Chapter 1

Introduction

1.1 Social Networks and Inequalities

There is a considerable consensus among students of social inequalities about the main determinants of the unequal distribution of income and status in industrial societies. The consensus rests on human capital theory (Becker 1964, Mincer 1974). In industrial societies, competitive labor markets govern the allocation of people to positions. In competitive labor markets, employers have one sole objective: profit maximization. Profit maximizing firms pay wages that are proportional to the productivity of employees.\(^1\) It is generally assumed that productive skills are acquired in schools and during on-the-job training (Becker 1964). Inequalities persist because individuals acquire different levels of schooling and different amounts of training and experience. Human capital theory offers a simple yet powerful explanation of various forms of inequalities. Paradigmatic applications include the explanation of earnings differentials between men and women (Polachek and Siebert 1993) and the understanding of the poor status of ethnic minorities, like blacks (Wilson 1978, Hout 1984) and gypsies (Kertesi 1995).

In the previous decades, a new paradigm emerged in the social sciences where the concept of social capital plays a key role (for different definitions of this concept, consult Bourdieu 1986, Coleman 1990, Putnam 1995, Flap 1995, 1999; Tardos 1996, Lin 1998, Portes 1998). A fundamental claim of this paradigm is that life-chances depend not only on individual resources but also on network characteristics reflecting the resources of network members (Flap 1995, 1999; Lin 1982, 1998). In other words, inequalities stem not only from the unequal distribution of human capital but also from the unequal distribution of social capital.

Why can network characteristics be expected to have an impact on life–chances and inequality? There is ample evidence that personal connections play an important role in matching people to positions.\(^2\) This simple fact indicates that job information is not widely diffused and opportunities are not open to everyone. Thus, competition in labor markets is not perfect. For this reason, human capital theory does not offer a complete explanation of inequalities. Additionally, the fact that personal contacts are often used to match people to

---

\(^1\) Consult an introductory textbook on microeconomics; see also Davis and Moore (1945).

\(^2\) In the United States and in some Western European countries - the Netherlands, Germany, and England - the proportion of people getting a job informally ranges around between 27 and 64 percent (Saunders and Flowerdew 1987, Flap and De Graaf 1988, Wegener 1991, Granovetter 1995, Moerbeek et al. 1995). It should also be noted that the figures are larger in the US than in Western European countries.
positions might also suggest that personal networks are an additional determinant of inequalities. Earnings and status advantages are often due to employment in primary jobs (Doeringer and Piore 1971, Sorensen and Kalleberg 1981). Roughly speaking, primary jobs are those jobs where earnings are relatively independent of actual performance and the job is associated with promotion and growth-in-earnings opportunities. One might speculate that employers allocate primary jobs to applicants who are referred by one of their employees (Doeringer and Piore 1971, Granovetter 1974). If this is so then access to good jobs depends not only on education but also on access to employees working in firms with primary jobs. Personal networks are an additional determinant of inequalities because they affect the chances of finding jobs through personal contacts and accessing employees in firms with primary jobs. Finding a job through contacts obviously depends on networks since one cannot find a job through friends if there are no friends around (cf. Blau 1977). Moreover, finding a job through contacts also depends on network composition in terms of employment status and occupation. People tend to know other people with similar characteristics (Homans 1950, Laumann 1966, Verbrugge 1977), therefore access to employees in primary jobs often requires friends who also work in primary jobs. To summarize, network composition in terms of employment status and occupation should have an (indirect) effect on inequalities. This is the reason why such a network composition can be considered as a new form of capital, namely social capital.

