Weak Ties, Information, and Influence: How Workers Find Jobs in a Local Russian Labor Market

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In 1973 Granovetter formulated the strength-of-weak-ties hypothesis (SWT), which became the foundation of a vast sociological literature on social networks in labor markets. Until now, SWT has never been directly tested but treated instead as a surrogate for the relationship between an actor's network and labor market outcomes such as characteristics of a job obtained. The paper restates SWT as a proposition about the probability of getting a job as a function of within-actor differences in tie strength and tests it with data on hires carried out in one Russian city in 1998. In support of SWT, the results show that a worker is more likely to get a job through one of her weak ties rather than strong ties. The advantages of weak ties lie in their abilities to provide timely access to non-redundant information and to influence employers directly. In contrast, strong ties are associated with indirect influence on employers through well-connected intermediaries. The estimates come from a within-worker fixed-effect conditional logistic regression and thereby provide rare evidence of an association between information and influence transferred through social ties and labor market outcomes, independent of workers' inaividual characteristics.

Over the past three decades, Granovetter's strength-of-weak-ties (SWT) hypothesis inspired a vast research program on the role of social networks in the labor market. The program's theoretical framework and empirical agenda focus on the effects of social networks on labor market outcomes such as income and status of the jobs obtained (for a review, see Granovetter 1995; Lin 1999; Marsden and Gorman 2001). SWT, however, is about the likelihood of getting a job rather than the attributes of the job obtained. In this regard, its empirical support is limited. Descriptive statistics aside, no study thus far has shown if the likelihood of getting a job depends on the strength of the ties involved and, if so, whether the effect is due to information and influence transferred through social relationships, as SWT's original formulation asserts.

The paper provides such evidence in the context of an urban labor market in Russia during the late 1990s, where a mix of institutional

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structures offers an attractive setting for shedding new light on the actual resources transferred through social networks. The Russian context of the 1990s is also well suited for collecting more detailed data about these processes due to weak labor laws, a low priority given to meritocratic principles and practices by both the state and the public that allow employers to disregard labor market regulations and practice arbitrary hiring quite openly. Taken altogether, this context presents a unique opportunity to unveil the social mechanism behind hiring through social networks. In support of SWT, the results show that a worker is more likely to get a job through one of her weak ties rather than strong ties. The advantages of weak ties lie in their ability to provide direct access to information and potential employers. Strong ties are better for gaining indirect access to employers through intermediaries. The findings come from a within-worker fixed-effect conditional logistic regression and thereby provide rare evidence of an association between information and influence transferred through social ties and labor market outcomes, independent of workers' individual characteristics.

The presentation begins with a brief description of the current Russian labor market followed by a restatement of the SWT hypothesis. Then, I introduce information and influence as the key resources workers need to get a job and present a hypothesis linking tie strength with the propensity to provide information and influence. The data and statistical model employed to test these hypotheses are described in a methodological section followed by the presentation of findings and concluding discussion.

THE RUSSIAN LABOR MARKET

There appears to be broad consensus that labor allocation in Russia does demonstrate some important market characteristics such as free mobility of labor, responsiveness to the forces of supply and demand, and competition for rewards (Gimpelson and Lippoldt 1999; Kapelyushnikov 2001; Sabirianova 2002). To some degree, these features were visible in the Soviet period, whereby the socialist system failed to establish direct control over the labor supply and made extensive ideological and political compromises over this issue (McAuley 1979). The result was a peculiar hybrid of state-controlled redistribution with spontaneous markets. New graduates as well as enterprise managers were assigned to jobs by the state through systems of distribution and nomenklatura.[1] Actors with personal connections to firms and the state bureaucracy, however, could manipulate and subvert the system of distribution. Most importantly, those who were already employed in non-managerial positions and wanted to change their jobs, could rely on only one formal channel, advertisements, which typically offered inferior positions. Consequently, direct contacts with enterprises and personal networks were the predominant means of changing jobs. Although state wage control was strict, enterprise managers could exercise discretion over bonuses and job rewards in kind, such as apartments and cars. The regime of *propiska*, state-issued permits to reside in specific areas, severely limited interregional mobility, but it did not reduce labor market turnover much in the 1980s, which fluctuated around 20 percent, a level comparable to that in Western economies (Clarke 1999:17; Oxenstierna 1990:28). Unlike that in market economies, however, turnover was disconnected from productivity growth (Brown and Earle 2002) and thereby only exacerbated the misallocation of labor that was chronic to state socialism.

