INCOME ATTAINMENT IN POST-COMMUNIST SOCIETIES

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(met een samenvatting in het Nederlands)

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Now that my dissertation is finished I find myself reminiscing about the time after I graduated in Sociology. I remember thinking: "What's next?" After an educational career characterized by switches between schools and disciplines, I had actually attained my first diploma. This opened the door to a lot of opportunities. I could have entered the door to an academic career and apply for a PhD project right away, yet I was reluctant to the prospect of four years of researching, writing a book, and especially teaching. I decided to accept a research position at the ISEO in Rotterdam. But, the ambition to work on a PhD research project not just lingered, it grew stronger. After a year I decided that it was now or never and I applied for a PhD project at the Department of Sociology/ICS at Utrecht University. Now, having finished my dissertation, I can confidently say that I do not regret this decision.

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Willem-Jan Verhoeven, January 2007

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INTRODUCTION AND RESEARCH QUESTIONS

1.1 Stratification in post-Communist societies

Investigating societies' inequalities is a major research problem in sociology (Ultee, Arts, and Flap 2003). Inequality exists in every society and the dynamic nature of societies continuously changes the level of inequality. Negative or positive market conditions, public opinion that becomes more critical, governments that switch from left to right, political ideologies about how to distribute resources and economic excess, and so forth, all influence inequality in human societies. Trying to understand how these processes shape inequality has always interested social scientists.

The basic sociological research question applicable to investigate societies' inequalities reads: 'Who gets what and why?' (Lenski 1966: 3). Sociologists investigate the extent to which there are inequalities between the members of modern societies, between whom these inequalities exist, explain why these inequalities exist, and explain the persistence of these inequalities. Because these are questions about how societies are stratified – about how assets, goods, and resources are distributed among a society's members – this line of research has been called *stratification research* in sociology. There is some degree of social inequality in every society but it may exist in different domains. Inequality in societies can be investigated in terms of consumer goods, life chances, or socioeconomic background. People achieve different levels of education, have different incomes, and live in a variety of families and neighborhoods. The level of inequality also varies across countries or regions within a country.

In the previous century, Central and Eastern European (CEE) countries have experienced at least two large-scale experiments in social stratification. First, State Socialism was a large-scale experiment in destratifying society by way of political intervention (Ganzeboom 1998). During the second half of the twentieth century, Communist and State Socialist regimes governed what are now the former Soviet republics, Poland, the once-united Czechoslovakia, Hungary, the former Yugoslavia, Romania, Bulgaria, China, and other countries. Contrary to the idea that stratification necessarily follows from the division of labor in every society, Socialist regimes, inspired by Marxist political ideology, aimed to reduce social inequalities through the proliferation and implementation of an egalitarian ideology. Communist societies typically have a one-party political system and a command economy, which is comprised of redistributive systems characterized by state ownership of the means of production, full employment, labor wages earned at state enterprises as a principal source of income, an income-leveling policy discouraging accumulation of individual wealth, and a pervasive system of public transfers that provide basic social services and benefits for everybody (Mikhalev 2003: 3). These redistributive systems were designed to create an egalitarian structure of the income distribution with low levels of inequality.

It would be interesting to know whether the Communist regimes were successful in achieving low levels of inequality. Additionally, investigating the stratification systems of State Socialist nations can provide valuable insight into understanding the origin, functioning, and persistence of social stratification; they provide "… a unique set of laboratories for observing the effects of 'really existing socialism'…" (Lenski 1994: 55). However, analyzing the income distribution in Central and Eastern Europe during the Communist period has been problematic because researchers have had difficulties obtaining sufficient reliable data.

At the end of the last century, the second large-scale experiment was the transformation from the command economies of the State Socialist nations into market economies. Even before the 1989-reforms, most Socialist societies in Central and Eastern Europe had adopted some market reforms. However, it was the combination of the 'velvet' revolutions and the fall of the Berlin wall followed by the overthrow of the Communist regimes that really paved the way for introducing market mechanisms into the planned economies of Central and Eastern Europe. The transformation from planned to market economies in these countries offered a second unique opportunity to study the effect of institutional changes on stratification outcomes and to find possible explanations for changing stratification outcomes. And stratification researchers did not hesitate to study the patterns of social stratification emerging with the new social order. These transformation processes can be regarded as a second natural experiment (e.g., Nee 1996), in which the consequences of institutional change for social stratification can be investigated.

The market transformation of the redistributive economies of post-Socialist or reforming-Socialist societies is characterized by the elimination of price controls, the transfer of state property to private individuals or other private economic actors, and the liberalization of labor markets, exchange rates, and foreign trade regimes. The socioeconomic consequences of these changes have been studied extensively, with two fundamental research problems being addressed: (1) do economic reforms increase or reduce inequality? and (2) do economic reforms disproportionately benefit certain social groups at the expense of others? (Xie and Hannum 1996: 951).

1.2 Income inequality in post-Communist societies after the 'velvet' revolutions

Until the early 1990s, data on household income and earnings from Central and Eastern Europe were hardly available in the Western World. Atkinson and Micklewright (1992) were among the first to publish measures of income inequality that reached far back into the Communist era. Now, however, there are sufficient data available to answer the question of whether market reforms have increased or reduced income inequality in the formerly Communist countries of Central and Eastern Europe. In table 1.1, Gini coefficients of per capita income are reported for 22 post-Communist countries from 1987 to 2002. The results show that at the time of the 'velvet' revolutions, the income inequality in CEE countries and the Baltic States is smaller on average than the income inequality in the Commonwealth of Independent States (CIS). During the first few years of market transformation in the early and mid 1990s, the income inequality increases in most of the formerly Communist countries. The rising income inequality in the CIS is more dramatic during this period than the one occurring in the CEE countries and the Baltic States. By the end of the 1990s the difference in average

income inequality between the CIS and CEE countries and the Baltic States is even larger than during the late 1980s and early 1990s. During the early 2000s, the income inequality in most of the CEE countries and the Baltic States continues to rise, while in the CIS (except for Russia) the income inequality slightly drops.

Table 1.1 Changing income inequality during market transformation, various countries, 1987-2002

	Gini coefficients of per capita income (×100)			
Countries	**1987/90**	**1993/94**	**1996/98**	**2000/02**
Central and Eastern Europe (CEE):				
Bulgaria	23	38	41	37[b]
Croatia	36	–	35	29[c]
Czech Republic	19	23	25	27[b]
Estonia	24	35	37	37[c]
Hungary	21	23	25	28[b]
Latvia	24	31	32	32[c]
Lithuania	23	37	34	32[c]
Poland	28	28	33	35[b]
Romania	23	29	30	32[b]
Slovenia	22	25	30	28[b]
Slovakia	20[a]	18[a]	–	28[b]
Commonwealth of Independent States (CIS):				
Armenia	27	–	61	38[c]
Belarus	23	28	26	30[c]
Georgia	29	–	43	37[c]
Kazakhstan	30	33	35	31[c]
Kyrgyz Republic	31	55	47	29[c]
Moldova	27	–	42	36[c]
Russia(n Federation)	26	48	47	52[b]
Tajikistan	28	–	47	35[c]
Turkmenistan	28	36	45	41[c]
Ukraine	24	–	47	29[c]
Uzbekistan	28[a]	33[a]	–	27[c]

Note: – not available; Source: World Bank (2002: 9).
[a]Source: Milanovic (1998: 41).
[b]Source: World Bank (2003).
[c]Source: United Nations Development Programme (2004: 188).

The measures of income inequality presented in table 1.1, above, clearly indicate that the distribution of income in former Communist countries has become more unequal during the process of market transformation. Overall, the income inequality in CEE countries and the Baltic States has increased gradually, while in the CIS, the increasing inequality in income was more dramatic and was followed by a slight decrease. By the end of the twentieth century, after a turbulent decade of dramatic market reform, the former Communist countries experienced rising income inequality. The income inequality levels off at a much higher level than the level of income inequality at the end of the Communist regimes.

1.3 Income inequality trends in Central and Eastern Europe before 1989

In view of the available data, it is not possible to elaborate the trends in income inequality for all post-Communist societies; therefore, only income distributions in the former Czechoslovakia, Hungary, Poland, and Russia will be discussed in more detail here.

The observed level of income inequality depends on the concept of income that is used to describe the distribution (Rainwater 1994). The inequality in CEE countries, especially in the former Czechoslovakia, appears to be higher if household income (or any equivalent unit acknowledging larger scale economies) is used than if per capita income is used (Vecerník 2001b). The reason for this is that wages were extremely equalized and the employment of women was high during Communism. Therefore, inequality in earnings tended to be low as well. To acquire a more complete picture of the changing income distribution in CEE countries, it would be informative to use a variety of income concepts. Unfortunately, because of the lack of data, this study could only use data on (gross) earnings and per capita income. Still, describing trends in these two income concepts provides a clear picture of changing income inequality in the countries being investigated. Note that in this section and in section 1.5, I rely heavily on the work of Dessens, Jansen, and Nelissen (1998), who have already described trends in income inequality up to 1994. Here, the trends are extended beyond the millennium year and Slovakia is also included.

When interpreting the trends, it should be noticed that the data for 1986 and later were already being influenced by reforms initiated prior to the 1989-transition: Gorbachev introduced wage reforms in the USSR in 1986, Hungary's government introduced the personal income tax, and the impact of Poland's Solidarity movement probably affected the income distribution as well. Thus, we can expect to see changes in the income distribution from the late 1980s onwards.

To start with the distribution of earnings, the Gini coefficients for the selected countries are presented in figure 1.1. The general picture is obvious: inequality in earnings is relatively stable up to 1989/90. The trends show some ups and downs, but the level of earnings inequality at the beginning and the end of the period prior to 1989 hardly varies.[1] Although a relatively stable pattern in earnings inequality can be observed for all countries reported here, the level of inequality as well as the extent of change clearly differs between the five CEE countries under consideration.

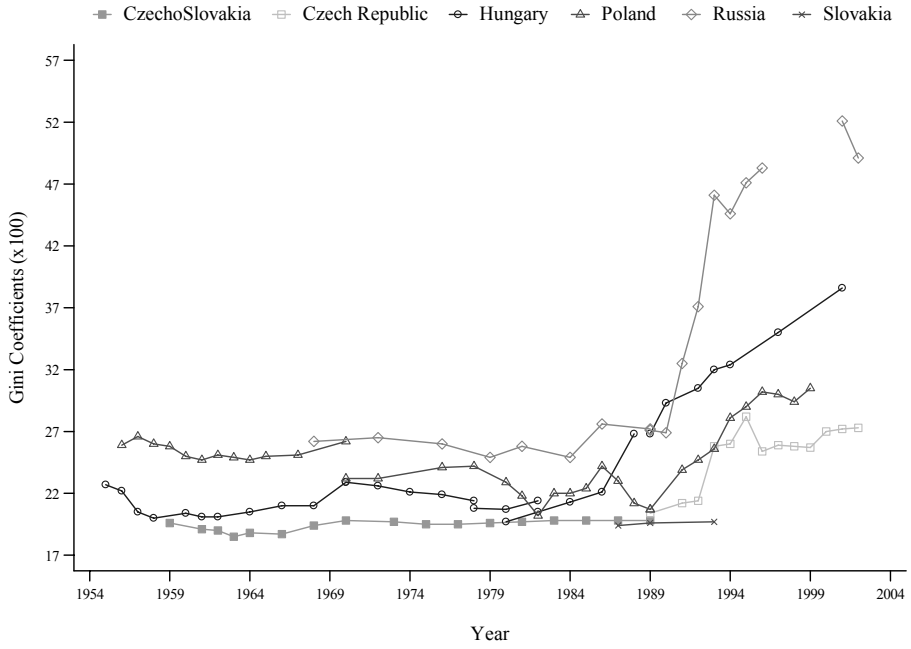
Czechoslovakia shows a strikingly stable trend and a low level of earnings inequality during the Communist era (Gini coefficient between .185 in 1963 and .198 in 1989). According to Czechoslovak authors, this low level of inequality can be attributed to the desire for equality, historically rooted in the Czechoslovakian population. Even after the market reforms, the population maintained its strong concern for equity (Brada 1991; Teichova 1988).

Up to 1989, the trend in earnings inequality in Hungary was less stable than that in Czechoslovakia. This may be the result of the variety of definitions of earnings used during this period. Up to 1970, 'earnings' refer only to the state sector, whereas later data cover the whole socialized sector. Part-time workers were included from 1978, and data from 1981 also include wage supplements (Dessens, Jansen, and Nelissen 1998). After a decline in inequality during the 1950s, it remained fairly stable

[1] There seems to have been a change in the definition of 'earnings' before and after 1970 in Poland. Atkinson and Micklwright (1992) give overlapping series of Gini coefficients that differ for the common year 1970 (.262 versus .232, see Appendix A, table A.3).

during the 1960s. In 1970, there was a short-term increase in inequality that gradually declined during the 1970s. From 1980 on, there was a trend towards increasing earnings inequality. Over the whole period up to 1989, the level of earnings inequality was higher in Hungary than in Czechoslovakia.

Figure 1.1 Gini coefficients of (gross) earnings, 1955-2002, for Czechoslovakia, the Czech Republic, Hungary, Poland, Russia, and Slovakia



Note: Sources: Atkinson and Micklewright (1992), Rutkowski (1996), UNU/WIDER (2000), and TransMONEE (2004). Gini coefficients are given in the Appendix A, tables A.1-A.5.

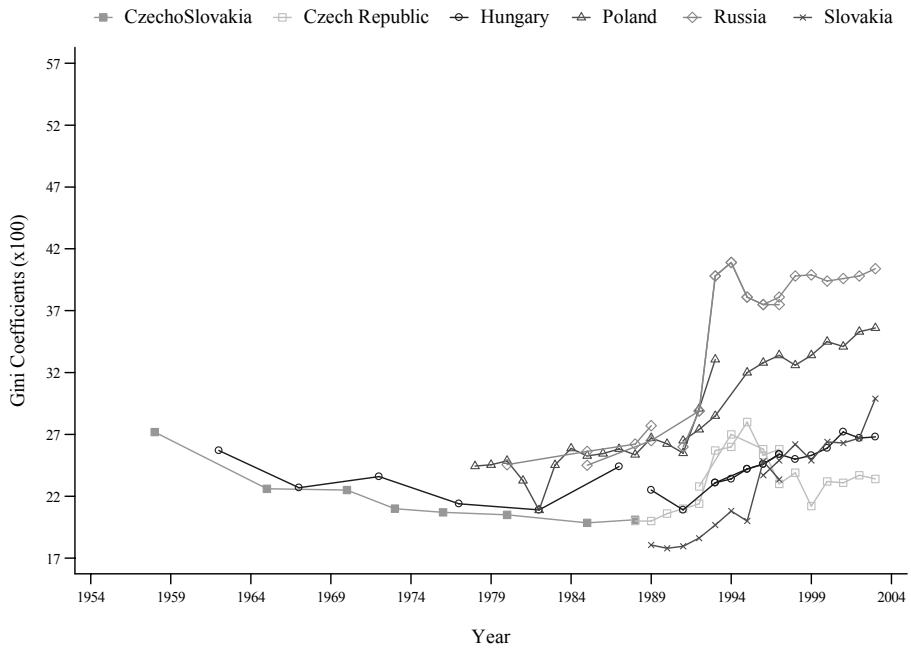
The trend in earnings inequality in Poland shows an irregular pattern. Between 1978 and 1982, there was a sharp decline in the earnings inequality. This was probably due to the improved position of the people at the bottom of the earnings distribution and the diminished differences in earnings at the top of the distribution. Among other things, this could be attributed to the partial implementation of Solidarity's wage and income policy proposals (Dessens, Jansen, and Nelissen 1998). Thereafter, the earnings inequality rose again, which was probably due to the wage policy that resulted in rising non-manual wages. As a result, the relative earnings of the people at the bottom of the earnings distribution got worse. Between 1987 and 1989, this development was reversed again (Flakierski 1986, 1991), which can be observed by the decline in inequality that followed. In 1989, the level of earnings inequality in Poland only slightly exceeded that of Czechoslovakia.

Although the earnings inequality in Russia showed a fairly stable pattern up to 1989, the level of inequality exceeded that of the other countries reported here. The observed increase in Russia in the

period 1984-1989 can be linked to Gorbachev's policy to widen the wage differentials. The wage reforms resulted in a trend towards greater inequality (see also: Chapman 1983, 1991).

Now, let us consider the distribution of per capita household income. The Gini coefficients for the five selected CEE countries are shown in figure 1.2. There was a generally decreasing trend up to the end of the 1970s, and thereafter, the inequality in per capita income increased. Similar to the trends in earnings inequality shown in figure 1.1, Czechoslovakia had the lowest level of per capita income inequality, followed by Hungary, Poland, and Russia. Czechoslovakia seems to be a special case. In contrast to the relatively stable inequality in earnings, the trend in per capita income inequality decreased steadily up to the 1989-transition. Between 1958 and 1965, especially, earnings inequality fell sharply, which could possibly be attributed to the role of social benefits; again, Czechoslovakia has a strong belief in equality and equity.

Figure 1.2 Gini coefficients of per capita income, 1958-2003, for Czechoslovakia, the Czech Republic, Hungary, Poland, Russia, and Slovakia



Note: Sources: Atkinson and Micklewright (1992), Milanovic and Ying (1996), Frolova (1998), Flemming and Micklewright (2000), Hölscher (2000), Mitra and Yemtsov (2006), UNU/WIDER (2000), and TransMONEE (2004). Gini coefficients are given in the Appendix A, tables A.1-A.5.

The per capita income inequality in Hungary follows a U-shaped pattern. There was a slight increase in inequality between 1967 and 1972, which can be related to the New Economic Mechanism (NEM) introduced in 1968 (Flakierski 1986). In general, the NEM was a reform package that

decentralized economic decision making and allowed profit making, rather than setting planned targets and allocating supplies. Between 1982 and 1987, there was a remarkably strong increase in the per capita income inequality. According to Dessens et al. (1998: 46) this was caused by changes at the top of the income distribution. The bottom decile more or less followed the inflation. Part of the increasing inequality might have been a result of the growth of the second economy (especially the cultivation of agricultural plots by non-manual workers).

In Poland, the trend in per capita income inequality showed a sharp decline between 1980 and 1982, which can be linked to Poland's Solidarity program: undifferentiated wage increases to compensate for inflation, establishing a social minimum and an increase of social benefits. From 1983 onwards, inequality increased steadily, with a small dip in 1988, which coincided with increased flexibility allowed in wage settlements and union pressure for equalization.

As far as we can tell from available data for Russia, there was an increasing trend in inequality in per capita income during the 1980s. The increase was probably moderated by the 'Twelfth Five-Year Plan' put into operation in 1986. This plan equalized the distribution of income by indexing pensions, increasing disability benefits, and extending child allowances.

1.4 Income inequality trends in Central and Eastern Europe since 1989

Market transformations in CEE were accompanied by negative economic growth during the early 1990s (World Bank 1996) together with a large drop in income and employment, and high inflation (Dessens, Jansen, and Nelissen 1998). In contrast to the stable inequality during the period up to 1989, Dessens et al. have shown that income inequality rose dramatically after the 1989-transitions in all the countries included here (1998: 48-49).[2] The rise in income inequality during the early 1990s has also been discussed by Flemming and Micklewright (2000), using decile ratios (p_{90}/p_{10}). In the Czech Republic, the decile ratio increased from 2.43 in 1989 to 3.70 1995. In Hungary, the decile ratio increased from 3.40 in 1990 to 3.75 in 1997, and the decile ratio in Poland increased from 2.43 in 1989 to 3.53 in 1997 with a small drop in 1995. In Russia, the decile ratio increased from 3.33 in 1989 to 15.55 in 1993. In 1994 the decile ratio dropped to 9.41 and increased again to 10.40 in 1997, with a small drop in 1996.

Dessens et al. only report the trends as far as 1993. Figure 1.1 presents trends in earnings up to the early 2000s and figure 1.2 shows per capita income inequality. These trends provide a clear picture of how the income distribution was affected during the transformation process. Although the income inequality rises sharply during the early 1990s for both earnings and per capita household income in all countries reported here, the trends are strikingly different across the countries. To get a better understanding of the development of the income inequality, the trends are described within the context of the country specific transformation processes, below.

[2] No judgments can be made on the trend in earnings inequality in Slovakia after the 1989 transition, because of lack of data.

1.4.1 The Czech Republic

The Czech Republic became an independent state in January 1993 when Czechoslovakia split into two separate nations. After 1993, there was a strong increase in the inequality of both earnings and per capita income. The economic reforms that followed separation included liberalizing prices, de-equalizing earnings, reintroducing market competition, re-creating income from business, and privatizing land, houses, state enterprises, and means of production.

The first phase of market transformation resulted in a trend towards rising income inequality. The peak in income inequality, expressed by a Gini coefficient of .282 for earnings and of .280 for per capita income, was reached in 1995. In 1996 the Gini coefficients dropped to .254 for earnings and .253 for per capita household income. In mid-1997, the Czech economy was in a recession and the unemployment rate doubled. During the period from 1997 to 2002, the earnings inequality increased slowly but steadily and the inequality in per capita income increased in 1998 and fell 1999; thereafter there was a steady increase.

Despite the increase in income inequality in the Czech Republic, the level of inequality in earnings remains the lowest of all the countries discussed here. This may be related to the early and strong reforms of the social safety net. As countermeasures to the de-equalization strategies, "…it was necessary to put in place certain social measures from the very beginning of the transformation: introduction of unemployment benefits, the valorization of pensions and other benefits, the fixing of the guaranteed minimum wage, and the establishment of the minimum subsistence income" (Vecerník 2003: 217). Between 1992 and 1996, the per capita income inequality in the Czech Republic was higher than in Hungary and Slovakia, but after that it dropped again. In general, the Czech income inequality remains the lowest of all the countries reported here.

1.4.2 Hungary

During the late 1980s, the earnings inequality increased rapidly (see figure 1.1). This trend continued up to 2001, where it peaked at a Gini coefficient of .386. However, when using other measures of income, a stable or decreasing trend can be seen between 1987 and 1991 (see figure 1.2). Also, based on equivalized incomes, Kattuman and Redmond (2001: 41-42) suggest "…that the institution of a progressive personal income tax regime in the late 1980s moderated the growth in inequality in Hungary, at least up to 1991; after 1991, the redistributive efficacy of the income tax regime declined." This is also visible in the inequality in net personal income and per capita household income (see the trends reported by Atkinson and Micklewright (1992), Flemming and Micklewright (2000), UNU/WIDER (2000), and Galasi (1998), presented in Appendix A, table A.1). After 1991, the income inequality increased for every single income indicator.