To illustrate this reasoning, consider the reproduction of racial and gender inequalities. Network composition is a key factor of understanding the reproduction of disadvantaged positions even when the original causes of disadvantaged positions (mainly discrimination) are not operating anymore (Granovetter 1974, Flap and Tazelaar 1989, Montgomery 1991, 1994). The important consequence of discrimination is that the relatives and friends of disadvantaged people have poor labor market experience. Observers of racial inequalities argued that such network composition prevents disadvantaged people from having access to mainstream resources and role models (Loury 1977, Wilson 1987). However, network composition has also implications for the opportunities of getting jobs through contacts. Empirical research documents that people in poor labor market positions (ethnic minorities, women) remain excluded from good opportunities because they know or they contact people who are also in a disadvantaged position (McPherson and Smith-Lovin 1982, 1986, 1987; Campbell and Rosenfeld 1985, Braddock and McPartland 1987, Ibarra 1992, Elliott 1999, Petersen et al. [forthcoming]). Thus, although disadvantaged people may rely extensively on their friends and family to get a job, these contacts often lead to relatively bad jobs (Marx and Leicht 1992, Falcón 1995, Greenwell et al. 1997, Alon and Stier 1997, Green et al. 1999). Breaking out of bad positions is facilitated when disadvantaged people contact or know dissimilar people occupying better labor market positions (Green et al. 1995, Stoloff et al. 1999), or when they avoid the use of personal contacts (Drentea 1998; but see also Moerbeek et al. 1995).
1.2 Mechanisms behind Network Effects

It was argued in the previous section that personal networks are likely to be an additional determinant of inequalities because competition in labor markets is not perfect. Imperfect competition is indicated by the extensive use of personal contacts to match people to positions. The use of personal contacts and network effects cannot be considered as independent of the (mal)functioning of organizations or institutions (Granovetter 1979, Litwak 1985, Stinchombe 1989). Therefore, it is logical to ask which institutions and organizations are responsible for the use of social connections in labor markets and how these institutions and organizations might generate network effects in labor markets.

There are basically two different answers to the question why personal contacts are used in labor markets. The first answer is that due to the existence of personal contacts, employers hire a friend or a relative instead of other, eventually better applicants. The second answer is that meritocratic selection requires the evaluation of productive skills and personal contacts might transmit information about productivity of applicants. These accounts differ with respect to the implications of social connections for meritocratic selection, i.e. selection on the basis of the productive skills of applicants. The first answer suggests that personal contacts undermine meritocratic selection. The second implies that personal contacts are indispensable during the hiring process; they support meritocratic selection.

PERSONAL CONTACTS UNDERMINE MERITOCRACY: PARTICULARISM

One possible source of imperfect competition is particularistic selection, i.e. the evaluation of applicants in terms of their connections to the employer rather than in terms of their productive skills. It is tempting to attribute this phenomenon to particularistic preferences employers have. However, it is a better strategy to identify structural constraints that generate the impression of per se preferences (Lindenberg 1985). On the one hand, the assumption that employers have particularistic preferences might indicate the influence of third parties who are the patrons of job seekers. This power of third parties rests on mutual obligations arising from exchange relations to the employer. Hiring a friend of a friend thus reflects either the fulfillment of these obligations or the creation of a new obligation. On the other hand, the impression that employers have particularistic preferences might be due to constraints on the hiring decisions of employers that are imposed by employees. Assume that employers do not have social obligations towards third parties, and they do not have personal preferences towards certain applicants. Although employers wish to select on a meritocratic basis, they might be not able to do so because current employees can enforce the hiring of their own friends. This power of employees can be attributed to the fact that employees have the opportunity to withdraw help during on-the-job training or to harass newcomers (Lindbeck and Snower 1988, Bailey and Waldinger 1991, Coverdill 1998), and thereby to harm the organization capital (Prescott and Visscher 1980) of the firm. In short, particularistic preferences reflect the ability of current employees (insiders) to withdraw their cooperation with newcomers (outsiders).
A case study in a Hungarian manufacturing plant, conducted between the two World Wars, nicely illustrates particularistic recruitment based on the power of insiders and particularistic recruitment based on exchange relations with employers (see Tóth 1994). Many workers got their job through unions. This fact reflects the insider power of employees: control over the recruitment process was a main objective of unions. Since the bargaining power of unions depends only on the firms’ demand for skilled labor, unions aimed to control only the recruitment of skilled manual workers. Another important way of finding a job was the reliance on protectors, who were mainly skilled workers or supervisors who used to work in the firm. Some protectors were high status people having a salient role in political life: local landlords, politicians, administrators in various government departments and political associations. These high status people were able to help because they had a social tie to the employer.