Starting in 1988, the state attempted to reform the ineffectual socialist mechanism of labor allocation by creating the Federal Employment Service to provide, among other functions, unemployment benefits and information about job vacancies. Private employment agencies mushroomed and the mass media were flooded with ads for jobs and labor (Ohtsu [1988] 1992; Oxenstierna 1990). Reformers designed this new organizational infrastructure to handle the reallocation of labor that was expected as a result of economic liberalization. Their reforms reshaped the mechanisms of individual job mobility, which became driven primarily by shrinking opportunities in manufacturing, expanding opportunities in trade, finance, and public administration, and the emergence of

[1] The Soviet system of nomenklatura encompassed virtually all managerial positions and delegated personnel decisions to specific levels of the Communist Party hierarchy commensurate with the size and importance of the firm.

new private firms (Gerber 2002; Sabirianova 2002). The contribution of new labor market intermediaries to this massive reallocation, however, was insignificant; jobs were obtained primarily through personal contacts, which maintained or even increased their role during the postsocialist transition (Clarke 1999; Gerber and Mayorova 2003; Gimpelson and Magun 1994; Yakubovich and Kozina 2000).

A number of studies attempt to understand that role in terms of the resources that networks transfer, albeit with limited success. Clarke (1999:11) finds that influence, rather than information, is the most important asset obtained through personal contacts in the Russian labor market during the 1990s, although the nature and scope of the data do not allow him to quantify the relative weights of these resources and relate their provision to specific characteristics of social networks. Bartus (2001:123) explores whether intensive search for information or particularistic influence operates in the Hungarian labor market but does not find any conclusive support for either.

THE STRENGTH-OF-WEAK-TIES HYPOTHESIS: A WITHIN-SUBJECT FORMULATION

In a study of professional, technical, and managerial workers from a Boston suburb, Granovetter ([1974] 1995) finds that about 83 percent of those who got their jobs through contacts used contacts that they saw infrequently. The finding leads Granovetter to the concept of tie strength defined by the frequency of interactions, emotional intensity, and reciprocity between the parties. Since weak ties are more likely than strong ones to serve as bridges to new parts of a social universe, they are better providers of the kind of nonredundant labor market information that increases a job seeker's chances of getting a job (Granovetter 1973, [1974] 1995). This statement became widely known as the strength-of-weak-ties (SWT) hypothesis.

Although SWT is about the effect of weak ties on the likelihood of getting a job, follow-up studies focus primarily on the effect of tie strength on attributes of the jobs obtained such as wage, job satisfaction, occupational status (e.g., Bridges and Villemez 1986; Lin, Ensel, and Vaughn 1981; Marsden and Hurlbert 1988; Wegener 1991). One reason for this substitution is methodological convenience: researchers typically observe only the matches realized, and the variation in their attributes, such as wage or job satisfaction, is the only variation they can explore.[2]

A change in the dependent variable requires a change in the independent variable as well. The strength of the tie that leads to a job cannot alone predict attributes of that job; one has to know the whole network in which the job seeker is embedded (Granovetter 1995:148; Montgomery 1992). Aggregate measures of personal networks, such as constraint (Burt 1992) or extensity (Lin 2003), capture more directly a network's capacity to transfer nonredundant information and exert influence, for which the strength of the tie that led to the job is just a rough surrogate. These approaches are consistent with Granovetter's own (1985) emphasis on the need to examine a person's overall embeddedness in a relevant network to understand her ability to undertake an economic action.

Even when a researcher can construct a reasonable aggregate measure of a job seeker's network and show that it affects some attribute of the job acquired, it is difficult, if not impossible, to rule out spurious correlation. Mouw (2003) carries out a comprehensive theoretical and empirical analysis of this issue and comes up with a necessary condition that must be met for the effect of a network characteristic on wages to be causal: it has to affect positively both the likelihood of getting a job through contacts and the wages earned at that job. None of the five previously used datasets reanalyzed by Mouw meets this condition, so we cannot rule out spurious correlation in these studies. As Mouw concludes, "[T]he role of network social capital in the labor market . . . reflects the cor-

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[2] Due to the recent proliferation of employee referral policies, data on job applicants has become available, which enables insightful and methodologically accurate analyses of the role of personal contacts from employers' perspective (Fernandez and Weinberg 1997; Fernandez, Castilla, and Moore 2000; Peterson, Saporta, and Seidel 2000). Unfortunately, such data cover only one type of tie, formal referrals by an organization's current employees, and do not contain much information about the tie's characteristics such as strength, status, etc.

relation between friends' characteristics and unobserved individual productivity" and, if so, can be driven entirely by social homophily, that is, the tendency for similar people to become friends (891). Better performers share higher quality job information and stronger influence with their friends, who, by virtue of homophily among friends' characteristics, should be better performers too. Without a perfect measure of performance, we cannot properly estimate the effects of information and influence. Thus, the whole research agenda inspired by SWT comes into question. I suggest that one possible response is to get back to SWT.