1.4.3 Poland

In January 1990, the Mazowiecki government implemented the Balcerowicz plan, which ended price controls on most products. The reforms that followed are also known as Poland's 'shock therapy' and were characterized by the reduction of state orders for manufactured goods, restraints on credit for state-owned enterprises, increased import competition, and the collapse of the Council for Mutual Economic Assistance (CMEA), the Soviet-era trade bloc. These reforms were accompanied by sharply increasing earnings inequality from 1989 onwards (figure 1.1). The earnings inequality decreased

slightly in 1991, 1997, and 1998. Between 1989 and 1991, per capita income inequality decreased, followed by dramatic increase in 1992 and 1993. After 1993, per capita income inequality leveled off and showed a steady trend of increasing inequality with dips in 1995, 1998, and 2001.

1.4.4 Russia

In the late 1980s, Mikhail Gorbachev's *perestroika* initiated reforms in the Russian redistributive economy. Some land was transferred to farmers, a limited number of small privately owned enterprises was allowed, and some loss-making factories were closed down (e.g., Van Atta 1989). In June 1991, Boris Yeltsin won 57 percent of the popular vote in the democratic presidential elections and he took office in July 1991. In August 1991, a group of hardliners within the Communist Party launched a coup against Gorbachev and briefly deposed the Soviet leader. This event is also called the 'August Coup' or the 'Vodka putsch' (McFaul 1995). Despite the failure of the coup, it exposed the weakness of the Soviet state. After the failed coup, Yeltsin assumed control over important Soviet/Russian institutions, and by December 1991, the Soviet state was effectively dismantled and Yeltsin's administration was a fact.

After the collapse of the Soviet Union, Yeltsin and some young radical economic reformers (Yegor Gaidar, Anatoly Chubais, and Boris Nemtsov) proposed dramatic economic reforms. In January 1992, they launched a comprehensive economic program to transform the Soviet command system into a market economy. These reforms were characterized by (1) rapid price liberalization, deregulation of enterprise activities to get prices right, and encouraging the increase in production in response to higher prices; (2) restrictive fiscal and monetary policies to bring inflation under control and to impose stricter budgetary constraints on enterprises; (3) speedy privatization to break the links between firms and government and to encourage enterprise restructuring, making it easier to enforce and sustain stabilization policies; and (4) opening the economy via foreign trade and capital account liberalization.

The dramatic change of power resulted in an unstable and uncertain political and economic situation, further aggravated by the radical economic reforms. This unstable period coincided with the dramatically growing inequality in earnings and per capita income of the countries reported here (see figures 1.1 and 1.2). During the 1990s, the earning inequality even exceeded that of the USA. The earnings inequality slightly decreased in 1994, but after that there was a trend towards further increases in earnings inequality. The data that were available for this study show that the maximum inequality peaked in 2001 and dropped again in 2002. The inequality in per capita income decreased in 1995, followed by an increase in 1998, leveling off thereafter.

1.4.5 Slovakia

The Czech and Slovak states were economically and socially different even during the common Czechoslovakian period, with the average income and standard of living in the Czech part higher than those in the Slovak part. Slovakia was hit the hardest economically after the separation of Czechoslovakia in January 1993. The economy of the Czech part of Czechoslovakia had an industry producing higher-level products and its workforce was more skilled. Many Slovaks working in the Czech section stayed there after 1993, making things even worse for the Slovak economy.

These socioeconomic differences became more prominent during the market reforms that followed the transition: "the level of total employment fell more rapidly in Slovakia, unemployment grew more

rapidly and was about three times higher by 1993, and real GDP was more negative than in the Czech Republic" (Garner and Terrell 1998: 25). The Slovak transition was characterized by a relatively slow privatization of firms and enterprises[3] (especially compared to the Czech transition) and by generous social security transfers (Chase 1998). While the Czech economy has proven to be the most dynamic one of the Visegrad countries[4] and attracted most foreign investors, the Slovak economy has lagged behind.

In this study, only limited data were available on earnings inequality in Slovakia, so it is not possible to make claims about trends in earnings inequality for Slovakia after 1993. However, data on per capita income show that after a delay of about three years, the inequality rose sharply. By 2003, the per capita income inequality even exceeded that of the Czech Republic and Hungary.

1.5 The income distribution

The discussion of trends in income inequality in the previous section shows that during the market transformation process (1989-2003), income inequality increased in the Czech Republic, Hungary, Poland, Russia, and Slovakia.

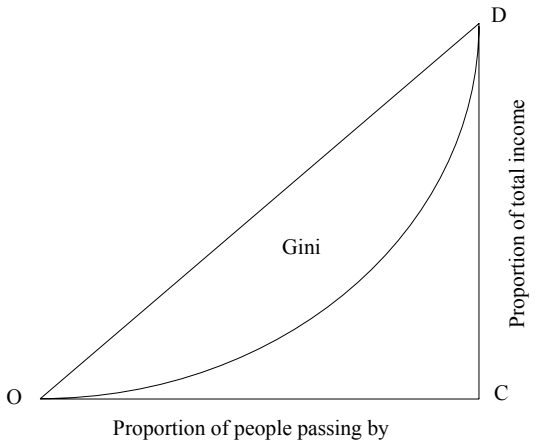
In the present study, it is argued that in order to understand the influence of the market transformation process on income distribution, one should investigate what happens to the income of individuals. To illustrate this, we will discuss income distribution in more detail. The income distribution is often illustrated by the Lorenz curve introduced in 1905, which can be summarized in lay terms as follows: line up every member of a society in ascending order by their income and let them parade by (Cowell 1995). The proportion of total income a person receives is given as that person passes by. Thus, when no one passes by, no income has been distributed. This is indicated by point O in figure 1.3. When everyone has passed by, all income has been distributed. This is indicated by point D in figure 1.3. If the Lorenz curve lies along the line connecting O and D, there is no income inequality. The further it is convex towards point C (see figure 1.3), the more unequal the income distribution of society under consideration. In such a situation, a large proportion of people pass by in the beginning of the parade, to whom only a small proportion of income will be distributed. At the end of the parade, a small proportion of people pass by, to whom a large proportion of income will be distributed.

The Lorenz curve diagram is used to derive the Gini coefficient, which is a measure to express inequalities. It has been reported in previous sections when the income inequality in transitional countries has been discussed. The Gini coefficient can be expressed as the ratio of the area between the straight line OD and the curved line OD in figure 1.3 to the area OCD ($\nearrow/\triangle$). The Gini coefficient can also be defined as the average difference between all possible pairs of incomes in the population, expressed as a proportion of total income (Cowell 1995). Thus, the increase in income inequality in CEE countries, reported in the previous sections, means that the total income in these countries is

[3] The Czech Republic successfully completed the first wave of voucher privatization by 1993 and started registration for a second wave in October 1993. By contrast, at the end of 1997, Slovakia had not completed the first wave of voucher privatization and was still confronting difficulties with the process (Chase 1998: 404).
[4] The Visegrad group consists of the Czech Republic, Hungary, Poland, and Slovakia.

distributed more unevenly over the population since 1989 than it was during the Communist era. In other words, the distance between the incomes of the members of these transitional countries has become larger since the 1989-transitions.

Figure 1.3 Hypothetical Lorenz curve of income



The discussion of the income distribution, above, indicates that changes in income inequality are linked to changes between the incomes of persons. Thus, rising income inequality poses an interesting research problem: which social groups experienced income gains and which social groups experienced income losses during the market transformation process in post-Communist countries? This will be elaborated in the section on research questions that follows.

1.6 Research questions

The previous section has shown that for understanding changes in the income distribution, it is important to investigate how people attain their income and how the income attainment process changed during market reform; this determines their position in the distribution of income and subsequently shapes the income distribution. Lenski (1966) proposed that socioeconomic inequalities arise from the unequal distribution of resources across society's members. The more unequal the distribution of resources in industrial societies, the more unequal the distribution of consumer goods (income) will be, and most of the consumer goods (income) will go to the people with most of the resources. Thus, some people have a greater chance of attaining a higher income than other people. This is dependent on the value and amount of resources individuals have. The market reforms in transitional countries changed the income returns to the different forms of resources.

This brings us to the general research question of this study, which is closely related to the major research problem in the literature on transitional societies: whether economic reforms disproportionately benefit certain social groups at the expense of others (Xie and Hannum 1996: 951).

CHAPTER 1

It is one of the major questions addressed by researchers of post-socialist or reforming socialist economies and has often been framed in terms of 'winners' and 'losers' (e.g., Brainerd 1998; Ganzeboom 1998; Gerber 2000a; Hauser and Xie 2005; Kropp 1998). The general research question of this dissertation reads as follows:

Who are the winners and losers in income attainment during the transformation process in post-Communist societies?

This is not a new question but one of the core questions in the research field of countries in transition. It is a general and broad research question about the consequences of the market transformation process for income attainment in post-Communist societies. Therefore, to study the impact of the market transformation process on social stratification in more detail, more specific sub-questions have been formulated and answered in this dissertation.

The literature on countries in transition is centered around the Market Transition Theory (MTT), which is a theory that can used to determine winners and losers in transitional economies. The MTT describes how processes of marketization influence stratification outcomes like income and income inequality (Nee 1989, 1991, 1996). The theory holds that the introduction and expansion of market institutions give rise to multiple bases of power and privilege (the 'Market Power Thesis') and change the incentive structure (the 'Market Incentive Thesis') and change the opportunity structure (the 'Market Opportunity Thesis') of societies. Subsequently, the former political elite no longer have absolute control over resources of power and privilege. Labor markets are rearranged and there are changes in the structure of property rights, resulting in a decline in the value of political power in the competition over resources, with power becoming market-based. In short, human and market capital provide more income benefits, while the income returns to political capital wane.

In terms of winners and losers, the theory holds that members of the former political elite are among the losers of the transformation process. They have to give ground to the direct producers of economic goods, as well as to the new economic elite, which consists of highly educated professionals, managers, and entrepreneurs, who can be seen as winners. Furthermore, the theory not only holds that the changing structure of property rights increases opportunities for entrepreneurs, but it also increases opportunities for those employed in the private/hybrid sector as well. Increasing opportunities and increasing returns to human capital should also endorse equal pay between men and women (Nee and Matthews 1996).

Since its publication in 1989, the theory has been tested in numerous different studies on China as well as Central and Eastern Europe. The MTT is challenged by empirical inconsistencies and by scholars posing alternative theoretical explanations. This is why this literature is often referred to as the 'Market Transition Debate'. The discussion on the socioeconomic consequences of the market transformation process is still going on. The large body of literature on how market reforms change socioeconomic outcomes offers a unique opportunity to summarize empirical results and synthesize theoretical perspectives, with the aim of determining the winners and losers in income attainment. In order to do this, we evaluate income returns to various forms of capital. Those forms of capital that increase a person's income during the market transformation process determine who the winners are.

The forms of capital that do not increase or decrease a person's income determine the losers. This raises the first sub-question of the present study:

1. To what extent have the income returns to human, political, and market capital changed during the market transformation process?

Although the MTT originally described how market reforms altered the mechanisms of stratification in China, it is regarded as a general theory of transition. Authors interested in the socioeconomic consequences of the dramatic 1989-transitions in CEE countries apply the MTT to those particular contexts. However, it appears that the MTT has difficulties with the variety of institutional settings that can be found in the various transitional countries, and the implicit assumption that reforming and post-Communist countries undergo a uniform transition from a redistributive to a market economy has met with much criticism. In short, the MTT lacks propositions and assumptions, specifying conditions under which its predictions hold and under which they do not. The alternative theoretical notions emerging from these opposing views are also referred to as 'Path Dependency' (e.g., Stark 1992a; Walder 1996). The main argument is that post-Communist countries have different institutional histories, leaving a multitude of institutional settings in which market reforms are introduced. Thus, challengers of the MTT argue that CEE countries experience specific path dependent transformation processes and that it is arguable whether these have resulted in similar changes and socioeconomic outcomes. This point raises the second sub-question that will be addressed in the present study:

2. To what extent have the income returns to human and market capital the same pattern in CEE countries during the market transformation process? And how can differences be related to different path dependent transformation processes occurring in these countries?

Another heavily debated topic is the diminishing role of political capital and its consequences for Communist Party (CP) members. The collapse of Communism and of the CP confronted its members with the devaluation of their political capital. It seems logical to assume that, because of this, CP members lost their privileged position in society and, as a result, their income advantage over non-members. On the other hand, there may be more going on than meets the eye. CP members might have been able to convert their political capital into valuable market assets (Bian and Logan 1996; Böröcz and Róna-Tas 1995; Parish and Michelson 1996; Róna-Tas 1994; Xie and Hannum 1996; Zhou 2000). It is also possible that the privileges they enjoyed under the Communist regime provided them with valuable knowledge and other resources (e.g., job experience, managerial skills, and social connections) useful to ascertaining their position during market reforms. Or, maybe they have individual traits – like ambition, competitiveness, etcetera – that enabled them to get to the top within any stratification system, not only a Communist one (Gerber 2000a, 2001a). These (at least partially) contradictory views on the way the income of CP members might be influenced, led to the following sub-question of the present study:

3. What are the remaining income advantages of CP members over non-CP members in post-Communist societies when taking into account their differences in resources?

Finally, apart from the debatable argument that CP members were losers during the market transformation process, surprisingly little attention has been devoted to the possible 'real' losers. The welfare systems of Communist countries – with their characteristic promise of 'cradle-to-grave' income security – are known to have been generous when compared to the welfare systems of Western societies. During Communism this was not necessarily a problem. Wages and social benefits were relatively low and the command economy was characterized by full employment to keep the large industrial sector going. However, the first few years of market reform resulted in negative economic growth, hyperinflation, and growing unemployment. Together with the generous welfare system inherited from the Communist era, this placed a heavy burden on the state budget. Reforming the social safety net was inevitable – with repercussions for the income of the weak and the poor in post-Communist societies. But, it is questionable whether the impact of the reforms would be similar for all holders of social benefits. This study specifically addresses the issue of whether having more resources helped social benefit holders to maintain or supplement their income during the hard times that followed the 1989-reforms. The final sub-question of the present study reads as follows:

4. How have the incomes of people depending on social benefits changed in post-Communist societies? And have the incomes of people who were dependent on social benefits changed differently when taking into account the differences in their resources?

1.7 Outline of the study

This final section of the introduction describes the organization of the remaining chapters of this book. In chapter 2, the MTT will be discussed and the theory will be evaluated while doing a meta-analysis of empirical sociological and economic studies. The aim in this chapter is to test to what extent the MTT can explain how the market transformation process changed the effects of income determinants in reforming and post-Communist societies. This chapter is important in three ways. First, it provides an extensive summary of the literature relevant to the research problem of the present study. Second, it describes theoretical and empirical contradictions existing in the market transition debate and possible grounds and solutions for these inconsistencies are provided. These theoretical and empirical issues are addressed in the subsequent chapters of this study. Third, it gives rise to modifications and extensions of the MTT.

In chapter 3, the predictions derived from the MTT are tested, employing a different research design. This test of the MTT is restricted to Central and Eastern Europe. However, contrary to the meta-analysis, differences between CEE countries are permitted. The aim in this chapter is to test to what extent trends in the effects of income determinants are similar across post-Communist countries, as predicted by the MTT. Additionally, different possible trends are examined in relation to different path dependent transformation processes occurring in post-Communist societies. To do this, trends in the income effects of years of education, years of work experience, self-employment, private sector

employment, and gender have been estimated for the Czech Republic, Hungary, Poland, Russia, and Slovakia. In a two-step, cross-national, and across time research design, 59 standardized cross-sectional surveys have been analyzed. The results from this two-step analysis are linked to an alternative theoretical notion on the socioeconomic consequences of market transformation: that of path dependent transformation processes. The five CEE countries have been classified according to their privatization strategies. Comparing this classification with the empirical trends gives an indication of the viability of the notion of path dependent transformation processes for understanding the relationship between market reform and income attainment.

In chapter 4, the income advantages of CP members over people who have never been a CP member are investigated. The aim is to determine whether CP members are winners or losers in the market transformation process. There are three reasons why a separate chapter is dedicated to this issue. First, the diminishing income returns to political capital – and the broader theoretical issue concerning the fate of the 'old' political elite and the formation of the 'new' economic elite – has been a heavily debated issue in the market transition debate. Second, this prediction of the MTT could not be analyzed for CEE countries in the meta-analysis reported in chapter 2. Third, information on CP members is scarce, so only a very small selection of the standardized datasets can be used. Despite this, it is a contribution to the field since such analyses are scarce.

In chapter 5, the MTT is extended to identify the unemployed, pensioners, and disabled as being the 'real' losers of the market transformation process. Commonly used income models that estimate income returns to human capital and control for demographic characteristics have been enriched with the labor market categories of 'unemployment', 'retirement', and 'disability'. These extended models are analyzed separately in 53 standardized cross-sectional surveys for the Czech Republic, Hungary, Poland, Russia, and Slovakia. The results from these analyses are summarized in more general conclusions on how the incomes of social benefit holders changed in Central and Eastern Europe during the market transformation process.

Finally, in chapter 6, the reader will find the major conclusions drawn from the analyses presented in chapters 2 through 5. Furthermore, theoretical progress as well as limitations are discussed here. The chapter closes with suggestions for future research.

2

MARKET TRANSITION THEORY: A META-ANALYSIS OF STUDIES ON INCOME ATTAINMENT

Abstract

Income Attainment During Transformation Processes
A Meta-Analysis of the Market Transition Theory

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The changing communist regime in China and the 'velvet' revolutions in Central and Eastern Europe (CEE) have provided an opportunity to investigate trends in income attainment during processes of transformation. Nee (1989) formulated the market transition theory, which indicates the main determinants of changing income attainment during the transformation process from a state-regulated, centrally planned economy to a market economy. An extensive literature, with studies testing the predictions derived from this theory on China and CEE, has emerged since this seminal article by Nee. However, there are theoretical and empirical inconsistencies in these studies. This calls for a systematic comparison of the empirical results and evaluation of Nee's theory. This paper reports a meta-analysis performed on 64 publications to determine to what extent there is consistent empirical evidence for the hypothesized relationship between marketization processes and the changing effect of income determinants. We found that political capital remains important during transformation in urban China, the gender gap in income increases in urban China as well as in CEE, and although human capital and market-related resources are important determinants of income, it is not evident that their importance increases during the transformation process. We find some support in favor of the market transition theory, but it needs revision and elaboration.

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3

MARKET TRANSITION THEORY: A SECONDARY ANALYSIS OF POST-COMMUNIST SOCIETIES*

3.1 Introduction

The post-Communist countries in Central and Eastern Europe provide a unique opportunity to investigate the consequences of socio-economic change in determining income. Under Communism, these countries were characterized by a redistributive economy, which is characterized by massive intervention of the state, with the prices of labor and goods determined by the state. In contrast, a market economy is less centralized and prices are agreed upon by buyer and seller. The shift from a redistributive economy to a market economy suggests changes in the allocation of resources and persons, and as a result, the effects of income determinants will also change.

In the literature, several theoretical approaches exist that explain the changing effects of income determinants during the transition away from Communism. With his Market Transition Theory (MTT), Nee defends the theoretical position also known as New Institutionalism (Brinton and Nee 1998). The most important assumption is that changes in stratification outcomes can be explained by changing economic institutions through which resources and persons are allocated. The MTT does not take into account country specific conditions, postulating that post-Communist countries have a collective starting point and will develop to a predetermined capitalist market economy. The transition is assumed to be similar for all countries experiencing such a process, and subsequently, the effects of income determinants should change across nations in similar ways. This is in contrast to the concept of Path dependent transformation, which holds that countries experience unique transformation processes, and that changes in stratification outcomes across countries will not be comparable.

These different ideas about how stratification outcomes – in this case income – are influenced by extensive market reform raise relevant questions: To what extent are trends in the effects of income determinants similar across post-Communist countries, as predicted by the MTT? Can possible different trends be related to different path dependent transformation processes occurring in post-Communist countries?

Originally, the MTT described how institutional change altered the mechanisms of stratification in China. Nevertheless, the seminal article published by Nee in 1989 encouraged sociologists and economists to test the predictions derived from the theory extensively in China as well as in various Central and Eastern European (CEE) countries. This literature is also referred to as 'the market

* This chapter is co-authored by Jos Dessens and Wim Jansen. The text is currently under review. Earlier versions of this chapter have been presented at the spring meeting of the International Sociological Association Research Committee on Social Stratification (RC28), Nijmegen (The Netherlands), May 11-14, 2006 and at the Utrecht University Stratification and Culture Seminar, Utrecht (The Netherlands), October 10, 2005.

transition debate,' in which the theoretical and empirical inconsistencies of the MTT have been raised (Fligstein 1996; Nee 1996; Oberschall 1996; Parish and Michelson 1996; Stark 1996; Szelényi and Kostello 1996; Walder 1996; Xie and Hannum 1996).

In the market transition debate, the MTT is regarded as a general theory indicating properties of institutional arrangements that emerge during market transformation and which transform or reinforce the preexisting stratification order. In this respect, it is treated as a general theory that can be used to explain changes in the effects of income determinants in various contexts, where a redistributive economy has been replaced by a market economy. This is where the shoe pinches. As is shown in the previous chapter, there are differences between regions that are not in line with the MTT. Here it is argued that the MTT lacks specific assumptions and additional propositions to explain the changing effects of income determinants across post-Communist countries. Theoretical progress can be achieved by specifying the conditions to which the MTT predictions apply and do not apply.

In institutionalist theory, state-socialist societies and capitalist societies are treated as different, types of societies with fundamentally different institutional contexts. The collapse of Communism is regarded as a transition between the two institutional settings, implicitly assuming that post-Communist societies develop into a predetermined end-state: redistributive economies change into market economies (Stark 1996). This does not specify how long the market transition process will take, raising questions like the following (which suggest that transitional countries develop into some kind of ideal type of society): At what point do the effects of income determinants change as predicted? Is it to the point where a capitalist market economy is fully in place? In this respect, the MTT is at risk of not being falsifiable. If the predicted changes in the mechanisms of stratification can not be observed, it is only a matter of time before they will eventually show up. Until that happens, the predictions can not be rejected.

Nee (1991; 1996) has refined the MTT and notes multiple market outcomes identified as partial reform and multiple regions differing in the extent of market reform. Despite these refinements, the theory is criticized for assuming that there will be a convergence to a single set of stratification outcomes, like power and income (Parish and Michelson 1996). This implies that eventually all regions undergoing market transformation will experience the predicted changes in the effects of income determinants. Therefore, observed differences between countries stem only from differences in the pace in which market reforms take place.