An important side effect of particularistic selection is that job information will be not widely diffused in labor markets. The social relations of job seekers to insiders and to patrons create an opportunity for both employers and job seekers to meet each other quickly. If this is so then firms connected to job searchers through contacts will not place advertisements and they will not report vacancies to employment services. This fact is related to the problem of timing of transactions, i.e. to the problem of finding jobs or applicants quickly (Roth and Xing 1994). The counter-intuitive implication of this fact is that job seekers and firms are not interested in using institutions that would support meritocratic selection. The reason is simple: to be able to choose among various opportunities, one should wait until all opportunities are there. But waiting for opportunities contradicts the aim of finding partners quickly.

The argument from the timing of transactions helps us to identify the institutions that are able to promote perfect competition. There are several institutions –personnel departments, anti-discrimination regulations, laws concerning the advertisement of openings in certain jobs – that push employers towards the use of public places. Additionally, there should be institutions concerning the timing of transactions in public places (Roth and Xing 1994). Imagine that all job seekers and employers are interested in using public places like employment services and advertisements. Due to the timing problem, the firm entering first enjoys advantages over those who enter later. Therefore, job seekers and employers are interested in entering the public place earlier than other job seekers and employers. However, meritocracy requires the simultaneous presence of all opportunities. The lesson is that meritocracy requires safeguards that prevent firms and persons from finding each other early. If there are no such safeguards the public place will be not effective.3

3 The rise of the famous Japanese school-placement system illustrates the vulnerability of meritocratic meeting places with special clarity (Azumi 1969). In this system, firms approach universities in order to get new employees, and school offices select students for the job on the basis of grades. Due to the timing problem, employers are interested in approaching students as early as possible. This creates incentives for students to find a job, and eventually to disrupt studies, before graduation. As a side-effect, the relationship between grades and access to good jobs weakens. In the long-run, employers would not rely on grades and universities would lose their reputation of securing good jobs to their best students. Not surprisingly, universities tried to prevent firms from early recruitment. Already in 1953, when the first university students under the new educational system graduated, the Japan Federation of Employers’ Associations (JFEA) and the universities...
PERSONAL CONTACTS SUPPORT MERITOCRACY: INTENSIVE SEARCH

Another source of imperfect competition is related to the difficulties of detecting the productive abilities of applicants using information about education. Imperfect competition is indicated by the fact that participants are not aware of all labor market opportunities. Ignorance is due to the high costs of acquiring information about all relevant opportunities (Stigler 1962). In addition, there is another kind of search problem in labor markets (Rees 1966). In labor markets, workers and firms reveal a considerable qualitative variation. In the presence of qualitative variation, applicants/firms must be carefully inspected since the employment relationship is very often a long-term relationship. The problem of determining the quality of a particular opportunity is the intensive search problem. Contrary to this, goods have approximately the same quality in commodity markets, thus the main problem of actors in commodity markets is extensive search, i.e. to extend their opportunity set in order to find the cheapest product.

Rees (1966) also argued that informal methods help to solve the intensive search problem. The careful inspection of a particular opportunity makes the extension of the opportunity set costly. To economize on these costs, job seekers and firms have to restrict the range of opportunities and inspect only the restricted range of opportunities. Informal methods are useful in both restricting the range of opportunities and inspecting these opportunities in detail. On the one hand, informal methods naturally restrict the range of opportunities: friends and relatives know only a limited number of applicants/workplaces. This is an additional reason why informal recruitment is considered as a particularistic practice or a process that leads to the exclusion of those who lack contacts in labor markets (Marsden and Gorman [forthcoming]). On the other hand, friends and relatives know important details about the applicant/workplace (i.e. the personality of the employer or the candidate, the tasks to be carried out) which would be not available were another search method chosen.

The argument from the intensive search problem is helpful in identifying institutions that can promote perfect competition. The intensive search problem is a consequence of the fact that education does not reveal fully the productivity of applicants. Usually, general knowledge and discipline rather than productive skills are acquired in schools (a radical statement can be found in Collins 1979). Therefore, educational credentials are of limited value for employers who need workers with job-specific skills. The important implication of this fact is that employers do not always trust educational qualifications (Rosenbaum et al. 1990, Miller and Rosenbaum 1997). However, employers trust educational signals and use them as a hiring criterion if institutional links exist between schools and firms (Rosenbaum et al. 1990). Perfect competition requires institutions that generate trust in educational credentials.

