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Between Exchange and Reciprocity: The Interplay of Institutions and Social Networks in the Russian Labor Market

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Chapter 7. Hiring as Reciprocity

7.1. Introduction

If we limit the scope of possible allocation mechanism to redistribution and market exchange then the only implication of the key finding in the previous chapter, which is that dense networks decrease the probability of bargaining and alternative job opportunities for a worker, is negative. That is to say, dense personal networks circumvent market exchange. Workers embedded in such networks do not make any real choices and end up in the first job delivered by a close kin or friend. In fact, such behavior is reasonable and well documented. Workers do not choose among alternatives because working with acquaintances is a value in itself; it makes work more satisfying and nurtures trust and loyalty which both employers and employees highly appreciate. In this way, the social fabric resists the marketization of economic activities. At the same time, if we follow consistently the theoretical framework developed in Chapter 2, economic reciprocity comes up naturally as an alternative positive logic underlying hiring through dense social networks. In general, this claim looks trivial; probably, there are very few people who would disagree that mutual help is one of the backbones of social relations. However, equally few people try to dissect this phenomenon systematically in a real-life setting; it is usually buried in discussions of social networks which take the presence of reciprocity for granted. Untangling reciprocity from the complex web of emotions and motives which govern personal relationships appears to be a Sisyphean task, in particular, if it is handled with large-scale survey instruments. Ethnographic studies and controlled experiments dominate the sociological literature on the subject. In this Chapter, I attempt to push these methodological limits by doing exactly the thing that is considered to be hopeless. Such complementarity is necessary because representative surveys explicate behavioral patterns which often cannot be easily articulated in in-depth

interviews and modeled in experiments; economic reciprocity is a very sensitive topic to discuss, since by definition its articulation indicates selfish behavior even if people are not aware of selfish motives while reciprocating.

The transition from state socialism to capitalism in Russia, whose current economy is often labeled as an “economy of favors” (e.g., Ledeneva 1998), presents a promising arena for such an undertaking. The messy transition directly challenges the stylized treatment of reciprocity in the social exchange literature and puts it in the context of the other basic modes of resource allocation such as market exchange and redistribution. In this chapter I explore whether restricted and/or generalized types of reciprocity are involved in hiring in the Russian labor market and what role, if any, hierarchical and symmetrical social relations play in sustaining them.

7.2. Elements of Reciprocity in Hiring

The pioneering work on reciprocity in human societies belongs to anthropologists. They showed that it has to be taken seriously as a governance mechanism of economic activities in primitive societies (Frazer 1919, Malinowski 1932, Mauss 1990 [1950], Lévi-Strauss (1969 [1967], Sahlins 1972) and discovered that the whole economies of such societies were based on exchanges of favors within established symmetrical structures, primarily, kinship networks. To capture the fundamental importance of chains of favors rather than isolated incidents, anthropologists introduced the notion of reciprocity as the major form of economic integration in primitive societies. Particular implementations of reciprocity vary from one society to another; each presupposes some idiosyncratic criterion of equivalency and may impose conditions on the order, place, and time of reciprocation.

Malinowski’s treatment of Kula exchange is the most influential early contribution to this literature. Malinowski (1922) describes how the tribes inhabiting a wide ring of islands engage in trades of necklaces and armlets. The trades proceed along fixed routes which form a close circuit with necklaces and armlets traveling in opposite directions. The exchange is purely social in nature since its objects do not have any economic value. At the same time, various economic activities proceed under the umbrella of this social ritual. The rigid structure and sophisticated rules of reciprocal

exchanges in primordial societies had a major impact on sociological thinking on the subject.

Early sociological accounts of reciprocity do not provide any clear definition of this phenomenon and treat it very generally. For instance, Becker (1956) treats reciprocity as the human nature of modern man who, therefore, can be called *Homo reciprocus* (Becker 1956). Following this line of thought, sociologists may find themselves trapped in the logic similar to one advanced by diehard proponents of free markets who put on a similar pedestal the human propensity “to trade, barter, and exchange” (Adam Smith 1993[1776]: 21).

Gouldner (1960) addresses this danger in his “preliminary statement” on the norm of reciprocity which was envisioned by the author as a contribution to functional theory but left a lasting legacy for sociological thinking on the subject long after the demise of functionalism. Gouldner introduces reciprocity as a general norm and agrees that it “may be found in all value systems” (Gouldner 1960: 171). However, from his perspective universality does not mean unconditionality. Reciprocity is contingent on the social context in which the initial favor is made: the need of the recipient, the value of the favor for the donor, the motives imputed to the donor, the status of the participants within a society. Whether and how these factors play out in specific transactions is an issue sociology has to understand. Homans (1961) and Blau (1964) framed the resulting sociological debate on reciprocity focused on the relationship between economic exchange and social exchange, the structure of reciprocity, the role of exploitation and power in social exchange, the contribution of social exchange processes to social solidarity (for a critical review, see Ekeh 1974).

Consistent with the inherently psychological foundations of Homan and Blau’s arguments, the debate remained confined to social exchange theory in social psychology. Research in this field relies primarily on experiments (although, for a remarkable exception, see Yamagishi and Yamagishi 1994). Students of social exchange developed a very productive research program but, unfortunately, tightly controlled socio-psychological experiments establish a setting tremendously distant from real-life instances of reciprocal interactions. Reciprocity is defined as the opposite to negotiated exchange which nevertheless possesses a clear notion of equivalency (e.g., Molm,

Takahashi, and Peterson 2000). Ethnographic studies of reciprocity in the real world show that people engage in long-term exchanges of gifts and favors with an extremely vague sense of equivalency and uncertain periods between transactions; a recipient of a favor treats the partner's contribution idiosyncratically, i.e., on the basis of her particular circumstances such as resourcefulness and the ability to act at the time when help is needed (e.g., Clark and Chrisman 1994; Weinberg 1992). Finally, the stylized concept abstracts from the rich institutional setting in which exchanges of favors take place. As the discussion in Chapter 1 shows, this setting cannot be reduced to social relationships but includes formal institutions which, while being designed with a different goal in mind, end up serving as a support structure for reciprocity.

These discrepancies between the theoretical model of reciprocity and the reality explain why very few attempts were made to directly explore this phenomenon in modern societies. Although economic sociology accumulated ample evidence of the relevance of reciprocity to such diverse forms of social relations as *compadre* in the Philippines, *guanxi* in China, and *blat* in the former Soviet Union (Berliner 1957, Gouldner 1960, Hwang 1987, Ledeneva 1998, Walder 1986), no systematic attempts were made to detect it empirically. Economic sociologists face the same dilemma exchange theorists do: on one hand, they fully appreciate the central place of reciprocity in economic life, but at the same time find it difficult to grasp this vague phenomenon in the real world (e.g., Powell 1990). Because they cannot sacrifice the institutional context and intervening causes in their analysis, they solve the dilemma by subsuming reciprocity as one of many features of social networks and generally avoid its direct operationalization and measurement.

