducted from

September 2001-January 2002. A range of information on up to five new jobs obtained by respondents since December 1984 was collected, including the primary means by which they found the job (our measure of job search strategy), the occupation, industry, employment type (self-employed vs. hired), and size and property form of firm. Respondents reported a total of 8,389 new jobs begun since December 1984. We also have data on the standard set of background variables and current earnings.⁴

Our key measure is the primary method(s) used by the respondent to obtain each new job begun after December 1984.⁵ Respondents were asked: “In what manner did you find/obtain this job?” The response categories were as follows:

1. I used the state employment agency.
2. I used a private employment agency.
3. My relatives, friends, or acquaintances helped me.
4. Through an advertisement in the newspaper, radio, television, etc.
5. I personally applied to the organization’s personnel department.
6. I sent my resume to the organization’s personnel department.
7. I changed jobs within the same organization.
8. I entered a competition announced by the enterprise.
9. I looked for opportunities for self-employment.
10. I was assigned to the job after completing my education.
11. I returned to the job from maternity leave.
12. I returned to the job after the army or another temporary job.
13. Other.

All thirteen categories are clearly too unwieldy to be analyzed separately. Yet, for the reasons described above we believe it is insufficient to simply distinguish between personal networks and other search methods. Therefore, we adopt the following 7-category classification of search methods (with constituent response categories in

⁴ The survey also contains migration and family structure histories spanning the same period. We are still cleaning these histories, so we do not include variables pertain to place of residence or family structure in our analyses. Since both sets of factors might influence the use and consequences of personal networks in job searches, we plan to add them to our models as soon as the relevant data are ready for analysis.

⁵ Budgetary limitations precluded determining how the job held in December 1984, the outset of the observation window, was obtained. But since our focus is on the late-Soviet and post-Soviet periods, this loss of information, while unfortunate, is not crucial.

brackets: 1) personal networks [3]; 2) public or private employment agencies [1,2]; 3) job advertisements of announcements [4,8]; 4) direct application [5,6]; 5) self-employment [9]; 6) state assignment [10]; 7) other [13]. We view returns to prior jobs from maternity leave [11] or the army [12] as non-searches; we therefore exclude the corresponding jobs from our analyses. The same goes for intra-firm job changes [7], which involve internal rather than external labor markets. We are missing data on the search method for 389 new jobs, which also must therefore be excluded. We also exclude jobs obtained by respondents before they reached the age of 16. With these sample restrictions, our sample consists of 7500 new jobs obtained via active external searches by 3854 respondents from 1985-2001. For our multivariate analyses we omit jobs involving self-employment, on the grounds that self-employment is a form of exit from the labor market.

Our measures of other variables are straightforward, with one exception. We require an occupation-based measure of job desirability in order to model the effects of networks on job quality for jobs obtained prior to the current job. We measure occupational quality using a scale created by Gerber using 14 surveys conducted in Russia from 1991 through 2000. The scale is based on the mean logged earnings in constant (December 1997) rubles for each 4-digit 1988 ISCO occupation.⁶ This “occupational logged earnings index” (OLEI) is an empirically derived method for scaling occupations in transition-era Russia. It suffers from one major failing: by pooling surveys conducted at different times (in order to maximize the number of observations in each 4-digit category) the index assumes stability over time in the

⁶ For occupations with fewer than 20 valid observations in Gerber’s data, the assigned scale values are weighted averages of the 4-digit and 3-digit means. Details will be provided upon request.

average earnings accruing to different occupations. On the other hand, the index performs fairly well as a predictor of earnings: its zero-order effect on the logged earnings of SSMDR respondents with valid earnings and occupations is .98 – which is near unity – and it alone explains 20% of the variance, which is impressive for a one-degree-of-freedom measure a sample the size of the SSMDR, particularly since the SSMDR data were not included in the computation of the index. Thus, we believe the OLEI is a reasonably valid measure of the earnings that normally accrue to a particular occupation.

Models

We begin by examining trends over the time in the proportion of new jobs that are obtained using each of the seven search methods (Hypotheses 5a-5c). Next we estimate logistic regression models to evaluate the effects of gender, age, education, and CPSU membership on the probability of using networks (Hypotheses 4a-4d). We then analyze the labor market returns to networks (Hypotheses 1a-1c, 2a-2c, 3a-3d, 6, 7a-7d) by examining bivariate trends and estimating multivariate models of the appropriate form. We use three measures of the returns to networks: the OLEI score of the job obtained, the probability that the job obtained is in a privately owned firm, and current earnings. For each multivariate analysis, we begin with either a zero-order or reduced form model, then test for change over time in the intercept, then test for interactions involving time. Since we lack a strong theory about the precise functional form of change over time, we test a variety of specifications for changes in intercepts and changes in the effects of individual characteristics and/or the interactions between individual characteristics and

networks (see Gerber 2002b). To simplify the exposition of results, here we report only results from the best-fitting specifications.⁷

Results

Trends in Successful Search Strategies

We depict trends in the relative frequency of different search strategies by plotting the proportion of successful searches reported by our respondents during each year of the period under study that resulted from each of seven strategies: personal networks, employment agencies, job advertisements or announcements, direct application (sending in an unsolicited resume or directly applying to the personnel department), self-employment, state assignment, and “other” (Figure 1).⁸ The trends are consistent with Hypotheses 5a-5c. The most striking development since the late Soviet era has been a sharp increase in the proportion of hires resulting from the use of personal networks. Personal networks already played a substantial role in the late Soviet era: in 1985, they were primary basis for 33.5% of the hires reported by our respondents. By 2001, the figure increased to 57.2%. Our data thus confirm the findings reported by Clarke (1999) and Yakubovich and Kozina (2000) based on more limited data: the importance of personal networks on the Russian labor market has significantly increased following the introduction of market reforms. The most pitched two-year growth in the relative importance of personal networks in the labor market occurred in 1991 and 1992, the years when the Soviet Union collapsed and the “shock therapy” reforms were introduced.

⁷We recognize that our design incorporates potential selection bias due to the endogeneity of job changes with regard to the outcomes modeled. We plan to take the appropriate steps to deal with the issue in the near future.

⁸ We exclude new jobs that resulted from a return to a previously-held job from maternity leave or military service, as well as jobs that involved re-assignment to a new position by one’s current employer (since these jobs involve internal rather than external labor markets) and those for which the data on search strategy are missing.

The growth in the importance of personal networks came mainly at the expense of direct application, which accounted for over 51.2% of new jobs in 1985 but only 21.3% by 2001. Another noteworthy trend is the growth of hires that result from responses to formal advertisements. In proportional terms, this type of search strategy grew most of all: from about 3.0% of new hires in 1985 to 14.1% in 2001, making ads the third most common successful search strategy by then. This finding suggests that formal market institutions *have* taken on significantly greater importance in the Russian labor market: the virtual absence of job advertisements in Soviet times underlines that this method of formally communicating information about jobs is a distinctively “market” institution. Other studies (Clarke 1999; Yakubovich and Kozina 2000) have combined the use of ads with the use of agencies and direct applications. On the basis of stagnant or downward trends in the combined category, they have concluded that formal market institutions have not played an increased role in the Russian labor market. It is not clear why direct applications should be viewed as using formal market institutions, since they in fact involve the use of neither formal intermediaries (agencies) nor formalized information channels (advertisements). In fact, direct application is probably the least formal of any search strategy, and its relative decline should not be interpreted as evidence against the growth of formal institutions in the labor market. As for public or private employment agencies, our data also show that their use remains limited. But by disentangling the use of ads from the other search techniques (which our large sample permits us to do), we arrive at a different conclusion regarding formal market institutions more generally: their role in the Russian labor market has clearly increased.

Our data also capture the practical elimination of state assignment as a mechanism for obtaining a new job in Russia. The most common type of state assignments was the “distribution” (*raspredelenie*) of students to mandatory 3-year jobs following completion of higher or specialized secondary education (see Solnick 1998; Gerber forthcoming). This institution began to break down in the late 1980s and was abandoned altogether following the Soviet collapse. Finally, we note that our data are also consistent with the slow growth of self-employment in Russia during the 1990s, which other studies have indicated (Gerber 2001a, 2002a).

Determinants of the Use of Personal Networks

The Russian labor market has clearly gotten “more personal,” in the sense that personal networks have come to play a substantially greater role in the process of obtaining new jobs. Thus far, we have considered this development mainly from the perspective of what it reveals about the economic sociology of Russia’s transition to the market. Now we turn to the topic of what this development means for processes of social stratification in Russia. First, we look at the effects of gender, age, education, and CPSU membership on the probability that a successful search used personal networks.