These criticisms do not necessarily negate the MTT. In this study, we propose that the criticisms should be regarded as a call for specifying the conditions under which the effects of income determinants change as predicted by the MTT and under which they do not (also suggested by Nee and Cao [(1999: 825)). Walder (1996: 1068) formulates this emphasis on specifying market conditions as follows: "The question is not to what *degree* markets have emerged, but what *kind* of market economy is emerging in different regions."

In conclusion, the market transition debate generated new theoretical ideas about the relationship between market reform and changing effects of income determinants, which can be lumped together as path dependency. Market transformation is not as uniform between post-Communist countries as implicitly assumed by the MTT. The socioeconomic paths towards centrally planned economies were different in these countries and left different institutional traces during the Communist era. Countries like Hungary and Russia were agricultural societies through the second half of the twentieth century,

with various mixtures of private and public ownership (World Bank 2004). In some Communist societies, market mechanisms had already been introduced during the Communist era. Although the 'velvet revolutions' in CEE occurred approximately simultaneously, the paths towards decentralization of the state-centered redistributive economies were different (Domanski 2000; Gerber and Hout 1998), due also to the differences during the Communist era. In sum, the consequences of market reforms should be understood within the context of country specific political, economic, and social situations.

Most of the studies investigating the influence of market reform on income determination use time as an approximation of the transformation process. Some scholars choose to analyze one country at two points in time (e.g., Reilly 1999) or in some specific year before and after the start of the transformation process (e.g., Flanagan 1998; Orazem and Vodopivec 1995, 2000; Róna-Tas 1994; Vecerník 1995). The observed changes are interpreted as resulting from the transformation process. However, the longer the time span, the better the measure, because expected changes will have a better chance of showing up (Walder 1996). Instead of comparing the effects at two points in time, other scholars analyze trends in the changing effects of income determinants in a country over longer periods (Brainerd 1998, 2002; Campos and Jolliffe 2002; Dessens, Jansen, and Nelissen 1998; Domanski and Heyns 1995; Gerber and Hout 1998; Keane and Prasad 1999a; Vecerník 2001a).

Given the argument that transitional countries experience different transformation processes, some scholars have analyzed income determinants for several countries separately in one year to determine to what extent the transformation process has changed income determinants in those countries (e.g., Diewald and Mach 1999; Hanley 2000; Zhou and Suhomlinova 2001). Others have analyzed several countries separately over two or more years, looking at how income determinants have changed over time within each country (e.g., Chase 1998; Filer, Jurajda, and Plánovský 1999; Kostello 2002; Newell and Reilly 2000).

Using time to measure market reforms is based on a crude assumption that as time progresses market reforms will expand. Authors who have investigated the influence of market reforms on income determination in different regions follow a more subtle approach. If two or more regions vary in the extent to which market reforms have been implemented, comparing these regions gives insight into how the transformation process has changed the effects of income determinants. Based on the Chinese situation, the differences between rural (more marketized) and urban (less marketized) regions are used as a more subtle measure for taking into account the market transformation process (Cao 2001; Nee 1996; Nee and Cao 1999; Xie and Hannum 1996). Verhoeven, Jansen, and Dessens (2005) performed a meta-analysis contrasting two regions with different transformation processes: urban China and CEE. They analyzed the extent to which the trends in the effects of income determinants differed between the two regions. Analyzing different regions that vary with respect to market penetration appears to be a fruitful approach for studying the relationship between market reforms and the changing effects of income determinants.

The aim of this study is threefold. First, trends in the effects of income determinants are simultaneously estimated for the Czech Republic, Hungary, Poland, Russia, and Slovakia. This will indicate whether the MTT is able to predict changing stratification outcomes in post-Communist countries. The theory assumes a uniform transformation process, which should be reflected in similar trends in the effects of income determinants in the five post-Communist countries.

Second, the idea of path dependent transformation processes will be related to possible differences in trends in the effects of income determinants between post-Communist countries. This will give an indication about the extent to which theoretical implications from path dependent transformation processes correspond with empirical findings.

Third, the MTT methodology will be improved by adopting a cross-national and across time comparative research design.

3.2 The Market Transition Theory

Originally, the MTT described how market transition would influence the mechanisms of stratification in China: basically, increasing market transactions expand the private sector, shift control over resources from redistributors to direct producers, create more opportunities for personal investment, and open up labor markets (Nee 1989, 1991, 1996). As a result, returns to human capital, entrepreneurship, and employment in the private sector will increase. Furthermore, differences in income between men and women will decrease (Matthews and Nee 2000; Nee and Matthews 1996).[1] Through their participation in the second economy, women had high levels of human capital and other accumulated skills that are valuable in a market economy (Szalai 1991) and they were often working in the service sector. While these characteristics were devalued under Communism, they are revalued during the transformation process (Fodor 1997). It seems that the shifting reward system from ascription to achievement should favor women. However, the relative decline of female employment – compared to male employment (Hunt 1997) – can easily undo these advantages.

The MTT generally describes how the process of marketization influences the effects of income determinants. All post-Communist countries experience market reforms, so the predictions discussed above apply to all these countries. To keep the implications for cross-national differences in income determination predicted by the MTT simple and well organized, they will be presented as the MTT similarity thesis, in which entrepreneurship and private sector employment are denoted as market capital.

MTT similarity: *Market reforms in post-Communist countries will increase the income returns to human capital and market capital and decrease the gender income gap.*

The general character of the MTT stirred up criticism that the transformation processes in post-Communist countries are not similar to those occurring in China (Gustafsson and Shi 2000; Stern 1998) and that they are not uniform across post-Communist countries (Stark 1992a). In a later version of the MTT, Nee (1991) replied by stating that the observed contradicting stratification outcomes stem from differences in the pace of market reform. In the words of Nee (1991: 268): "Market transition theory turns on the extent to which markets replace hierarchies in the allocation of resources." Changes in the effects of income determinants occur as predicted by the MTT, but in some transitional countries, they might be observed earlier than in others. This leaves room for slightly varying

[1] The MTT also predicts a decline in income returns to political capital relative to market related human capital. Because of the limited availability of data on CP members, this prediction is not tested in this study.

increasing trends in the effects of income determinants between CEE countries; hence the term *similarity*.

The MTT does not specify assumptions about country specific conditions to which this hypothesis would apply. To address this, Nee and associates adopted the theoretical approach that has been coined *New Institutionalism* (Brinton and Nee 1998). State-socialist and capitalist societies are treated as different entities with fundamentally different institutional arrangements that allocate resources and distribute income. Market transition entails replacing allocation through redistribution with allocation through markets.

According to Stark (1992a; 1996), this transition concept assumes that post-Communist countries have a collective beginning and develop via common paths to a predetermined capitalist market economy. The theory implicitly assumes an inevitable convergence to an ideal capitalist-type society when market reforms have extensively progressed.[2] This suggests convergence to a single set of stratification outcomes like power and income (Parish and Michelson 1996). In other words, trends in the effects of income determinants across post-Communist countries resemble each other more and more: they *converge*.

The predicted changing effects of income determinants, discussed above, are presented in figure 3.1A as MTT similarity and figure 3.1B as MTT convergence. Figure 3.1 represents hypothetical trends in the effects of income determinants. The y-axes represent the effect of a specific determinant of income and the x-axes represent time. The MTT does not take variability in the institutional contexts into account before the transformation year (only as a reference to detect change); therefore, trends in the effects of income determinants are not given before market reforms are introduced. Figure 3.1A: MTT similarity shows that as time progresses, the effects of income determinants change similarly across post-Communist countries (c_i).[3] Figure 3.1B: MTT convergence indicates that the initial differences in the effects of income determinants between post-Communist countries (c_i) decrease over time. Due to differences in the pace of marketization, slightly different trends may be expected. In general, as time progresses, differences in the effects across nations should become smaller.

Figure 3.1C presents a model indicating rejection of the MTT similarity thesis and of the MTT convergence thesis. Figures 3.1A, 3.1B, and 3.1C all assume interactions between country and time. The hypotheses presented in figure 3.1A: MTT similarity and figure 3.1B: MTT convergence, assume that the coefficients are restricted. *Similarity* assumes that the slopes for all post-Communist countries are increasing and *convergence* assumes that the slopes across post-Communist countries become more alike. MTT similarity will be rejected when at least on country has no or a negative slope and MTT convergence will be rejected when the slopes disperse, which is indicated by figure 3.1C: Rejection.

[2] Modernization theory received similar criticism, because it states that far-reaching modernization necessarily and inevitably results in convergence towards an industrial ideal type society (e.g. Tilly 1986).

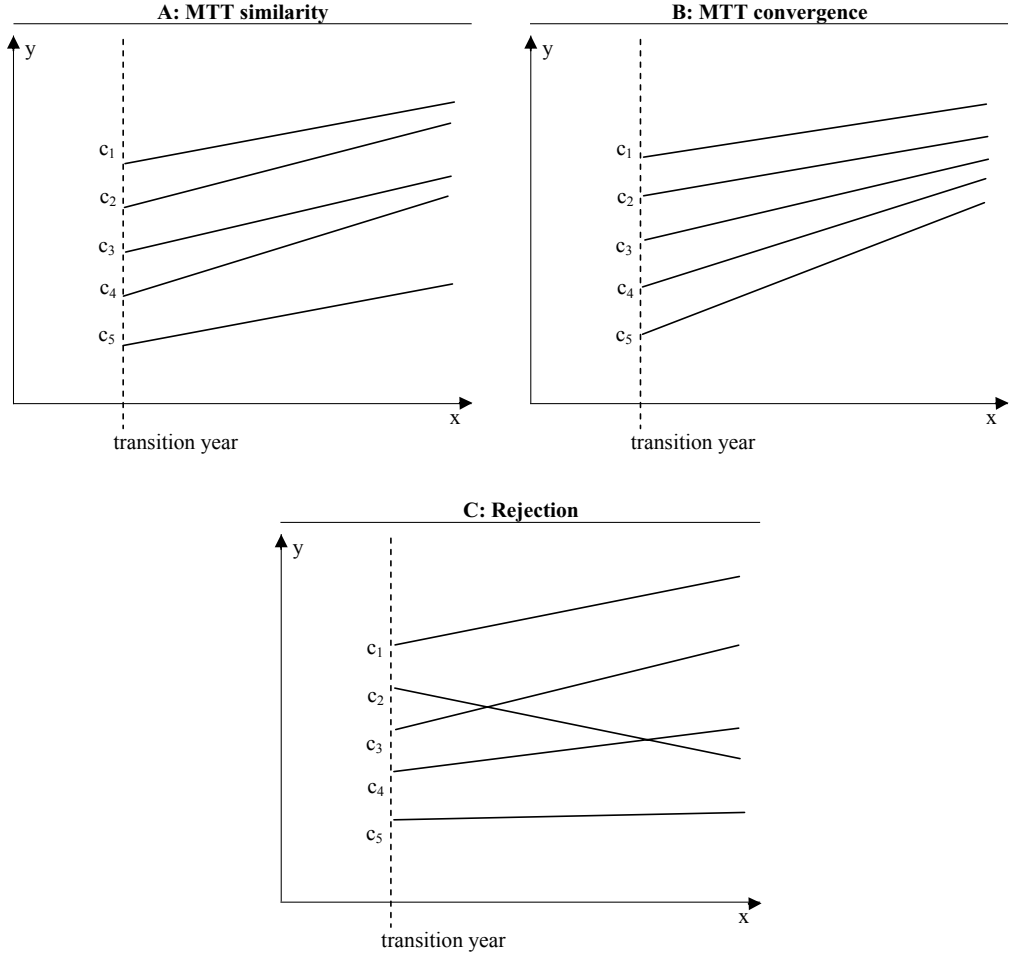
[3] The extent of a potential increase in the effects of income determinants is not unlimited. When effects are already large at the beginning of market reforms, they will not increase at the same rate as effects that are smaller at the beginning of market reforms. It is more likely that trends in income determinants follow a non-linear shape. The same logic is applicable to small effects at the beginning of market reforms. These will not keep on decreasing at the same rate as effects that are larger at the beginning of market reforms.

CHAPTER 3

3.3 Data

In total, 61 standardized cross-sectional surveys of the Czech Republic, Hungary, Poland, Russia, and Slovakia, covering a period from 1991 to 2002, were used (see Appendix E). Because of variability in the age groups included in the 61 samples and variability between countries in the age at which participation in the labor market normally begins, the analysis is restricted to the most economically active persons: aged 20-64. The total number of working individuals of age 20-64 is 62,084.[4]

Figure 3.1 Changing effects of income determinants



Note: x = year; y = effect of income determinant; c_i = post-Communist country.

[4] When weights were available, the datasets were weighted to correct for discrepancies between sample distributions of demographic variables and distributions of demographic variables retrieved from statistical offices.

It is known that questions about personal or household income result in a large number of missing values (Moore, Stinson, and Welniak 2000). Out of all 61 standardized datasets, 6,878 employed respondents did not report their income. Descriptive statistics show that among these respondents there are more self-employed people and more people working in the private sector. As a result, the income returns to self-employment and private sector employment are likely to be slightly underestimated in this study. Additional missing values on the independent variables leave a final dataset of 53,761 individuals to be analyzed.

3.4 Measures

3.4.1 Dependent variable

In this study, we use monthly personal income and income from self-employment as the dependent variable. The income variable is transformed to a logarithmic scale.

Measuring income is known to be problematic. People are reluctant or not able to report their income precisely. Some authors have suggested that the way in which income questions have been asked affects the reliability of the income variable (Duncan and Petersen 2001; Jansen and Dessens 2004; Róbert 2000). In some surveys used in this study, income was based on a single question, while in others, income was asked via a more detailed set of questions. Jansen and Dessens (2004) have shown the advantages of using a detailed set of questions. Sensitivity analyses showed that this difference did not affect the results reported here.

3.4.2 Income determinants

The MTT discusses changes in the effects of income determinants, namely, party membership (political capital), human capital, market capital (self-employment and private sector employment), and gender. In this study, changes in income returns to party membership are not analyzed because only a few datasets have information on political capital. For an analysis on changes in returns to political capital during transformation processes, see, e.g., Verhoeven et al. (2005).

Human capital

Human capital is measured by years of education and years of work experience. Most datasets include years of education except the ISJP91/96 and the SSEE for Poland.[5]

[5] For these two datasets, we use educational level to approximate years of education. For example, in the Hungarian ISJP91 dataset, education is coded in six categories: less than primary school, primary school, vocational training, secondary school, lower tertiary school, and higher tertiary school. A respondent who has attended school six years or less is assigned four years of education and respondents who completed primary school have attended six years of schooling. Generally, it takes eleven years to finish vocational training in Hungary, fourteen years to complete schooling at the level of the lower tertiary school, and seventeen years to complete at the higher tertiary level. This is a nice alternative to including all educational categories as dummy variables. The same procedure is used to approximate the years of education in the other datasets, based on the educational system for each country.

Only the SSEE dataset has information on actual years of job experience; therefore, in the other datasets, job experience is approximated using the following expression (see also, Treiman and Roos 1983: 620):experience = age-years of schooling-6.

Mincer (1958) has argued that the log of income is a function of years of schooling, years of experience, and years of experience squared (also referred to as the 'Mincer equation'), which is available for basically every country on the globe. Therefore, experience squared is also included in the models. This implies that the effect of years of experience on the logarithm of personal income now becomes the coefficient (β_1) of experience plus two times the coefficient (β_2) of experience squared times experience ($\beta_1+2\times\beta_2\times$experience). So, the effect of years of experience on the logarithm of personal income depends on experience itself.

Self-employment

The surveys used in this study have information on employment status of the respondents and their occupational class: EGP classification (Erikson and Goldthorpe 1992; Erikson, Goldthorpe, and Portocarero 1979). The tool developed by Ganzeboom and Treiman (Ganzeboom and Treiman 1996) is used to recode the 1988 International Standard Classification of Occupations (ISCO88) into the ten EGP categories.[6] The categories IVa and IVb are used to indicate individuals who are self-employed. The 1991 International Social Justice Project survey has too few self-employed people for Russia and Slovakia to be analyzed. For these countries, the income model in 1991 is estimated without including self-employment.

Private sector employment

Besides self-employment, employment in the private sector is used as a market-related resource. The effect of employment on income is indicated by a dummy variable contrasting it with employment in the public sector. Some standardization was necessary. Cooperatives and 'hybrid' firms (those that are owned partly publicly and partly privately) are coded as private sector. City, municipality, and state firms and enterprises are coded as public sector.

Gender

Men were coded as zero and women as one.

3.5 Methods

In this study, a two-step analysis is followed. During the first step of the analysis, the effects of the MTT income determinants are estimated for each country at a given year using OLS regression analysis. Denoting the log of monthly personal income of the respondent by $\ln(y)$ and X_j as the j-th independent variable (j = 1…6: years of education, years of experience, years of experience squared, self-employment, private sector employment, and gender), the model can be described by equation [3.1]:

$$\ln(y) = \alpha + \sum_{j=1}^{6} \beta_j X_j \qquad [3.1]$$

[6] The latest version of this tool can be found on-line (Ganzeboom 2003).

We are interested in changes in the effects of income determinants, so the coefficients and their standard errors, estimated for each country and year in model [3.1], are saved in a new data matrix. In the next step, we investigate whether these coefficients vary by country and time. In order to compensate for the fact that coefficients based on large datasets are more precise than those based on smaller datasets, the coefficients are weighted by the inverse of their squared standard errors. To answer the question as to whether we can explain variation in these weighted coefficients by country and time an empty model is fitted, which is a model with the constant only. After fitting the empty model, it is possible to determine whether any substantial variation is left unexplained. The empty model is fitted using the 'MEANES' macro, and all subsequent models are fitted using the 'METAREG' macro by Lipsey and Wilson (2001).

Table 3.1 shows the descriptive statistics of the weighted mean coefficients for the income determinants. Lipsey and Wilson (2001) use the measure 'Q' as an indicator for the homogeneity of the weighted coefficients. In our analysis, homogeneity is rejected for years of education, self-employment, private sector employment, and gender; 'Q' is significant, indicating that apart from the variability expected from sampling error, there is excess variability that can be explained by country, time, and the interaction between country and time.

Table 3.1 Descriptive statistics (empty model) of the coefficients for the effects of education, experience self-employment, private sector employment, and gender on log personal income

	Weighted Mean	S.E.	Min.	Max.	n	Q
Years of education	.064***	.001	.025	.114	61	586.16***
5 years of experience	.014***	.001	-.005	.041	61	124.85***
Years of experience max.[a]	.983***	.001	.948	1.006	61	195.12***
40 years of experience	-.009***	.001	-.035	.006	61	114.30***
Self-employment	.306***	.011	-.221	1.257	59	454.57***
Private sector employment	.070***	.005	-.194	.372	61	438.98***
Gender	-.335***	.005	-.582	-.161	61	358.11***

Note:
[a]Years of experience for maximum income returns.
* $P < .05$; ** $P < .01$; *** $P < .001$, two-tailed.

In the first step of the analysis, a curvilinear relationship between experience and income was assumed and a quadratic term of experience was included in the estimation equation. This means that the effect of years of work experience is obtained by: $\beta_1+2\times\beta_2\times$experience (see section 3.4.2). The trends in the effect of years of work experience on the log of personal income should be analyzed for each year of experience, which varies between zero and about fifty years of work experience (resulting in fifty analyses of trends in the income effect of years of experience). This is too much for a brief, well-organized analysis.

The curvilinear relationship between years of experience and personal income means that older workers experience a reduction in personal income relative to workers in mid-career. The average years of experience resulting in maximum income returns (the top of the parabolic shape) was

calculated and used to determine how the effect of years of experience on personal income changed over time.

Skills acquired under Communism were highly specialized and therefore of less use in an open labor market and not easily transferable across occupations, jobs, and sectors. In our study, people with a lot of experience had acquired most of it during the Communist era, meaning they had skills that are not easily transferable. Therefore we assumed that the effect of forty years of experience (much experience) decreased during the transformation process. On the other hand, people with little experience most likely acquired it during the market transformation process. Therefore, it was assumed that the effect of five years of experience increased during market transformation.

Homogeneity is rejected for the effect of five years of experience, for the effect of years of experience for maximum income returns, and for the effect of forty years of experience. Excess variability in the coefficients indicates that the effect of years of experience depends on country, time, and the interaction between country and time.

The extent to which the effects of income determinants differ among the post-Communist countries is investigated with the Country Varying Model [3.2], which models excess variability in the effects of income determinants (EID_j) as differences between countries. C_k (k = 1…4) is a dummy variable indicating the post-Communist countries; Hungary will serve as the reference country.

Country Varying Model: $$EID_j = \beta_{0j} + \sum_{k=1}^{4} \beta_{kj} C_k \qquad [3.2]$$

In equation [3.2], coefficient β_{0j} refers to the effect of the j-th income determinant for Hungary. Each β_{kj} denotes a difference between the j-th country and Hungary. A significant R^2 for this model (which equals the R^2 change of the Country Varying Model from the empty model) indicates differences between countries.

In the next model, time is added. This Time Varying Model [3.3] takes into account the excess variability that depends on time (t, with t centered at 1991).

Country-Time Varying Model: $$EID_j = \beta_{0j} + \sum_{k=1}^{4} \beta_{kj} C_k + \beta_{5j} t \qquad [3.3]$$

In equation [3.3], coefficient β_{0j} is interpreted as the effect of the j-th income determinant for Hungary in 1991. Now, the coefficients β_{kj} refer to the differences between the j-th country and Hungary in 1991. Coefficient β_{5j} refers to the change in the effect of the j-th income determinant resulting from a one-year change. A significant change in R^2 compared to model [3.2] indicates whether there are effects attributable to time.

The MTT predicts that all coefficients of time should be positive (Figure 3.1A: MTT similarity). Non-significant or negative coefficients contradict the MTT (countries c_2 and c_5 in Figure 3.1C: Rejection). Because the effect of gender ('0' for men and '1' for women) on the logarithm of income is analyzed, the coefficient of time indicates to what extent this effect changes. A decline over time in the gender income gap means that the effect of gender on the logarithm of income gets smaller,

resulting in a positive and significant trend. The MTT does not predict that the rate of change in the effects is the same for all countries. Therefore, the Interaction Model [3.4] is extended with interactions between time and country.

Interaction Model: $EID_j = \beta_{0j} + \sum_{k=1}^{4} \beta_{kj} C_k + \beta_{5j} t + \sum_{l=6}^{9} \beta_{lj} C_{l-5} \times t$ [3.4]

A significant change in R^2 compared to model [3.3] indicates interactions between time and country. According to the MTT, the *j*-th effect coefficient of time for Hungary (β_5) and the *j*-th effect coefficient of time for the *l*-th country ($\beta_5+\beta_{lj}$) should all be positive and significant. The gender difference should not increase.