This general claim holds for sociological studies of the role of social networks in labor markets shaped by Granovetter's distinction between weak and strong ties. Earlier work treats social networks as information channels; accordingly, weak social ties, which lead beyond the individual's immediate circle and thus open new opportunities, are the most advantageous in a labor market (Granovetter 1973, 1974). Such an understanding of the role of social networks is perfectly compatible with the notion of competitive markets. Moreover, social networks bring substance into the abstract and fleshless concept of perfect competition (e.g., Burt 1992, Podolny 1993). At the same time, strong social ties do not lead to new information but are better in providing help when it is really

needed (Granovetter 1983, Uehara 1990, Wellman 1990). They often constitute alternative micro-system within which people organize economic activities on reciprocal basis (Stack 1974, Lomnitz 1977, Uehara 1990). Thus, the literature appears to associate weak ties with competitive markets while strong ties with reciprocal relationships albeit it does not say so directly. The emphasis on insular, kinship and community based economic systems in empirical research prevents us from seeing the presence of reciprocal relations in the main economy, in general, and in labor markets, in particular.

At the same time, the labor market literature takes seriously the notions of favoritism and particularism (e.g., Graves 1970, Heimer 1992). Case studies show that the allocation of jobs in modern Russia is governed by similar principles, in particular, because the necessary tools are already in place and the switch from chronic labor shortages to chronic unemployment makes any job highly valuable (Clarke 1999).

This warrants in-depth analysis of reciprocity as an alternative allocation mechanism of the Russian labor market. However, according to ethnographic evidence, reciprocity is not confined to the labor market; it is very unlikely that people just exchange help in getting jobs. Instead, a variety of economic and social services can be engaged. Social exchange theorists disagree on the borderline between economic and social in this context: whether it should be defined in terms of the media of exchange (e.g., Lévi-Strauss 1969 [1967], Malinowski 1922), the presence of contractual relationship and/or negotiations (e.g., Blau 1964, Molm et. al. 2000), underlying motives (e.g., Malinowski 1922, Mauss 1990[1950]). I distinguish reciprocal exchanges of items with some economic utility from their social contexts because the focus of my analysis is the relationships between economic transactions and their institutional support structures as they are defined in Chapter 2. If economic and social elements are completely blurred and undistinguishable, the issue of the relationship between them does not make much sense.

Unlike redistribution and exchange, economic reciprocity cannot be observed within one transaction, such as a hire. What we can find in a single transaction, hire including, is a favor which is defined as a “gracious or friendly action due to special goodwill and in excess of what may be ordinarily looked for” (Oxford English Dictionary

1989). The favor constitutes the building block, the elementary particle of reciprocity while reciprocity is a chain of mutual favors.

Gouldner suggests that “We owe others certain things because of what they have previously done for us, because of the history of previous interaction we have had with them” and then restates this point in a formal way: “A norm of reciprocity, in its universal form, makes two interrelated, minimal demands: 1) people should help those who have helped them, and 2) people should not injure those who have helped them” (Gouldner 1960: 171). It is imposed on actors involved by either “the dominant cultural profile” or by “the latent culture structure” (Ibid.: 171). Consequently, two steps have to be taken to establish the presence of the norm of reciprocity in hiring: first, we have to establish the presence of a favor in the act of hiring and, second, to look if this favor can be explained by a history of prior exchanges between the actor and her helpers.

Gouldner’s universal norm of reciprocity is the norm of restricted reciprocity. Reciprocal exchanges take place between two actors; the person who received a favor is expected and feels obliged to return it to the donor. Homans (1961) and Blau (1964) offer the earliest detailed sociological treatments of restricted reciprocity and its implications for society at large. Ekeh (1974) strengthens explanatory power of the sociological concept of reciprocity by bringing forward the notion of generalized exchange originally discovered in anthropological empirical studies of primitive societies (e.g., Malinowsky 1932, Lévi-Strauss (1969 [1967])). Generalized exchange allows a favor to be “returned” to a person different from the donor; it relies on established systems of social relationships which prescribe precisely who may receive a favor from whom (Ekeh 1974: 208-209). In primitive societies, kinship structures are the most common structural mechanisms generating generalized reciprocity, although reanalyzing the kinship data from a study of one aboriginal tribe in Australia, Bearman (1997) shows that a more general system of inequality based on gerontocracy rather than kinship creates stable marriage patterns consistent with the norm of generalized exchange. This finding brings closer traditional and modern societies, since in the latter kinship structures albeit still important are much less rigid and encompassing than in the former; other types of social relationships generate reciprocity which is not structurally patterned as clearly as in tribes.

Latest advancements in social exchange theory account for this fundamental difference by specifying quite general norms which can induce generalized reciprocity without triggering free riding. For example, Takahashi (2000) shows that the principle of helping those who help others achieve this goal. These developments expand the boundaries of generalized reciprocity to encompass communities and even societies. At this point, generalized reciprocity dissolves into separate and seemingly unrelated favors; we do not observe tit-for-tat but single favors without any clear patterns of reciprocation.

Malinowski's (1922) social exchange theory brings restricted and generalized reciprocity together by arguing that both of them operate simultaneously. I accept it as a reasonable working assumption in the context of the Russian labor market. Consequently, it makes sense to start with a single favor rather than reciprocity as the basic phenomenon which has to be explained.

The literature distinguishes three major types of help one can obtain from social networks in the context of hiring in the Russian labor market: information transfer, assistance with hiring procedures, and influence on the hiring decision or patronage (Bian 1997; Clarke 1999: 230-231; Kozina 1999: 189-191). It is not always easy to establish which particular instances of information transfer, assistance with hiring procedures, and patronage qualify as favors, in particular, when help is provided by an employer. By virtue of their position, employers provide information, explain hiring procedures, refer job candidates to relevant people, and order hiring. It is virtually impossible to separate proper performance of formal duties from special treatment without looking at fine idiosyncratic details of hiring. In my data, only 11.7% of hires took place through a direct contact between the worker and employer with a history of personal relationship. I consider this kind of hiring as a special case and exclude it from the analysis of reciprocity presented here, focusing instead on favors done by intermediaries.

Informed by prior ethnographic studies, exploratory research, and a pilot project, I compiled an exhaustive list of the benefits provided by personal networks in the context of hiring in workers' survey questionnaire. It includes five items on information transfer: size and conditions of rewards, job content, workers' collective and management, job conditions, specific peculiarities of the workers' collective and/or management; six types of help with hiring procedures: consulting on the preparation of documents, transfer of

documents to the employer, tipping on whom to talk to, obtaining necessary signatures, tipping on how to pass hiring procedures, participation in hiring negotiations on behalf of the worker; and four kinds of the influence on hiring decision: introduction, recommendation, the request to hire, and the direct order to hire.