We start by considering the separate trends over time in the probabilities of using networks for groups defined by each of these four variables (Figures 2A-2D).⁹ To eliminate the effect of sampling noise, we rely mainly on 3-year moving averages to identify trends. The bivariate plot suggests that men and women used personal

⁹ For these and all subsequent analyses, we restrict our sample to new jobs obtained on the external labor market. That is, in addition to omitting new hires involving returns from maternity leave or military service, re-assignment by current employer, and missing data on search method, we also omit entries to self-employment. We keep jobs resulting from “state assignment” even though they might be viewed as involving an administrative mechanism rather than search. Despite the theoretically obligatory and administrative character of many such assignments, in practice there was some flexibility: assignees could lobby for more desirable assignments and could evade assignments they did not like (see Solnick 1998; Gerber forthcoming). Thus, there was a component of search involved.

networks at roughly equal rates during the mid-1980s, but men's use of networks began to exceed women's by 1990. The initial years of market transition appear to have accelerated the gender gap in the use of personal networks, but as the transition progressed, the gap closed, with women actually catching up to men by 2001.

Comparing the youngest (16-29 year-olds) and the oldest (50-59 year-olds) groups of workers, we see an effective reversal of the zero-order effect of age on the use of personal networks in successful searches. Older workers experienced a growth in the use of networks sooner than younger workers, but the growth in their usage leveled off following the introduction of radical market reforms. The growth in personal network use by the youngest workers proved steeper and more sustained, such that their rates of personal network use exceeded those of older workers by the mid-1990s and continued to grow until the end of the decade.

College-educated Russians apparently have maintained a fairly consistent, if small, advantage in the use of personal networks during the entire period under observation. As for CPSU membership, a uniform advantage is difficult to discern in the bivariate plot. It appears that CPSU members were less likely to use networks in the late 1980s, then became more likely to use them in early 1990s, then no more or less likely to do so by the late 1990s. But at no point in time do the differences between CPSU members and non-members appear pronounced.

Our logistic regression results confirm the impressions we based on the bivariate plots and add some nuances (Table 1). Our baseline model includes measures of our four variables of interest, plus a set of dummy variables for different origin states ("main activity" or labor force status prior to getting the new job), which must be controlled

because they are likely to be correlated with our four variables of interest and may also influence the use of networks. Using this simple specification (which constrains all effects and the intercept to be constant over time), there appears to be a gender gap in the use of personal networks. Not only do the college-educated use networks more frequently than those without college, but those with some form of secondary education are more likely to use networks than those with less than secondary. Thus, the effect of education obtains at both ends of the distribution. The effect of CPSU membership is not significant. New labor market entrants (those entering jobs from school) and job-seekers leaving the military are less likely to use networks than those moving to a new job from current employment, while the unemployed and pensioners are more likely to use networks.

Our second model adds change over time in the intercept, with temporally constant effects of other variables. The best-fitting functional specification of change over time includes two terms: a “linear year” equal to the years elapsed since 1985 and a dummy variable for post-1991.¹⁰ In essence, this specification implies that the log-odds of using personal networks grew linearly over the 17 years covered by our observation window, but a one-time upward spurt took place in 1992, presumably representing the impact of the “shock therapy” reforms introduced that year. Net of the change over time in the intercept, the gender gap becomes (barely) non-significant and the effect of unemployment disappears; otherwise, the pattern of effects is unchanged.

¹⁰ As noted, we experiment with a variety of specifications for change over time in both the intercepts and the key effects of interest in our models for each outcome. Here we provide only the details for the best-fitting specifications of these temporal changes. Complete details regarding the fit of all the specifications tested are available upon request.

Our third model in Table 1 presents the best-fitting specifications of change over time in the effects of gender, age, and CPSU membership. No specification of change over time in the effect of college education yielded a significant effect. The fourth model in Table 1 removes non-significant effects in order to eliminate their influence on the parameter estimates and verify the robustness of the effects to alternative specifications. Removing the effects does not change the pattern of significant effects and reduces the log-likelihood by only 2 points. Therefore, the fourth model is our preferred model and we focus on it to interpret the patterns of temporal change implied by our results.

For illustrative purposes, we plot the change (or stability) over time in the effects of each our key variables on the odds of using networks implied by our preferred model (Figure 3). Women did not differ from men with respect to the use of networks in 1985 (as represented by the removal of the non-significant “main” effect of gender from the model), but 1986 initiated a gender gap that grew linearly (in the log-odds metric) each year. However, in 1992, the gender gap began to diminish, as evinced by the statistically significant positive interaction between gender and “spline-logyear.”¹¹ By the mid-1990s, women had effectively caught up with men in their use of networks to get new jobs.¹²

The temporal pattern in the effect of age is complicated somewhat by its curvilinearity. The positive second-order effect implies that the “negative” effect of age

¹¹ The spline-logyear variable equals zero for all years prior to 1992 and $\log(\text{year}-1990)$ for all years subsequent to 1991. Thus, it represents a pattern of no change prior to the introduction of radical market reforms, then a decelerating but monotonic process of change thereafter.

¹² The modest resumption of the gender gap at the end of the period is most likely an artifact of our specification of change over time – in reflects the deceleration of the “spline-logyear” component of the interaction. We suspect – though, for the sake of simplicity, we do not test this – that a re-specification of this interaction that constrains the gender gap to equal zero from the mid-1990s onward would provide a better fit.

reverses at 33 years, disregarding the interaction. That means that for most workers (those 33 and over) age increased the probability of using networks. By making the first order term more negative for each year from 1992 onward, the interaction effect lowers the inflection point, so that it reaches 40 in 1992, 51 in 1996, and 57 in 2001. Thus, following the introduction of market reforms, younger workers are ever more likely than their older compatriots to use networks to find new jobs. This pattern is reflected in the odds ratios for 18 year-olds vs. 50 year-olds: the curvilinear effect made for rough equivalence in their odds during the late Soviet era, but by 2001 the odds were over 4 times higher for 18 year olds (net of the other variables in the model).

As noted, the effect of education remained stable throughout the period: the college educated had 18% higher odds of using personal networks to obtain their new jobs. Despite the widespread emphasis in the literature on the greater “social capital” of CPSU members, our model suggests that during the waning years of the Soviet period they were less likely to use networks to get new jobs than non-Party members. However, they quickly gained on non-Party members in this regard, so that by the start of the transition period, CPSU members had 13% higher odds of using networks. They maintained this advantage thereafter.

Effects of Networks on Job Quality

We begin by examining trends over time in the effect of using networks on the two measures for which we have information pertaining to all jobs held since 1984. In terms of occupational earnings, there appears to have been little or no “return” to the use of networks in the late Soviet era, and a very modest return to doing so in the post-Soviet era (Figure 4A). The difference of roughly .05 on the OLEI scale for the post-Soviet era

implies that Russians who obtained new jobs through networks could expect about 5% higher earnings than those who used other methods. The effects of using personal networks on the probability of finding a private sector are more consistent and more pronounced (Figure 4B). This is further evidence that social search methods are associated with market institutions. Of course, the zero-order effects of networks on both measures of job quality are provide relatively crude measures of returns to networks, and offer little insight into why the returns do or do not change over time. To obtain a more precise picture of the impact of personal networks on the quality of job acquired, we turn to multivariate models.

Our zero-order model for the effects of search strategies on OLEI score of job obtained show that networks do lead, on average, to a higher OLEI score than direct application (the omitted category). However, the advantage is small in magnitude (amounting to 6% higher expected earnings) and is smaller than the advantages accruing to other search methods, except for using employment agencies. Overall, the explanatory power of search strategy is very weak, yielding an R-squared of only .008. Altogether, Hypothesis 1 is supported, but weakly.

When controls for gender, age, education, CPSU membership prior occupation, origin state (in employment), and time are added (model 2), the return to networks relative to direct application falls by nearly half. As other research has shown (Bridges and Villemez 1986; Marsden and Hurlbert 1988), excluding control variables leads to over-estimation of the effect of personal network use on job quality. However, consistent with Hypothesis 2, a net effect of networks (relative to individual application) remains, controlling for individual characteristics and change over time in the baseline.