In the literature, two kinds of institutional links were identified which contribute towards the trust of employers in educational credentials. The first link is the participation of employers

made an agreement that the matching process may begin only after the end of the academic year. This agreement turned out to be not binding: by 1958, 20 percent of firms started examining before the official opening, and despite the protest of universities, the JFEA withdrew from the agreement.
in vocational training. The German apprenticeship system is often used to illustrate the role of employers’ participation in training. In Germany, almost all students receive a recognized vocational qualification, which is trusted by employers. Vocational qualifications express that the young person passed exams, is punctual and careful, knows what quality is, and is willing to learn at later phases of the career (Windolf and Wood 1988). Since the vocational training takes place within firms, employers may fill vacancies with these young people. Differences in the existence of apprenticeship systems might explain why the youth unemployment rate is lower in countries with a traditionally strong apprenticeship system (Austria, Germany, Switzerland) than in other European countries or in the US where apprenticeship systems are either limited or absent (De Goede et al. 1996).

The second institutional link is employers’ participation in decision processes that shape educational reforms. The effect of employers’ participation in shaping educational reforms is illustrated with the case of Japan (Brinton and Kariya 1998, Rosenbaum et al. 1990). Here schools have a reputation that they select students on a meritocratic basis, the curriculum of students reflects merit, and the contents of education is linked to the demand of employers. Therefore, employers trust and understand educational qualifications, and thereby schools play an important role in matching students to jobs. Employers distribute job offers to schools, then teachers propose students for the employers. Employers prefer to recruit from the same school, and teachers are interested in selecting the best students. Therefore, only a small number of Japanese get their job informally (Granovetter 1974), and this small number is parallel to the high number of people who get their job with the help of the school (Brinton and Kariya 1998).

SUMMARY

In this section, two accounts were developed to understand network effects in labor markets. Network effects are due to imperfect competition, thus network effects can be understood by asking why competition is not perfect. Competition is imperfect either because third parties have an influence over how employers select applicants or because employers and job seekers do not have all information to achieve a perfect match. If network effects are due to influence processes, we have particularism. I distinguished between two kinds of influence processes: influence based on exchange relations with employers, and influence based on the power of insiders. If network effects are due to attempts to solve the information problem about productive skills, we have intensive search. I will refer to these accounts as mechanisms. Table 1.1 provides an overview about the differences between the particularism and intensive search mechanisms.

---

4 It is also interesting to notice that in Germany, people matched informally earn less than people matched formally, while in other countries, like the US and the Netherlands, either the opposite is true or informal methods do not make a difference (see De Graaf and Flap 1988).
### Table 1.1 Differences between the particularism and intensive search mechanisms

<table>
<thead>
<tr>
<th>Reasons for using personal contacts</th>
<th>Intensive Search</th>
<th>Particularism</th>
</tr>
</thead>
<tbody>
<tr>
<td>employer’s uncertainty about productive abilities of applicants</td>
<td>a) social relations between employers and applicants</td>
<td>b) bargaining power of employees</td>
</tr>
<tr>
<td>institutions that constrain the mechanism</td>
<td>links between educational institutions and firms</td>
<td>laws concerning meritocratic selection</td>
</tr>
</tbody>
</table>

Before proceeding, three remarks are in order. First, identifying intensive search and particularism as competing accounts of network effects is not new (Coverdill 1998, Fernandez et al. 2000, Marsden and Gorman [forthcoming]). Second, both mechanisms can explain the fact that the use of contacts leads to the closure of labor market, i.e. the exclusion of those who lack social contacts to current employees or employers. Third, these explanations focus on the relationship between personal contacts and labor market outcomes. But they cannot explain processes prior to the use of personal contacts like asking network members for help during job search or the development of social or productive skills in personal networks. Therefore, our list of mechanisms is not comprehensive.