I apply the definition of favor as an action “in excess of what may be ordinarily looked for” to determine the items which constitute a favor in a labor market, assuming that the “ordinarily looked for” refers to the kinds of assistance a person is likely to receive from formal labor market intermediaries. In this regard, information about a job’s pay and content is the most conventional type of assistance and therefore is hardly qualified as a favor. At the same time, information about a workers’ collective, bosses, and work conditions is usually more rare and sensitive. According to the findings in Table 6.1, 46.2% of the workers in the sample receive such valuable information from their job contacts. Any type of help with hiring procedures but a referral is beyond the scope of services currently provided by formal labor market intermediaries. This interpretation does not undermine the value of referrals; it suggests that referrals are more valuable to workers in the degree in which they provide valuable information, assistance, and influence. After excluding referrals, 26.4% of the sample obtained some kind of help with hiring which are qualified as favors. Classifying the types of influence on hiring decision, I take the most conservative stance assuming that requests and hiring orders constitute a favor while introductions and recommendations do not. Under this definition, 25.7% of the hires in the sample appear to be subjects of patronage. Overall, the majority of workers, 63.4%, received at least one type of favor. Since patronage is the most sensitive and interesting type of favors, I analyze its structural support in the following section.

7.3. Structural Support for Reciprocity

Gouldner’s norm of restricted reciprocity and its generalized counterpart appear strongly influenced by the over-socialized conception of man to which the conventional critique from the social embeddedness perspective (Wrong 1961, Granovetter 1985) applies. According to this perspective, the norm of reciprocity cannot function if it is not supported by ongoing social relationships which work as both an intermediary and

enforcement mechanism. Pre-existing social ties are arteries through which favors travel while the members of the networks comprised of such ties observe each other's behavior and sanction any violation of the norms of reciprocity, either restricted or generalized ones.

Various versions of the embeddedness framework emphasize various structural underpinnings of reciprocity. Following anthropological research (Lévi-Strauss 1969 [1967], Malinowsky 1932, Sahlins 1972), Polanyi (1957) argues that reciprocity of primitive societies is supported by the symmetrical kinship structures which are exogenous to reciprocal transactions. Polanyi's reciprocity is traditional in the sense that it is sustained by clearly defined obligations attached to specific roles within kinship networks (Polanyi 1957, 1977). Most importantly, Polanyi explicitly insists that, as any other form of economic integration, reciprocity cannot be instituted and reproduced by reciprocal exchanges themselves without any institutional support formed outside of the economic sphere.

Normative obligations are more diffused in modern societies. They are not well specified and proliferate among friends, neighbors, colleagues, and so on in addition to kin. The sociological literature deals with this in two ways. First, it introduces the notion of social exchange which covers intangible forms of support such as loyalty, empathy, etc. in addition to tangible material help (Homans 1961, Blau 1964). Social exchange can be sustained in the long-run without any supporting structure because, as an important part of the exchange, the partners demonstrate their mutual appreciation of each other as human beings. However, treating such appreciation as an exchange token on equal footing with goods and services undermines its intrinsic quality. The embeddedness framework (Granovetter 1985) lays down the second path which preserves the purely economic nature of transactions but puts them in a broader social context which encompasses non-economic relations. This approach is preferable if one wants to explain an economic action, which is the case here. It is compatible with the often spontaneous character of favors made as a by-product of social interactions.

Under restricted reciprocity, a favor in hiring is made in recognition of the ongoing exchanges between the parties who have been providing mutual assistance over some time period prior to the hire. The vague notion of equivalence sustains the feeling

of indebtedness on both sides which keeps the interaction going. This implies that the account is never set and a sequence of favors can continue without any evident order of reciprocation; the past experience of mutual favors nurtures the obligation and willingness to help in the future. A favor begets another favor and, as a result, restricted reciprocity emerges as a self-sustained and self-regulated allocation mechanism. A structuration process (Giddens 1979) replaces a rigid social structure. Prior interactions constitute the context in which the action in question takes place. Positive emotions stimulated by them (Lawler and Yoon 1998) and the intrinsically vague notion of equivalency resulting in the lasting feeling of mutual indebtedness sustain the system in the long-run (Powell 1990). Sahlins also points out at the self-reproducible character of the interaction between the social and economic domains: “If friends make gifts, gifts make friends” (1972: 186).

Hypothesis 7.1. Previous experience of mutual help increases the likelihood of a favor in hiring.

On the other hand, the norm of generalized reciprocity implies that the history of mutual economic help between the parties directly involved in the transaction of interest is irrelevant. Instead, the relative location of the parties in the social structure plays the crucial role through three distinctive mechanisms.

First, a favor takes place simply because the general norm of reciprocity is firmly enforced by the social network involved in hiring. If so, the enforcement mechanism is more effective if more members of the network know each other and thereby can observe each other's behavior.

Hypothesis 7.2. The probability of a favor in hiring increases with density of the action set involved.

The second mechanism of generalized reciprocity does not depend on economic reciprocation but on power dependency between transacting partners. In the presence of a hierarchical relationship between them, a senior person does not necessarily make favors

in the expectation of return, since his subordinate may lack the resources to reciprocate anyway, but in order to induce loyalty and gain status and legitimacy (Blau 1964: 25-31, 255-263; Coleman 1990: 129-131; Emerson 1962). The age, gender, and occupational hierarchies are the hierarchical structures particularly salient in the Russian labor market (e.g., Clarke 1999, Kapelyushnikov 1999).

Hypothesis 7.3. The older the average age of the action set vis-à-vis the worker, the high the probability of a favor in hiring.

The patrimony of the Russian economic system is well documented. However, the literature ignores the paradoxical consequence of the subordinate position of women which, according to the logic of the structural argument presented here, should lead to a sustainable flow of favors from men to women.

Hypothesis 7.4. Women are more likely than men to get a job as a favor while women-dominated networks are less likely than men-dominated ones to deliver favors.

While age and gender hierarchies are traditional remnants of modern societies, the relationships between managers and workers are often treated as a neo-traditional feature of state socialism. In socialist countries, the malfunctioning system of redistribution, built primarily around state enterprises, makes workers heavily dependent on the whim of their managers and thereby gives rise to personalized patron-client relationships in which loyalty and submissiveness on the part of workers is the currency in exchange for special treatments (Ashwin 1999, Walder 1986). Hiring is an opportunity to jumpstart such a relationship.

Hypothesis 7.5. The higher the proportion of managers in a worker's action set the more likely he is to get a job as a favor.

In addition, the history of a patron-client relationship can make a favor in hiring even more likely.

Hypothesis 7.6. A worker who has former bosses in her action set is more likely to get a job as a favor.