The returns to networks do not vary by age, but they do vary by CPSU membership in a stable fashion and by both gender and education in a dynamic fashion (models 3 and 4).¹³ Due to complicated nature of these interactions, it is useful to convert them into time-varying net “multiplier” effects of networks on OLEI for the groups in question (Figure 5). The “main effect” (for non-CPSU males without college) is stable at 1.02 throughout the period, implying that the use of networks yields, on average, 2% higher occupational earnings than would be obtained using direct application. Note that net of the controls and interactions in our preferred model, all other search strategies yield still higher returns in terms of occupational earnings. During the late Soviet era, the returns to networks are higher for the college educated, suggesting that better-educated individuals indeed have access to superior networks. But this advantage actually declines during the course of the market transition period, disappearing altogether by 1998.

In the meantime, women begin to benefit more than men from the use of networks during the transition era: by 2001 the net effect for women is 1.08, four times greater than the effect for otherwise similar men. This finding is surprising, given the expectation that, if anything, women’s networks will be inferior in quality to men’s. Perhaps this explains why women caught up with men in terms of their use of personal networks to find jobs during the post-Soviet era (see above): with time they have a greater incentive to do so, based on this dependent variable.

Finally, CPSU members actually have *negative* returns to the use of personal networks: they obtain better quality jobs through direct application than they do using

¹³ As in the other analyses reported herein, we experimented with a variety of specifications for change over time in the baseline and in the effects of gender, age, education, and CPSU membership. Here and below we report only the best-fitting specifications. We focus our discussions on the preferred models, which for the most part result from the removal of non-significant effects from the complete models estimated in the third stage.

networks. In fact, the “main” effect of CPSU membership is significant only when we include the CPSU*networks interaction: CPSU members who do not use networks enjoy 5% higher occupational earnings than otherwise similar non-members, but CPSU members who do use networks have no such advantage. In fact, relative to non-members who use direct application, CPSU members actually can expect 2.4% *lower* occupational earnings [$100 \cdot \exp(.049 - .073)$]. Among CPSU members, the use of networks yields a 5% decrease in expected occupational earnings. This is strong evidence *against* the argument that the basis for CPSU members’ advantages in the post-Soviet era is superior “social capital.” The data suggest that, if anything, CPSU members social networks are inferior in quality to those of otherwise similar non-members.

Turning now to private sector jobs, we confirm that using personal networks significantly increases access to the private sector (Table 3). Here the effect is substantial in magnitude: based on the zero-order model, using networks rather than direct application increases the odds that a new job is in the private sector by a factor of 2.5 [$=\exp(.934)$]. The most likely explanation for this effect is that private employers have a greater incentive to rely on networks in deciding whom to hire. Agencies also raise the odds (relative to direct application) that a new job is in the private sector, but to a lesser extent than networks. Advertisements, however, raise the odds to an even greater extent. This implies that private employers are more likely to advertise job openings than state-owned firms. The introduction of controls reduces the magnitudes of these effects somewhat, yet they remain sizable.

The effects of network use on access to the private sector vary by gender, education, and CPSU membership. Once again, we plot the time-varying net effects of

networks – this time, on the odds that a new job is in the private sector – to facilitate interpretation of the interactions (Figure 6). For non-CPSU males without college, the use of networks rather than direct application doubles the odds that a new job is in the private sector. The effect is weaker, though still substantial, for women: using this dependent variable, they experience lower job quality returns to their networks than do men. The same goes for CPSU members: compared to non-members, their networks are less likely to lead to a private sector job. There is no main effect of CPSU membership, implying that only among Russians who use networks to get their job are members less likely than non-members to find their way to the private sector. Once again, the data suggest that, contrary to the “social capital” explanation of the advantages of CPSU members, they have poorer quality networks than non-members. We see further evidence that the highly educated have higher quality networks, but their advantage *diminishes* during the market transition era. In this case, however, the advantage does not disappear: by 2001 the net effect of networks stands at 2.8 for the college educated, still notably higher than the 2.0 value for Russians without college degrees.

Finally, we examine the effects of networks on current earnings, perhaps the most direct measure of whether networks provide a net advantage on the labor market in post-Soviet Russia (Table 4). We begin with a reduced form model including only the significant effects of search strategies, demographic controls, and CPSU membership.¹⁴ Respondents who got their current jobs using personal networks and by responding to advertisements earn more than those who got their jobs through other means, controlling

¹⁴ In the interest of a parsimonious presentation, for this analysis we show only models that omit non-significant effects. Including non-significant variables does not alter any of the inferences or interpretations. It should be borne in mind, as well, that our sample excludes currently employed respondents who have not changed jobs since 1984, because we do not know how they got their job.

for gender, age, education, and CPSU membership. Model 2 shows that, consistent with earlier results, the returns to networks are especially high for college educated Russians (who gain a premium of 38.3% versus the main effect of 16.2%) and are in fact *negative* for CPSU members (who suffer an earnings penalty of 11.4% if they got their current job using personal networks). The interaction for women is not statistically significant, suggesting that their greater returns in terms of occupational earnings may offset their lower returns in terms of access to the private sector (since these factors are omitted from the reduced form models).

Our earlier analyses suggest that the returns to personal networks may be largely mediated by the occupational earnings and sector of the job obtained. In fact, when we add characteristics of current job and prior state that also affect earnings to the additive model, the returns to networks and advertisements alike are no longer significant (model 3). Evidently, a substantial component of the advantages accruing to the use of networks results from the greater access to higher-paying occupations and the private sector that they provide. However, our estimate of the returns to networks in model 3 is partly suppressed by the *negative* returns to personal networks for women and CPSU members, which are revealed by the significant interactions in model 4. According to this model, non-CPSU males without college receive 9.3% higher earnings if they obtained their current job using networks, even controlling for occupation, prior state, sector, firm size, and branch of employment. Women suffer a net earnings penalty of 3.3%, and CPSU members suffer a net penalty of 8.8%. Once again, CPSU members who *do not use networks* earn more, controlling for all the other variables in the model.

In sum, then, networks yield earnings advantages both by increasing the quality of the occupation obtained in a job search and by increasing the probability of landing in the private sector.¹⁵ They provide an additional advantage even net of these factors. Generally, the advantages of networks appear to be greater for college-educated Russians, which is consistent with the interpretation that they tend to have better-quality networks. CPSU members, in contrast, have poorer-quality networks, judging by the recurrent finding that they receive *negative* net returns to the use of networks. The story for women is somewhat complex: as market transition progressed, they came to receive substantially greater returns in terms of occupational earnings, but throughout the late- and post-Soviet eras they have consistently lower (though still positive) returns in terms of access to the private sector. They also have slightly negative net returns to income, controlling for other characteristics of current job.

Conclusions

The labor market got more personal in the course of Russia's market transition: the prominence of personal networks as a method of successful job search grew dramatically, as did the importance of another formal market institution – job advertisements. Individual application, the most common technique used to find a job in the Soviet era, has diminished substantially in importance. We interpret these trends as manifestations in the labor market of the institutional changes associated with market transition. Theoretically, we would expect markets to foster the use both of personal networks and job advertisement in the hiring process, and to discourage individual application. The dramatic growth since the onset of market transition in the proportions

¹⁵ Note that private sector earnings are estimated to be 32.6% higher than earnings in state the state sector.

of hires that take place via personal networks and job advertisements therefore testifies to the extent of institutional changes that have taken place in Russia.

Confirming Hypotheses 1a-1c personal networks do lead to better quality jobs in Russia for all three dependent variables we use to measure job quality. The effect is weak – and relative only to the method of individual application – for OLEI score. However, it is more substantial – and relative to all other methods except the use of advertisements – with respect to access to the private sector and current earnings. Consistent with Hypothesis 2, the net effects of networks remain significant, even controlling for a variety of other characteristics that affect each outcome, though the controls do reduce the magnitude of the network effects. All told, our results demonstrate Russians who obtain their jobs through personal networks generally get an advantage from doing so. There are some exceptions, to which we turn presently. First, though, we wish to note that Russians who get their jobs through advertisements also thereby reap advantages. Thus, the two forms of job search associated with market institutions both yield advantages in transition-era Russia. Finally, the positive effect of network use on access to the private sector provides further evidence for our theory that private employers prefer to use networks when making hiring decisions more than state employers do.

Let us consider variations by gender, age, education, and CPSU membership in turn. We hypothesized that women are more likely to use networks (4a), have lower returns to networks (3a), but the gender gap in returns decreases in the course of market transition (7a). We found that in the late Soviet era, women became less likely to use networks, but once market transition began, the trend reversed, so they caught up with

men by the late 1990s. Thus, H3a is contradicted for the late Soviet era, but the trend in the post-Soviet era has been consistent with H3a. We suspect that increasing discrimination by employers following the transition has reduced women's opportunity to find jobs using formal or individual means, pushing them toward greater use of networks. The patterns in regard to returns are mixed. During the transition era, women came to benefit from networks more than men with respect to occupational earnings, consistent with H7a. But their returns consistently lagged behind those of men with respect to access to the private sector, confirming H4a. Also consistent with H4a, net of controls women experience a slight earnings penalty from using networks, in contrast to the earnings advantage gained by men. Absent the controls, however, the interaction between gender and networks is not significant in the earnings model, which implies that the combined indirect effects of the interaction (via OLEI and private sector) offset the direct effect. Overall, the evidence dictates against making strong statements about the relative quality of women's networks.