### 1.3 The Research Problem

In the previous decades, there has been a considerable research examining the effects of personal contacts on labor market outcomes. A detailed overview will be provided in Chapter 2; consult also Preisendörfer and Voss (1988), Flap and Tazelaar (1989), Granovetter (1995), Lin (1999) and Marsden and Gorman [forthcoming]. This research contributed to our knowledge about the conditions under which social networks contribute to inequalities. Yet, less attention was paid to the question why network effects exist in labor markets. More specifically, the question whether network effects are generated by the intensive search or the

---

5 A recent suggestion is that access to positions that deal with customers or with business partners depends on personal contacts (cf. Lin 1999: 484). The rationale for this hypothesis is that contacts either produce or signal social skills necessary for dealing with customers and business partners. If personal contacts produce these skills then this mechanism is not relevant here. The contacts that produced these social skills were effective in the past, long before job search started, and they are not likely to affect the use of personal contacts in labor markets. Our interest centers on contacts that might help in utilizing skills rather than on contacts that produced these skills. If personal contacts signal social skills then this mechanism is just a special case of the intensive search mechanism.
particularism mechanism was neglected (for a notable exception, see Fernandez et al. 2000). Most of the empirical research tacitly assumed that intensive search is responsible for observed network effects. Although there are attempts to develop explanatory models and hypotheses (Holzer 1987b, Wegener 1987, Voss 1988, Flap and Tazelaar 1989, Boxman et al. 1991b, Boxman 1992, Montgomery 1992, Kugler 1997), these models elaborate on search problems and do not address the implications of particularism (cf. Coverdill 1998).

Why bother about the causes of network effects? As shown in the previous sections, the conjecture that social networks are an additional determinant of inequalities is closely linked to the malfunctioning of some labor market or educational institutions. If the causes of network effects remain unknown, empirical findings about network effects in themselves provide no insights about what is wrong with labor market institutions. In such a situation, researchers can refer to stylized facts about labor markets in order to interpret their findings. Note, however, that rejecting the assumption of perfect competition motivates research on network effects in labor markets. Referring to stylized facts might be a sound practice under the assumption of perfect competition – but it is not attractive after rejecting that assumption.

The recent history of post-communist countries shows with special clarity the importance of understanding the causes of network effects. Comparative research often stressed the differences in mobilization of network members between East and West (Bian and Ang 1997, Völker and Flap 1999). This research suggests that the intensive search account is unique to capitalist labor markets while the particularism account is unique to state-socialist labor markets. However, particularism is likely to be operating in capitalist societies as well. The reason is that not all capitalist labor markets are necessarily equipped with institutions that can eliminate particularism (consult the previous section; see also Freeman 1998). Post-communist societies offer an interesting setting to study the causes of network effects because institutional changes brought about a situation where both intensive search and particularism can work at the same time.

Our research is restricted to one of the post-communist countries, Hungary. For research about network effects in other post-communist settings, consult Yakubovich and Kozina (2000). The institutional changes in Hungary and their implications for network effects will be described in the next section.

To summarize, the problems central to this book are the following:

**Does the composition of personal networks in terms of employment status and occupation contribute to inequalities in Hungary? Why do personal contacts help people to get a good job? Is this effect of personal contacts due to the fact that personal contacts support meritocratic selection by solving important information problems? Or, is this effect due to the fact that personal contacts undermine meritocratic recruitment and selection procedures?**
1.4 The Research Setting: Institutional Changes in Hungary

This section argues that the use of personal connections is especially salient during the transformation processes because the emerging market economy is not supplemented with institutions that would eliminate particularism and would solve information problems.

TRANSITION AND PARTICULARISM

Particularism in post-communist countries has its roots in the communist past. An important feature of networks under communism is the existence of exchange relations, which were often kept separately from the intimate circle of friends and relatives (Völker 1995, Völker and Flap 1997, Ledeneva 1998). Power did not rest only on suppression, but also on rewarding loyal social groups. Since the universalistic communist ideology is at odds with the institutionalization of preferential treatment, favors and loyalty were exchanged through informal patronage ties (Walder 1986). Additionally, shortage of goods was typical for socialist economies (Kornai 1980). In the absence of free prices and well-defined property rights, non-market mechanisms emerge to distribute scarce goods. In communist countries, an important non-market mechanism for obtaining consumption goods was the reciprocal use of personal contacts (Kornai 1990, Ledeneva 1998). Contacts were used to secure and exchange consumption goods and services. Reciprocal ties were also important to get people for utilizing resources that were extracted from state-owned companies (e.g., to build a house or to repair a car using stolen materials). Because of the wide range of goods that were considered as valuable, promoting well-being required an exchange network with people in various occupations.