The third mechanism of generalized reciprocity assumes that a favor takes place because the partners value their relationship per se and consider mutual help as its key component. Here, favors are expressions of affection and the value of the partner as a person. If this mechanism is indeed at work then the history of interactions of the non-economic nature should be a factor in hiring. Such interactions can enter the hiring context in two ways: either a worker act through both social and economic ties or a worker's individual ties can include both an economic and social components. The former means that the socio-economic mixture is a quality of an action set; if it is present, I call the action set a mixed action set. The latter means that the same mixture resides within individual ties; I call action sets with such ties mixed-ties action sets. In either case I expect better chances to receive a favor in hiring.

Hypothesis 7.7. Mixed action sets and mixed-ties action sets increase the likelihood of getting a job as a favor.

So far, I focused on the role of social networks in supporting generalized reciprocity and ignored possible contributions of formal labor market intermediaries. However, one of the main functions of formal institutions, assigned to them by their designers, is to limit undesirable impacts of social relationships. In particular, to expand the role of market exchange it is necessary to curb reciprocity as an alternative. This is what formal labor market intermediaries can achieve by making vacancies available to everybody through open channels. The Russian Labor Code requires employers to submit all their vacancies to the local office of the Federal Employment Service (Smirnov 1996: 114). However, the requirement remains on paper. In an interview for this study, a deputy director of the Samara Employment Service referred to the absence of a local regulation

implementing the law as the reason for his agency's inability to enforce it. As a result, employers exercise their discretion in deciding what jobs are made widely available. If this is so in my case, a job's characteristics rather than its availability through formal channels should influence the likelihood of getting a job as a favor. Therefore, it is crucial to test if after controlling for a job's characteristics, its availability in the open market makes it less prone to reciprocity:

Hypothesis 7.8. A job's availability through formal labor market intermediaries decreases the likelihood of getting it as a favor.

Hypotheses 2-8 explore the support structure of generalized reciprocity. Restricted reciprocity is treated in Hypothesis 1 only as a self-sustained process which does not require any support. This is inconsistent with my general framework in Chapter 1 which emphasizes the crucial role of support structures for any kind of reciprocity. In other words, all the parameters of social networks introduced in Hypotheses 2-7, which increase the likelihood of generalized reciprocity, can strengthen restricted reciprocity as well while formal labor market intermediaries can limit it. To save space, I do not restate each hypothesis here but instead formulate a "meta-hypothesis" as following:

Hypothesis 7.9. The interaction terms between the action set characteristics, introduced by Hypotheses 7.2-7.7, and the history of mutual favors between the transacting partners can positively affect the likelihood of receiving a job as a favor. A job's availability through formal labor market intermediaries decreases the effect of the history of mutual help on the probability of receiving the job as a favor.

A favor is a favor only if the benefit delivered is of value to the recipient. In this regard, the better the job, the more likely it is to become a token in reciprocal exchanges. At the same time, the Russian labor market is differentiated by the quality of organizations rather than jobs per se. Workers do not necessarily aspire to get a specific job but to get their foot in the door of the organization they want to work for. A worker

does not care much about the attractiveness of the job since this is just a way to get access to the organization's internal labor market where better jobs and working conditions become available. This is a particularly reasonable strategy since in the Russian labor market good jobs are scarce and distributed through internal promotions whenever possible (Clarke 1999: 239). This means that the dynamics of external hiring, which this dissertation deals with, is more likely to be shaped by characteristics of organizations rather than jobs. In particular, an organization's average salary rather than the remuneration attached to a job determines the attractiveness of the position for the worker and thereby affects its chances to become a token in reciprocal exchanges of favors.

Two mechanisms shape the pattern of this dependency. On one hand, well-to-do enterprises are under pressure to hire the relatives and friends of their employees; the higher an enterprise's average salary the more likely it is to get involved in hiring as a favor. On the other hand, such enterprises can preserve their wellbeing only if they hire sufficiently qualified workers, whether those are members of their employees networks or not. Case studies provide sufficient evidence that successful organizations, in particular their upper management, recognize this dilemma and try to limit hiring as a favor (e.g., Kozina 1999: 191). This observation yields the opposite prediction, namely, the higher an enterprise's average salary the less likely it is to allow hiring as a favor. Taken together, the two tendencies produce a non-monotonic relationship between the attractiveness of an organization and hiring as a favor:

Hypothesis 7.10. The likelihood of hiring as a favor is a reverse U-function of the organization's average salary.

7.4. Data and Method

I refer the reader to Chapter 3 for a general description of the data and modeling approach implemented here since the data and method of analysis are consistent across the Chapters. In this section I explain the peculiarities related to statistical analysis of favors and reciprocity.

Section 7.2 explains why a favor should be accepted as a basic element of reciprocity and primary outcome in its statistical modeling. It also describes a variety of

favors exchanged in the context of hiring in the Russian labor market. To not overburden the analysis I focus on influence on hiring decision or patronage as the type of favor which most clearly separates reciprocity from hiring through market exchange. As it is reported in Section 7.2, 196 hires or 25.7% of the sub-sample of those which involve contacts show unambiguous indications of patronage.

The hypotheses I want to test deal with the role of action sets and, in a limited degree, of formal labor market intermediaries in the proliferation of favors in hiring. Only those hires which involve personal relationships, whether as conduits of favors or not, can be included in such an analysis. Among characteristics of action sets, a prominent role belongs to density which is defined only for non-trivial action set, i.e., those which include at least two nodes. When these two restrictions on the population of interest are taken into account, 526 hires representing all the 93 organizations in the sample can be included in the analysis.

To explore the mechanism of restricted reciprocity empirically, I collected information about the prior history of economic relationships between the workers and those contacts in their action sets, who got directly involved in their hiring for the job in the sample (for brevity, I will call such contacts hiring contacts). For obvious reasons, such information is impossible to gather for those members of an action set who belong to the worker's household. Household members are unavoidably involved in joint economic activities which are all but impossible to separate into acts of reciprocation with the instruments of a large-scale survey. Therefore, I introduce the category 'the same household' to identify those action sets that include at least one member of the worker's household. The remaining action sets are divided into those which include at least one hiring contact with whom the worker had a history of mutual economic favors in the past and those which do not. The data suggests (see Table 6.1) that 13.5% of the workers in my study have at least one hiring contact from their households, 27.7% have a history of mutual favors with at least one hiring contact, and 24.4% have hiring intermediaries but not a history of mutual favors with them.

7.5. Findings

Model 1 in Table 7.1 contains mainly control variables. Little variation in the probability of getting a job as a favor is explained by them. This probability is higher for younger workers although the effect vanishes entirely in subsequent models and therefore does not deserve much attention. Similarly, the log-odds of this probability for the transportation industry are about half the ones for manufacturing but the magnitude and statistical significance of the effect weakens when the intermediaries involved in hiring are specified. In short, it looks like the likelihood of getting a job as a favor is not a function of workers' and jobs' characteristics. The only exception is a job's attractiveness in monetary terms. For both the job's salary and the average salary in the organization, I use the quadratic functions of their logarithms to specify their inverse U-shape effect on hiring as a favor predicted by Hypothesis 7.10. It turns out that the job's salary does not matter while the average salary in the organization affects the outcome in the way specified by Hypothesis 7.10. The coefficients for both the linear and quadratic terms of its logarithm are large and statistically significant at the .05 level. Simple calculations show that the likelihood of getting a job as a favor increases while the average salary in the organization grows from 0 to 735 rubles and decreases afterwards. Although the coefficient estimates change in the subsequent models, they retain their significance and the ratio of the coefficient for the linear term and the coefficient for the quadratic term remains relatively stable. This means that the value of the average salary at which the likelihood of getting a job as a favor reaches its maximum, which is 735 rubles, is quite independent of the model specification.