The only significant variation by age has to do with the probability of using networks. At the outset of the Soviet period, younger Russians were less likely to use networks than older Russians, in contradiction to H4b and consistent with Granovetter's ([1974] 1995) finding and the view that younger workers have not had as much time to cultivate valuable contacts. But the age effect reverses direction over the course the observation period: by 2001, younger workers are *more* likely to use networks, which is consistent with H4b and the pattern found in other studies (Corcoran et al. 1980; Marsden and Hurlbert 1988). This, too, may reflect the impact of market reforms: if employers begin to place more emphasis on formal qualifications such as workforce experience due

to competitive pressures, younger workers may find they have to rely on contacts to get jobs. On the other hand, there is no variation by age – nor any change over time in variations by age – in the returns to networks. So, perhaps the quality of networks does not vary by age.

Russians with college education are more likely to use networks, in contradiction to H4c. One possible explanation is that, just as H3c predicted, they enjoy higher returns to their networks. Clearly, their networks are of better quality with respect to labor market outcomes than the networks of Russians without college. Perhaps the higher returns serve as greater positive incentives to use networks, even though they have less of a “negative” incentive to do so, since presumably they have more opportunities to obtain jobs through other mechanisms. On the other hand, their advantages in terms of returns tend, if anything, to diminish somewhat over the course of market transition (H7c). It may be the case that market transition has increased the opportunities available to highly educated Russians through formal means, as market transition theory predicts. Nonetheless, by the end of 2001 college educated still receive greater returns to networks in terms of current earnings – at least in the reduced form model.

Perhaps the most important set of findings involve Communist Party members. During the late Soviet period, they start out less likely to use networks. But with time they gain on non-Party members, so that throughout the transition era they are slightly more likely to use networks. However, by all three measures of job quality, *CPSU members receive lower returns to their networks than non-CPSU members*. In fact, they experience negative returns with respect to occupational mobility and current earnings. This is compelling evidence that the earnings advantage of CPSU in post-Soviet Russia

does not stem from superior social capital. All the results suggest that quality of CPSU members' networks is in fact lower than the quality of non-members' networks, at least with respect to labor market outcomes. The social capital explanation (Rona-Tas 1994; Rona-Tas and Guseva 2001) is clearly contradicted by the data. Since other evidence has been adduced in favor the "selection theory" (Gerber 2000b, 2001b, 2002b), it should be viewed as the more likely explanation for why Communist Party members do better in contemporary Russia.

Some stratification processes – earnings determinants, educational stratification, and the school-to-work transition – have shown considerable stability in Russia despite the dramatic institutional changes (Gerber and Hout 1998; Gerber 2000b, forthcoming). But others – labor market transitions and inter-generational occupational mobility – have exhibited rapid change (Gerber 2002b; Gerber and Hout 2002). The picture with respect to job search strategies is mixed. Our analyses did not reveal any long-term patterns in the baseline returns to networks, once temporal change in the interactions. Thus, H6 is not supported. Overall, the temporal patterns in variations in returns to networks are rather muted. However, one dynamic aspect is unmistakable: the transition from a state-administered to a market-based economy increased the prevalence of personal networks and advertisements, while decreasing the prevalence of individual application. Clearly, the latter result shows that job search strategies are institutionally embedded. The overall picture, which combines both stability and change, should serve as a further caution against trying to generalize about the impact of market transition on stratification.

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FIGURE 1: Trends in Successful Job Search Strategies, Russia 1985-2001

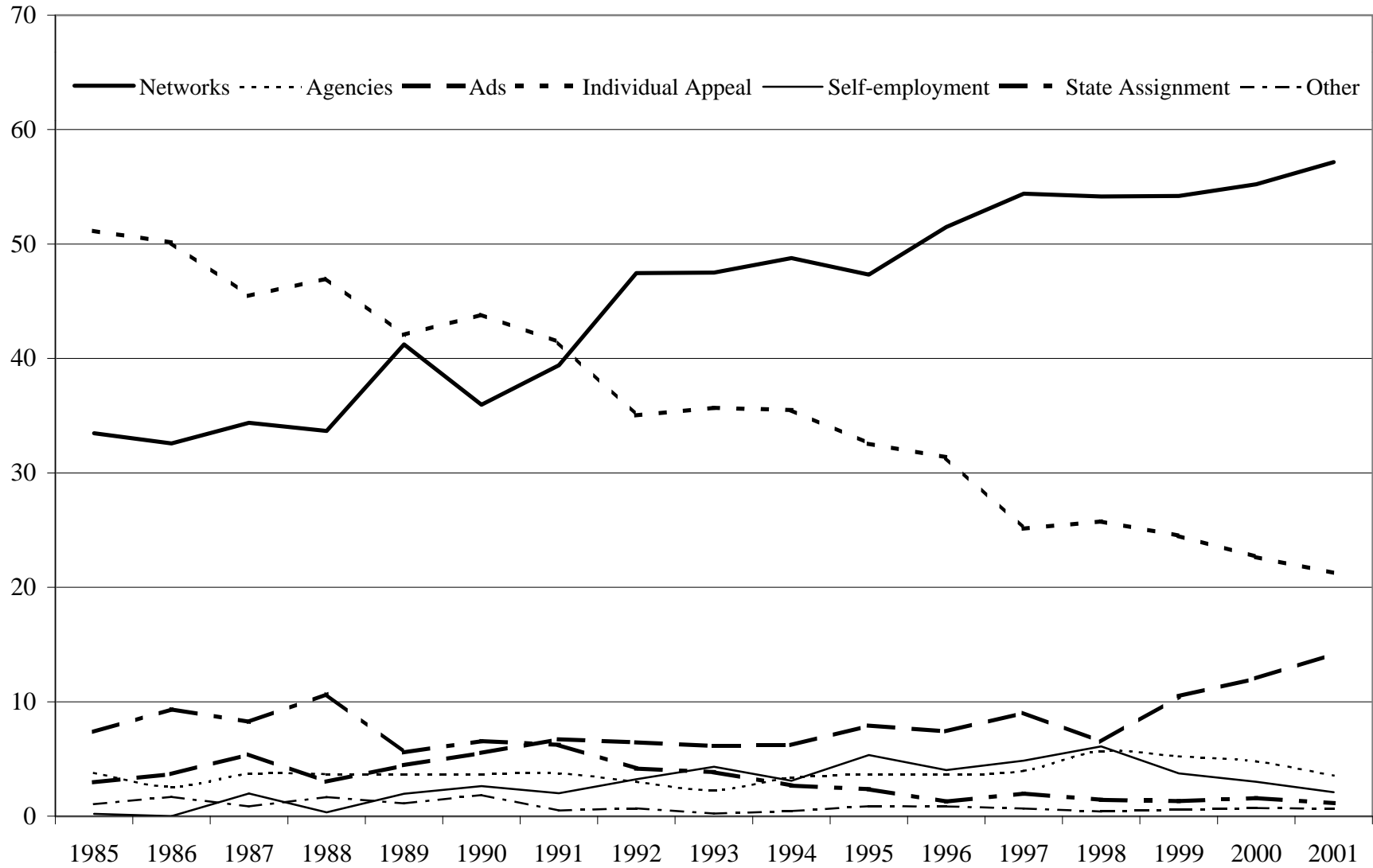


FIGURE 2A: Use of Networks, 1985-2001, By Gender

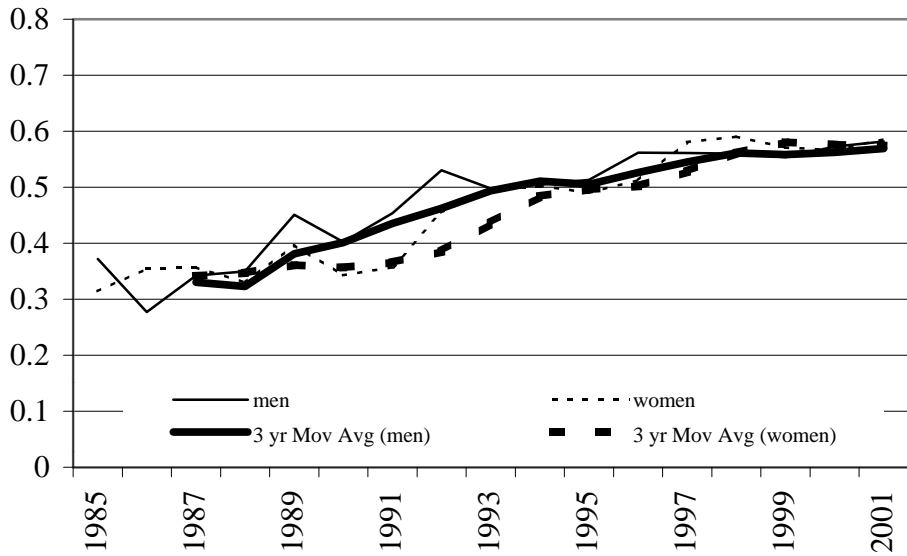


FIGURE 2B: By Age (Youngest vs. Oldest)