What is the implication of the democratization of post-communist countries and the emergence of a market economy for the role of exchange relations? In democracies, informal patronage ties are not necessary to maintain legitimacy. The institutionalization of private property and the liberalization of prices undermine both the supply of and the demand for exchange relations. Therefore, inherited exchange relations will be less often used than before. Post-communist societies should be societies which consist of atomized small communities and where societal solidarity is undermined (Andorka 1993, 1994).

Another important implication of transformation processes for individuals is the decrease in earnings and the threat of unemployment.7 To defend living conditions, individuals have to keep their jobs or eventually to find even better ones, or they have to accumulate capital in

---

6 Note also that communism was implemented in societies where feudal traditions and the institutions of patronage were important (Sik 1994).
7 In Hungary, net real earnings dropped by 13.5 percent and the unemployment rate increased from 0.5 percent to 10.3 percent between 1989 and 1992 (Munkaérőpiaci Tükör 2000, Kalló 1992). Besides defending living conditions, earnings opportunities become more dispersed. The increase in earnings inequalities in Eastern-European countries during 1989-1995 was larger than the increase in inequalities in the US and United Kingdom during the eighties (Rutkowski 1996, 1997; Fleming and Micklewright 2000; Munkaérőpiaci Tükör 2000).
order to start an enterprise. Personal connections, which are inherited from the past, might help people to achieve these objectives, especially when it is easy to find friends among work-related contacts. Selecting friends from workmates is another important feature of networks under communism. Similar to other choices, the choice of friends is not independent of constraints (Blau 1977, Verbrugge 1977, van der Poel 1993). The selection of friends from workmates is due to two constraints: the shortage of alternative meeting places and the shortage of leisure time. First, voluntary associations were systematically destroyed by the communist regimes (Utasi 1992). Second, besides their main job, Hungarians pursued various economic activities (e.g., overtime at the main job, work in the household farm, small-scale production and services, reciprocal exchange of labor) in order to cope with the shortage of consumption goods (Harcsa 1991). Therefore, friendship ties are more workplace oriented and less emotional in communist countries, in general, and in Hungary, in particular, than in Western countries (Csheh-Szombathy 1972, Angelusz and Tardos 1988, 1991; Utasi 1992, Blau et al. 1991).

It is not clear whether the conditions that generated the selection of friends from workplaces still persist in capitalist Hungary. On the one hand, since maintaining living conditions became a salient problem in the late 80’s and especially in the early 90’s, Hungarians have less leisure time available for developing and maintaining friendship ties (Harcsa 1991, Falussy and Vukovich 1996). Therefore, people have less intimate friends (Albert and Dávid 1998) and the importance of workplace in recruiting friends decreased (Angelusz and Tardos 1998). On the other hand, there is also evidence that friendship ties are even more instrumental than before (Utasi 1996).

This exposition focused on the factors that have an influence on the incentives to mobilize network members. Unfortunately, it is not precisely known to what extent are these incentives constrained by labor market institutions. At first sight, one would expect that the emergence of markets (institutions of private property) leads to the emergence of infrastructures that support the functioning of markets (e.g., institutions facilitating meritocratic selection, information networks) (Nee 1989, 1996; Stark and Nee 1989). More realistically, the emergence of labor market infrastructures requires the existence of a group that has sufficient power to enforce the introduction of these institutions (North 1990). We have good reasons to assume that such a pressure group will not have sufficient bargaining power, let alone the existence of such pressure groups. The reason is that Eastern-European governments have to adapt to more serious financial constraints than in the communist past, while there is a large demand for public expenditures. In such a situation, building institutions that would prevent particularism is not a particularly salient political issue.

---

8 Some social scientists strongly believe that the extent to which newspaper advertisements in Hungary favor men cannot be derived from job requirements. If this is the case then discrimination is not lawful. However, women who were not allowed to apply for a job do not go to law against the employer. In the last decade, only one firm was put on trial for discrimination. The trial was initiated by the Secretariat of Equal Opportunity. For details, consult Koncz (1999).
Chapter 1. Introduction

TRANSITION AND INTENSIVE SEARCH

Intensive search became an important problem in Hungary because the institutional links between schools and employers are declining. Vocational education in state-socialist Hungary was similar to the German dual system. That is, there was the opportunity of following a vocational pathway that combined school-based education with training at the workplace. Although the dual system of vocational education persists in Hungary, the linkages between firms and schools providing vocational education (see section 1.2) weakened during the 90’s.