My basic premise is that even if the utility of a job seeker's overall network is given, there remains the possibility that some ties within that network are more likely to lead to jobs than others, and if so, this difference has to be explained. SWT is about the propensity of a specific tie, rather than the whole network, to lead to a job or, to put it differently, about the variation in the likelihood of getting a job across the ties of the same worker. This "within-subject" alternative promises to show finally whether social ties are associated with labor market opportunities independently of job seekers' individual characteristics. Any effect, if found, cannot be attributed to the spurious correlation between the characteristics of a job seeker's relationships and her unobserved productivity, because the characteristics of her relationships may vary, while her productivity is held constant.

Summarizing the foregoing discussion, I restate SWT as a proposition about the within-subject effect of tie strength on the likelihood of getting a job through that tie:

Proposition 1. Within Ego's personal network, a weak tie is more likely than a strong one to lead to a job.

INFORMATION AND INFLUENCE

To explain the prominence of social networks in labor markets, sociologists routinely invoke the propensity of social networks to transfer information and influence (Granovetter 1973, [1974] 1995, 1995; Lin et al. 1981; Bian 1997; Marsden and Gorman 2001; Mouw 2003). Granovetter's initial insight relies on the work of Rees (1966), who claims that a major advantage of personal networks is their ability to pass a particular kind of information, which he calls intensive, that is, in-depth, sensitive, and difficult to formalize. Lin and his co-authors refer more specifically to information as "knowledge about the precise job requirements and procedures for applying" (Lin, Ensel, and Vaughn 1981:394). At the same time, influence is about "putting in a good word" to the employer on behalf of the job seeker Granovetter ([1974] 1995:97) or the "ability to link the person to a particular segment of the labor market and enhance his/her chances of finding a job there" by putting online "credibility of the referring person or agent" (Lin, Ensel, and Vaughn 1981:394–95).

According to Granovetter, the strength of weak ties lies in their ability to transfer both information and influence. He finds that job seekers' weak ties "much more often . . . 'put in a good word' for them, as well as telling them about the job" (Granovetter ([1974] 1995:53–54). Weak ties are better than strong ones in securing influence due to the salience of structural factors, that is, they are better positioned to realize both information and influence benefits of social networks by being far enough away from the job seeker to provide him with nonredundant information and, at the same time, more likely to be sufficiently close to the employer to exert influence on him (Granovetter 1973:1372, [1974] 1995:54, 1995:148; Lin, Ensel, and Vaughn 1981).

Other studies, however, see the strength of weak ties exclusively in information gathering and promote strong ties as a conduit for influence. In particular, Bian relies on motivational rather than structural underpinnings of influence and therefore claims that "although weak ties are useful in spreading information, the strong ties of trust and obligation may be more advantageous in accessing influence, which is generally more costly and difficult to obtain" (Bian 1997:367).[3] He goes on to argue that this is particularly clear in non-market economies such as China's, where state bureaucracy handles job

[3] Granovetter ([1974] 1995:54) acknowledges that strong ties are more motivated to advocate on behalf of the job seeker but argues, referring to his findings, that structural advantages of weak ties outweigh the motivation factor.

assignments in a centralized fashion, and therefore the ability to influence bureaucrats' decisions, while illegal and hence costly, becomes crucial. A contact is willing to exert influence only if she trusts that the job seeker will be discreet and return the favor when an opportunity arises. Such trust and mutual obligation are attributes of strong ties (Bian 1997), and therefore "for reasons of motivation, especially, it is to be anticipated that strong ties may be more important foundations for influence flows than for information transfers" (Marsden and Gorman 2001:490).

There is a common type of influence that does not fit this logic exactly. In Granovetter's study, about 40 percent of the matches through personal ties took place directly between a worker and an employer whom the worker knew (Granovetter [1974] 1995:57). In other words, the contact and employer turned out to be one and the same. Obviously, an employer is in a position to exert influence on his own hiring decisions, which in our terms means that structural factors are in play. At the same time, the employer's motivation to hire such a worker may have something to do with reciprocity in the past as well as with the expectation of reciprocity within the future employment relationship—or with the straightforward desire to have a good worker. To single out this distinctive phenomenon, I call it *direct influence*. Since relationships between employers and their prospective employees are usually weak because of status differentials, we should expect that direct influence contributes to the strength of weak ties side by side with information benefits.

On the other hand, in the case of *indirect influence*, when the contact is a well-connected person who can refer the job seeker to others, a strong tie between the job seeker and contact is the major motivating factor. With this qualification in mind, I restate the second part of SWT, which suggests that access to information and direct influence explain the effect of weak ties on the likelihood of getting a job:

Proposition 2. The positive effect of weak ties on the likelihood of getting a job, stipulated in Proposition 1, is explained by a higher propensity of weak ties to provide access to information and to influence employers directly, rather than to influence employers indirectly through personal contacts.