3.6 Results

3.6.1 Hypothesis testing

Starting with the effect of years of education on the log of personal income, the change in R^2 between the Interaction Model and the Country-Time Varying Model was significant. The incremental F-test for interaction reported in table 3.2 is F(4, 51) = 3.861; $p < .01$. There is a significant interaction between country and time, meaning that the effect of years of education on the log of personal income changed differently across post-Communist countries.

Figure F.1 of Appendix F shows the trends in the income effect of years of education. The coefficient of time reported in table 3.2 represents the trend in Hungary and is positive and significant. By changing the reference country, the trends in the income effect of years of education for the other four countries can be determined. They are all found to be positive and significant. These significantly positive trends for all nations support the claim that market transformations resulted in similar increasing income returns to schooling across post-Communist countries (confirming the MTT similarity thesis).

The coefficient of the interaction between Russia and time reported in table 3.2 is not significant, indicating that Hungary and Russia have similar increasing trends. Changing the reference country also reveals that the Czech Republic, Poland, and Slovakia have similar increasing trends. The difference between the trends of these two groups of countries is significant. The income returns to years of educations have increased more quickly in Hungary and Russia than in the Czech Republic, Poland, and Slovakia. While the income returns to years of education show similar changes in CEE, they do not converge between post-Communist countries.

Changes in the effect of years of experience on the log of personal income are determined in three analyses. In section 3.5, we explained the choice of analyzing the effect of five years of experience, the effect of years of experience for maximum income returns, and the effect of forty years of experience. Table 3.3a reports the results from the analysis of the effect of five years of experience on the log of personal income. No significant interactions between country and time and no significant changes over time are found, indicated, respectively, by the incremental F-test for interaction: F(4, 51) = 1.536; $p > .10$, and the incremental F-test for time: F(4, 55) = .804; $p > .10$. Thus, the income returns

to five years of experience are different across the five CEE countries, but no changes over time were found, which rejects the MTT similarity thesis.[7]

Table 3.2 Modified weighted least squares regression with inverse variance weight and fixed slopes for the effect of years of education on log personal income, by regions over time

	Country Varying Model	Country-Time Varying Model	Interaction Model
Constant	.079***	.072***	.070***
	(.002)	(.002)	(.003)
Country			
Czech Republic	-.022***	-.024***	-.019***
	(.003)	(.003)	(.004)
Hungary	–ref–	–ref–	–ref–
Poland	.012***	.009***	.015***
	(.003)	(.003)	(.004)
Russia	-.030***	-.033***	-.037***
	(.003)	(.003)	(.004)
Slovakia	-.025***	-.028***	-.020***
	(.003)	(.003)	(.004)
Period			
Time	–	.003***	.004***
		(.000)	(.001)
Interaction between country and period			
Czech Republic × time	–	–	-.002**
			(.001)
Hungary × time	–ref–	–ref–	–ref–
Poland × time	–	–	-.002*
			(.001)
Russia × time	–	–	.001
			(.001)
Slovakia × time	–	–	-.003***
			(.001)
Incremental F-test for country	17.336***	–	–
Incremental F-test for time	–	13.207***	–
Incremental F-test for interaction	–	–	3.861***
n	61	61	61
R^2	.553	.772	.825

Note: standard errors in parentheses.
* $P < .05$; ** $P < .01$; *** $P < .001$, two-tailed.

Figure F.2a of Appendix F shows the results from the Country Varying Model. No significant changes over time are found, so the income effects of five years of experience do not converge between post-Communist countries.

[7] *Experience* may have a different connotation in the MTT than in the classical Mincerian framework. In the Communist period, experience might have been rewarded more than formal education and, subsequently, its effect would not necessarily increase during market reforms.

Table 3.3a Modified weighted least squares regression with inverse variance weight and fixed slopes for the effect of five years of experience on log personal income, by regions over time

	Country Varying Model	Country-Time Varying Model	Interaction Model
Constant	.022***	.023***	.025***
	(.002)	(.002)	(.003)
Country			
Czech Republic	-.013***	-.012***	-.013***
	(.002)	(.002)	(.004)
Hungary	–ref–	–ref–	–ref–
Poland	.001	.001	-.003
	(.003)	(.003)	(.004)
Russia	-.011***	-.011***	-.014***
	(.002)	(.002)	(.003)
Slovakia	-.007***	-.007**	-.008**
	(.003)	(.003)	(.004)
Period			
Time	–	-.001***	-.001**
		(.000)	(.001)
Interaction between country and period			
Czech Republic × time	–	–	.000
			(.001)
Hungary × time	–ref–	–ref–	–ref–
Poland × time	–	–	.001
			(.001)
Russia × time	–	–	.001
			(.001)
Slovakia × time	–	–	.001
			(.001)
Incremental F-test for country	10.971***	–	–
Incremental F-test for time	–	.804	–
Incremental F-test for interaction	–	–	1.536
n	61	61	61
R^2	.439	.470	.527

Note: standard errors in parentheses.
* $P < .05$; ** $P < .01$; *** $P < .001$, two-tailed.

The results from the analysis of the effect of years of experience for maximum income returns are reported in table 3.3b. No significant interaction between country and time and no significant change over time are found, indicated, respectively, by the incremental F-test for interaction: $F(4, 51) = 1.109$; $p > .10$, and the incremental F-test for time: $F(4, 55) = 1.100$; $p > .10$. Thus, the MTT similarity thesis is rejected; only the intercepts for the post-Communist countries differ.

Because no significant interactions between country and time and no significant changes over time are found, the effects of years of experience for maximum income returns do not converge between post-Communist countries. Figure F.2b of Appendix F represents the results from the Country Varying Model.

Table 3.3b Modified weighted least squares regression with inverse variance weight and fixed slopes for the effect of years of experience for maximum income returns on log personal income, by regions over time

	Country Varying Model	Country-Time Varying Model	Interaction Model
Constant	.974***	.972***	.969***
	(.002)	(.002)	(.003)
Country			
Czech Republic	.016***	.015***	.016***
	(.002)	(.002)	(.004)
Hungary	–ref–	–ref–	–ref–
Poland	-.008	-.013	.005
	(.003)	(.003)	(.004)
Russia	.013***	.012***	.017***
	(.002)	(.002)	(.003)
Slovakia	.008***	.008***	.009**
	(.003)	(.003)	(.004)
Period			
Time	–	.001***	.002***
		(.000)	(.001)
Interaction between country and period			
Czech Republic × time	–	–	-.001
			(.001)
Hungary × time	–ref–	–ref–	–ref–
Poland × time	–	–	-.002**
			(.001)
Russia × time	–	–	-.002**
			(.001)
Slovakia × time	–	–	-.001
			(.001)
Incremental F-test for country	8.546***	–	–
Incremental F-test for time	–	1.100	–
Incremental F-test for interaction	–	–	1.109
n	61	61	61
R^2	.379	.425	.471

Note: standard errors in parentheses.
* $P < .05$; ** $P < .01$; *** $P < .001$, two-tailed.

Table 3.3c reports the results from the analysis of the effect of forty years of experience on the log of personal income. Significant interactions between country and time are found, indicated by the incremental F-test for interaction; $F(4, 51) = 2.602$; $p < .05$. The trends in effects are different between post-Communist countries.

Figure F.2c of Appendix F shows trends in the income effect of forty years of experience. Changing the reference country reveals that Poland has had a significantly negative trend and Russia no trend at all. Based on these results, the MTT similarity thesis has to be rejected.

Table 3.3c Modified weighted least squares regression with inverse variance weight and fixed slopes for the effect of 40 years of experience on log personal income, by regions over time

	Country Varying Model	Country-Time Varying Model	Interaction Model
Constant	-.008***	-.009***	-.011***
	(.002)	(.002)	(.003)
Country			
Czech Republic	.004*	.004	.004
	(.002)	(.002)	(.004)
Hungary	–ref–	–ref–	–ref–
Poland	-.005	-.005*	.004
	(.003)	(.003)	(.004)
Russia	-.003	-.003	.001
	(.002)	(.002)	(.003)
Slovakia	-.003	-.003	-.006
	(.003)	(.003)	(.004)
Period			
Time	–	.000*	.001*
		(.000)	(.001)
Interaction between country and period			
Czech Republic × time	–	–	-.000
			(.001)
Hungary × time	–ref–	–ref–	–ref–
Poland × time	–	–	-.003***
			(.001)
Russia × time	–	–	-.001*
			(.001)
Slovakia × time	–	–	.000
			(.001)
Incremental F-test for country	2.454*	–	–
Incremental F-test for time	–	.520	–
Incremental F-test for interaction	–	–	2.602**
n	61	61	61
R^2	.149	.180	.319

Note: standard errors in parentheses.
* $P < .05$; ** $P < .01$; *** $P < .001$, two-tailed.

There seem to be three clusters: (1) the Czech Republic, Hungary, and Slovakia; (2) Russia; (3) Poland. The differences in the income effects of forty years of experience between the clusters were tested and found to be significant. The income effects of forty years of experience do not converge between post-Communist countries.

The results from the analysis of the effect of self-employment on the log of personal income are reported in table 3.4. The interactions between country and time and changes over time are not significant, indicated, respectively, by the incremental F-test for interaction: $F(4, 49) = 1.107$; $p > .10$, and the incremental F-test for time: $F(4, 53) = .485$; $p > .10$. Only the intercepts for the post-Communist countries differ; the MTT similarity thesis has to be rejected.

The income effects of self-employment are presented in figure F.3 of Appendix F. There are no changes over time, meaning that the income effects of self-employment do not converge between post-Communist countries.

Table 3.4 Modified weighted least squares regression with inverse variance weight and fixed slopes for the effect of self-employment on log personal income, by regions over time

	Country Varying Model	Country-Time Varying Model	Interaction Model
Constant	.058**	.024	-.014
	(.024)	(.026)	(.038)
Country			
Czech Republic	.206***	.200***	.317***
	(.031)	(.031)	(.050)
Hungary	–ref–	–ref–	–ref–
Poland	.285***	.285***	.340***
	(.032)	(.032)	(.051)
Russia	.460***	.444***	.441***
	(.041)	(.041)	(.067)
Slovakia	.431***	.410***	.340***
	(.035)	(.035)	(.062)
Period			
Time	–	.009***	.020**
		(.003)	(.008)
Interaction between country and period			
Czech Republic × time	–	–	-.028***
			(.010)
Hungary × time	–ref–	–ref–	–ref–
Poland × time	–	–	-.015
			(.011)
Russia × time	–	–	-.003
			(.011)
Slovakia × time	–	–	.008
			(.011)
Incremental F-test for country	11.572***	–	–
Incremental F-test for time	–	.485	–
Incremental F-test for interaction	–	–	1.107
n	59	59	59
R^2	.462	.481	.524

Note: standard errors in parentheses.
* $P < .05$; ** $P < .01$; *** $P < .001$, two-tailed.

Table 3.5 reports the results from the analysis of the effect of private sector employment on the log of personal income. The interactions between country and time are significant, indicated by the incremental F-test for interaction: $F(4, 51) = 2.475$; $p < .10$. This means that the effect of private sector employment on the log of personal income changes differently across post-Communist countries.

Table 3.5 Modified weighted least squares regression with inverse variance weight and fixed slopes for the effect of private sector employment on log personal income, by regions over time

	Country Varying Model	Country-Time Varying Model	Interaction Model
Constant	.043***	.027**	.036**
	(.012)	(.012)	(.017)
Country			
Czech Republic	-.019	-.028*	.010
	(.016)	(.016)	(.024)
Hungary	–ref–	–ref–	–ref–
Poland	.068***	.061***	.056**
	(.018)	(.019)	(.029)
Russia	.118***	.103***	-.003
	(.016)	(.017)	(.026)
Slovakia	-.012	-.022	.009
	(.017)	(.017)	(.027)
Period			
Time	–	.005***	.003
		(.002)	(.004)
Interaction between country and period			
Czech Republic × time	–	–	-.007
			(.005)
Hungary × time	–ref–	–ref–	–ref–
Poland × time	–	–	.002
			(.006)
Russia × time	–	–	.020***
			(.005)
Slovakia × time	–	–	-.005
			(.005)
Incremental F-test for country	4.405***	–	–
Incremental F-test for time	–	.545	–
Incremental F-test for interaction	–	–	2.475*
n	61	61	61
R^2	.239	.268	.387

Note: standard errors in parentheses.
* $P < .05$; ** $P < .01$; *** $P < .001$, two-tailed.

Trends in the income effect of private sector employment are presented in figure F.4 of Appendix F. Three clusters of countries can be identified: Hungary and Poland have a slightly increasing trend; the Czech Republic and Slovakia, a slightly decreasing trend; and Russia, a sharply increasing trend. Not all trends are positive, so the MTT similarity thesis has to be rejected. Tests showed that the trends between the three clusters are significantly different. The income effects of private sector employment do not converge between post-Communist countries.

Finally, the results from the analysis of the gender income gap are reported in table 3.6. The incremental F-test for interaction, $F(4, 51) = 5.657$; $p < .01$, indicates that the interactions between

country and time are significant. The differences in personal income between men and women have developed differently across post-Communist countries.

Table 3.6 Modified weighted least squares regression with inverse variance weight and fixed slopes for the difference in log personal income between men and women, by regions over time

	Country Varying Model	**Country-Time Varying Model**	**Interaction Model**
Constant	-.259*** (.010)	-.247*** (.011)	-.278*** (.015)
Country			
Czech Republic	-.083*** (.014)	-.079*** (.014)	-.066*** (.020)
Hungary	–ref–	–ref–	–ref–
Poland	-.077*** (.016)	-.074*** (.016)	-.105*** (.024)
Russia	-.142*** (.014)	-.137*** (.014)	-.042** (.020)
Slovakia	-.060*** (.015)	-.055*** (.015)	-.034 (.022)
Period			
Time	–	-.004*** (.001)	.006* (.004)
Interaction between country and period			
Czech Republic × time	–	–	-.006 (.004)
Hungary × time	–ref–	–ref–	–ref–
Poland × time	–	–	.006 (.004)
Russia × time	–	–	-.025*** (.004)
Slovakia × time	–	–	-.008* (.005)
Incremental F-test for country	6.115***	–	–
Incremental F-test for time	–	.598	–
Incremental F-test for interaction	–	–	5.657***
n	61	61	61
R^2	.304	.333	.538

Note: standard errors in parentheses.
* $P < .05$; ** $P < .01$; *** $P < .001$, two-tailed.

The MTT similarity hypothesis states that differences in the personal income between men and women will decrease during market transformation. This means that trends in the effect of gender on the log of personal income – as presented in figure F.5 of Appendix F – should increase for all post-Communist countries. The results reported in table 3.6 show that Hungary has a significant increasing trend. Changing the reference category revealed that Poland also has a significant increasing trend, the

Czech Republic and Slovakia have no significant trends and the trend in Russia decreases significantly. Based on these results, the MTT similarity thesis has to be rejected.

Three clusters of countries were found: Hungary and Poland, the Czech Republic and Slovakia, and Russia. Testing the differences in the trends between the three clusters revealed that the trends in Hungary and Poland significantly deviate from the trends in the Czech Republic and Slovakia. The decreasing trend in Russia significantly deviates from all other trends. The gender income differences do not converge in post-Communist countries.

3.6.2 Path dependent transformation processes

With the results described above, the first research question posed in this study can be answered: post-Communist countries have not experienced similar trends in the effects of income determinants on the log of personal income as predicted by the MTT. Market transformations in CEE countries have not been uniform, resulting in different stratification outcomes. This brings us to the second research question posed in this study. Can the different trends be related to path dependent transformation processes?

As discussed in section 3.6.1, there are similar within-group changes with respect to the effects of income determinants and differences between groups. Path dependent transformation processes may provide insight into why there are within-group similarities and why there are differences between groups.

One of the prominent founders of the idea of path dependent transformation is David Stark. In his 1992 article, Stark introduced a typology of privatization strategies (Stark 1992a: 28). He used three dimensions of privatization to distinguish the different privatization strategies in East Germany, Czechoslovakia, Hungary, and Poland: (A) methods of asset evaluation, (B) identities of participants, and (C) resources utilized to acquire ownership rights.

The evaluation of assets in Hungary and Poland occurred through bargaining,[8] while in Czechoslovakia, asset evaluation was left to the market. So, based on dimension A, Hungary and Poland are expected to have similar trends that deviate from the trends in the Czech Republic and Slovakia. In Czechoslovakia and Poland, citizens were targeted to acquire assets and in Hungary economic-legal persons were targeted. Based on dimension B, the Czech Republic, Poland, and Slovakia should have similar trends, which deviate from the trend in Hungary. In Czechoslovakia, financial resources were utilized, and in Hungary and Poland, positional resources were utilized. Dimension C should result in the same distinction between countries as dimension A: Hungary and Poland versus the Czech Republic and Slovakia.

How does Russia fit into this typology? The initial attempt to reform the economy failed in Russia, which influenced privatization in two major ways: the *nomenklatura* were able to convert their political capital into private ownership; non-*nomenklatura* who owned trading companies, banks, and investment funds in 1992[9] were able to gain control of a substantial share of the economy through the 'loans-for-shares' auctions in the mid-1990s, regarded as the most scandalous episode of Russian privatization (Guriev and Rachinsky 2005). Although Russia's privatization process was not

[8] This is a hybrid form of administratively organized privatization and privatization through market mechanisms.
[9] They were able to accumulate financial capital during the period of partial reform initiated by Gorbachov in the late 1980s (Guriev and Rachinsky 2005; Hoffman 2003).

comparable to that in other CEE countries, it can be argued that economic actors were targeted to acquire assets (dimension B) and that the trends in Hungary and Russia should be similar. An obvious implication of Stark's typology of privatization strategies is that the Czech Republic and Slovakia should have similar trends because both countries followed Czechoslovakia's voucher auction.

In this study, trends were found for the income returns to years of education, forty years of experience, private sector employment, and the gender income gap. The Czech Republic and Slovakia have similar trends in the effects of all four income determinants. The empirical results on trends in the effects of income determinants in the Czech Republic and Slovakia presented in this study are in line with Stark's typology.

The relation between the empirical results on trends in the effects of income determinants and the three dimensions of Stark's typology of privatization strategies is summarized in table 3.7. Trends in the income effect of years of education are in line with dimension B of Stark's classification. In the Czech Republic, Slovakia, and Poland, civic persons were targeted to acquire assets, while in Hungary and Russia, economic actors were targeted. The varying trends in the income returns to years of education may be related to actors targeted to acquire assets.

Table 3.7 Summary of the empirical findings in terms of Stark's typology of privatization strategies

	Czr	**Hun**	**Pol**	**Rus**	**Slo**
Years of education	B	B	B	B	B
40 years of experience	A/C	–	A/C	A/C	A/C
Private sector employment	A/C	A/C	A/C	A/C	A/C
Gender income gap	A/C	A/C	A/C	A/C	A/C

Note: Czr = the Czech Republic; Hun = Hungary; Pol = Poland; Rus = Russia; Slo = Slovakia. A = method of asset evaluation; B = identities of participants; C = resources utilized to acquire ownership rights.

Trends in the income effects of forty years of experience, private sector employment, and gender are in line with dimensions A and C of Stark's typology. The results for these income determinants show that the Czech Republic and Slovakia had similar trends, Hungary and Poland had similar trends (but different from the Czech and Slovakian ones), and the trends in Russia were strikingly different from those in the other countries. Differences in the methods of asset evaluation and in the kind of resources used to acquire ownership rights seem to have resulted in different changes in income determination across post-Communist countries.

One exception was found concerning the income effect of forty years of experience. Hungary had a trend similar to those of the Czech Republic and Slovakia, which is not in line with what would be expected from Stark's typology.

3.7 Summary and conclusions

Two questions were raised in this study. First, to what extent are trends in the effects of income determinants similar across post-Communist countries, as predicted by the MTT? The data in this study were analyzed in two analytical steps. In the first step, for each country and year, the logarithm of personal income was regressed on years of education, years of work experience (including a

squared term for experience), self-employment, private sector employment, and gender. The extent to which these estimated coefficients varied by country, time, and the interaction between country and time was analyzed in the second step, using modified weighted least squares regression analyses with fixed slopes. The inverse of the squared standard errors was used to weight the analyses.

The data analyzed in this study showed that trends in the effects of income determinants are different among post-Communist countries. The MTT similarity prediction (that the effects of income determinants would show similar changes) is partly supported for income returns to human capital and rejected for income returns to market capital and the gender income gap. Only the effects of years of education on the log of personal income changed according to the MTT similarity thesis. Changes in the effects of forty years of work experience, private sector employment, and gender on the log of personal income were different among post-Communist countries. Furthermore, no changes were found in the income effects of five years of experience, years of experience for maximum income returns, and self-employment. This contradicts the MTT similarity thesis. Empirical support for converging trends is also lacking in all effects of income determinants.

Finding different trends in the effects of income determinants brings us to the second research question posed in this study: Can different trends be related to different path dependent transformation processes occurring in post-Communist countries? Path dependent privatization strategies may provide a fruitful framework for specifying differences in stratification outcomes between post-Communist countries. Stark introduced a typology of privatization strategies based on three dimensions: (A) methods of asset evaluation, (B) identities of participants, and (C) resources utilized to acquire ownership rights (Stark 1992a: 28).

The empirical results from the two-step analyses are, to a great extent, in line with Stark's typology of privatization strategies: The trends in the effects of all income determinants analyzed in this study are similar between the Czech Republic and Slovakia. This was also expected because privatization in the Czech Republic and Slovakia originated in the voucher auctions of Czechoslovakia. Trends in the income effect of years of education are in line with what would be expected based on differences across post-Communist countries in actors targeted to acquire assets. In the Czech Republic, Poland, and Slovakia, civic persons were targeted and the trends in these countries are similar. In Hungary and Russia, economic actors were targeted and these countries had similar trends in the income effect of years of education. The trends between the two clusters of countries are different.

Differences across post-Communist countries in the methods used to valuate assets and the resources used to acquire assets coincide with the different trends found in the analyses of the income effects of forty years of experience, private sector employment, and gender. For these income determinants, similar trends are found for the Czech Republic and Slovakia, for Hungary and Poland, and for Russia. These clusters were also hypothesized based on the method of evaluating assets and the resources used to acquire them.

We speculated about path dependent transformation processes occurring in post-Communist countries, which would result in different stratification outcomes. Using a cross-national and across time comparative research design, we aimed to provide empirical results to back up these speculations and succeeded to some extent.

So what is the case: market transformation or path dependency? The answer would be a little bit of both, suggesting that the Market Transition Theory and the notion of path dependent transformation

processes do not necessarily contradict each other. It is more likely that they supplement each other. Path dependency may provide additional propositions about the conditions where the predictions of the Market Transition Theory apply and those where they do not.