Model 2 in Table 7.1 includes the variables for the institutional means involved in hiring. Their effects test the generalized reciprocity arguments outlined by Hypotheses 7.2 – 7.8.

The availability of a job through formal labor market intermediaries decreases its chances of being given as a favor; the log-odds of the likelihood of such an outcome decreases by a factor of .66 ($\exp(-.417)$) and the effect is significant at the .05 level. But the most substantial and robust effect is the one of density predicted by Hypothesis 7.2. As the density of the action set increases by .1, the log-odds of the probability of getting the job as a favor grows by more than 10% and the effect is highly statistically significant. Thus, it looks indeed that generalized reciprocity is more likely within

relatively dense action sets where the compliance with the norm of reciprocity is easier to monitor. However, we should abstain from far-fetched conclusions so long as our model does not control for restricted reciprocity which is intrinsically intertwined with its generalized counterpart.

Model 3 takes restricted reciprocity into account and indeed weakens the relationships observed in Model 2. The effect of formal labor market intermediaries becomes insignificant which indicates that restricted reciprocal exchanges are less likely to involve jobs offered in the open labor market. The density effect loses about 25% of its magnitude and diminishes in significance which means that this measure captures some impact of restricted reciprocity in the previous model. At the same time, it remains strong and significant at the .01 level, thereby confirming the increasing likelihood of generalized reciprocity with density.

Hypothesis 7.1 about restricted reciprocity is unambiguously supported by Model 3. As I discussed in the data section of this chapter, the involvement of the household members in hiring does not necessarily indicate restricted reciprocity but has to be controlled for as a distinctive pattern of exchange. As the coefficient for the related variable in Model 3 shows, this involvement drastically increases the probability of getting a job as a favor as one could expect. But the key finding pertains to the role of the prior exchange of favors. It turns out that the history of prior exchanges of favors increases the probability of a favor in the context of hiring by a factor of 1.86 ($\exp(0.622)$). Favors beget favors and restricted reciprocity emerges as a self-reproducing process of structuration which does not necessarily require any supporting institutions outside the sphere of economic exchanges per se. The finding challenges the theoretical framework developed in Chapter 2 but does not firmly falsify it yet. It is possible that supporting institutions reinforce the relationship between past and future exchanges of favors (see Hypothesis 7.9); moreover, it can turn out that as soon as we control for such an interaction effect, the immediate relationship between past and future favors will disappear altogether. Models in Tables 7.2, 7.3 explore these possibilities by introducing the interaction effects between parameters of the institutional support structures and restricted reciprocity. Statistical power of my analysis is limited by the small average number of hires per organization and therefore I test each interaction term with a separate

model rather than all of them simultaneously. In this regard, the findings should be interpreted with caution.

The first model in Table 7.2 includes the interaction between the action set density and the indicators of restricted reciprocity. The estimates of the coefficients for the interaction terms are insignificant; at the same time, the independent effects of density and restricted reciprocity lose statistical significance after the interaction is introduced. The effects of all these variables appear intertwined and blurred to such a degree that it is impossible to separate them statistically. This observation is confirmed further by the strange behavior of the likelihood function. Comparing the deviance statistics for this model with the one for the same model without the interaction term presented as Model 3 in Table 7.1 we notice that the deviance increased by less than one unit. The result is puzzling since the deviance is supposed to decrease with the addition of new variables; this feature plays a key role in comparing fitness of nested models. The explanation lies in estimation procedures for the hierarchical logit model which can produce only approximate values of the likelihood function and the deviance statistic based on it. As I discussed in Chapter 3, the Laplace approximation employed for this analysis is the most precise one currently available. However, in this particular case its approximation error leads to the inconsistent result, which together with insignificant and unstable coefficient estimates, points to multicollinearity as a potential problem. In other words, it is virtually impossible to distinguish the effect of the interaction term from the independent effects of the variables involved. The addition of the interaction term does not improve the original model which substantively means that density of an action set neither enforces nor weakens restricted reciprocity in hiring. The effect of density is robust in all the subsequent models with interactions which allows me to fully confirm its reinforcing impact on generalized reciprocity, in accordance with Hypothesis 7.2.

Judged by the improvements in the deviance statistics, only three models in Tables 7.2,7.3 deserve attention albeit even their evidence should be considered as preliminary since the improvements and the coefficient estimates for the interaction terms of interest are significant predominantly at .1 level. In addition, the majority of the findings pertain to the role of household members rather than to exchanges of favors with partners outside of households. For instance, the third model in Table 7.2 shows that the

role of household members in getting a job as a favor is smaller if the worker's action set is dominated by women. This means, first, that women dominated action sets are more often linked to workers' households and, second, that women's excessive presence in the action set reduces the worker's chances to get a favor in hiring through her household members. These findings provide somewhat unexpected support to Hypothesis 7.4 albeit in the context of households only: women's activities in a labor market are more often directed to helping other members of their households than men's activities do.

The role of household members is strengthened by the presence of the worker's former bosses in the action set, according to the first model in Table 7.3. The mechanism behind this interaction requires a separate study. So far, the only interpretable evidence comes from my interview with the deputy director of the Samara branch of the Federal Employment Service. He mentions that managers often want to help with getting a job for the employees whom they have to lay-off because of economic difficulties, but do not know where suitable jobs can be available. They tell a laid-off worker to find an attractive position and let them call the hiring manager and recommend the worker. One can speculate that such a worker will use her household to locate a suitable job and then invoke her former boss to secure it. This can explain why the mixture of former bosses and household members in the same action set increases the likelihood of getting a job as a favor.

Beyond a worker's household, ongoing social relationships fail to significantly enforce the role of restricted reciprocity. Only the first two models in Table 7.3 suggests that the effect of the history of mutual favors on getting a job as a favor is higher if either former bosses or both purely economic and purely social ties are present in the action set. The effects found are substantively large but statistically weak, they are significant at the .1 level only, which prevents me from drawing far-reaching conclusions.

7.6. Discussion

Overall, my findings fall short of meeting the theoretical predictions; only Hypotheses 7.1, 7.2, and 7.10 find sufficient support. Most remarkably, I could not show that restricted reciprocity relies on any support structure to sustain and reproduce itself, as I

argued in the theoretical chapter following Polanyi's lead. On the contrary, it appears that restricted reciprocity is a self-reproducing mechanism.