DATA AND MODEL

The Data Source

The analysis presented in this paper uses a large-scale survey of hires that took place in 1998 in the local labor market of Samara, a large industrial city of 1.25 million situated on the Volga river about 700 miles southeast of Moscow. The choice of Samara as a project site was based on a number of circumstances. First, the city has experienced both enormous problems of restructuring and high levels of redeployment of the labor force, processes that submit labor market institutions to a thorough test and reveal a variety of mechanisms of labor allocation. Second, I could use previous ethnographic and quantitative studies of the Samara labor market (Clarke 1999; Kozina 1997, 1999) as a source of more precise indicators for the operationalization of my theoretical concepts and testing for potential sample selection biases.

The level of registered unemployment in Samara in 1998 remained stable at about 3.7 percent (Samara Goskomstat 1999b:23) while the unemployment rate, estimated according to the methodology of the International Labor Organization, was about 12 percent (Samara Goskomstat 1999a:1). The annual hiring rate at Samara's large and medium-size enterprises was about 22 percent, according to my estimate based on Goskomstat data (1999a:103, 125).

Information about workers and their organizations was accumulated using three questionnaires. A firm-level structured questionnaire was designed to elicit information about the organizations' structure, employment conditions, and use of market intermediaries (ads, direct applications, state and private employment agencies), and personal contacts in hiring. The interviews were carried out in personnel departments at the same time that the sample of hires was drawn. The information collected was combined in a firm-level data file.

Two structured questionnaires were designed on the individual level. The Employee's Questionnaire was administered first. It contained ten modules: sociodemographic characteristics of the respondent, job characteristics, job search process, employer, first contact, other intermediaries, hiring process, job satisfaction, work experience, and social resources. The interviews were administered in the respondents' homes by trained interviewers from the Samara

Branch of the Institute for Comparative Labor Relations Research. When answering questions from the employer module, a respondent had to identify the person who made the decision regarding the hire. That person was later interviewed using the Employer's Questionnaire, which included seven modules: job characteristics, worker search process, intermediary, hiring process, satisfaction with the worker hired, work experience, and personal information. An attempt to match the personal contacts mentioned by employees and employers was successful in 96.2 percent of cases.

Sample Design

I drew a two-stage stratified clustered sample of the hires that took place in Samara organizations in 1998 from all the economic branches except for state administration and finance. The recruitment into state administration is a political process, of which the study requires substantially different theoretical and methodological tools. The finance sector presents an interesting case for the project, but at the time of the fieldwork it was completely closed for outsiders in general and researchers in particular. Twelve large manufacturing enterprises belonging to the military-industrial complex have a secret status and, consequently, are beyond the reach of researchers. Economic stagnation, severe downsizing, and high turnover make these firms identical to other large manufacturing enterprises and therefore their exclusion from the target population does not limit the representativeness of the study.

A unified database of Russian organizations with information on the number of hires, which is a crucial parameter for this study, does not exist. In the 1990s, the State Statistical Committee (Goskomstat) maintained a complete database of large and medium-size organizations and carried out a quarterly survey of a 7 percent simple random sample of small organizations. I used these data as the sampling frames for the study with the following modification: the database of the large and medium-size organizations was split between organizations that reported to Goskomstat as independent entities and organizations (e.g., schools, railroads, healthcare establishments) aggregated within regional branches for the purpose of statistical reporting. The organizations from the "aggregated" part of the database were disaggregated for sampling purposes, with the number of hires in each "disaggregated" organization deemed to be equal to the number of hires in the aggregated unit divided by the number of organizations in that unit. To implement this modification accurately, I had to organize the target population of all the organizations in Samara into three strata: large and medium-size organizations that report to the Goskomstat as independent entities (Stratum I), large and medium-size organizations aggregated for the purpose of statistical reporting (Stratum II), and small organizations (Stratum III).

For analytical and practical reasons, I intended to draw a sample of about 150 organizations. The target sample size for each stratum was chosen proportionally to the variation in the number of hires within the stratum (for details, see Scheaffer, Mendenhall, and Ott 1996:141). In the end, 154 organizations were drawn into the sample with the probability proportional to the number of hires in 1998, including 67 organizations in Stratum I, 46 organizations in Stratum II, and 41 organizations in Stratum III. Ninety-three organizations actually participated in the survey, yielding a response rate of 60.4 percent with the highest attrition of 54 percent among small organizations. To account for the attrition, I developed firm-level weights and re-ran the analysis in this paper with the weighted data. The results did not change in any significant way.