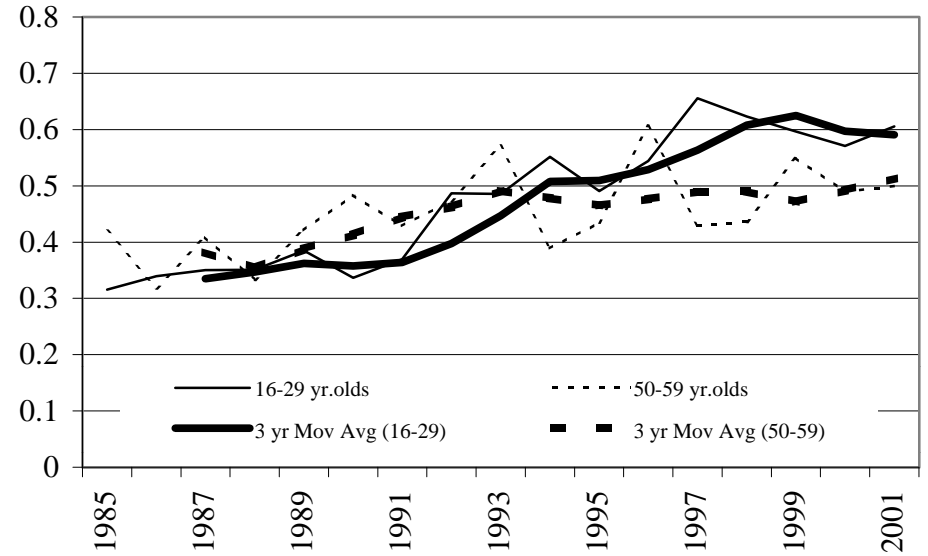


FIGURE 2C: By College (VUZ) Degree

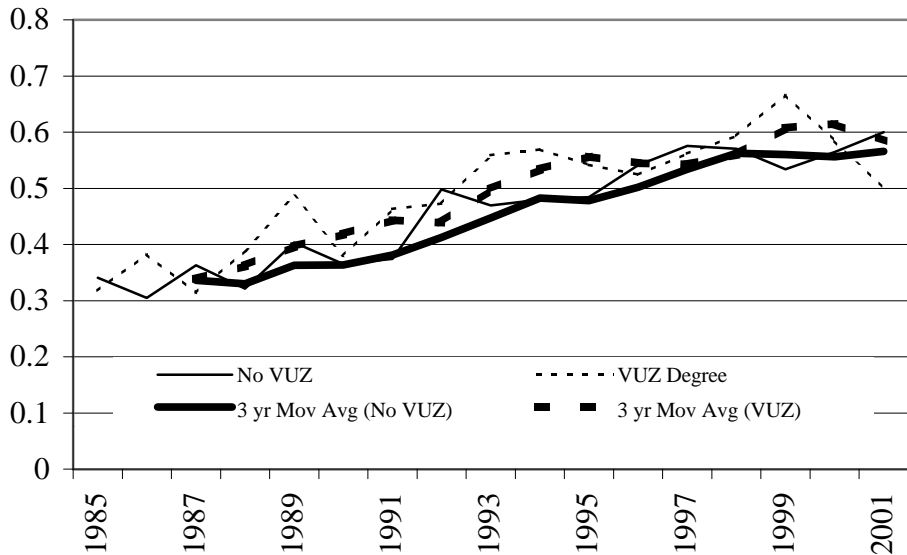


FIGURE 2D: By Communist Party Membership

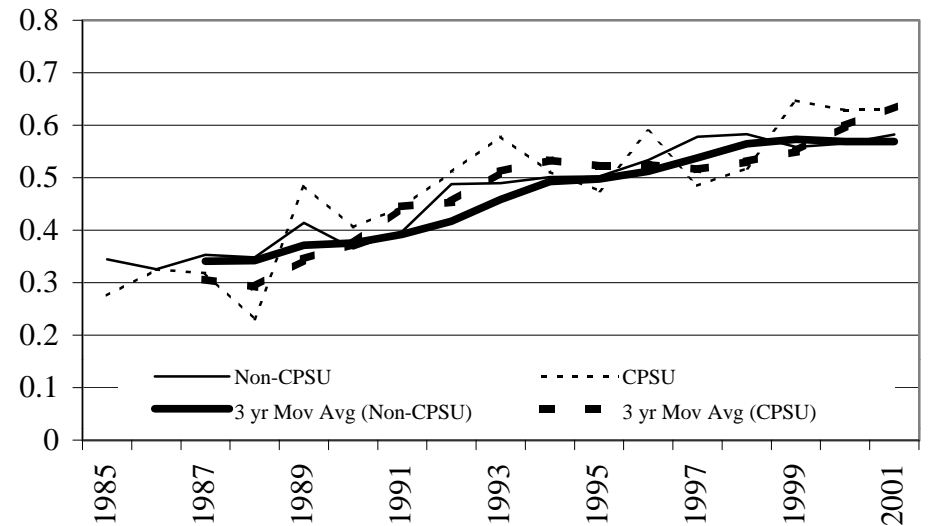


TABLE 1

Logistic Regression Models for the Probability of Using Networks for a Successful Job Search, Russia 1985-2001^A

	B	SE	B	SE	B	SE	B	SE
Woman	-.120 **	.061	-.091	.062				
Age(16)	-.031 **	.010	-.034 **	.010	-.020 **	.010	-.020 **	.010
Age(16) Squared	.001 **	.000	.001 **	.000	.001 **	.000	.001 **	.000
Education (Secondary)								
College (VUZ)	.117 *	.071	.133 *	.073	.137 *	.073	.169 **	.069
Lower Vocational (PTU)	-.095	.081	-.124	.082	-.122	.083		
Less than Secondary	-.321 **	.122	-.229 *	.126	-.306 **	.126	-.277 **	.124
CPSU Member	-.101	.106	.007	.110	-.449 *	.248	-.441 *	.248
Origin State (From employment)								
From school	-.454 **	.086	-.496 **	.088	-.479 **	.089	-.469 **	.081
From unemployment	.161 **	.075	-.006	.077	.011	.077		
From Army	-.498 **	.163	-.443 **	.167	-.419 **	.168	-.413 **	.165
From outside labor force	.048	.076	-.029	.078	-.031	.078		
From pension	.508 **	.203	.552 **	.210	.502 **	.207	.513 **	.205
From maternity leave	-.080	.136	-.039	.137	-.012	.139		
From other	-.210	.370	-.129	.366	-.138	.370		
From self-employment	.310	.306	.041	.296	.080	.299		
Linear Year			.048 **	.009	.075 **	.011	.074 **	.011
Post-1991			.311 **	.095	.265 **	.104	.269 **	.103
Woman*Spline Logyear					.389 **	.126	.383 **	.126
Woman*Linear Year					-.063 **	.020	-.062 **	.020
Age*Spline Logyear					-.011 **	.002	-.011 **	.002
CPSU*Truncated Linear Year					.095 **	.046	.094 **	.046
Constant	.319 **	.108	-.239 **	.117	-.453 **	.123	-.496 **	.114
Log-likelihood								
	-4992		-4877		-4861		-4863	

^ASample consists of successful elective job searches from SSMDR data with non-missing data on search strategy: 7273 observations from 3783 respondents. Standard errors are adjusted for clustering of observations within respondents. A dummy variable for missing data on CPSU membership is included in all models but not shown.