At the same time, my findings clearly demonstrate that generalized reciprocity relies on non-economic relationships as an intervening mechanism. In particular, it looks like relatively dense networks are necessary to enforce the norm of generalized reciprocity. Dense networks produce better advocates who actively influence hiring on behalf of the worker. Let me remind you of the finding in Chapter 6 that dense networks limit workers' access to non-redundant labor market opportunities. Thus, there is a trade-off between more opportunities and more influence. To illustrate the significance of this trade-off, I use Model 2 from Table 6.3 and Model 3 from Table 7.1 to predict the probabilities of getting a job through a choice among alternatives and as a favor while increasing density in .01 increments from 0 to 1 and keeping the values of all the other covariates constant. For each value of density I obtain the number of probabilities equal to the number of individuals in the sample and then average them. The resulting graphs for both outcomes, the probability to choose among alternatives and the probability to get a job as a favor, are presented in Figure 7.1. As density increases, the former decreases from .48 to .36 while the latter increases from .17 to .34.

The significance of this trade-off is not limited to hiring or the Russian labor market. It can be spotted in a variety of contexts intrinsic to the Russian transition from state socialism. Inspired by a number of sociological and anthropological studies, Prendergast and Stole (2000) develop a game-theoretical model of barter relations in Russia which shows that in the absence of money workers prefer to continuously rely on dense networks of long-term trading partners rather than to switch to a lower-cost producer. They argue that "such a policy of 'putting all your eggs in one basket' increases incentives for trustworthy dealings compared to situations where one's partner is of little importance" (Ibid.: 39). In my case, the reasons for high density action sets being involved in hiring can be both structural and strategic but the bottom line is the same: sparse action sets deliver more opportunities while dense ones make sure that a few opportunities available will be realized.

Another remarkable finding in this chapter is the inverse U-shaped relationship between the attractiveness of an organization, measured by the average salary paid to its

employees, and the probability to get a job there as a favor. The finding is compatible with the conflicting pressures organizations face while trying to restructure their employment policies. On the one hand, employers recognize the importance of social cohesion for the economic wellbeing of their enterprises and often just cannot refuse the desire of workers to assist in hiring their relatives and friends. On the other hand, they must pay attention to the hires' qualifications. A compromise is often found in innovative practices. A number of personnel departments of Samara enterprises maintain lists of relatives and friends of their workers interested in being hired. The lists usually contain detailed information about candidates' qualifications but a personal relationship to a current employer is a prerequisite for getting in line (Clarke 1999, Yakubovich and Kozina 2000). My participant observations and interviews during the fieldwork for this dissertation show that in some enterprises this practice gradually evolves towards opening the lists to outsiders which raises the question of cultural underpinnings behind the use of personal contacts in hiring.

Indeed, the vast literature on the Soviet and post-Soviet society and economy suggests that subversive personal connections became deeply entrenched in the Russian ways of doing business. Whatever article or book on this topic one opens, it is very likely that the proverb "It is better to have 100 friends than 100 rubles" (*ne imey 100 rubley, a imey 100 druzey*) will lead the presentation (e.g., Clarke 2000, Ledeneva 1998: 104, Yakubovich 1999: 256). In the in-depth interviews during the fieldwork, I did not ask the respondents about this or any other proverbs and did not encourage them to name any either. Nevertheless, the manager of one successful new private enterprise volunteered on his own the saying "Friendship is friendship but work is work" (*druzhba druzhboy – sluzhba sluzhboy*), when was questioned about the role of personal connections in his firm. I do not argue that this proverb rather than the previous one adequately captures the Russian culture of personal relationships. Instead, this finding confirms the well-developed argument that the culture is contradictory, it can be a source of mutually exclusive justifications. Which justification is actually adopted is a function of the economic and social context in which actors operate. Competitive and technologically challenging environments do not sacrifice social relationships in favor of economic efficiency. Social relationships can co-exist with and enhance economic efficiency but

they need to be re-negotiated. The process of re-negotiation requires time and creative effort, as the new practices in the Samara labor market show. It is always uneven since different economic branches experience competitive, technological, and social pressure in various degree. As a result, a segmentation of the labor market can emerge. Clarke (1999: 267-271) defines it on the basis of hiring channels. The analysis in this Chapter shows that subtler divisions between jobs available in the open market, i.e., through formal intermediaries, and those distributed through restricted reciprocity emerge. Openly available jobs can still be attained through personal contacts; such contacts do not carry favors but information and assistance generally available from formal intermediaries as well.

Some findings in this chapter call for reconsiderations of the original theoretical framework of Chapter 2. The dummy variable which identifies the presence of the members of a worker's household among her job contacts was included in the analysis because it appeared substantively and methodologically impossible to track reciprocal transactions among the members of the same household. However, the analysis shows that the presence of the household members has a robust and substantively meaningful effect in all the models. In his early writing, Polanyi distinguishes householding as a separate mode of allocation which he later submerges into redistribution (Polanyi 1977: 41-42). My results suggest that householding deserves a special theoretical consideration, at least, in the context of the Russian transition from state socialism. Other empirical studies clearly collaborate this claim (Burawoy et. al. 2000a, 2000b; Clarke 2000).

Moreover, my analysis is consistent with these studies in demonstrating the key role of women in economic activities centered around households. It shows that although women are less effective than men in finding good labor market opportunities for themselves, women-dominated networks are better at providing other job seekers with alternative options. Thus, women's activism is directed more towards others than is men's. The drawback is that women-dominated networks deliver information, but cannot penetrate the chains of reciprocal relationships which can influence hiring decisions. It appears that the key to understanding women's activism lies in their traditional secondary position within the labor market and, at the same time, primary role within the household as domestic managers. The former means limited labor market opportunities and power

while the latter includes the assistance and stimulation of the job search activities of other household and family members. This is a promising agenda for future research.