The frame for the second stage was obtained from the personnel departments of the organizations, sampled on stage one, by trained samplers. The population studied on the individual level was limited to those hires that lasted for at least two months. Such hires were ordered by the date when they occurred or alphabetically and then selected systematically into the sample. Twenty hires had to be drawn from Strata I and III, and 15 hires from Stratum 2. If the actual number of hires at an enterprise in 1998 was less than the sample size assigned, all of them were drawn. As a result, I obtained a two-stage stratified cluster sample with enterprises as clusters and a total sample size of 1,434 hires, of which 1,143 actually participated in the survey, yielding a 71.9 percent response rate on the individual level. Basic descriptive charac-

teristics of the final sample are presented in Table 1.

The project design points to a potential sample selection bias. Those workers who applied for jobs but were not hired are excluded from the target population. The hiring process in Russia is still very informal and its stages are poorly delineated. Whether a person is going to be hired or not is often decided in advance, before she formally submits her application. Thus, the pool of applicants is not very different from the pool of hires. Strictly speaking, one has to consider as the risk set for this analysis a pool of those who wanted to get a job but failed to do so. Neither previous researchers nor I could define this group with any precision, since workers' intent is difficult to measure and, moreover, it is not entirely exogenous to their prospects in the labor market.

The Action Set Approach

Conclusions drawn from a within-subject analysis of the effectiveness of social ties in the labor market depend on the "baseline," that is, the relationships against which the ties that lead to jobs are compared. At first glance, an individual's personal network appears to be the most appropriate baseline. Attempts to collect such data within large-scale surveys, however, tend to yield small networks biased toward strong ties (Campbell and Lee 1991; Lin 1999). Most importantly, studies show that people consistently use different ties for different purposes (Hurlbert, Haines, and Beggs 2000; Wellman 1990, 1992) and therefore many ties in a personal network may have nothing to do with Ego's labor market opportunities and constraints.

This is the reason why I utilize the concept of an action set (Mayer 1966) and identify a job seeker's ties that could potentially be activated or were actually activated in the process of getting a job. It includes the people who (1) were familiar to the respondent before hiring; and (2) were either contacted by the respondent, could have been contacted if necessary, or approached the respondent themselves. The inclusion of these three types of ties ensures against a bias toward more advantageous relationships strategically picked by the respondent.

Table 1. Descriptive Characteristics of Workers

Individual Characteristic	Frequency	%
Gender		
Female	527	46.1
Education		
General secondary	381	33.3
Vocational secondary	504	44.1
Higher	258	22.6
Previous Employment Status		
Working	580	50.7
Registered unemployed	144	12.6
Unregistered unemployed	299	26.2
Student	120	10.5
Previous Occupation		
Manager	98	8.7
Professional	146	12.9
Technician, clerk	120	10.6
Skilled worker	508	44.9
Semi-skilled, unskilled workers	106	9.4
No previous job	153	13.5
Total	1,131	100.0

	Mean	SD	Minimum	Maximum
Worker's age	36.7	12.8	17	75
Action set size	2.2	1.7	0	8

Note: N = 1,143 workers in 93 organizations.

In terms of the action set, the theoretical arguments in the previous section can be expressed as follows: Each contact in a person's action set possesses a main resource that is valuable to a job seeker. Some contacts primarily provide information about jobs; others can also promote a job seeker to potential employers (indirect influence); still others are employers themselves (direct influence). A job seeker either solicits help from some of these contacts or the contacts offer their assistance without solicitation. Information about a specific job arrives from one member of the action set, although other members as well as nonmembers may get involved at later stages of actually getting the job. Consistent with SWT, the paper focuses on the characteristics of the tie that delivers the initial job tip. Whether its assistance results in the job seeker getting a job depends on matching the tie's strength and the contact's resource; weak ties transfer information and direct influence while strong ties are better for indirect influence.

To test these ideas, the survey identifies a respondent's action set using the following three questions: (1) Thinking back and doing a rough calculation, if you decided to ask for help in the job search, how many relatives, friends, and acquaintances did you have available to ask? Tell me about them. (2) Recall those people you actually approached during the job search. How many were there? Tell me about them. (3) During your job search, were you approached by people whom you had not asked for help? (Note to the interviewer: If the respondent has not searched for jobs, ask about the six months prior to getting the job sampled for this study.) For each contact mentioned, the respondent is asked to provide sociodemographic characteristics and indicate the main resource the contact could contribute to the process of getting a job. Additionally, the respondent is asked to characterize her relationship with each of her contacts as well as the relationships among her contacts.

The numbers in the last row of Table 1 show that the size of a worker's action set varies from 0 to 8 with the average of 2.2. One hundred and twenty-one respondents do not name any contacts that could help them with getting a job; 366 respondents name only one; 2,546 contacts in total are mentioned.