The most important institutional change is the withdrawal of firms from the provision of vocational training, due to the rapid and radical withdrawal of the state from the economy and to the collapse of state enterprises in the early 90’s (Fóti 1996, Gábor 1997). Not surprisingly, few pupils are trained in firms where vacancies exist and jobs will be offered. Compared to 1990, the proportion of students trained in firm workshops dropped from 58 to 29 percent by 1995 (Benedek 1996, Laki 1997). Although the role of the private sector somewhat increased in providing vocational training, this does not promote the links between workplaces and schools because these private firms do not offer jobs for pupils who complete vocational education.

Other institutional changes contributed to the increase of the heterogeneity of educational qualifications (the following description relies heavily on OECD 1999). First, with the transition of the educational system from national to municipal and local governance, local municipal governments now run 90 percent of vocational training schools. The first step towards standardization was taken by the development of the National Training List in 1996, which unifies training and the examination requirements for 933 professions. However, employers do not contribute to the development of long-term plans. Second, in 1991, a loan from the World Bank launched a „Human Resource Development Program“ that developed a new model for secondary education. In four years a baccalaureate is obtained with basic vocational training in 13 different fields, advanced skills can be pursued in extra 1 to 3 year courses. The program was intended to solve the main problem of the „traditional“ three-year vocational training schools that they do not prepare pupils for thinking and acting creatively, and adapting quickly to the changing needs of employers.

The evidence cited above indicates that vocational qualifications are less standardized than before (Gábor 1997) and therefore employers are not likely to trust educational credentials. Heterogeneity in grades and training would not pose problems if firms offered training to newcomers. Training newcomers is typical in firms where internal labor markets exist. However, internal labor markets are not widespread and they are mainly associated with foreign firms. Correspondingly, firms in Hungarian property rarely provide training for their employees (OECD 1999). This is not surprising since there is no history of internal labor markets in Hungary. The Hungarian version of internal labor market, which actually meant a subcontracting system within the firm (Stark 1986), collapsed during the transformation
processes (Gábor 1997). Moreover, internal labor markets require firms to be large and most of the firms that are both in private and in Hungarian property are small.  

To conclude, there is a large gap between the Hungarian vocational educational system and the demand of employers. Recruitment of new workers, especially in the new growth sectors, is increasingly based on assessment of attitudes, individual potential and relevant competences rather than on the possession of formal credentials (OECD 1999). In such a situation, personal contacts are likely to be used in order to assess the skills of applicants.

1.5 Plan of the Book

This book will examine network effects in the Hungarian labor market. Network effects in post-communist societies were often interpreted using the rather general theory of path-dependence (David 1985, Arthur 1988, North 1990). Using this framework, the hypothesis was advanced that personal contacts become even more important during the transition from communism to capitalism (Sík 1994; see also Czakó and Sík 1994, 1995). Many studies provided insights into the path dependent features of privatization (Hankiss 1990, Róna-Tas 1994, Böröcz and Róna-Tas 1995), ownership structure (Stark 1996, Tóth 1997, Stark et al. 2000, Vedres 2000) and entrepreneurship (Czákó et al. 1994, Lengyel 1998). Contrary to this, less attention was given to the role of personal connections in the Hungarian labor market. Although there is evidence documenting the extensive use of personal contacts in recruitment (Csegény et al. 1996, Laki 1997, Laki [unpublished]), there are no studies examining the effects of personal contacts on labor market outcomes (for a study before the transition, see Böröcz and Southworth 1998).

The first aim of our study is to describe whether the composition of personal networks in terms of employment status and occupation has an influence on earnings inequalities in Hungary. In the following, the term network resources will refer to the composition of personal networks in terms of employment status and occupation. The study of the effects of

---

9 Employers also play no role in shaping educational reforms. The expansion of educational opportunities and meritocratic selection characterizes the path to universities rather than to workplaces for which secondary educational qualifications are required. Due to the importance of university education, competition for admission to good secondary schools became more considerate. As a by-product, young people also have to compete for admission in good primary schools, which is reflected in the practice of some primary schools to screen 6 years old children. Competition for and meritocratic selection in secondary and primary schools, however, implies that pupils with the best general abilities do not compete for vocational education. Another evidence for the hierarchical image of the Hungarian educational system is that the prestige of secondary vocational schools is judged on how many pupils were admitted later to universities.