Table 6.1. Descriptive Characteristics of Hiring^a

Characteristics of hiring	Frequency	%	Sample size
<u>Elements of exchange:</u>			
Alternatives on the supply side	323	28.4	1139
Alternatives on the demand side	417	45.5	917
Wage bargaining	101	10.9	927
<u>Favors:^b</u>			
Valuable information	354	46.2	766
Valuable help	202	26.4	764
Direct influence on hiring	196	25.7	763
Any favor	485	63.4	764
<u>Exchange and Favor:</u>			
Both	233	38.7	602
Only Exchange	124	20.6	
Only Favor	156	25.9	
Neither	89	14.8	
<u>Ego's relation to job contacts:</u>			
Same household	154	13.5	1142
History of mutual favors	316	27.7	
No history of mutual favors	279	24.4	
No relationship	393	34.4	

a: Missing cases are excluded variablewise

b: Multiple choice variable

Table 7.1. The Probability That a Worker Gets the Job as a Favor: Estimates of the Two-Level Logit Model With Laplace Approximation of ML. Sample = 526 hires in 93 organizations

Fixed effects	Model 1	Model 2	Model 3
Individual-level intercept			
Organization-level intercept	-57.588 (28.049)**	-61.905 (27.560)**	-62.507 (27.317)**
Logarithm of organization size/10	0.923 (1.031)	1.093 (1.038)	0.987(1.075)
New private organization	0.195 (0.512)	0.222 (0.528)	0.257 (0.550)
Logarithm of average salary in organization/10	183.852 (85.856)**	199.266 (85.368)**	194.461 (83.775)**
Logarithm of average salary in organization/10 ²	-138.723 (63.464)**	-150.845 (63.415)**	-147.474 (62.221)**
Economic branch (manufacturing):			
Service	-0.232 (0.383)	-0.200 (0.372)	-0.242 (0.371)
Transportation	-0.777 (0.293)***	-0.626 (0.310)**	-0.570 (0.309)*
Non-profit	-0.204 (0.485)	-0.192 (0.494)	-0.185 (0.488)
Female	0.064 (0.200)	0.087 (0.253)	0.142 (0.258)
Worker's age/10	-0.207 (0.100)**	-0.078 (0.121)	-0.042 (0.126)
Employment status (employed):			
Student	-0.251 (0.335)	-0.252 (0.344)	-0.337 (0.348)
Unregistered unemployed	0.037 (0.206)	0.042 (0.215)	-0.019 (0.218)
Registered unemployed	0.291 (0.238)	0.472 (0.264)*	0.426 (0.260)
Occupation (skilled worker): ^b			
Managerial	-0.909 (0.591)	-1.006 (0.648)	-0.975 (0.629)
Professional	0.076 (0.355)	0.019 (0.394)	-0.043 (0.407)
Technical, clerical	-0.550 (0.433)	-0.556 (0.490)	-0.570 (0.493)
Unskilled worker	0.146 (0.318)	0.088 (0.341)	0.092 (0.350)
Logarithm of job salary/10	-12.187 (19.847)	-19.146 (22.631)	-13.319 (22.486)
Logarithm of job salary/10 ²	9.954 (16.506)	16.500 (18.794)	12.092 (18.543)
Job available through formal intermediaries		-0.417 (0.213)**	-0.343 (0.221)
Action set size		0.017 (0.083)	0.001 (0.086)
Action set density		1.003 (0.273)***	0.747 (0.286)***
Age difference between the action set and ego/10		0.208 (0.132)	0.178 (0.131)
Female dominated action set		-0.064 (0.261)	-0.084 (0.259)
Proportion of managers in action set		0.166 (0.339)	0.111 (0.353)
Former bosses in action set		-0.312 (0.352)	-0.239 (0.369)
Both economic and social ties in action set		0.251 (0.352)	0.360 (0.357)
Mixed socio-economic ties in action set		-0.197 (0.233)	-0.124 (0.239)

Restricted reciprocity (no prior exchange of favors):

 The same household

1.032 (0.291)****

 Prior exchange of favors

0.622 (0.271)**

Firm-level random effect

Intercept variance

0.617 (0.357)

0.464 (0.432)

0.583 (0.422)

Deviance (-2LogL)

1541.034

1524.203

1512.321

a: Significance levels: * < .1, ** < .05, *** < .01, **** < .001 (2-tailed test)

b: Reference categories are given in parentheses.

Table 7.2. The Probability That a Worker Gets the Job as a Favor: Estimates of the Two-Level Logit Model With Laplace Approximation of ML. Sample = 526 hires in 93 organizations. Models for the Interactions Between the Variables of Interest and Restricted Reciprocity.

Fixed effects	The variable interacted with restricted reciprocity			
	Action set density	Age difference between the action set and ego/10	Female dominated action set	Proportion of managers in action set
Individual-level intercept				
Organization-level intercept	-63.115 (27.421)**	-61.509 (27.672)**	-62.682 (28.926)**	-65.750 (27.237)**
Logarithm of organization size/10	1.007 (1.074)	1.013 (1.070)	0.972 (1.089)	1.042 (1.070)
New private organization	0.257 (0.549)	0.235 (0.543)	0.214 (0.570)	0.265 (0.548)
Logarithm of average salary in organization/10	195.913 (84.041)**	190.478 (85.178)**	192.209 (88.595)**	205.883 (83.631)**
Logarithm of average salary in organization/10 ²	-148.597 (62.426)**	-144.586 (63.246)**	-146.265 (65.800)**	-156.393 (62.172)**
Economic branch (manufacturing):				
Service	-0.237 (0.370)	-0.225 (0.370)**	-0.211 (0.373)	-0.224 (0.370)
Transportation	-0.577 (0.312)*	-0.576 (0.310)*	-0.611 (0.325)*	-0.544 (0.316)*
Non-profit	-0.181 (0.494)	-0.196 (0.484)	-0.249 (0.472)	-0.193 (0.491)
Female	0.138 (0.257)	0.140 (0.259)	0.042 (0.274)	0.155 (0.264)
Worker's age/10	-0.042 (0.126)	-0.024 (0.123)	-0.030 (0.129)	-0.049 (0.126)
Employment status (employed):				
Student	-0.324 (0.348)	-0.298 (0.352)	-0.290 (0.342)	-0.313 (0.348)
Unregistered unemployed	-0.013 (0.219)	-0.013 (0.217)	-0.003 (0.220)	0.003 (0.221)
Registered unemployed	0.421 (0.264)	0.423 (0.259)	0.445 (0.266)*	0.463 (0.270)*
Occupation (skilled worker): ^b				
Managerial	-0.968 (0.629)	-0.988 (0.626)	-0.919 (0.642)	-1.034 (0.657)
Professional	-0.037 (0.405)	-0.029 (0.403)	0.057 (0.424)	-0.048 (0.414)
Technical, clerical	-0.556 (0.496)	-0.547 (0.496)	-0.590 (0.469)	-0.560 (0.497)
Unskilled worker	0.099 (0.354)	0.090 (0.350)	0.106 (0.353)	0.109 (0.353)
Logarithm of job salary/10	-12.816 (22.764)	-12.544 (22.857)	-10.371 (22.307)	-14.105 (22.288)
Logarithm of job salary/10 ²	11.724 (18.813)	11.439 (18.869)	9.903 (18.366)	12.945 (18.269)
Job available through formal intermediaries	-0.342 (0.223)	-0.342 (0.224)	-0.332 (0.220)	-0.306 (0.213)
Action set size	-0.001 (0.086)	0.001 (0.086)	0.013 (0.087)	-0.011 (0.088)
Action set density	0.690 (0.573)	0.759 (0.287)***	0.791 (0.295)***	0.761 (0.289)***
Age difference between the action set and ego/10	0.175 (0.133)	0.353 (0.222)	0.189 (0.132)	0.184 (0.134)