*p < .05, one-tailed

**p < .05, two tailed

FIGURE 3: Net effects on Odds that a Successful Search Used Networks

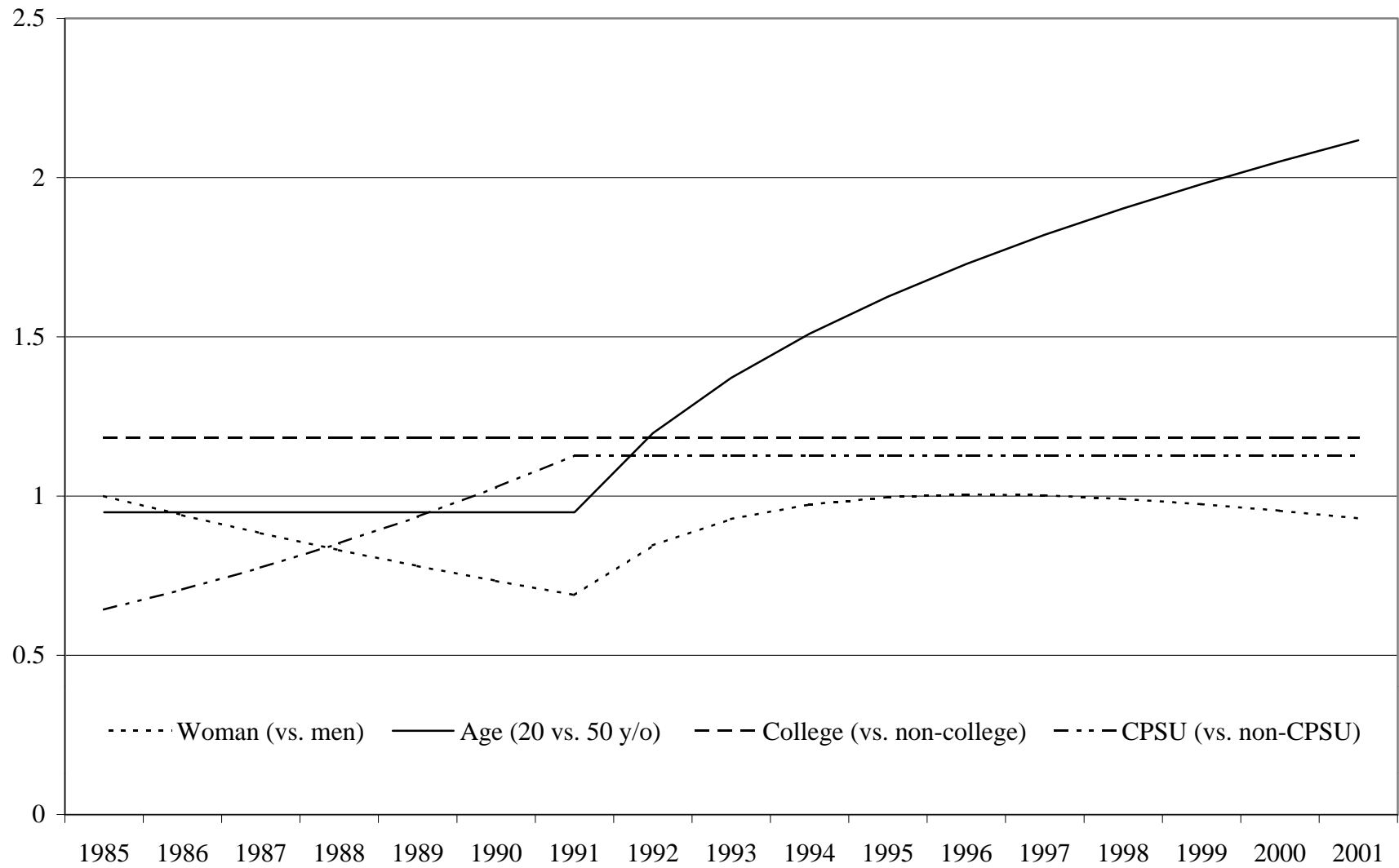


FIGURE 4A: Effect of Networks on Log Occupational Earnings Index of New Job, 1985-2001

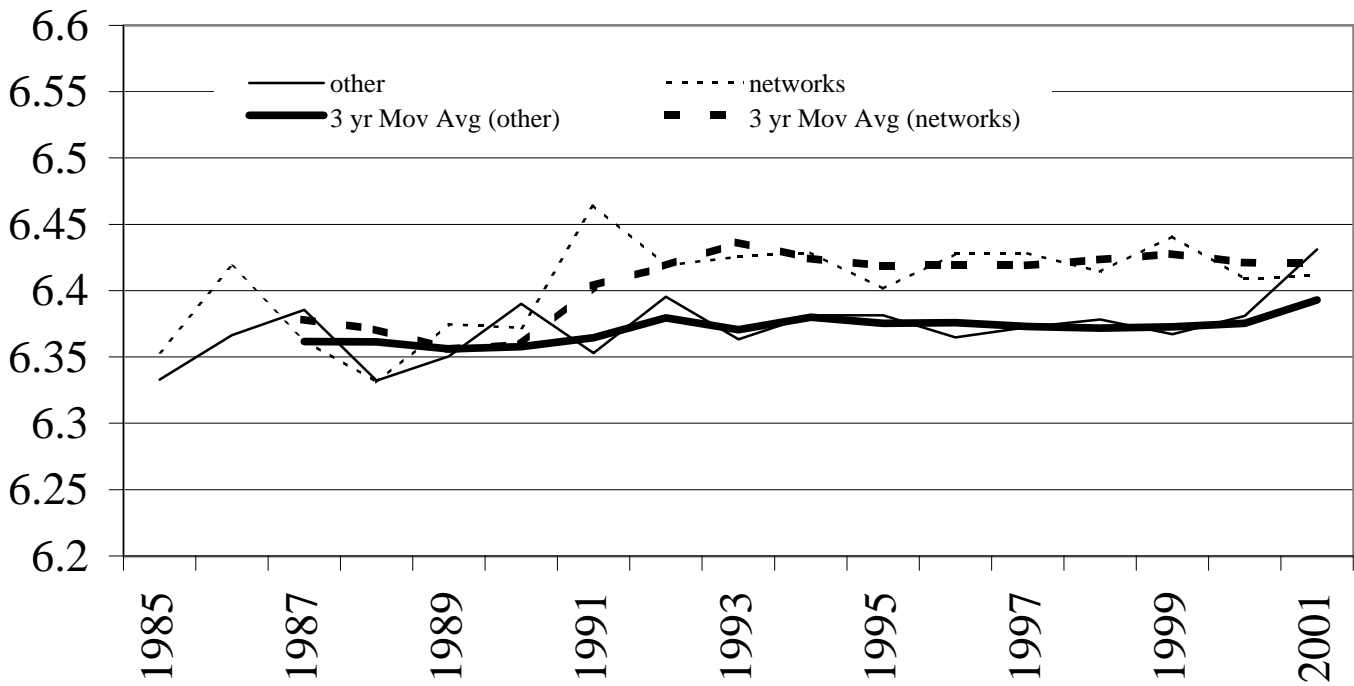


FIGURE 4B: Effect of Networks on Probability of that New Job is in Private Sector, 1985-2001