10 Although this study is motivated by the social capital research program, the subsequent theoretical and empirical analyses rely on several theories of network and contact effects, but not on a single theory of social capital. I use the theory–neutral term network resources in order to express the relative independence of my work of existing theories. Additionally, this research does not study the investments of individuals in social contacts (see Baron and Hannan 1994).
network resources will be guided by the assumption that network resources have no direct causal effects on labor market outcomes. Rather, labor market outcomes are directly affected by job finding methods, i.e. the channels through which persons and jobs encounter each other (Granovetter 1981). Network effects exist only if they have an impact on finding a job through contacts. Hence, network effects can be understood by adopting a two-step modeling strategy. The first step consists of examining the impact of network resources on the chances of receiving job information through a person, and on the characteristics of the person passing the job information. The second step is the analysis of the relationship between the source of the job information and labor market outcomes. Correspondingly, I try to answer the following two descriptive questions:

(1) Do network resources increase the chances of finding a job through personal contacts?
(2) Are relatively good jobs found through personal contacts?

My second aim is more ambitious: I also wish to explain why job finding methods have an effect on labor market outcomes, if any. Elaborating the relationship between labor-market institutions and mechanisms, on the one hand, and that between mechanisms and observed contact effects, on the other hand, offers the opportunity to explain contact effects in terms of labor market institutions. The benefit of such strategy is to compare network effects across different local labor markets or even societies in terms of labor market institutions. Additionally, finding the mechanism is important if one wishes to explain path-dependent features, described in section 1.4. The popular path dependence idea remains a metaphor when one does not specify the concrete mechanisms that generate the path dependent features. To summarize, this study aims to answer a third question, namely:

(3) Why are relatively good jobs found through personal contacts? Is this relationship due to particularism or to intensive search?

I begin with reviewing the existing theories about network effects in labor markets (Chapter 2). The aim of this review will be to find theories that can guide the description and the explanation of contact effects. It will be argued that although some of the theories are appropriate to describe contact effects, they are less appropriate to explain these effects in

---

11 Using similar two-step modeling strategies is not new. A formalized version was developed using search theoretic ideas (Boxman et al. 1991b, Boxman 1992, Flap and Boxman 1998). Here the first step considers the impact of social networks and firm characteristics on search method choices of individuals and firms. The second step considers the effect of search method choices on labor market outcomes. The advantage is the modeling of both sides of labor market. However, there are several disadvantages. In the first step, use of search channels rather than finding using search channels is explained. The specification of search costs in terms of reciprocity costs instead of resources spent on active search is also questionable. In the second step, no model was developed to explain how the self-selection of job seekers and firms into informal matches generates social capital effects. For a two-step modelling strategy that solves these problems, consult Kugler (1997).
terms of our mechanisms. Given this conclusion, Chapter 3 is devoted to the formulation of hypotheses that enable the inference about mechanisms from observable network effects.

The remainder of the book is devoted to the empirical test of the hypotheses. Chapter 4 describes the data and the methods that will be used in the empirical analyses. Data for the study come from a longitudinal survey which was conducted among people who completed secondary vocational education in 1998. In comparison to existing studies, this is a rather unique and rich data set, which allow the study of various network and contact effects. First, I explain the series of decisions that led to this survey. Then I describe how the original intentions were implemented during the fieldwork. Finally, the methods of empirical analyses will be described.

Empirical analyses are organized into three chapters. The analyses begin with examining the descriptive questions we have posed. Chapter 5 examines the first descriptive question whether personal networks have an impact on the likelihood of finding a job, and on the characteristics of the person who passed the job information. Then, Chapter 6 examines whether hearing about a job informally, and the characteristics of the contacts affect the distribution of labor market outcomes. The empirical analyses end with examining our explanatory question. The hypotheses, which aim at distinguishing between mechanisms, are tested in Chapter 7. The implications of the empirical analyses for our research questions are summarized in Chapter 8.