Female dominated action set	-0.089 (0.258)	-0.099 (0.264)	0.190 (0.415)	-0.109 (0.260)
Proportion of managers in action set	0.103 (0.357)	0.098 (0.356)	0.125 (0.357)	-0.685 (0.744)
Former bosses in action set	-0.236 (0.372)	-0.273 (0.373)	-0.224 (0.373)	-0.218 (0.381)
Both economic and social ties in action set	0.361 (0.363)	0.381 (0.358)	0.337 (0.352)	0.371 (0.368)
Mixed socio-economic ties in action set	-0.124 (0.244)	-0.133 (0.239)	-0.167 (0.242)	-0.070 (0.245)
Restricted reciprocity (no history of mutual favors):				
The same household	0.881 (0.773)	1.092 (0.337)***	1.425 (0.374)****	0.490 (0.468)
History of mutual favors	0.598 (0.560)	0.734 (0.276)***	0.513 (0.283)*	0.305 (0.435)
Interaction with restricted reciprocity:				
The same household	0.197 (0.970)	-0.175 (0.264)	-1.082 (0.613)*	1.561 (1.114)
History of mutual favors	0.047 (0.755)	-0.246 (0.272)	0.238 (0.513)	0.955 (0.892)
<hr/>				
Firm-level random effect				
Intercept variance	0.529 (0.453)	0.514 (0.444)	0.600 (0.447)	0.525 (0.437)
Deviance (-2LogL)	1513.203	1511.675	1506.663	1509.728

a: Significance levels: * < .1, ** < .05, *** < .01, **** < .001 (2-tailed test)

b: Reference categories are given in parentheses.

**Table 7.3. The Probability That a Worker Gets the Job as a Favor: Estimates of the Two-Level Logit Model With Laplace Approximation of ML. Sample = 526 hires in 93 organizations.^a
Models for the Interactions Between the Variables of Interest and Restricted Reciprocity.**

Fixed effects	The variable interacted with restricted reciprocity			
	Former bosses in action set	Both economic and social ties in action set	Mixed socio-economic ties in action set	Job available through formal intermediaries
Individual-level intercept				
Organization-level intercept	-68.692 (26.897)**	-65.197 (28.430)**	-63.472 (27.507)**	-64.063 (27.584)**
Logarithm of organization size/10	1.070 (1.091)	0.983 (1.093)	0.956 (1.083)	1.027 (1.063)
New private organization	0.281 (0.548)	0.324 (0.558)	0.257 (0.554)	0.236 (0.538)
Logarithm of average salary in organization/10	212.740 (82.716)***	201.694 (87.071)**	196.659 (84.155)**	200.963 (85.395)**
Logarithm of average salary in organization/10 ²	-161.146 (61.502)***	-152.842 (64.608)**	-149.149 (62.513)**	-152.764 (63.469)**
Economic branch (manufacturing):				
Service	-0.238 (0.372)	-0.261 (0.373)	-0.243 (0.372)	-0.261 (0.373)
Transportation	-0.607 (0.316)*	-0.634 (0.310)**	-0.559 (0.303)*	-0.541 (0.302)*
Non-profit	-0.212 (0.493)	-0.191 (0.489)	-0.191 (0.488)	-0.184 (0.492)
Female	0.191 (0.264)	0.204 (0.268)	0.153 (0.257)	0.093 (0.269)
Worker's age/10	-0.045 (0.122)	-0.050 (0.125)	-0.041 (0.123)	-0.051 (0.128)
Employment status (employed):				
Student	-0.255 (0.351)	-0.329 (0.358)	-0.318 (0.351)	-0.315 (0.355)
Unregistered unemployed	-0.062 (0.226)	-0.012 (0.226)	-0.007 (0.216)	-0.003 (0.218)
Registered unemployed	0.353 (0.267)	0.437 (0.267)	0.435 (0.265)*	0.420 (0.251)*
Occupation (skilled worker): ^b				
Managerial	-0.993 (0.597)*	-0.991 (0.632)	-0.958 (0.636)	-0.884 (0.642)
Professional	0.002 (0.419)	-0.040 (0.407)	-0.019 (0.407)	-0.034 (0.408)
Technical, clerical	-0.638 (0.476)	-0.628 (0.503)	-0.552 (0.494)	-0.532 (0.485)
Unskilled worker	0.167 (0.356)	0.116 (0.357)	0.110 (0.339)	0.140 (0.351)
Logarithm of job salary/10	-12.756 (23.232)	-12.150 (22.446)	-12.723 (22.354)	-15.392 (22.441)
Logarithm of job salary/10 ²	11.965 (18.996)	11.359 (18.417)	11.589 (18.447)	14.162 (18.416)
Job available through formal intermediaries	-0.320 (0.217)	-0.355 (0.227)	-0.339 (0.219)	0.053 (0.384)
Action set size	-0.017 (0.088)	0.004 (0.087)	0.000 (0.086)	-0.008 (0.086)
Action set density	0.720 (0.280)***	0.745 (0.285)***	0.736 (0.289)**	0.742 (0.295)**
Age difference between the action set and ego/10	0.189 (0.129)	0.182 (0.130)	0.169 (0.130)	0.169 (0.138)

Female dominated action set	-0.113 (0.268)	-0.097 (0.262)	-0.095 (0.259)	-0.068 (0.271)
Proportion of managers in action set	0.115 (0.363)	0.057 (0.356)	0.070 (0.358)	0.115 (0.362)
Former bosses in action set	-1.075 (0.459)**	-0.364 (0.397)	-0.238 (0.370)	-0.254 (0.370)
Both economic and social ties in action set	0.319 (0.377)	-0.588 (0.633)	0.381 (0.359)	0.438 (0.365)
Mixed socio-economic ties in action set	-0.142 (0.242)	-0.093 (0.234)	0.068 (0.396)	-0.176 (0.242)
Restricted reciprocity (no history of mutual favors):				
The same household	0.712 (0.316)**	0.811 (0.298)**	1.185 (0.400)**	1.045 (0.369)**
History of mutual favors	0.422 (0.317)	0.407 (0.286)	0.735 (0.364)**	0.913 (0.317)**
Interaction with restricted reciprocity:				
The same household	2.325 (1.055)**	2.640 (1.307)**	-0.375 (0.611)	0.006 (0.607)
History of mutual favors	0.964 (0.600)*	1.436 (0.759)*	-0.208 (0.458)	-1.049 (0.619)*
<hr/>				
Firm-level random effect				
Intercept variance	0.663 (0.439)	0.573 (0.464)	0.487 (0.461)	0.448 (0.445)
Deviance (-2LogL)	1506.337	1506.686	1513.243	1509.338

a: Significance levels: * < .1, ** < .05, *** < .01, **** < .001 (2-tailed test)

b: Reference categories are given in parentheses.

Figure 7.1. The Effects of Network Density on the Probabilities That a Worker Considers Alternative Jobs and Gets a Job as a Favor