4

WINNER AND LOSERS IN MARKET TRANSITION: CP MEMBERS*

"Die Regeln sind für alle gleich, nur die Ausnahmen sind verschieden."
Literaturnaja gazeta 28.12.1977; cited in Voslensky (1980)

"Vom Staatskuchen iβt er gern und viel, sitzt zu Tisch mit Freunden in Kollegien, Hochbeglückt durch sein Intrigenspiel und Nomenklatura-Privilegien."
A. Galič: Pokolenie obrečennych Frankfurt a.M. 1974, S. 28; cited in Voslensky (1980)

4.1 Introduction

In the literature on the winners and losers of the transformation from Communism, the fate of the 'old' political elite and the formation of the 'new' elite have been central topics. The Communist Party (CP) in the Central and Eastern European (CEE) countries was the dominant institution during the Communist era. Apart from its influential political and economic role, the CP also served as an important social stratification mechanism. A byproduct of Communism was that precedents were created that favored one's own kind. CP members were able to help each other as well as their close relatives and friends to get better jobs with better salaries. This generated inequalities in favor of CP members. The privileges CP members had have been extensively described in anecdotes (Voslensky 1980). One could say that CP membership provided an additional resource, referred to as 'political capital.'

The breakdown of Communism had far-reaching consequences for the stratification order. The new institutional configurations of post-Communist societies changed the value of returns to the various forms of capital (human, social, and political). The collapse of Communism and of the CP had a large impact on CP members. The institutional foundation for the advantages of CP membership ceased to exist, and CP members were confronted with the devaluation of their political capital. Some people argue that because of this change, the political elite lost their privileged positions and, as a result, their income advantages (Domanski and Heyns 1995; Nee 1989, 1991, 1996; Parish, Zhe, and Li 1995).

Competing theoretical ideas about the role of political capital during market transformations assume that CP members are not affected by the revolutionary changes in post-Communist societies, or only marginally so. CP members are able to convert their devalued political capital into more valuable market assets (Bian and Logan 1996; Böröcz and Róna-Tas 1995; Parish and Michelson

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1996; Róna-Tas 1994; Xie and Hannum 1996; Zhou 2000). Perhaps this is less so for the rank-and-file CP members than for the political elite, but for argument's sake, we refrain from stressing this difference here. However, we will test this idea later on in this paper. Others claim that CP members possess special individual traits that were necessary to become CP members and which also give them advantages in a more marketized economy (Gerber 2000a, 2005).

Research on China and CEE has produced empirical findings that seem to favor the argument that CP members have been able to maintain their socioeconomic advantages. This has been confirmed by a recent meta-analysis (Verhoeven, Jansen, and Dessens 2005). However, it is not always clear to which other social groups CP members are being compared when their relative income position is investigated, nor what their income advantages were before the transformation process. So, what do we know about the income advantages of CP members? This question can be answered by determining the 'net' income returns for political capital apart from other resources – forms of capital indicated as converting mechanisms – before and after the start of market reforms. In other words, the income of CP members should be compared to the income of comparable people – in terms of resources (forms of capital) – who were never CP members. Additionally, it is important to see how the relative differences in income between CP and comparable non-CP members have developed during the transformation process. Here, controlling for human capital, market assets, and demographic characteristics, we test whether the income advantages of CP members over people who have never been CP members decrease or are still present during the transformation process in former Communist societies.

Although China is an important region when investigating the changing income effects of CP membership during market transformation, we focus on the income disparities between CP and non-CP members in CEE.[1] In this study, the incomes of CP members will be compared to the incomes of similar people who have never been a member of the CP. So, we have constructed two groups that are equal on important determinants of income while differing in respect of CP membership. This has been done for Czechoslovakia and Hungary before the transformation process and for the Czech Republic, Slovakia, Hungary, and Russia after market transformations started. Testing whether the income differences before and during the transformation process are significantly different will show how the relative income position of CP members has changed during the transformation process. For Russia, we can go one step further because we have one data point in the early stage of transformation and three data points later in the transformation process. This offers the opportunity to test whether the income advantages of CP members have decreased, increased, or remained stable during the transformation process, independent of human capital and other important determinants of income.

4.2 Theory and hypotheses

4.2.1 Income advantages of CP members

Most of the literature is not on income returns to political capital, per se, but on the composition of the elite and the role CP membership played in reshuffling elite positions (exceptions are: Dickson and

[1] Detailed survey data on China are limited and some authors argue that the transformation process in China has been different (more gradual) from that in CEE countries (Gustafsson and Shi 2000; Stern 1998).

Rublee 2000; Gerber 2000a, 2001a). CP membership is not equivalent to belonging to the political elite during Communism. The rank-and-file members of the CP did not belong to the political elite but they still had privileges (political capital) that might have led to income advantages over non-members. Although there is a difference between CP membership and belonging to the elite during Communism, theories about the fate of the political elite nevertheless imply predictions about changes in the income advantages of CP members. Zang (2006) showed that CP membership was important for recruitment into the elite; thus, CP membership seems to be closely related to belonging to the elite.

Because of the power and influence of the CP and the advantages and privileges that it provided to its members, political capital was the main basis for power under the Communist regime (Dahrendorf 1959; Lenski, Lenski, and Nolan 1991). It enabled CP members to accumulate other resources. Because the Communist elite were mainly a political elite, changes in the elite composition during the transformation process will influence the socioeconomic advantages of CP members. So, theories about changes in the elite composition imply predictions about what happens to the income position of CP members – for the high-ranking CP members (political elite) and, to a lesser extent, low-ranking members (the rank-and-file).

There are two competing answers to questions about changes in the composition of the Communist elite: the 'Elite Circulation Thesis' and the 'Elite Reproduction Thesis' (Szelényi and Szelényi 1995). The elite circulation argument claims that the political elite lost their command position and have been replaced by new people, which should lead to diminishing income advantages for CP members. Elite reproduction suggests that the political elite have not been affected by the transformation process. People who occupied top positions during Communism have stayed in top positions during post-Communism, which should result in persisting income advantages of CP members.

Nee's Market Transition Theory (MTT) is one interpretation of the circulation argument and describes the specific changes in the principles by which earnings are allocated. According to Nee and his associates, political position – the main basis for economic reward in the redistributive economies of Communism – is being replaced by productivity and entrepreneurial initiative, both important in market economies (Nee 1989, 1991, 1996; Nee and Matthews 1996). As markets become more important in distributing goods, returns to human capital and market capital should increase and returns to political capital should decline. As a result, CP members should lose their monopoly on economic and political resources and their income should subsequently decline, at least relative to the incomes of technocrats, for example.

Based on the circulation argument, it can be predicted that the incomes of CP members will come to resemble more and more the incomes of people who have never been members of the CP but who have equivalent amounts of other valuable resources.

> **Income convergence:** *During the transformation process in post-Communist countries, the incomes of CP members will converge to those of non-CP members who have the same amount of valuable resources.*

The MTT has been challenged with contrary empirical findings and theoretical criticism. Scholars supporting the reproduction argument suggest that the privileges of CP members have not been affected by the revolutionary changes in CEE. Eyal, Szelényi, and Townsley (1998: 7) suggested that

"…each individual possesses a portfolio of 'stocks' of different forms of capital, and when they confront social change they try to reshuffle this portfolio to get rid of forms of capital which are losing value, and convert them into forms of capital which are more valuated." Supporters of the reproduction argument argue that CP members who occupied influential positions possess multiple sorts of resources. Although they were rewarded on the basis of their political capital during the Communist era, they often had high levels of human capital as well, on which they have relied during the transformation process. These influential positions may also have taught them managerial skills, which are highly rewarded when markets are introduced.

There is some debate on how the CP members were able to convert their political capital. A variety of underlying assumptions have been used to explain why they were not, or only were marginally, affected by the transformation process. Some claim that CP members converted their political capital into economic assets (Hankiss 1990; Róna-Tas 1994; Staniszkis 1991), while others argue that education is the capital-conversion mechanism that provided the politically privileged with new advantages (Bian, Shu, and Logan 2001). Still others claim that the emphasis on changing institutions overlooks the influence of individual traits. In fact, they claim that the debate about circulation versus reproduction of elite applies to a lesser extent to CEE countries after the decay of Communism than it does to the Chinese market transformation process (Gerber and Hout 1998; Szelényi and Kostello 1996). Apart from changes in the way goods are distributed, there may be individuals who are better able to acquire most of these goods, regardless of the distribution system. In other words, some individuals are capable of using different kinds of distribution mechanisms to their advantage and acquire most of the goods. Gerber (2000a; 2005) suggests that the attributes that made people members of the CP – such as ambition, submission to organizational discipline, or even opportunism – also give them an edge in the competition over material advantages within markets.

Based on the reproduction argument, it can be predicted that, compared to individuals having the same amount of other resources, CP members have kept their income advantages.

> **Income reproduction:** *During the transformation process in post-Communist countries, CP members have been able to convert their political capital into valuable assets or use other resources so that their income advantages remain the same over non-CP members who have the same amount of resources*.

4.2.2 High- and low-ranking CP members

CP members should not be treated as a coherent group. While much of the literature focuses on high-ranking members (the political elite), they were only a small group compared to the rank-and-file (low-ranking) members. Nee (1991: 276) distinguishes former brigade cadre from former team cadre: "The social rank of former brigade cadres is superior to that of the more numerous former team cadres. Brigade cadres supervised subordinate team cadres, and they are apt to be informal village leaders and retain personal ties to current village cadres." It seems plausible to assume that high-ranking CP members had more resources that could be converted into market assets than low-ranking members. When confronted with social change, high-ranking members had more opportunities to ensure their privileged position than low-ranking members, which is in line with the reproduction argument. The circulation argument predicts that if political capital is becoming less valuable, high-ranking CP

members will have more to lose than low-ranking members. Therefore, the income advantage of high-ranking members will decrease more than the income advantage of low-ranking members. This brings us to the following conflicting predictions:

Income convergence and rank: *The income advantages of high-ranking CP members over non-CP members who have the same amount of resources will decrease more than the income advantages of low-ranking CP members over non-CP members.*

Income reproduction and rank: *The income advantages of high-ranking CP members over non-CP members who have the same amount of resources will remain the same and the income advantages of low-ranking CP members will decrease over non-CP members.*

4.2.3 Path dependent transformation processes

The prominent theory in the circulation-versus-reproduction debate is the MTT. Its supporters use it to derive predictions and its opponents react against it with their alternative explanations. Critics of the MTT stress its lack of sensitivity towards the different transformation processes that countries in transition experience. They emphasize that a wide range of economic and political institutions were developed because of different path dependent transformation processes, having different consequences for the magnitude and nature of changing inequalities (Bian and Logan 1996; Fligstein 1996; Gerber and Hout 1998; Parish and Michelson 1996; Róna-Tas 1994; Stark 1996; Szelényi and Kostello 1996; Walder 1996, 2003; Xie and Hannum 1996). Therefore, CP members are affected differently in the various CEE countries. The problem with cross-national comparative research in this area, however, is the limited number of countries for which data is available, which results in limited statistical power, complicating adequate quantitative analysis.

Using a typology or several dimensions of the transformation process to specify country differences seems plausible and practical. Some authors have been working on ways to classify countries according to their transformation process (Stark 1992a; Szelényi and Kostello 1996; Walder 2003).[2] According to Walder (2003: 899), there are two important interrelated dimensions of market transformation from which research on elite (CP members') opportunity should start: (a) the extent of regime change and (b) the disposition of public assets. The extent of regime change refers to the extent to which the CP lost its political monopoly: challengers to the old elite can establish electoral democracies, the Communist governments can continue to rule as national dictatorships, or dictatorships and democracies cannot be established by either challengers or the old regime elite (McFaul 2002). The disposition of public assets relates to the pace and regulation of the privatization process. Both dimensions offer an explanation of how CP members' opportunities can differ between countries. "Based on a crude binary distinction between 'high' and 'low' values on these two dimensions" (Walder 2003: 905), four types of transitional economies can be defined (see figure 4.1).

According to Walder (2003), the Czech Republic[3] and Hungary can be classified as Type 1

[2] The typology based on market penetration, introduced by Szelényi and Kostello (1996), is of less use for our objective. It does not distinguish between CEE countries during the transformation process, making it difficult to classify the four countries we analyze in this study according to this typology.

[3] The Czech Republic and Slovakia are treated as having the same origin (Czechoslovakia), and therefore Slovakia is classified the same as the Czech Republic.

transitional economies and Russia can be classified as Type 3. This means that the Czech Republic, Hungary, and Russia all score high on regime change.[4] Although Walder (2003: 911) uses a binary categorization, he summarizes with a more realistic illustration, stressing "… that causes and outcomes exist along a continuum."

Figure 4.1 Elite opportunity in four types of transitional economies

POLICY/REGULATORY CONSTRAINTS ON ASSET APPROPRIATION	EXTENSIVENESS OF REGIME CHANGE: High	EXTENSIVENESS OF REGIME CHANGE: Low
High	**Type 1** High rates of elite turnover in both political and economic organizations. Limited mobility into propertied and corporate elites. Those with higher education and skill more likely to survive in elite salaried posts.	**Type 2** Low rates of elite turnover. Cadres retain posts, use them to enhance incomes for themselves and family members, but limits on privatization delays and restricts movement into a new propertied or corporate elite.
Low	**Type 3** High rates of turnover in political elite, but extensive opportunity for movement into propertied and corporate elites. Lower rates of downward mobility for old elite. Advantages for the skilled and highly educated are smaller than in Type 1.	**Type 4** Low rates of elite turnover. Officials have option of extracting incomes from their posts or leaving their posts as assets are privatized. Formation of new propertied and corporate elite out of the old elite.

Source: Figure 2 in Walder (2003)

Unfortunately, the cross-classification does not allow us to distinguish between the Czech Republic, Slovakia, and Hungary; therefore, we fall back on Walder's note that causes and outcomes of transformation exist along a continuum and use Stark's (1992a) classification scheme to distinguish the three countries. His classification is based on three dimensions of privatization strategies: (a) methods of asset evaluation, (b) identities of participants, and (c) resources for participating in privatization. Stark describes the Czechoslovakian 'voucher-auction' program as asset evaluation through market mechanisms favoring citizens and using financial resources. Hungary's 'institutional cross-ownership' program is an example of asset evaluation through bargaining favoring corporations using positional resources.[5]

[4] In practice, Russia has experienced less regime change than the Czech Republic and Hungary. Regime change in Russia followed an oppositional movement that originated from within the Moscow apparatus, while the Communist regimes in Central Europe (Czechoslovakia, Hungary, Poland) were overthrown by strong oppositional challengers who allied with regime defectors (King 2000; McFaul 2002).

[5] Russia's market reforms were initiated relatively late and were characterized by Yeltsin's massive privatization of public firms. The privatization program consisted of market evaluation of assets favoring corporate actors, and financial resources were utilized. This would place Russia in between Czechoslovakia and Hungary. However, it is known that the massive privatization was too dramatic a change and did not really work. Compared to other CEE countries, Russian entrepreneurs and small firms have been confronted with many obstacles arising from onerous and pervasive bureaucratic interference (Stern 1998). For this reason, we consider Russia as the opposite of Czechoslovakia and locate Hungary in between Czechoslovakia and Russia.

The combination of Walder's and Stark's classifications suggest that CP members have had the fewest opportunities in the Czech Republic and Slovakia, that they have had more opportunities in Hungary, and that they have had the most opportunities in Russia. Walder used mobility outcomes to describe the different sets of opportunities that emerged in the various configurations of political circumstances. We believe that his classification, combined with the one by Stark, can also be used to predict differences between the four countries in the changing income advantages of CP members. Subsequently, persistent income advantages of CP members during the transformation process might – at least partially – be related to institutional circumstances. CP members had fewer opportunities to guarantee their income advantages in the Czech Republic and Slovakia than in Hungary. CP members in Russia had a lot of opportunities to safeguard their income advantages.

Institutional differences: *The convergence of the income of CP members to the income of people who have never been a member of the CP will be strongest in the Czech Republic and Slovakia, less in Hungary and weakest in Russia.*

We can look at this prediction in light of the results we find for the four countries. It cannot really be tested, but we can make qualitative conclusions about how differences in the transformation process between countries have affected differences in the income of CP and non-CP members.

4.2.4 Former versus current CP membership

While some CP members remained loyal to the party, many resigned from the CP at the moment market transformations started, so CP membership shrank. During the transformation process, current and former CP members could have had income advantages over people who had never been members of the CP. The former members left the CP once things started to deteriorate for them. Their reasons for leaving could be that they were able to convert their political capital into more valuable assets. Maybe they had other resources they could employ to maintain their income position. Leaving the CP might have been a wise decision for these former members, putting them again in the top stratum of the income distribution.

Current CP members might well be a different group. They are probably the older, less opportunistic true believers who invested a lot in their ideology, giving them fewer opportunities to adjust. Maybe they are more conservative, making them more loyal to the CP and therefore reluctant to adapt to market adjustments, or they could be stuck with the CP, which limited their opportunities for economic advancement during the transformation process.

In terms of the circulation and reproduction arguments, the current CP members could be expected to be losers and the former CP members could be expected to be winners in the shifting stratification order. The data on the Czech Republic and Slovakia allow us to distinguish between former and current CP members. The analysis shows that the income advantages of former CP members over non-members were smaller in 1992 than in 1984 in both countries. In the Czech Republic, the income advantages of current CP members seem to be even smaller, supporting the prediction that current CP members are less able to maintain their income advantages than former CP members. However, in Slovakia the income advantages of current CP members over non-members seemed to have increased

in 1992, contradicting this prediction. Unfortunately, there is not enough information available for systematic analyses of these two groups in all four countries.

4.3 Data, measures, and methods

4.3.1 Data and measures

In this study, cross-sectional survey data on Czechoslovakia (1984), the Czech Republic (1993), Hungary (1986/1993), Russia (1993/1998/2000/2001), and Slovakia (1993) were analyzed (the references to the original files are provided in Appendix E). These datasets were selected because, taken together, they provide information on the situation before *and* during the transformation period and have at least information on respondent's personal income, political capital, human capital, occupational class, and demographic characteristics.

The dependent variable in this study is the logarithm of personal income, which was used because it has two major advantages: it leads to a less skewed distribution of the income variable, and the influence of inflation is ruled out because all effects are represented as relative increases or decreases of the dependent variable. We used datasets from before and after 1989, which introduces some problems concerning the interpretation of what the income variable exactly entails. It is often argued that CP membership was associated with privileges that went further than only getting the best occupational positions. Non-wage benefits from work – larger and better housing in more desirable neighborhoods, subscription to better hospitals, use of vacation resorts, etc. (Voslensky 1980; Walder 1992) – will influence actual income differences. Morrison (1984) estimated the advantages high-ranking CP members enjoyed in addition to their basic income and concluded that taking into account these non-wage benefits leads to greater income inequality. So, any differences we find in our datasets, especially before 1989, will most likely underestimate the earnings differences between CP members and non-CP members. It is hard to speculate on the magnitude of this bias.

For this study, we have estimated changes in the income advantages of CP members over non-CP members, controlling for other valuable resources such as human capital; we are looking for the net effect of political capital on income and how this effect has changed during the transformation process. To do this, we have to rule out the effects of other determinants of income.

First, human capital is measured by educational degree. Country specific educational categories were used and recoded into the CASMIN (Comparative Analysis of Social Mobility in Industrialized Societies) educational classification (König, Lüttinger, and Müller 1988; Müller and Braun 1997; Müller, Lüttinger, König, and Karle 1989).

Second, we have labor market information on the respondents. We know whether the respondent is employed or not and if so we have the respondent's occupational class (EGP classification (Erikson and Goldthorpe 1992; Erikson, Goldthorpe, and Portocarero 1979)). Ganzeboom and Treiman (Ganzeboom and Treiman 1996) developed a tool that can be used to recode the 1988 International Standard Classification of Occupations (ISCO88) into the 10 EGP categories. In addition, we also know whether the respondent works in the private or public sector.

Third, we controlled for the effects of age, gender, and marital status on personal income. Age was recoded into categories (<25; 26-31; 32-37; 38-43; 44-49; 50-55; 56+), which was necessary for matching, as described in the methods section below. Marital status was coded as married or not.

Not all data sets have specific information available to determine the rank of CP members (high or low). However, Nee (1991) says that the brigade cadres held supervisory positions, which the team cadres did not have. Therefore, we have used the EGP classification to create a proxy for this distinction. The first EGP category includes high controllers and the second includes low controllers. These two categories have been used to represent the high-ranking cadres. We are aware of the fact that this is only a rough proxy for high- and low-ranking CP membership.[6]

4.3.2 Methods

There are several options for analyzing the changing income advantages of CP members over non-CP members, controlling for other valuable resources. Multiple OLS regression analysis and its generalizations are techniques that are often used in sociological analysis. Regressing the dependent variable on several independent variables offers the possibility of estimating the effect of one independent variable while holding the other independent variables constant. This is appropriate when one is interested in the relative income returns of various resources – for instance, comparing income returns to political capital with income returns to human capital. However, we have not investigated this here. We are interested in a strict comparison of the incomes of CP members and the incomes of people who never were CP members, and how these income differences might have changed during the transformation process.

Given this research problem, the effect of CP membership on income can be seen as a treatment effect, and matching could be a useful alternative method to estimate this (treatment) effect while controlling for covariates (Smith 1997), which are the other important determinants of income, such as human capital, market capital, EGP score, and demographic characteristics. Smith also indicates that matching is useful when the treatment condition (CP membership) is relatively rare in the population and controls are numerous, which is the case for CP membership. There are other arguments favoring matching, and according to Smith (1997), effects can be estimated via matching that are comparable to those obtained with multiple regression analysis but with substantially reduced standard errors. Furthermore, we aim at exact matching, which creates equivalence of treatment and control samples with respect to the multivariate distribution of these covariates (Rosenbaum and Rubin 1983, 1985a; Rubin and Thomas 1996).

[6] In the 1984 dataset on Czechoslovakia and the 1998, 2000, and 2001 datasets on Russia, information is available on what kind of CP membership people had. The categories were paid position, unpaid position, rank-and-file, and never been a member. Whether there is a relationship between this variable and the EGP scheme was tested via non-parametric tests. In all datasets (except the 2001 Russian dataset), a relationship was found between the two variables, meaning that CP members with paid positions are found more in the first EGP classes and the rank-and-file CP members are found more in the lower EGP classes. This provides some justification for the approximation for high- versus low-ranking CP members based on the EGP scheme.