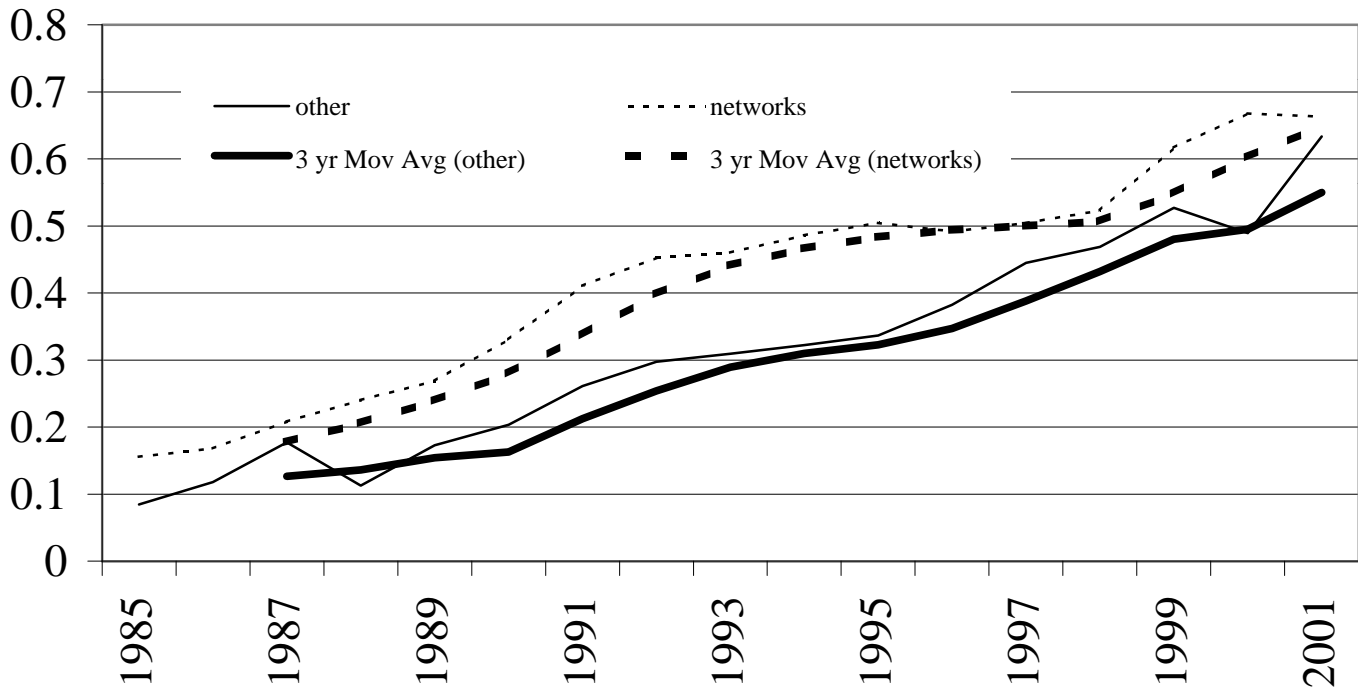


TABLE 2

OLS Models for OLEI Score of Destination Job, Russia 1985-2001^A

	B	SE	B	SE	B	SE	B	SE
Networks	.059 **	.011	.033 **	.009	.048 **	.024	.021 *	.011
Other	.166 **	.065	.114 **	.043	.118 **	.043	.117 **	.043
Agencies	.009	.025	.029	.019	.034 *	.019	.034 *	.019
Ads	.073 **	.019	.039 **	.015	.041 **	.015	.040 **	.015
Assignment	.077 **	.021	.054 **	.017	.072 **	.017	.067 **	.017
Woman			-.178 **	.009	-.197 **	.015	-.197 **	.010
Age(16)			.006 **	.001	.008 **	.002	.007 **	.002
Age(16) Squared			.000 **	.000	.000 **	.000	.000 **	.000
Education (Secondary)								
College (VUZ)			.145 **	.009	.099 **	.016	.100 **	.015
Lower Vocational (PTU)			-.039 **	.010	-.038 **	.010	-.038 **	.010
Less than Secondary			-.111 **	.018	-.125 **	.019	-.124 **	.019
CPSU Member			.016	.015	.050 *	.027	.049 **	.020
Origin Occupation (OLEI)			.321 **	.026	.319 **	.026	.319 **	.026
From Employment			.032 **	.008	.031 **	.008	.031 **	.008
Occ*From Employment			.119 **	.032	.117 **	.032	.117 **	.032
Time (spline logyear)			.013 **	.004	.024 **	.011	.023 **	.007
Woman*Logyear					.002	.010		
Age*Logyear					-.002 **	.001	-.002 **	.000
Vuz*Logyear					.038 **	.012	.039 **	.011
CPSU*Logyear					-.007	.023		
Woman*Networks					-.008	.024		
Age*Networks					-.002	.001		
VUZ*Networks					.042	.026	.039 *	.024
CPSU*Networks					-.079 *	.042	-.073 **	.031
Logyear*Networks					-.007	.016		
Woman*SplineLogyear*Networks					.027 *	.015	.025 **	.008
Age*SplineLogyear*Networks					.000	.001		
VUZ*SplineLogyear*Networks					-.028	.017	-.028 *	.015
CPSU*SplineLogyear*Networks					.018	.033		
Constant	6.353 **	.009	6.419 **	.015	6.405 **	.020	6.415 **	.017
R-squared	.008		.289		.294		.294	

^ASample consists of successful elective job searches from SSMDR data with non-missing OLEI score for new job: 7079 observations from 3721 respondents. Standard errors are adjusted for clustering of observations within respondents. Dummy variable for missing data on CPSU membership and prior OLEI score are included in all models but not shown.

*p < .05, one-tailed

**p < .05, two tailed

FIGURE 5: Net Effects of Using Networks on OLEI Score of New Job, Russia 1985-2001

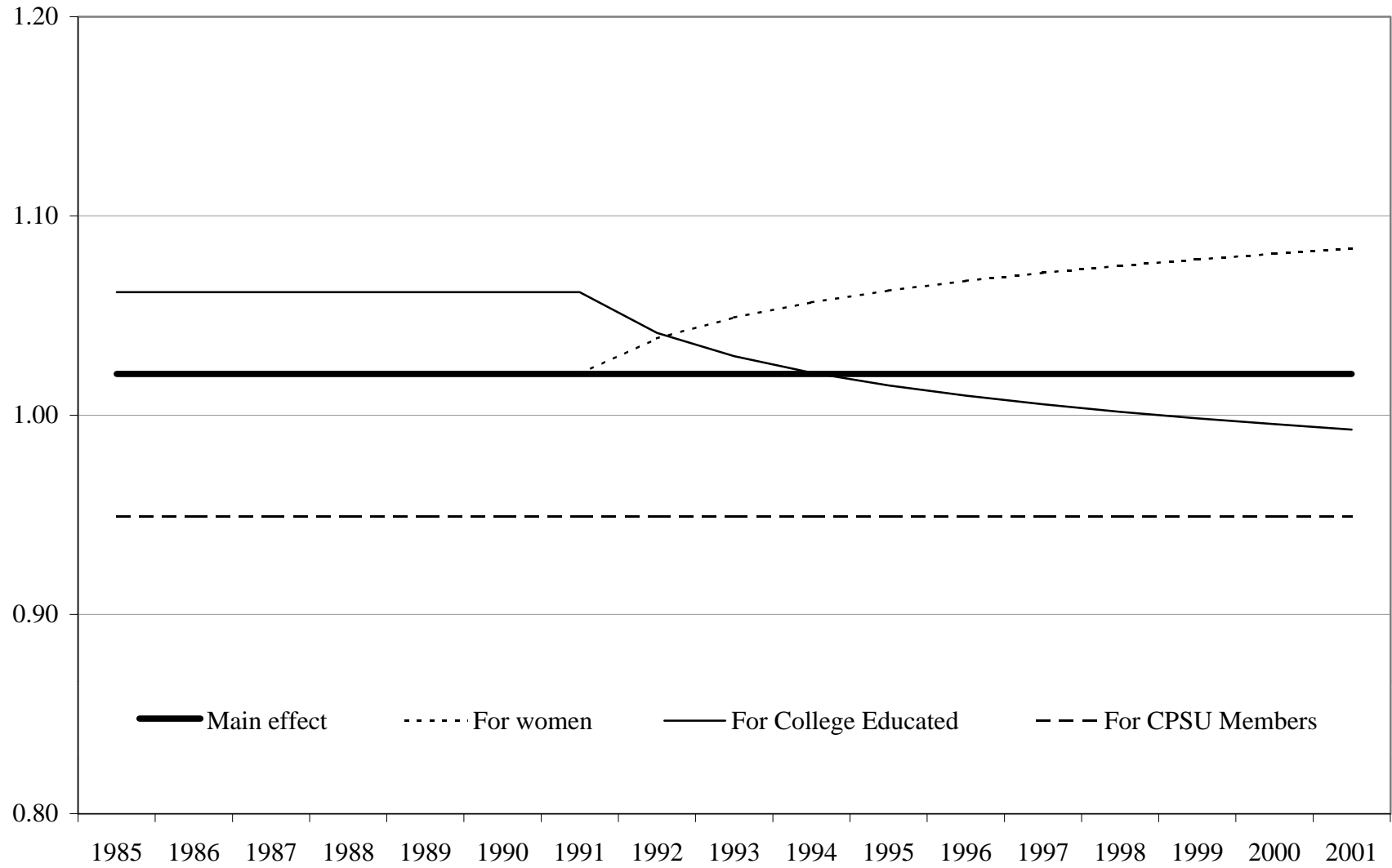


TABLE 3

Logit Models for the Probability that a New Job is in the Private Sector, Russia 1985-2001^A