Variables

DEPENDENT VARIABLE: GETTING A JOB. For each contact in a worker's action set, I code whether it is the one from which the worker first learned about the job acquired. If so, the dependent variable gets a value of 1; otherwise, it is equal to 0. By definition, a maximum of one tie from an action set may lead to the job. A total of 832 workers obtained jobs through one of the personal contacts in their action sets.

INDEPENDENT VARIABLE: TIE STRENGTH. Since a measure of closeness or intensity of a relationship is the best indicator of tie strength (Marsden and Campbell 1984), the worker-respondents are asked how well they knew each personal contact in the action set prior to getting in touch with them regarding a job. Answers are recorded on a three-point scale: superficially, sufficiently well, and very well, and yielded the frequencies 16.3, 39.6, and 44.1 percent, accordingly. The proportion of superficial ties is 3.5 percent higher among the ties that actually led to jobs, although they are still in the minority. This finding is consistent with previous studies carried out in various countries during periods of economic downturn (for a review, see Granovetter 1995:157–60). When an economy sinks, not just individuals but whole firms or economic sectors suffer, disconnecting whole work-related networks from the labor market. Ties to relatives and friends, which on average are stronger than work-related ties, become more important in getting new jobs.

INDEPENDENT VARIABLES: INFORMATION AND INFLUENCE. A respondent is asked to identify the main reason why a particular contact in her action set (could) have been helpful in getting a job. Three possible answers address the benefits of social networks discussed earlier in the paper: "The contact has information" means that the contact is aware about labor market opportunities by virtue of being close to their sources. "The contact has connections (*svyazi)*" is a culturally established way to refer to those who know resource-rich people and can solicit their help on behalf of the job seeker. Finally, "the contact is in a position to make hiring decisions" indicates that the contact himself could

offer a job to the respondent.[4] The second and third options represent two different types of influence. A well-connected intermediary influences hiring indirectly by "putting in a good word" for the protégé, which can take a variety of forms from a mere hint to a clear request or directive, depending on the intermediary's position vis-à-vis the employer. On the other hand, a contact-employer can exert direct influence by making a hiring decision in favor of the protégé. In what follows, I use interchangeably "indirect influence" and "connections," and "direct influence" and "jobs." According to the findings in Table 2, 47.4 percent of the contacts in the sample provided primarily information, 22.0 percent direct influence, and 30.6 percent indirect influence. Thus, information is by far the dominant resource transferred through the contacts in the action sets.

CONTROL VARIABLES. Since I carry out a within-subject analysis, characteristics of workers and their organizations cannot be estimated separately but are accounted for by fixed effects (see the description of the model in the next paragraph). Instead, the controls include *sociodemographic characteristics of contacts* such as gender, age, and occupation. About 41 percent of the contacts in this study are women; among the ties that lead to jobs, their proportion increases to 49 percent, signaling the surprising effectiveness of women as labor market intermediaries (Ashwin and Yakubovich 2005). Most of the contacts, about 37 percent, are managers; the second largest group, skilled workers, makes up 27.5 percent of the sample.

Statistical Model. I use the conditional fixed-effects logistic regression, as implemented in Stata (StataCorp 2003:171–87), to estimate the within-subject effects of tie strength and contacts' resources on the probability of getting a job. The workers whose action sets either consist of less than two contacts or do not lead to a job contribute zero to the conditional likelihood function and therefore have no effect on the estimation. The number of observations that make nontrivial contributions is called the effective sample size. In my case, it is equal to 523, which is 45.8 percent of the original sample size 1,143.

TESTING OF THE PROPOSITIONS

Table 3 contains the results of testing Propositions 1 and 2. Model 1 includes the variable "tie strength" only. As predicted in Proposition 1, the weaker the tie the more likely it is to lead to a job. A one-unit increase in the tie strength decreases the probability ratio of getting a job through that tie by about 19 percent.

Model 2 accounts for the main resource offered by a contact; direct influence and indirect influence are contrasted against information transfer as a reference category. The estimates show that direct influence is as effective as information transfer in providing jobs, while contacts whose prime resource is indirect influence are significantly less likely to lead to jobs. Thus, in our context personal relationships are more effective when they pass information about jobs or link directly to employers. It is remarkable that the effect of tie strength in Model 2 becomes closer to zero and statistically insignificant, which is consistent with Proposition 2: the advantage of weak ties lies more in direct access to employers and useful job tips than in indirect referrals.

Since I estimate a within-individuals fixed-effect model with contacts as units of analysis, any possible sources of variation across individual workers are controlled for. Thus, the effects of tie strength and network resources are independent of any unobserved attributes shared by a job seeker and her contact, in particular, productivity. This implies that they are not pure artifacts of social homophily, that is, a higher likelihood of friendship among similar people.