There are, however, two problems with matching: (a) statistical inefficiency and (b) difficulties finding matches.[7] These two problems have been variously labeled 'incomplete matching' (Freedman 1950), 'attrition' and 'incomplete or imperfect matching' (Althauser and Rubin 1970), and 'incomplete matching' and 'inexact matching' (Rosenbaum and Rubin 1985b). The first problem is that a lot of information is thrown away in order to create matches for relatively rare treatments, making this method statistically inefficient. This also applies here. The question is whether this is a bad thing. Rubin (1973) claims that throwing away irrelevant controls (in our case non-matchable non-CP members) diminishes the bias associated with the imbalance between treatments and controls in the distribution of covariates. As a result of this imbalance, the analysis-of-covariance estimated standard error for the treatment effect tends to be inflated (Rosenbaum and Rubin 1983: 48; Snedecor and Cochran 1980: 368 and 380). Matching can result in lower standard errors of treatment effects, even with a reduction in the number of controls, by reducing covariate imbalance and inducing a correlation between treatments and controls (Rubin and Thomas 1996; Smith 1997).

The second problem is finding matches – as the number of covariates increases linearly, the data demands increase geometrically (Smith 1997). "Even in a very large dataset, it is difficult to find controls with identical or near identical values on more than a small number of variables" (Rosenbaum 1996: 184-85). This is a less serious problem in this study; matches were found for almost all CP members. For some CP members, the closest match was used.[8] First, concessions were made concerning marital status. If no match was found, a married CP member was matched with an unmarried non-CP member, all other characteristics being equal. Then concessions were made for age, then education, and finally gender. With respect to employment status, EGP class, and private sector employment, no concessions were made; exact matches were found for these variables.

The matching procedure used in this study entailed finding controls (respondents who had never been CP members) with identical values on the seven matching variables described in the data and measures section as the treatments (members of the CP). To give an example: a 35 year old married male CP member with a college degree who is working in the private sector in a routine non-manual occupation will be matched with a 35 year old married male non-CP member with a college degree who is working in the private sector in a routine non-manual occupation. Because there are many more non-CP members (controls) than CP members (treatments), we can use more than one match per treatment. This is preferable "… to 'dampen out' the variability in estimated effects" (Smith 1997: 348). It is also more statistically efficient – using as much information as possible – and thereby increasing the 'power' of our statistical methods.

After this matching procedure, we are able to test the hypotheses with independent-samples *t* tests, comparing the mean personal income of CP members with the mean personal income of the non-CP

[7] Using propensity scores, matching is often being criticized for not taking systematic differences in unmeasured variables into account. So the observed differences between CP members and non-CP members would provide biased estimates of the 'treatment effect.' This is, of course, true, but this criticism also applies to OLS regressions or, for that matter, most other techniques used in the social sciences.

[8] In the 1984 dataset on Czechoslovakia, no exact matches were found for 50 CP members in Czech territory and 52 in Slovak territory. For the other datasets, the number of CP members for whom no exact matches were found are 115 (the Czech Republic 1992), 99 (Slovakia 1992), 101 (Hungary 1986), 95 (Hungary 1992), 52 (Russia 1998), 45 (Russia 2000), and 64 (Russia 2001).

members for each country and year separately.[9] For the Czech Republic, Slovakia, and Hungary, the hypothesis whether the income advantages of CP and non-CP members have changed during the transformation process can be tested via ANOVA using year and membership as factors (dummy variables) and estimating the full model. This model also reports the interaction between year and membership, which should be interpreted as the change in income differences between CP members and non-CP members between the period before and after the beginning of market reforms. For Russia, membership is used as the factor, and year and the interaction between membership and year as covariates in an ANOVA. This means that year is used as a continuous variable and the interaction term should be interpreted as a linear increase or decrease of the income differences between CP members and non-CP members during the transformation process.

4.4 Results

4.4.1 Descriptive statistics of matching procedure

Appendix G shows the descriptive statistics on the mean of the logarithm of personal income for the treatment (CP members) and control groups (non-CP members) resulting from the matching procedure for the four countries.[10] CP members always have higher incomes than their non-CP matches. The income advantages of high-ranking members over their matched non-members are larger than the income advantages of low-ranking members over their matched non-members, except for Slovakia in 1992. The mean incomes for Russia after 1992 seem to suggest that all people earned less later on in the transformation process, compared to early in the transformation. This is a distortion resulting from the 'Ruble Crisis' in 1998 when Russia adopted a new currency. After 1998, the mean incomes in Russia show an increasing trend similar to what can be seen in the other three countries.

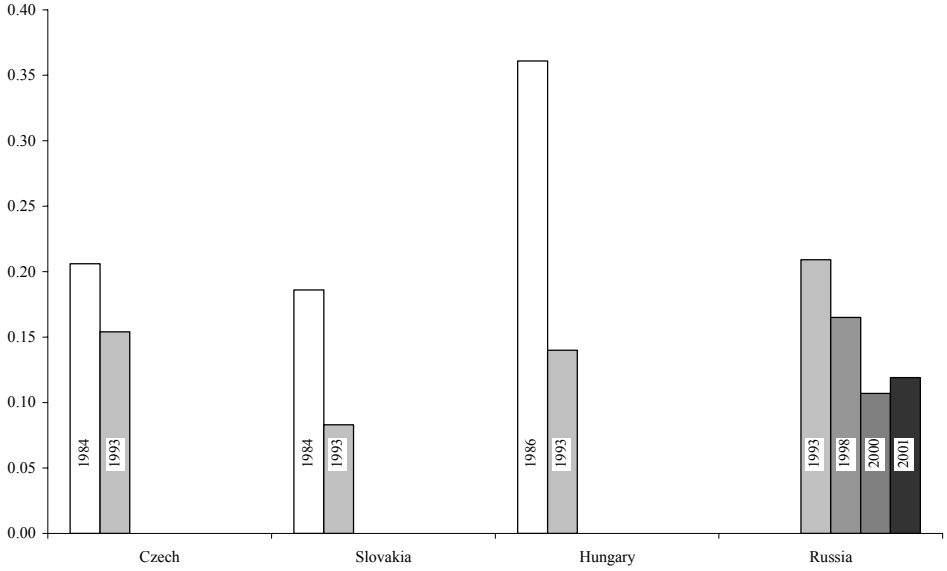
4.4.2 Income advantages of CP members

Income data are analyzed on CP members and non-CP members for Czechoslovakia, the Czech Republic, Slovakia, Hungary, and Russia. First, the incomes of all working CP members were compared with the incomes of matched non-CP members. Figure 4.2 illustrates the income differences between CP and non-CP members.

Because income was transformed into a logarithmic scale, the differences between CP and non-CP members can be translated into percentage income differences. For example, in 1984, the incomes of CP members were about 23 percent higher than the incomes of non-CP members ($[e^{.206}-1]\times100\% = 22.88\%$) in the Czech territory of Czechoslovakia, other relevant characteristics kept the same. This income advantage of CP members decreased to about 17 percent in 1992. Table 4.1 reports the significance levels of the income differences and the change in these differences. The income differences between CP members and non-CP members are significant in the Czech Republic, but the decreasing income advantages of CP members between 1984 and 1992 are not ($F[1, 3578] = 1.51$; $p > .10$). This indicates that CP members were able to maintain their income advantages.

[9] We assumed that the variances were unequal between the two groups and performed an independent-samples *t* test with separate variance estimates ($t \neq$ test).
[10] From here on, where we use *income*, it should be read as *ln(income)*.

Figure 4.2 Income advantages of CP members (mean (ln) personal income differences between CP members and non-CP members)



The analyses for the Slovak territory of Czechoslovakia and, later, Slovakia show comparable results to those reported for the Czech Republic. As can be seen in figure 4.2, the income differences between CP members and non-CP members in the Slovak territory are about 20 percent. In 1992, the income advantages of CP members decreased to about 9 percent. The results reported in table 4.1 show that the income differences between CP and non-CP members are significant in both 1984 and 1992. Furthermore, the decline in these income differences from 1984 to 1992 is also significant ($F[1, 2234] = 6.14$; $p < .05$).

The income differences between CP members and non-CP members in Hungary in 1986 are the largest of the four countries examined (about 43 percent), but they declined steeply from 1986 to 1992. In 1992, CP members had about 15 percent more income than non-CP members. Looking at the significance levels reported in table 4.1, the income advantages of CP members are significant and the dramatic decrease is also significant ($F[1, 3953] = 30.60$; $p < .01$).

Finally, figure 4.2 shows the income differences between CP members and non-CP members for Russia early in the transformation (1992) and later in the transformation (1998/2000/2001). In 1992, CP members had about 23 percent more income than non-CP members. The income advantages of CP members were about 18 percent in 1998, about 11 percent in 2000, and about 13 percent in 2001. As reported in table 4.2, the significance levels and all income differences between CP members and non-CP members are significant; however, there is no significant trend in the income differences over the four years ($F[1, 1956] = 1.13$; $p > .10$).

4.4.3 High- and low-ranking CP members

The results of the analysis of high-ranking CP members are illustrated in figure 4.3. Although the income differences vary in level between the Czech Republic, Slovakia, and Hungary, they decrease from 1984 to 1992 for the Czech Republic and Slovakia and from 1986 to 1992 for Hungary. In Slovakia, the decline is the largest, and the Czech Republic having the smallest. The significance levels in table 4.1 reveal that all income differences between high-ranking CP members and non-CP members are significant (except for Slovakia in 1992, where the high-ranking members seem to have lost their income advantages over non-members during the transformation process). Looking at the changes, the decrease in income advantages of CP members over non-CP members is significant in Slovakia ($F[1, 687] = 4.78$; $p < .05$) and Hungary ($F[1, 1215] = 4.58$; $p < .05$), but not significant in the Czech Republic ($F[1, 1100] = 1.26$; $p > .10$). The income differences between high-ranking members and non-members in Russia seem to decline over time; however, the results reported in table 4.2 show that the income advantages of high-ranking members over non-members are significant, while the trend over the four years is not ($F[1, 2380] = 0.52$; $p > .10$).

Table 4.1 Income advantages (difference in mean (ln) personal income between CP members and matched non-CP) of CP members and for high and low rank separately for the Czech and Slovak territory of Czechoslovakia (1984), the Czech Republic and Slovakia (1992), and Hungary (1986 and 1992)

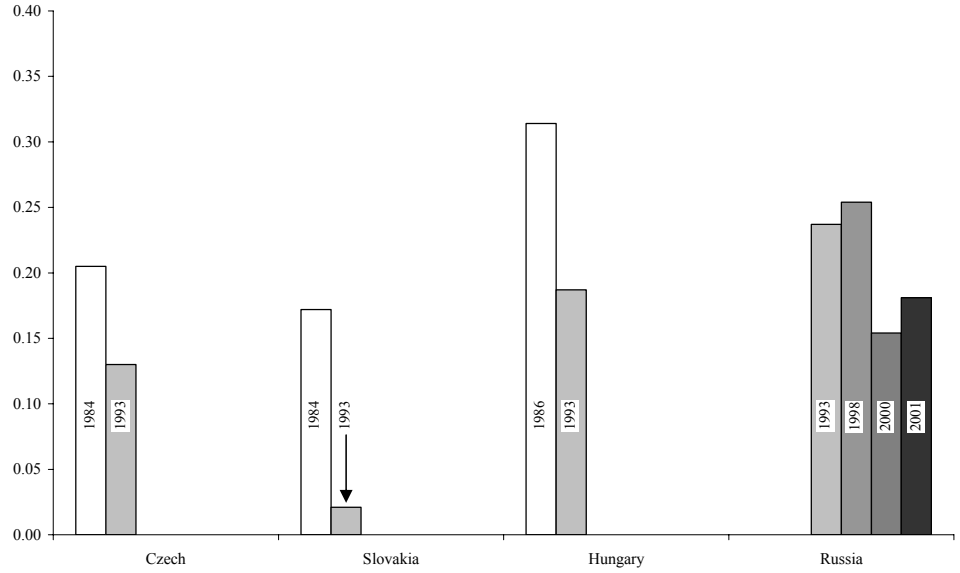
	Czech Republic			**Slovakia**			**Hungary**		
	1984[a]	**1993[a]**	**Change[b]**	**1984[a]**	**1993[a]**	**Change[b]**	**1986[a]**	**1993[a]**	**Change[b]**
Members	.206***	.154***	F=1.51	.186***	.083***	F=6.14**	.361***	.140***	F=30.60***
	(8.155)	(6.039)		(5.418)	(3.057)		(17.047)	(3.091)	
High	.205***	.130***	F=1.26	.172***	.021	F=4.78**	.314***	.187***	F=4.58**
	(5.829)	(3.134)		(3.198)	(.425)		(9.923)	(2.928)	
Low	.163***	.121***	F=.51	.141***	.083***	F=1.37	.273***	.058	F=16.98***
	(4.652)	(3.981)		(3.116)	(2.618)		(9.635)	(1.009)	

Note: t-values in parentheses.
[a] $t \neq$ test.
[b] ANOVA.
* $P < .05$; ** $P < .01$; *** $P < .001$, two-tailed.

Changes in the differences in income between low-ranking members and non-members are somewhat different from those between high-ranking members and their matches. The income advantages of low-ranking CP members are smaller than those of high-ranking CP members (except for Slovakia in 1992) both before and during the transformation process. Figure 4.4 shows that the income advantages that low-ranking CP members had during Communism in the Czech territory of Czechoslovakia decreased slightly in 1992, although not significantly ($F[1, 2476] = 0.51$; $p > .10$, table 4.2). In Slovakia, the apparently decreasing income advantages of low-ranking CP members between 1984 and 1992 are also not significant ($F[1, 1545] = 1.37$; $p > .10$, table 4.2). The change in the income advantages of the low-ranking members in Hungary is the most dramatic and is significant ($F[1, 2736] = 16.98$; $p < .01$, table 4.2). The income differences between low-ranking CP members and non-CP members in Russia show a somewhat decreasing trend, which is not significant ($F[1, 1960] =$

0.00; $p > .10$, table 4.3). After 1998 the income advantages of low-ranking CP members seem to have disappeared in Russia; the income differences are not significant (see table 4.2).

Figure 4.3 Income advantages of *high rank* CP members (mean (ln) personal income differences between high rank CP members and non-CP members)



4.4.4 Path dependent transformation processes

Finally, the results are related to the idea of path dependent transformation processes. Based on Walder's classification of elite opportunity and Stark's classification of privatization strategies, we hypothesized that the incomes of CP members would converge the most in the Czech Republic and Slovakia, less in Hungary, and the least in Russia.

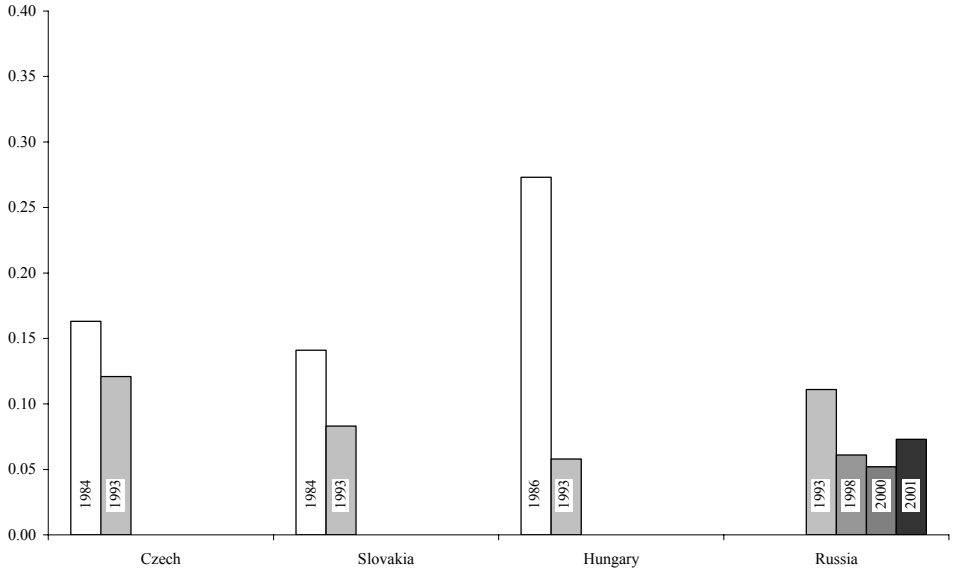
Table 4.2 Income advantages (difference in mean (ln) personal income between CP members and matched non-CP) of CP members and for high and low rank separately for Russia

	1993[a]	**1998**[a]	**2000**[a]	**2001**[a]	**Trend**[b]
Members	.209***	.165***	.107*	.119**	F=1.13
	(4.854)	(3.021)	(1.757)	(2.344)	
High	.237***	.254***	.154*	.181***	F=.52
	(4.719)	(3.706)	(1.752)	(2.675)	
Low	.111**	.061	.052	.073	F=.00
	(1.426)	(.715)	(.641)	(1.009)	

Note: t-values in parentheses.
[a] $t \neq$ test.
[b] ANOVA.
* $P < .05$; ** $P < .01$; *** $P < .001$, two-tailed.

The results presented in this study partly support this hypothesis: convergence between the incomes of high-ranking members and non-members was the largest in Slovakia, followed by Hungary and Russia. The Czech Republic deviates from the hypothesized pattern. The results from the analysis of low-ranking CP members also partly support the hypothesis on country differences: convergence of incomes was largest in Slovakia, followed by the Czech Republic and Russia. Here, Hungary deviates from the hypothesized pattern.

Figure 4.4 Income advantages of *low rank* CP members (mean (ln) personal income differences between low rank CP members and non-CP members)



It seems that it might be fruitful to use the differences in transformation processes between the Czech Republic, Slovakia, Hungary, and Russia to explain the changing income advantages of CP members. To some extent, the observed differences in income advantages of CP members between the four countries are in line with the hypothesis. However, the question of why the results for the Czech Republic on high-ranking CP members and the results for Hungary on low-ranking CP members deviate from the hypothesized pattern needs more investigation.

4.5 Summary and conclusions

In this study, changes in the income advantages of CP members over people who were never members of the Communist Party were investigated. We tested two competing predictions, derived from the Elite Circulation Thesis (income convergence) and from the Elite Reproduction Thesis (income reproduction). The circulation argument claims that the income advantages of CP members decreased, and the reproduction argument claims that CP members were able to keep their income advantages.

Explanations of why CP members were able to maintain their income advantages vary from converting political capital into valuable market assets to possessing multiple valuable resources they could employ. The test results are ambiguous in the sense that empirical evidence was found for income convergence as well as for income reproduction.

Empirical evidence for the Czech Republic shows that the income advantages of CP members did not significantly change from 1984 to 1992, which is in favor of income reproduction. Looking at the high- and low-ranking members separately reveals that the income advantages of high-ranking members decreased and the income advantages of low-ranking members increased slightly. This is in line with income convergence.

The results for Slovakia also support the argument for income convergence. The income advantages of all CP members decreased from 1984 to 1992, but the income advantages of high-ranking CP members decreased more than the income advantages of low-ranking CP members.

The empirical evidence for Hungary shows that the income advantages of CP members decreased from 1986 to 1992, which also favors the income convergence argument. However, looking at high- and low-ranking members, we see that the income advantages of the high-ranking members decreased less than the income advantages of the low-ranking members, which favors income reproduction.

The results for Russia seem to be in line with income reproduction. The income advantages of CP members remained fairly stable over the period 1992 to 2001. Looking at the high- and low-ranking members, there is empirical evidence to support income reproduction, with the income advantages of both decreasing slightly.

No clear results were found in favor of either the circulation or the reproduction argument. However, we did find persisting income advantages among CP members. So, one way or another, CP members were able to maintain part of their income advantage during the transformation process. The reproduction argument cannot explain these persisting income advantages. Despite controlling for schooling, as the converting mechanism, and controlling for other important determinants of income (age, gender, marital status, occupational category, and private sector employment), CP members still have higher incomes than people who were never members of the Communist Party during the transformation process. Note that it was not possible to control for either social capital or cultural capital. It might be that social networks can explain the persisting income advantages of CP members.

The diminishing income advantages of CP members in Slovakia and Hungary might result from people with a ‘rich’ ancestry (descendants from the families that belonged to the elite in pre-Communist times taking back what was once theirs) reclaiming influential positions, as suggested by the interrupted embourgeoisement mechanism (Konrád and Szelényi 1991; Szelényi 1988). Böröcz and Southworth (1996) show that cultural capital was already important for income determination during late State Socialism, which is a trend that could progress during the market transformation process.

We proposed that part of these unexplained income differences might be understood from differences in the transformation processes between the countries. The qualitative comparison of the hypothesized effect of the country specific transformation processes on the changing income advantages of CP members, along with the empirical results, show some support for this idea. The income differences between high-ranking CP members and non-CP members decreased more in Slovakia than they did in Hungary and they decreased more in Hungary than in Russia. The income

differences between low-ranking CP members and non-CP members decreased more in Slovakia than they did in the Czech Republic and in Russia. This is in line with the prediction based on Walder's (2003) classification. The distinction between the Czech Republic and Slovakia on the one hand and Hungary on the other – which was based on Stark's (1992a) classification – was not supported. A reason for this might be that the income advantages of CP members in Czechoslovakia in 1984 were already smaller than those in Hungary in 1986 and therefore decreased less.

The empirical results presented in this study reveal several anomalies. Why are the income advantages of CP members different between the Czech Republic and Slovakia and why do they change differently? Why is there little change in the income advantages of low-ranking CP members from 1984 to 1992 in the Czech Republic and from 1992 to 2001 in Russia, while they obviously decreased in Hungary? Why do the income advantages of high-ranking CP members persistent in Russia?

We found some (inconclusive) indication that specifying the transformation process helps to understand changes in the income advantages of CP members over non-CP members. Maybe the classification used here is not specific enough to catch differences in the transformation processes between these countries. It would seem fruitful to place more emphasis on the different paths of institutional change that originated even before the collapse of the Communist regimes (Stark 1992a, 1992b; Stark and Bruszt 1998) along with quantitative testing of predictions derived from this idea. At the same time, there are factors at the individual level, such as social and cultural capital or superior individual traits CP members might have – such as ambition, competitiveness, etc. (which would not be observable) (Gerber 2000a, 2005) – that could help to understand their income advantages during the transformation process.

5

WINNERS AND LOSERS IN MARKET TRANSITION: THE UNEMPLOYED, RETIRED, AND DISABLED*

5.1 Introduction

The fall of the Berlin wall and the decline of Communism in Central and Eastern Europe and the former Soviet Union have resulted in extensive political, economic, and social changes. Some social groups have been able to take advantage of these changes and improve their standard of living, while others have suffered more negative consequences and dropped below the line of minimum subsistence. These negative consequences of the market transformation process in post-Communist countries have frequently been reported in the news in Western European countries. Local newspapers report horrible stories from the East: 'old and forgotten' and 'They live off bread and tomatoes, silently waiting to die'. The money available to people depending on social benefits, is not enough for medicine and food (which are priced at Western levels), let alone for paying rent and utility bills.