	B	SE	B	SE	B	SE	B	SE
Networks	.934 **	.065	.681 **	.067	.772 **	.156	.692 **	.097
Other	-.058	.301	.067	.337	.122	.332		
Agencies	.505 **	.146	.332 **	.152	.312 **	.151	.325 **	.151
Ads	1.475 **	.109	1.105 **	.115	1.112 **	.118	1.128 **	.115
Assignment	-.656 **	.168	-.361 **	.181	-.265	.187		
Woman			-.346 **	.064	-.165	.137	-.239 **	.090
Age(16)			-.006 **	.003	.014 **	.006	.012 **	.004
College (VUZ)			-.069	.074	-.430 **	.163	-.368 **	.103
Lower Vocational (PTU)			.043	.080	.040	.081		
Less than Secondary			.009	.124	-.075	.125		
CPSU Member			-.097	.114	-.011	.229		
Origin Occupation (OLEI)			.250 *	.130	.229 *	.129	.329 **	.100
From Employment			-.299 **	.065	-.300 **	.065	-.305 **	.064
OLEI*Job-to-Job			.192	.183	.200	.182		
Origin Job in Private Sector			1.569 **	.127	1.583 **	.129	1.592 **	.128
Linear Year			.168 **	.022	.163 **	.022	.163 **	.022
Spline Logyear			-.239 **	.109	-.199	.125	-.195 *	.111
Woman*SplineLogyear					-.058	.088		
Age*SplineLogyear					-.014 **	.004	-.012 **	.003
Vuz*SplineLogyear					.058	.104		
CPSU*SplineLogyear					.076	.172		
Woman*Networks					-.503 **	.200	-.220 *	.118
Age*Networks					-.002	.009		
Vuz*Networks					.862 **	.223	.756 **	.173
CPSU*Networks					-.496	.332	-.283 *	.145
SplineLogyear*Networks					-.067	.095		
Woman*SplineLogyear*Networks					.207 *	.124		
Age*SplineLogyear*Networks					.002	.005		
Vuz*SplineLogyear*Networks					-.265 *	.140	-.175 **	.084
CPSU*SplineLogyear*Networks					.107	.230		
Constant	-1.041 **	.052	-1.855 **	.113	-1.852 **	.140	-1.858 **	.112
Log-likelihood	-4517		-4037		-4010		-4015	

Sample consists of successful elective job searches from SSMDR data with non-missing property form data for new job: 7113 observations from 3738 respondents. Standard errors are adjusted for clustering of observations within respondents. Dummy variable for missing data on CPSU membership, prior OLEI score, and property form of prior employer are included in all models but not shown.

*p < .05, one-tailed

**p < .05, two tailed

FIGURE 6: Net Effects of Using Networks on Odds that a New Job is in the Private Sector

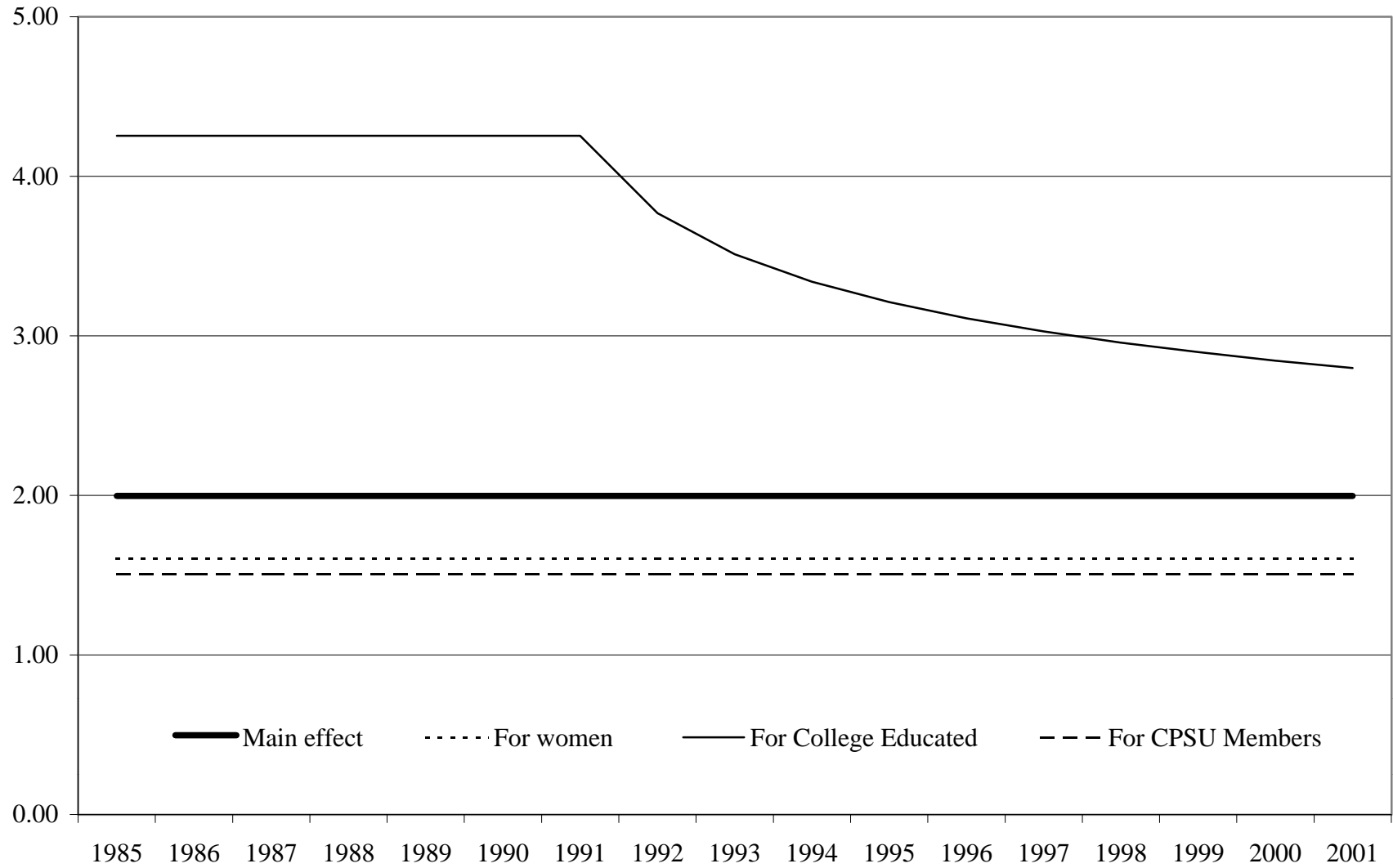


TABLE 4

OLS Models for Current Earnings, Logged Rubles Per Month^A

	B	SE	B	SE	B	SE	B	SE
Networks	.120 **	.032	.150 **	.051	.032	.029	.089 **	.045
Ads	.149 **	.056	.150 **	.055	.049	.053	.052	.053
Woman	-.511 **	.031	-.461 **	.044	-.291 **	.031	-.229 **	.043
Age(16)	.015 **	.005	.015 **	.005	.010 **	.004	.010 **	.004
Age(16) Squared (x100)	-.046 **	.000	.000 **	.000	.000 **	.000	.000 **	.000
Education (Secondary + PTU)								
College (VUZ)	.388 **	.034	.299 **	.048	.300 **	.034	.256 **	.045
Less than Secondary	-.386 **	.074	-.387 **	.074	-.250 **	.065	-.248 **	.064
CPSU Member	.034	.056	.168 **	.067	.044	.050	.108 *	.057
Occupation (OLEI)					.498 **	.047	.062 **	.028
Prior State Was Employed					.061 **	.028	.495 **	.047
Ln(firmsize)					.040 **	.008	.040 **	.008
Sector (State, Private Farm, or Other)								
Private Firm					.289 **	.031	.282 **	.031
Collective Farm					-.784 **	.188	-.795 **	.202
Branch (Manufacturing, Services, Public Administration, Other)								
Construction					.173 **	.056	.170 **	.055
Agriculture					-.463 **	.068	-.471 **	.067
Education/Health					-.179 **	.041	-.185 **	.041
Finance/Insurance					.286 **	.102	.286 **	.100
Woman*Networks			-.098	.061			-.122 **	.056
VUZ*Networks			.174 **	.067			.086	.061
CPSU*Networks			-.271 **	.105			-.181 *	.097
Constant	7.757 **	.050	7.745 **	.054	7.477 **	.061	7.453 **	.062
R-squared	.168		.173		.329		.332	

Sample consists of SSMDR respondents with non-missing data on current earnings who entered their current job after December 1984: 2319 respondents. Standard errors are corrected for heteroskedasticity. Dummy variables for missing data on CPSU membership, current OLEI score, current sector, and current branch are included in the appropriate models but not shown

*p < .05, one-tailed

**p < .05, two tailed