Model 3 shows that this conclusion holds after sociodemographic characteristics of contacts are controlled for. Some of these effects deserve attention. First, a respondent is significantly more likely to get a job through a female

[4] Obviously, this contact may also be able to refer the person to others. In fact, it is reasonable to assume that employers know other employers better than workers do. My fieldwork in Russia shows that managers who have to lay off workers often do their best to refer them to other places. If they are not aware of such places themselves, they offer assistance in securing any place the workers may find. The important point here is that that benefit is secondary to the ability of the contact to offer jobs themselves.

Table 2. Characteristics of the Contacts in Workers' Action Sets

Individual characteristic	All Contacts		Contacts Leading to Jobs	
Gender				
Female	1,063	41.8	408	49.0
Occupation:				
Manager	889	34.9	296	35.6
Professional	368	14.5	104	12.5
Technician, clerk	236	9.3	86	10.3
Skilled worker	726	28.5	225	27.0
Semi-skilled, unskilled worker	151	5.9	78	9.4
No job	176	6.9	43	5.2
Social Relationship to Ego:				
Relative	666	26.2	238	28.6
Friend	669	26.3	138	16.6
Acquaintance	966	37.9	311	37.4
No social relationship	245	9.6	145	17.4
Tie Strength:				
Weak	415	16.3	163	19.6
Medium	1,007	39.6	325	39.1
Strong	1,124	44.1	344	41.3
Main Resource Provided by the Contact:				
Information	1,208	47.4	453	54.4
Indirect influence (connections)	599	22.0	165	19.9
Direct influence (jobs)	779	30.6	214	25.7
Contact leads to a job	832	32.7	832	100.0
	Mean	SD	Mean	SD
Contact's age	41.5	11.5	43.7	10.9

Note: N = 2,546 contacts of 1,143 workers in 93 organizations.

Table 3. Fixed-Effects Conditional Logistic Regression of the Likelihood of Getting a Job

	Model 1	Model 2	Model 3
Independent Variables			
Tie Strength	–.207 (.082)**	–.088 (.086)	–.129 (.089)
Main resource provided by the contact (info):			
Direct influence		.028 (.156)	.016 (.180)
Indirect influence		–1.099 (.165)***	–1.135 (.173)***
Contact's Characteristics			
Female			.621 (.157)***
Age			.039 (.035)
Age^2			–.0001(.0004)
Occupation (skilled worker):			
Managerial			–.031 (.189)
Professional			–.182 (.218)
Technical, clerical			–.072 (.239)
Semiskilled, unskilled worker			.595 (.283)
No job			–.588 (.309)*
Likelihood ratio χ^2 (df)	6.43 (1)*	63.75 (3)***	111.06 (11)***

Note: N = 1,780 contacts of 523 hires in 93 organizations. Data shown as regression coefficients. Reference categories and standard errors are given in parentheses.
* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed test)

contact than a male contact. This finding is consistent with Russian women's proactive role within support networks in the postsocialist period. In a situation of economic hardship, women demonstrate stronger survival skills and adaptability. Conditioned to having access to inferior labor market opportunities vis-à-vis men, they do not suffer as much from a loss of status and have lower expectations regarding jobs (Ashwin and Yakubovich 2005).

The status of the contact does not make much difference. It is not surprising that contacts who are unemployed themselves are less likely to help in employing others. A higher likelihood of getting a job through a semi-skilled or unskilled worker versus a skilled worker is consistent with the segmentation of the 1990s Russian labor market into a narrow segment of high-paid jobs with low turnover and a large segment of low-paid jobs with high turnover. The latter is responsible for the surprisingly strong hiring in Russia during the economic downturn of the 1990s (Clarke 1999; Kapelyushnikov 2001). The ability of less- skilled workers to provide jobs is a mere reflection of the deskilling taking place in the Russian labor market. The efficacy of personal networks is partially determined by macroeconomic and institutional processes.

DISCUSSION

The paper's findings provide the first evidence that the information and influence that are transferred through social relationships do matter in the labor market, independently of the individual characteristics of their beneficiaries. The evidence comes from a within-subject formulation of the strength-of-weak-ties hypothesis, which is traditionally treated as a hypothesis about effects of a subject's overall network on labor market outcomes. I argue that even when the subject's network is given, the question remains: Which specific relationships deliver jobs? I find that in the Russian urban labor market a person's weak ties are more likely to do that, because they are better positioned to provide information and direct access to employers. When a tie leads to an intermediary whose main resource is the ability to provide referrals, motivation becomes crucial and stronger ties are better at ensuring it.