The influence of market reforms on socioeconomic attainment has often been framed in terms of 'winners' and 'losers' (e.g., Brainerd 1998; Ganzeboom 1998; Gerber 2002; Hauser and Xie 2005; Titma, Tuma, and Silver 1998). Contrary to most of the studies in this field, the research problem in this chapter focuses on the income position of the 'losers': the weak and the poor (the people who depend on social benefits). Here, it is assumed that these people are the 'real' losers of the market transformation process. Have the incomes of people depending on social benefits changed in post-Communist countries? Additionally, in line with the Market Transition Theory (Nee 1989, 1991, 1996) – which states that changing economic institutions alter the value of various forms of capital and that having the right kind of resources provides advantages – having additional resources would be expected to enable these people to compensate their weak socioeconomic position. To what extent can their changing incomes be explained by the resources that people depending on social benefits have?

The social security systems under Communism were characterized by legally endorsed universal welfare services, which were available to every citizen. In this respect these systems were very generous. To some extent they could be because there was virtually no unemployment. The large industrial sector depended on full employment and substantial employment security was provided. In addition, the state also provided subsidies covering food, medicine, housing, day care, kindergartens, and after-school centers, which were practically free of charge and which compensated for the relatively low wages and social benefits. In general, the state made certain that the entire population was provided for in regard to basic needs, which in turn were determined by the state. The public was critical of this welfare system, however, because of the generally low levels of service provided.

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* This chapter was co-authored by Jos Dessens and Wim Jansen. The text is currently under review. An earlier version of this chapter has been presented at the Utrecht University Stratification and Culture Seminar, Utrecht (The Netherlands), May 18, 2006.

CHAPTER 5

The 1989 market reforms in post-Communist countries were accompanied by a reconstitution of these social security systems. Behind this was a fundamental shift in philosophy: the promised 'cradle-to-grave' income security was exchanged for increased individual responsibility for one's own life. The reform of labor-market institutions reintroduced unemployment, which rose dramatically. In addition, the first years of market reform were characterized by negative economic growth and hyperinflation, placing heavy burdens on state budgets. As a result, state expenditures had to be cut, worsening the socioeconomic position of the poor and the weak.

In contrast to the extensive literature on the winners during the transformation process and the privileged under Communism, only a few scholars have studied the impact of market transformation on the income situation of social groups at the bottom of the income distribution (Fodor 1997; Gerber and Hout 1998; Milanovic 1999; Nee 1991; Raymo and Xie 2000). This is surprising, because decades ago influential scientists already believed that markets bring advantages to the rich and weaken the economic position of the poor (Marx 1958; Polanyi 1957; Scott 1976) compared to those with greater resources, at least in relative terms. In this respect, the dramatic shift from Communism to Capitalism and the institutional changes accompanying it, can be regarded as a natural experiment (e.g., Nee 1996), which offers a unique opportunity to study how reemerging markets and the restructuring of the social safety net change the income position of the weak and poor.

Based on cross-sectional survey data, trends in the income of unemployed, retired, and disabled persons (whom we refer to as social benefit holders) are presented here for the period from 1991 to 2002 for five Central and Eastern European (CEE) countries: the Czech Republic, Hungary, Poland, Russia, and Slovakia.[1] We compare these trends to changes in the income of the working population and also investigate the feasibility of finding additional resources to compensate for low benefits. Income is regressed on employment status, human capital, place of residence, household size, marital status, and the interactions between employment status and human capital, place of residence, household size, and marital status, controlling for several demographic characteristics. Interactions with time are included to capture across-time variation, which represents the influence of the reconstruction of the social safety net on the income of people depending on social benefits during the market transformation process.

5.2 The social safety net

The socialist regimes proclaimed an ideology of equality manifested in destratification of society by way of political intervention. The large industrial sector depended on full employment of the labor force, resulting in low or non-existing unemployment. The command economy also promised 'cradle-to-grave' income security with generous pension benefits (Fox 1998), which were collectively taken care of and provided by the state (Müller 2002b). The Communist countries of Central and Eastern Europe were legally committed to providing universal welfare services, which applied to every citizen (Kornai 1998). Welfare services provided from outside the central welfare system were not allowed.

[1] It is not possible to conclude from the data whether these people have actually received social benefits. Some people who answered that they were unemployed, retired, or disabled might not have applied for their social benefits, or they might have been employed and were therefore not receiving benefits.

Although universal entitlements were promised, the public was disappointed with the low standard of services actually provided.

The 1989 transition changed many political and economic institutions, which, in turn, altered the allocation of resources. There were two major consequences of the market transformation process that influenced the socioeconomic position of social benefit holders. The first was that, during market reform, it became clear that the large public sector was inefficient and unsustainable and had to be scaled down. Subsequently, employment in state enterprises rapidly declined. The emerging and expanding private sector was unable to absorb all the jobless people, and unemployment has risen dramatically since the 1989 transition (Blanchflower 2001; Rutkowski 2003a, 2003b). Unemployment rates in the Czech Republic increased from 4.1 percent in 1991 to 7.5 percent in 1998, and in Russia, unemployment increased from zero to 12.4 percent during the same period (European Bank for Reconstruction and Development 1999).

This burgeoning unemployment forced the governments of CEE countries to design and implement unemployment compensation systems (UCSs). By the end of 1991, all CEE countries had established a UCS, which shared six principal features (Ham, Svejnar, and Terrel 1998: 1121-22): (1) to receive unemployment compensation, people needed to have been employed for a minimum period ranging from six months during the preceding year (Poland) to one year in the preceding three years (Czech Republic, Hungary, and Slovakia); (2) the duration of unemployment compensation was similar for all workers; (3) the amount of unemployment benefits was based on the replacement rate of the previous wage; (4) the replacement rates dropped over the entitlement period (except in Poland); (5) a low maximum benefit level of 1.4 to 2.0 times the minimum wage was set; and (6) there was no indexation of benefits for inflation.

The second major consequence of the market transformation process that influenced the income position of social benefit holders was that existing set of social security institutions were mainly left untouched, especially during the early years of transition, when macro-economic and political reforms were given more attention than reforming the social safety net (Müller 2002a). After several years, distribution and social security issues attracted greater attention. Pension reform, in particular, was inevitable. The public pension schemes are considered to have been very generous compared to those of some of the richest countries in the world (Fox 1998). During the transformation process, the retirement age was still very low, resulting in a relatively long postretirement life span. Furthermore, special provisions existed for people with disabilities and people from selected occupations. To make things worse, the downsizing and closing of firms resulted in people leaving the labor market to claim disability pensions and early retirement, placing heavy burdens on public pension schemes. Subsequently, the percentage of the labor force contributing to public pensions declined rapidly, translating into plummeting coverage ratios and eventually into gradual erosion of the social protection of the elderly.

It became clear that the existing social security system needed to be adjusted to cope with the changing economic situation. Desirable reform measures included increasing the retirement age, abolishing special privileges, separating pension schemes from other social insurance plans and from the state budget, and introducing employees' contributions along with automatic indexation to adjust to price and/or wage increases. During times of high inflation, this resulted in insufficient retirement incomes and serious distortions of relative the levels of benefits (Impavido 1997; Müller 2002a). Not

surprisingly, the suggested reforms met with fierce resistance and policymakers were forced to compromise on the speed and/or scope of reform. In 1998 and 1999, further reforms were introduced in Hungary and Poland in the form of notional defined contribution (NDC) schemes (Müller 2002a) and a public-private mix to supplement state pensions (Müller 2002b). The NDCs tied benefits more closely to contributions and automatically adjusted the benefit level to a shortening of the period of contribution and/or an extension of the years of retirement.

Because of the negative economic growth during the first years of market reform, growing unemployment, and the unbearable costs of the pension systems, post-Communist countries faced heavy burdens on their state budgets, and their social security systems became unsustainable. The social security net had to be readjusted and redesigned in order to cut state expenditures. UCSs had to be established and public pay-as-you-go (PAYG) pension schemes had to be revised. At the same time, the governments of CEE countries had to guarantee an adequate social safety net, while reducing state intervention and controlling their budget deficits. This resulted in a reduction of the level of unemployment protection (Ham, Svejnar, and Terrel 1998).

5.3 Hypotheses

While the changing social security provisions had consequences for all social groups that depended on social benefits, this study is limited to three of such social groups, whose socioeconomic situation has been clearly influenced by the market reforms and accompanying changes in the social security system: the unemployed, the retired, and the disabled.

Social benefits provided by the state are sources of income that compensate people who do not receive an income from employment. In this respect, compared to people who are employed, people who depend on the state to provide their income lack resources. Vecerník speculates that people living exclusively from official wages or those dependent on social transfers were disadvantaged by market reforms and the self-employed and businessmen are favored (Vecerník 2001b).

Market reforms were accompanied by changes to the welfare system of the command economies of Central and Eastern Europe (see previous section). Price inflation and the erosion of welfare programs and subsidies were typical features of market reforms in post-Communist countries. The IMF, World Bank, OECD, and EBRD predicted substantial hardships for many social groups in the population during the transformation due to the emergence of market mechanisms in the economies of CEE countries and the removal of existing governmental interventions (IMF, The World Bank, OECD, and EBRD 1991). That market reforms could disadvantage the weak and poor has already been pointed out by Szelényi and Manchin, who claimed that in Hungary the “real pauperization took place” for those at the “bottom of the income hierarchy” (Szelényi and Manchin 1987: 122).

As a consequence of the retreat of the state and subsequent cuts in state budgets, one could expect the incomes of people dependent on social benefits to decrease in post-Communist countries as they went through the process of market reform. However, based on a study in China, Nee (1991: 272) pointed out that under the condition that market reforms result in economic growth, “the poor instead may experience direct material gains.” China experienced economic growth during the transformations in the mid-1980s, but most post-Communist countries in Central and Eastern Europe experienced

negative economic growth during the first years of market transformation (World Bank 1996). Furthermore, economic growth may result in absolute gains for the poor, but in relative terms – compared to those with more resources – their income may increase less. Because marketization tends to favor those with more resources and would therefore tend to erode the welfare programs and subsidies of the Communist states, the incomes of the people depending on social benefits would be expected to decrease – at least relative to the incomes of employed people.

When redesigning the institutions that allocate resources and persons, simultaneous readjustments to the social security system are essential, but these adjustments lagged behind the economic 'shock therapy' reforms in CEE countries. The early years of transformation in post-Communist countries were mainly characterized by political reforms and macroeconomic reforms like the liberalization of markets and the privatization of enterprises (Stern 1998), leaving existing social security institutions mainly untouched (Müller 2002a). Inevitably, negative economic growth and hyperinflation led to erosion of the income position of the people depending on the social security network. In the situation where CEE governments failed to adjust the social safety net to the economic reform in time, the income position of these dependent groups worsened even more; at least in the early phase of transformation when policy adjustments had not yet had an effect.

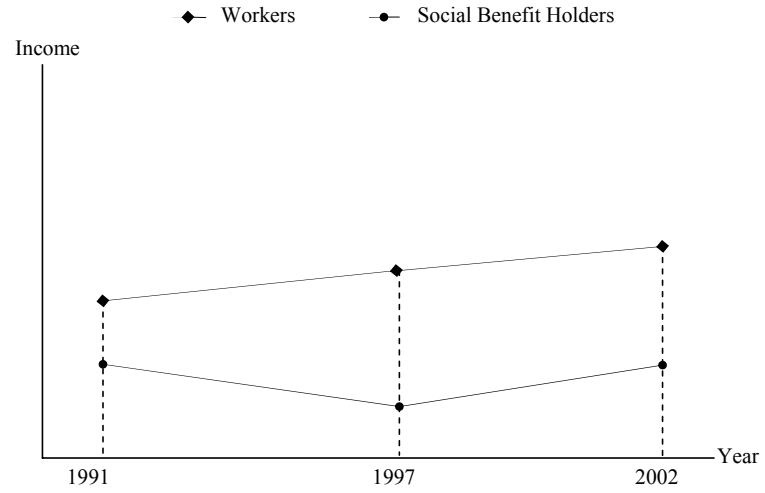
Although the readjustments to the social security system – such as the establishment of UCSs and the revision of pension schemes – started in the early 1990s in all CEE countries, it took time before the effect of changing policies became visible. The income position of the people depending on social benefits is expected to grow worse especially during the early stage of the transformation process.

H1 *The income of social benefit holders will decrease during the early stage of market transformation, a trend that will be reversed later in the transformation process*.

The predicted trends in the income of social benefit holders are presented in figure 5.1. Note that these trends are hypothetical. The key argument is that during the early years of market reform, the income position of the social benefit holders worsened. Thus hypothesis 1 will be confirmed if the estimated incomes show a decreasing trend during the period from 1991 until 1997, which should level off or be reversed in an increasing trend during the period after 1997. In addition, presenting estimated incomes in this way will also reveal whether the income position of the social benefit holders deteriorated in relative terms, compared to the incomes of workers. In this situation, the income of social benefit holders is not necessarily expected to decrease in absolute terms, but because the incomes of workers increase more, the income position of the social benefit holders becomes relatively worse. Thus, social benefit holders may be losers in the market transformation process in either absolute terms or in relative terms compared to workers.

Under conditions where the real value of pension benefits is eroded, public pension schemes are stripped, and state budgets are restricted, the people who rely solely on social benefits provided by the state will see their disposable income vanish. Here, we assume that in such a situation, having additional resources would be helpful in preventing people from falling below the poverty line.

Figure 5.1 Hypothetical trends in the income of workers and social benefit holders



The market transition debate revolves around the Market Transition Theory, which predicts increasing returns to human capital at the expense of returns to political capital. It is argued that, during market reforms, human capital becomes more important for allocating resources (Nee 1989, 1991, 1996), Education has proven to be a useful representation of human capital (Mincer 1958; Schultz 1963). Several synthesizing studies indicate that income returns to human capital increase during market transformation (Cao and Nee 2000; Fleisher, Sabirianova, and Wang 2005; e.g. Nee and Cao 1999; Nee and Cao 2002; Verhoeven, Jansen, and Dessens 2005). Thus, having a high level of education can be seen as an additional resource for people depending on social benefits.

One of the principal features of the UCSs established in CEE countries by the end of the 1990s was that the level of unemployment benefits was based on replacement rates for the previous wage (Ham, Svejnar, and Terrel 1998). If more education leads to higher incomes and more income leads to higher unemployment benefits, then unemployed people with more education will have had higher incomes (and subsequently, higher benefits) than unemployed people with less education. It follows, then, that if income returns to education increase during market reform, unemployed people with more education will be better able to maintain their income position than unemployed people with less education.

The same line of reasoning can be applied to people who are not active in the labor market because of disability or invalidity. The amount of the disability benefit is also determined by the rate of wage replacement (Fajth 1999). Thus, higher educated people who cannot work because of a disability would be expected to have had higher wages when they were working and, subsequently, would receive a higher disability benefit. The increasing income returns to education provide higher more highly educated disabled people with more opportunities to maintain their income during market reforms.

Pension benefits can be supplemented if the elderly have much human and political capital (Xie and Hannum 1996). Having human capital and/or market capital would have increased their possibilities of participating in the post-retirement labor market and, subsequently, supplementing

their pension income. In the former Communist countries, pension privileges (such as a lower retirement age and higher pensions) were granted for occupations of strategic importance (Müller 2002a), which were mostly occupied by people with political capital.

Another important feature of why education can be regarded as being an additional resource is that higher educated social benefit holders might accumulate more savings before they left the labor market. Higher educated social benefit holders might also have more opportunities to find part-time jobs to supplement their income in case they are unwilling to leave the labor market.

H2 *The higher educated social benefit holders are, the more income they will have, and the less their income will have decreased during the early stage of the transformation process.*

Most of the studies in the market transition literature report lower incomes for people in rural areas, compared to urban dwellers (e.g., Boyle Torrey, Smeeding, and Bailey 1998). The reasons for this are that market developments tend to progress more rapidly in cities than in rural areas, rural areas suffer more from negative economic growth, and rural areas are more vulnerable to the impact of reductions in agricultural production (World Bank 2004). Thus, people living in cities can be expected to have more opportunities for accumulating income. In this study, we assume that this also holds for social benefit holders. Cities provide more opportunities to supplement state benefits. For pensioners this could mean participating in the post-retirement labor market (Raymo and Xie 2000) or finding a job in the second economy.

Under conditions that tend to worsen the income position of social benefit holders, we assume that living in an urban area would provide additional resources to maintain a sufficient income.

H3 *Social benefit holders living in urban areas will have more income than social benefit holders living in rural areas, and the income difference will increase during the early stage of the transformation process*.

It has also been suggested that vulnerable social groups live together as a result of tradition, but also out of the need to pool resources and share household costs (Boyle Torrey, Smeeding, and Bailey 1998; Fox 1998). The same is assumed for other social benefit holders. Thus, living in larger, extended families offers the possibility of sharing household costs and share in the larger household income, which would help social benefit holders to maintain a sufficient level of income.

A comparable line of reasoning is used for married social benefit holders. Being married could provide several advantages that would help benefit holders to maintain a sufficient level of income. Again, household costs could be shared and the benefit holder could share in a larger household income. At the same time, a partner who can assist with household chores can also help to keep living costs down.

Under conditions that tend to worsen the income position of social benefit holders, we assume that living in a large, extended family and being married would serve as additional resources to maintain sufficient income.

H4 *Married social benefit holders will have more income than unmarried social benefit holders, and the income difference will increase during the early stage of the market transformation process.*

H5 *Social benefit holders who live in large, extended families will have more income than social benefit holders who live alone, and the income difference will increase during the early stage of the market transformation process*.

5.4 Data

In this chapter, we have used 53 standardized cross-sectional surveys on the Czech Republic, Hungary, Poland, Russia, and Slovakia, covering a period from 1991 to 2002 (see appendix E for the references to the original files).[2] For some years, two data sets were available. In such cases both data sets were used. These surveys were selected because of their information on household income, occupational status, human capital, and demographic characteristics. Only respondents who were unemployed, retired, or employed were selected for the analyses in this study. Respondents in an employment category such as home-maker, student, military personnel, and 'other' have been left out of the analyses. This selection left a total of 97,168 individuals.[3]

Questions about individual or household income tend to result in a large number of missing values (Moore, Stinson, and Welniak 2000), over all our 53 standardized data sets, 9,024 respondents did not report their income. Descriptive statistics showed that there were no problematic differences in the distributions of the independent variables between the respondents who did not give their household income and the respondents who did. Removing those respondents and any with additional missing values on the independent variables left a final data set of 80,422 for the analyses.

5.5 Measures

5.5.1 Dependent variable

Ideally, the dependent variable of this study would consist of the actual unemployment, pension, and disability benefits, which represent the personal income of the social benefit holders and can be compared to the personal income (salaries) of workers. This could then be regressed on personal characteristics like education, experience, age, gender, and so on. Unfortunately, the data used in this study do not contain information on the actual benefits that the unemployed, retired, and disabled people receive. Furthermore, personal income cannot be used because, in most cases, this variable only contains income information for the workers and not for the social benefit holders. Therefore, we have used monthly household income as the dependent variable.

[2] For the Czech Republic and Hungary, the period from 1992 to 2002 is covered; for Slovakia, the period is from 1993 to 1998.

[3] When weights were available, the data sets were weighted to correct for discrepancies between sample distributions of demographic variables and distributions of demographic variables retrieved from statistical offices.

Household income is defined as the sum of income from all sources received by all members of a household over a specified period of time, typically the calendar year or month prior to the interview (Duncan and Petersen 2001). Given this definition, using monthly household income as the dependent variable can cause some problems. To start with, there may be more contributors to the monthly household income than the respondent. Where the partner of the respondent is employed or also receives social benefits, the estimates of the effects of income determinants will be distorted. The reason for this is that the income determinants are applicable to the respondent, while the monthly household income applies to the respondent combined with that of his/her partner and anyone else in the household who brings in an income and would be higher than the personal income of the respondent. This can be even more problematic when the respondent is a child still living at home. In this case, the monthly household income does not correspond to the child's situation. Based on the personal characteristics of the child, a lower income would most likely be estimated than the monthly household income. We recognized that children living at home might distort the results, but in replicating the analyses with age restricted to 25 years and older, we got the same results, which suggests that in this study, the extent of this distortion is limited.

Aside from the problem that more people may contribute to the monthly household income, more people may have to live from it as well. The problem with this becomes apparent when looking at a hypothetical example. Let us consider an unemployed person who is the head of a four-person household and who is the sole income provider. This person has to share his/her income with three other household members. For this person, living in a large household does not provide any protection against diminishing income during hard times; in fact, it increases the risk of dropping below the poverty line.

Another problem is measuring household income. People are reluctant or unable to report their household income precisely. Some authors have suggested that the way in which income questions have been asked affects the reliability of the income variable (Duncan and Petersen 2001; Jansen and Dessens 2004; Róbert 2000). In some surveys, information on income was obtained through a single question, while in other surveys, this information was obtained through a more detailed set of questions. Jansen and Dessens (2004) have shown the advantages of using a detailed set of questions. Sensitivity analyses showed that taking into account the difference between a single question about income and a detailed set of questions did not affect the results reported in this study.

Despite these problems, it is argued that using monthly household income has advantages and is a suitable dependent variable. In this study, we theorize that having additional resources enables social benefit holders to maintain or supplement their income, and we have approximated additional resources with years of education, living in urban areas, being married, and living in large households (as discussed above). Our argument is that in the latter two cases, the relatively low income of social benefit holders will be compensated by the income of the partner or the other household members. In other words, having a partner or living in a large household provides income protection during hard times. Household income is a usable dependent variable for capturing these effects, because it contains the necessary income information of all household members. Furthermore, using household income means that almost all standardized surveys can be used, resulting in a greater quantity of data to be analyzed.

CHAPTER 5

Combining income data for several countries over time generates some comparability problems. First, CEE countries have been confronted with relatively large inflation rates, resulting in a decline in real income. Table 5.1 reports the mean monthly *nominal* household incomes by country and by year. In all CEE countries, the mean monthly (nominal) household income increased steadily. The effects of devaluating the currency – necessary to stop hyperinflation – in Poland in 1995 and in Russia in 1998 – are clearly visible.