Since the findings reported are within-worker effects, they cannot be explained by some unobservable individual characteristic of a worker that correlates with the same characteristic of her contacts. In particular, we can rule out the possibility that similarities in relatives' and friends' productivity alone underlie their ability to find jobs for each other. Information and influence secured by social ties matter on their own. Previous studies are unable to gain a similar insight because they focus on the one relationship that leads to the job acquired rather than the full scope of a worker's ties involved in the process of getting a job.

To be clear, the study has some limitations. First, its argument is built on a specific model of matching workers with jobs that presupposes the involvement of multiple contacts, of which at least one leads to the job acquired. Only about half of the respondents in the sample obtained their jobs that way. Development of a general approach that would encompass all these cases is a project for future research.

The second limitation is the imprecise measures of tie strength, information, and influence. Only future studies can show how consequential this limitation is. At the same time, the prior empirical research "does not yield a great deal of resolution . . . as to the mechanisms that account for observed statistical associations, in part because some of the intermediate outcomes . . . are rarely measured" (Marsden and Gorman 2001:496). This paper is the first step in an effort to remedy the situation. The data in this paper are more detailed than any other datasets assembled in the past for similar studies, and the findings fully justify gathering them.

Finally, we may be concerned about disproportional underreporting of weak ties in a typical action set. If weak ties are underreported to a higher degree than strong ties, the model overestimates the positive effect of weak ties on the likelihood of getting a job. To evaluate the robustness of the findings as to the disproportional underreporting of weak ties, I conduct a simulation where respondents are randomly assigned a gradually increasing number of unsuccessful weak ties.[5] Ninety-five percent confidence intervals for the tie strength effect

[5] I thank one of the anonymous reviewers for this suggestion.

are estimated from 100 replications of the simulation for 10, 20, 30, 40, and 50 percent increases in the number of weak ties. The 50 percent increase makes the positive effect of weak ties on the likelihood of getting a job statistically indistinguishable from zero, which provides some margin for error but not enough to suggest that workers can be completely ignorant about the labor market potential of weak ties. Fortunately, they are not, because a contact's occupation and industry, both of which are typically known by the job seeker, are good indicators of the contact's exposure to jobs. Future research should focus on a better understanding of what workers know about their strong and weak ties and how they use that knowledge in job search.

One of the key distinctions of this paper as compared to the previous research is the explicit specification of the resources that personal contacts possess: jobs, information about jobs, and contacts with others who have either information or jobs. The implications of the distribution of these resources among labor market participants may be understood further through formal modeling and simulation. Boorman's (1975) model is a good starting point for such an endeavor, since it accommodates multiple types of contacts and predicts the predominance of strong ties in actors' action sets during periods of economic recession, which is consistent with my findings.

By gaining insights into a major theoretical issue from an analysis of a specific Russian labor market, the paper strikes a more balanced view of networks in emerging markets in general and Russia in particular. The extensive literature on the Soviet and post-Soviet society and economy suggests that reciprocal personal connections are deeply entrenched in the Russian way of doing business (e.g., Ledeneva 1998; Guseva and Rona-Tas 2001). As evidence of this, researchers often cite the proverb "It is better to have 100 friends than 100 rubles" (*ne imey 100 rubley, a imey 100 druzey*) (e.g., Ledeneva 1998:104; Yakubovich 1999:256). Relying on cultural artifacts such as proverbs, however, can be misleading, as my in-depth interviews during the fieldwork show. The manager of one successful new private enterprise volunteers the saying: "Friendship is friendship but work is work" (*druzhba druzhboy–sluzhba sluzhboy*) when questioned about the role of personal connections in his firm. I do not argue that this proverb more adequately captures the Russian culture of personal relationships than the previous one. On the contrary, it turns out that exactly the same proverb exists in Chinese, and it is invoked by Chinese businessmen to explain disdain for the use of personal networks in hiring (Guthrie 1998:273). This finding suggests that any culture contains mutually contradictory values and therefore serves as a source of mutually exclusive justifications (cf., DiMaggio 1994; Stark 1996). Which justification is actually adopted is a function of the economic and social context in which actors operate. Over the past 15 years researchers have emphasized substantial differences between the Chinese and Russian paths toward market economies. The striking similarity in the justifications employed by economic actors suggests that the general logics behind these transformations, at least with regard to the labor market, may be quite similar after all.

Weak formal labor markets in postsocialist countries make reciprocity-based influence more salient, but this does not mean that the same phenomenon is absent in more mature markets. It is not that Russian workers act very differently from their Western counterparts. Rather, from a portfolio of similar tools they choose the ones that better fit their specific circumstances. The Russian case highlights theoretical and empirical issues of common interest overshadowed in other contexts. The paper brings one of them, the role of information and influence in social networks, into the foreground and thereby serves the development of a more general social theory.

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