Table 5.1 Descriptive statistics of monthly (nominal) household income in the Czech Republic, Hungary, Poland, Russia, and Slovakia, 1991-2002

	Czech Republic		Hungary		Poland	
	Mean	**N**	**Mean**	**N**	**Mean**	**N**
1991	–	–	–	–	3,119,996	819
1992	7,462	552	27,543	1,056	3,461,144	1,414
1993	8,361	5,810	34,360	5,196	4,716,983	1,391
1994	11,146	654	35,012	1,096	7,052,824	4,370
1995	11,697	613	36,042	867	836	1,355
1996	11,333	1,737	40,925	890	1,337	997
1997	12,927	776	44,663	1,242	1,369	1,010
1998	14,984	625	60,641	776	1,729	927
1999	15,088	1,372	72,414	844	1,732	911
2000	17,497	644	–	–	–	–
2001	17,814	686	97,304	738	1,838	1,039
2002	16,834	816	111,275	745	1,963	1,021
All years	11,492	14,285	46,988	13,448	2,939,514	15,255

	Russia		Slovakia	
	Mean	**N**	**Mean**	**N**
1991	203	2,299	–	–
1992	880	1,604	–	–
1993	61,204	5,637	7,894	4,122
1994	–	–	–	–
1995	925,364	1,095	10,334	1,158
1996	1,093,285	1,088	–	–
1997	–	–	–	–
1998	1,343	4,846	13,385	1,117
1999	1,284	1,111	–	–
2000	2,751	4,896	–	–
2001	4,025	7,244	–	–
2002	3,858	1,217	–	–
All years	83,930	31,038	9,294	6,397

To deal with the problem of high inflation rates, the monthly (nominal) household income, for each country within each year, is divided by the mean monthly household income of that county-year combination. This leaves a dependent variable, indicating relative (compared to the mean) income

differences. Using this procedure, it is assumed that inflation affects the amount of income more severely than the distribution of income, which is reflected in changes in the mean income.[4] Hereafter, the variable is transformed to a logarithmic scale, which is a 'standard' procedure by now.

5.5.2 Explanatory variables

All our analytical models focus on the income effects of unemployment, retirement, and disability. Interactions with time are included to capture across-time variations in the income effects of unemployment, retirement, and disability. Additional resources are operationalized as education, living in urban areas, being married, and living in larger households of which the descriptive statistics are reported in table 5.2. To save space, the descriptive statistics are given for the five CEE countries grouped together. Separate analyses showed that they were similar across all five countries.

Employment status

In all surveys, respondents were asked for their employment status. In this study, three groups of people who were dependent on social benefits are distinguished from workers, using dummy variables: *Unemployed*, *Retired*, and *Disabled* (*Employed* being the reference category). The ISJP91/96 data sets, the Polish ISSP data sets, and the Russian 1998 SEIAR and 2000 SESR data sets have one category for the retired and the disabled. Men of 57 years and younger belonging to this category were recoded as being disabled, and men over 57 years of age were recoded as being retired. For the women, the cut-off point was 53 years of age.[5] We recognize that this is a rough division: there will be younger retired people as well as older disabled people. However, the descriptive statistics of the retired and disabled in the 1994 Polish ISSP and SSEE data sets (in which the retired and disabled were coded separately) are comparable. The same holds for the 1998 Russian SEIAR data set compared to the 1998 Russian ISSP data set, and the 2000 Russian SESR data set compared to the Russian ISSP data set for the same year.

Figure 5.2 presents trends in unemployment as the percentage of the total population. These calculations are based on the standardized survey data used in this study and show that they are comparable to those based on official data sources (European Bank for Reconstruction and Development 1999; Sánchez-Páramo 2002). We found that the Czech Republic had relatively low unemployment, which increased only slightly during the period from 1992 until 2002. Unemployment was highest in Poland, where it increased until 1993 and, after a few years remaining stable, increased again from 1996 to 2002 (with a small drop in 1999). Unemployment started high in Hungary and increased during 1993-1995; after 1995, unemployment remained relatively stable until 2002. In Russia and Slovakia, unemployment started at the same low level as in the Czech Republic but increased dramatically during 1993 and 1999. After 1999, unemployment decreased again in Russia to a level comparable to that in the Czech Republic.

[4] Another way to deal with different currencies and inflation is to include dummy variables for each survey used in the analysis. However, the models become unnecessarily complex with all the dummy variables. It is also possible to deflate income by an inflation index (e.g., Gerber and Hout 1998).

[5] These cut-off points are based on the claim that due to generous provisions and low retirement ages, the average effective retirement age was about 57 years for men and 53 years for women (Fox 1994).

Figure 5.2 Trends in the percentage of unemployed people of the total population in the Czech Republic, Hungary, Poland, Russia, and Slovakia, 1991-2002

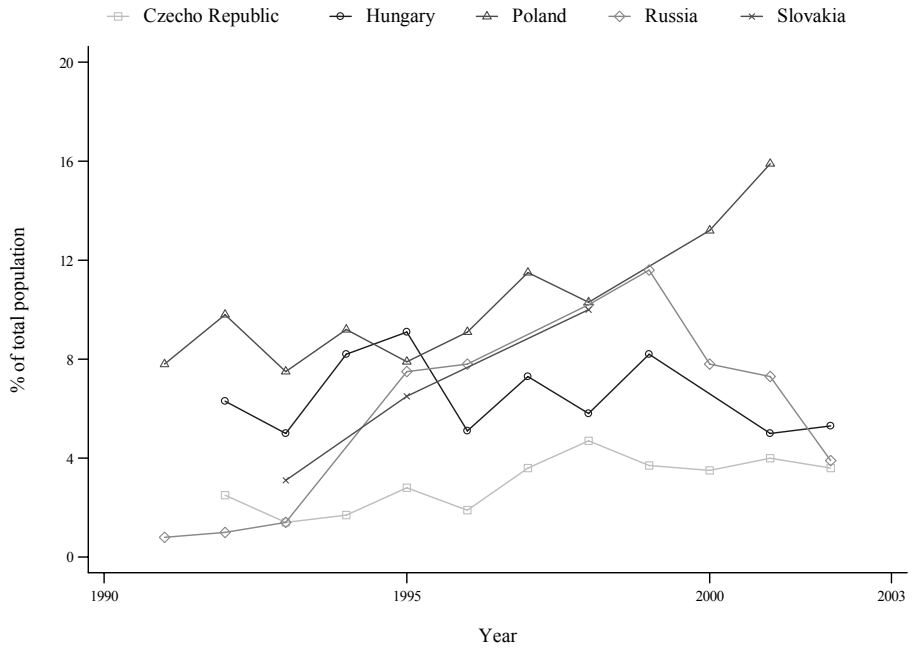
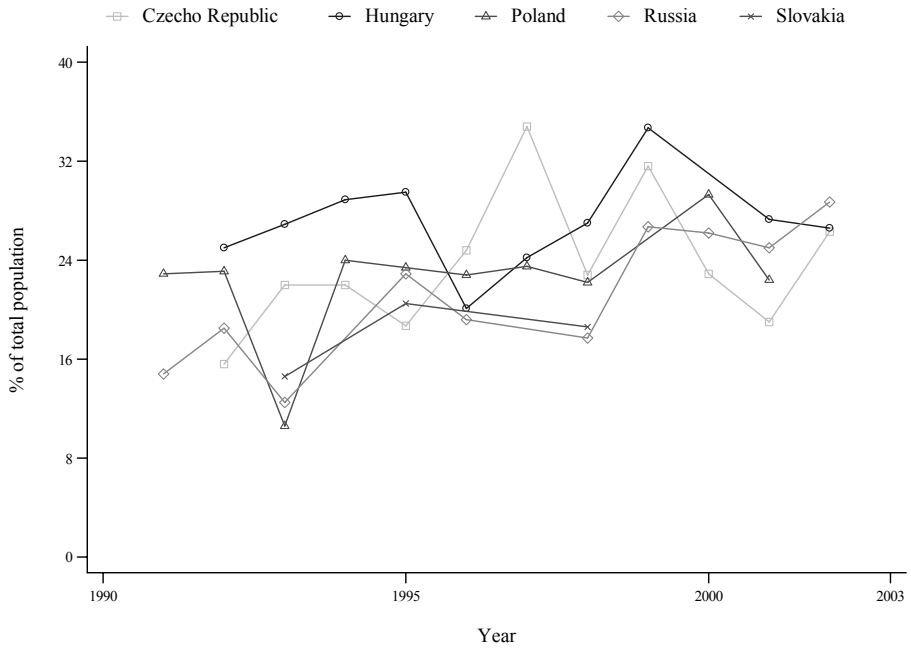


Figure 5.3 presents the trends in the retired people as a percentage of the total population. In all countries, the percentage of retired people was much larger than the percentage of unemployed people. The percentage of retired people started low in the Czech Republic, Russia, and Slovakia. In the Czech Republic, there was a clear increase in the percentage of retired people from 1994 to 1997, when it reached its peak. After 1997, the trend in the percentage of retired people seemed to level off. The percentage of retired people in Russia increased at a relatively stable rate from 1991 to 2002. In Slovakia, there was a slight increase in the percentage of retired people from 1993 to 1995. After 1995, the trend seemed to level off. The percentage of retired people started higher in Poland but remained relatively stable (except for a dip in 1994). In Hungary, the percentage of retired people started at the highest level. After a decrease in 1996, it increased again to its peak in 1999. After 1999, the trend seemed to level off.

Trends in the proportion of disabled people as a percentage of the total population are shown in figure 5.4. The percentage of disabled people was similar to the percentages of unemployed people. The percentages of disabled people of the five CEE countries closely resemble to each other. The trends were also similar between the countries. The percentage of disabled people slightly decreased from 1991 until 1993. From 1993 until 1996, the percentage of disabled people decreased and after 1996 it leveled off. The trend in Hungary deviated from the ones in the other countries because it was more dramatically increasing and decreasing.

Figure 5.3 Trends in the percentage of retired people of the total population in the Czech Republic, Hungary, Poland, Russia, and Slovakia, 1991-2002



Education

We measured *Education* as years of education reported by the respondents, which (except for the ISJP96 and the EE93 for Poland) is contained in most of our data sets. For these data sets, educational degrees were used to approximate the years of education.[6] Extreme values were recoded to a maximum corresponding to the standard duration to achieve the highest level of education given the country specific educational system. In the Czech Republic and Slovakia, people are generally 25 years in the educational system to finish university, in Hungary and Russia 24 years, and in Poland 23 years. On average, people in Central and Eastern Europe attend eleven years of education (see table 5.2).

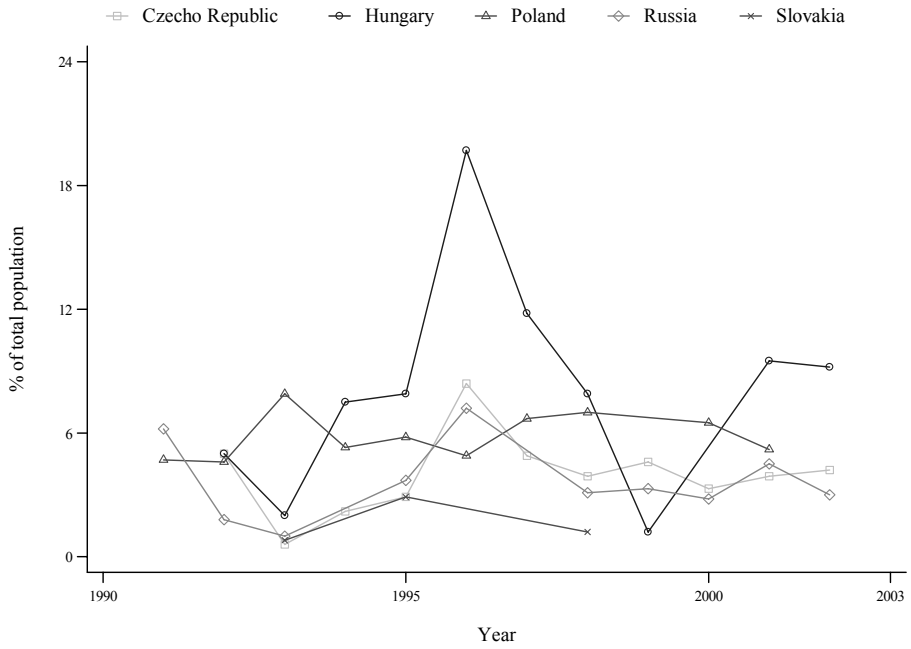
Region

Not all data sets have information on the size of the place of residence and only distinguish between urban and rural regions. Therefore, a dichotomous variable *Urban* ('0' for rural and '1' for urban) was constructed for all surveys. Dividing place of residence into urban or rural regions is

[6] For example, in the Hungarian ISJP96 data set, education was coded in six categories: less than primary school, primary school, vocational training, secondary school, lower tertiary school, and higher tertiary school. A respondent who attended school six years or less was assigned four years of education, and respondents who attended primary school were assigned six years of schooling. Generally, it takes 11 years to finish vocational training in Hungary, 14 years to finish lower tertiary school, and 17 years to finish higher tertiary school. This was a better alternative to including all educational categories as dummy variables. The same procedure was used to approximate years of education in the other data sets, based on the educational system for each country.

arbitrary. As a general rule of thumb, a cutoff point of 5,000 inhabitants was used for the Czech Republic and Slovakia[7]: areas with fewer than 5,000 inhabitants were rural and 5,000 and above were urban. For Hungary, Poland, and Russia, a cutoff point of 10,000 inhabitants was used. Table 5.2 shows that most respondents (65 percent) lived in urban areas.

Figure 5.4 Trends in the percentage of disabled people of the total population in the Czech Republic, Hungary, Poland, Russia, and Slovakia, 1991-2002



Marital status

Marital status was coded into the dummy variables *Single* (reference category), *Widowed*, and *Married*. The dummy variable *Widowed* contained both widowed and divorced respondents. Some data sets also distinguish cohabitating couples from married couples. In these cases, the cohabiting couples were coded as married. More than half of the respondents were married, 18 percent were widowed or divorced, and 13 percent were single (see table 5.2).

Household size

The variable *Household size* contains the number of persons living in the household. To simplify the interpretation of the intercept of the estimated regression models, a single household was coded as '0', a two-person household as '1', and so on. As table 5.2 shows, most people lived in a two-person household.

[7] Except for the Social Stratification in the Eastern Europe data set, where for Slovakia a cutoff point of 2,000 inhabitants was used.

Time

The *Time* variable was computed as year-1991. This means that *Time* runs from 0 (1991) to 11 (2002). In the section on hypotheses, we theorize that the trends in income effects early in the transformation process were different from those later on in the transformation process. It is hard to determine the cut off point between early and late in the transformation process. Economic growth rates or inflation rates may provide a way to make this distinction. However these data are highly changeable from year to year, making them unusable. Therefore, the middle of the period – *Time* = 6 (1997) – was used to distinguish between early and late transformation. The argument is as follows: if the institutional changes of the early 1990s had an effect, this should be visible (at least partially) during the late 1990s.

Table 5.2 Descriptive statistics of respondents 18 years and older in the Czech Republic, Hungary, Poland, Russia, and Slovakia grouped together, 1991-2002 (valid N = 80,422)

Variables	N	Minimum	Maximum	Mean	Standard Deviation
Age-18	87,997	0	81	28.62	15.81
Household size	88,051	0	14	1[a]	–
Years of education	87,399	0	25	11.02	3.36
Gender					
Total	88,136				
Men	48.2 %				
Women	51.8 %				
Marital status					
Total	87,824				
Single	13.5 %				
Widowed	18.9 %				
Married	67.6 %				
Region					
Total	81,645				
Rural	35.2 %				
Urban	64.8 %				

Note:
[a]Mode.

5.5.3 Control variables

Besides the explanatory variables, several 'standard' control variables were included in the models.

Female

Men were coded as '0' and women as '1'. About 52 percent of the respondents were women and about 48 percent were men (see table 5.2).

Age

Respondents of 18 years and older were selected for the analysis. Age was centered on 18 years of age and a squared term was also included in the models. The oldest respondent in the stacked sample

was 99 (81+18) years of age, and on average, the respondents were about 47 (29+18) years of age (see table 5.2).

5.6 Methods

The analytical strategy was to estimate two sets of OLS regression models (see models 1 and 2 in table H.1) using the stacked data sets for the Czech Republic, Hungary, Poland, Russia, and Slovakia. First, model 1 assessed whether there was a linear trend in the income of social benefit holders with different resources. Second, model 2 was a restricted interrupted linear regression model also called a 'spline' model (Greene 2000: 322-325; Marsh and Cormier 2002), which estimated a 'broken' trend in the income effects over time, as implied by hypotheses 1 through 5. Such a model is referred to as *interrupted* because before and after a certain breaking point (called a 'knot') the slopes are allowed to be different. A restricted model was used, meaning that the function was forced to be continuous at the knot (Marsh and Cormier 2002). In other words, the regression lines before and after the knot are connected. Unrestricted interrupted regression models have also been used by Deng and Treiman (1997), spline (restricted interrupted) models have also been used by Verhoeven, Jansen, and Dessens (2005), and both models have been used by Luijkx, Róbert, de Graaf, and Ganzeboom (2002).

An example of an 18-year-old, unemployed Czech man is used here to explain the spline model. To illustrate how the spline model should be interpreted, let us first show how the income[8] of the unemployed man with few resources changed when we assume a linear trend. Note that the 18-year-old unemployed man has no education, lives in a rural area, lives without any other household members, and is not married. This means that only the coefficients of the *Intercept* (β_0), *T* (β_1), *Unemployed* (β_{10}), and *Unemployed*×*T* (β_{13}) of model 1 for the Czech Republic in table H.1 will be used. All other variables take the value '0' and are cancelled from the regression equation. This leaves the following equation:

$$Ln(Income) = \beta_0 + \beta_1 T + \beta_{10} D_1 + \beta_{13} D_1 \times T \qquad [5.1]$$

Thus, the effect of *T* depends on being unemployed. To illustrate this, equation [5.1] is reformulated to denote the income of the unemployed man with few resources (D_1=1) as a function of *T*:

$$Ln(Income) = (\beta_0 + \beta_{10}) + (\beta_1 + \beta_{13}) \times T \qquad [5.2]$$

From equation [5.2] it follows that changes over time in the income of the unemployed man are assessed by coefficients β_1 and β_{13}, which is indicated by the slope of the line U_1U_2 in figure 5.5. Using the coefficients reported in model 1 for the Czech Republic in table H.1, the income of the unemployed man increases by .010-.006 = .004 for each year that passes. Using the covariance matrix, the variance of the combined coefficient is calculated to determine whether the change over time is

[8] If income is used, it should be read as the logarithm of monthly (relative) household income.

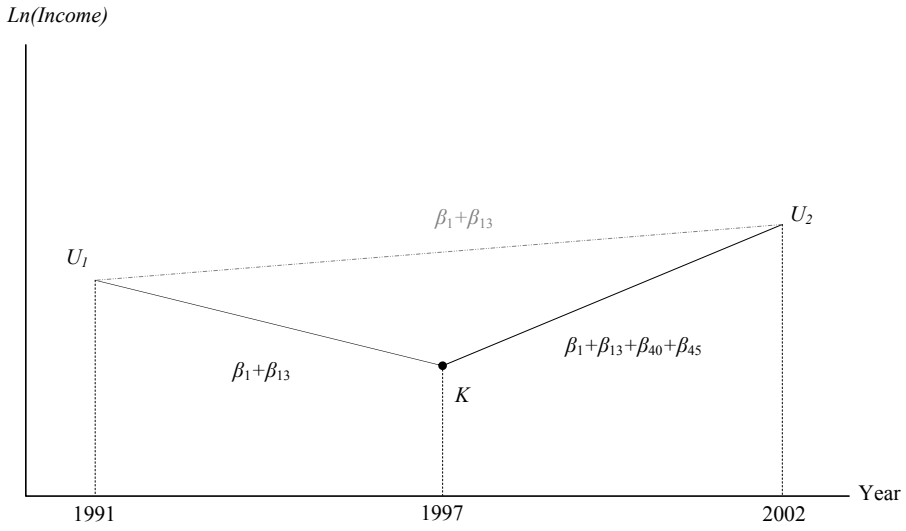
significant. To illustrate this, we can look at the change in income of the unemployed man over the period from 1991 to 2002. During this period, his income changes by (.010-.006)×11 = .044. The variance of $(11\beta_1+11\beta_{13})$ is computed from equation [5.3]:[9]

$$VAR(11\beta_1+11\beta_{13})=11^2 VAR(\beta_1)+11^2 VAR(\beta_{13})+2\times 11\times 11\times COV(\beta_1,\beta_{13}) \qquad [5.3]^{10}$$

where the squared standard errors of β_1 and β_{13} yield $VAR(\beta_1)$ and $VAR(\beta_{13})$.

During this period, his income increased by a non-significant .044.[11]

Figure 5.5 Illustration of a Model with and without a Spline



Let us now turn to the spline model. In this study, the knot is placed at 1997 and is depicted as *K* (see figure 5.5). Note that $K = 0$ when $T \leq 6$ and $K = 1$ when $T > 6$. To estimate whether the trend in the income of the unemployed man after 1997 ($T = 6$) was different from the trend up to 1997, the coefficient β_{40} of *Knot*×(*T*-6) and the coefficient β_{45} of *Unemployed*×*Knot*×(*T*-6) from model 2 in table H.1 are added to equation 5.1 (of which all coefficients are now retrieved from model 2).

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[9] Equation [5.3] is a specific instance of the more general formula (Retherford and Kim Choe 1993): $VAR\left(\sum_i a_i X_i\right)=\sum_i a_i^2 VAR(X_i)+2\sum_{j>i} a_i a_j COV(X_i,X_j)$

[10] $VAR(11\beta_1+11\beta_{13})=11^2\times.008^2+11^2\times.039^2+2\times11\times11\times-.00004=.182$

[11] $t=\frac{(11\beta_1+11\beta_{13})}{\sqrt{VAR(11\beta_1+11\beta_{13})}}=\frac{.044}{\sqrt{.182}}=.103$

$$Ln(Income) = \beta_0 + \beta_1 T + \beta_{10} D_1 + \beta_{13} D_1 \times T + \beta_{40} K \times (T-6) + \beta_{45} D_1 \times K \times (T-6) \quad [5.4]$$

This equation can be reformulated to express the income of the unemployed Czech man with few resources (D_1 =1) as a function of T. Up to 1997 (K = 0), the equation is as follows:

$$Ln(Income) = (\beta_0 + \beta_{10}) + (\beta_1 + \beta_{13}) \times T \quad [5.5]$$

From equation [5.5] it follows that up to 1997, changes in the income of the unemployed man are assessed by the coefficients β_1 and β_{13}, which is indicated by the slope of line U_1K in figure 5.5. Using the coefficients from model 2 in table H.1 for the Czech Republic, the income of the unemployed man increased by -.014+.034 = .020 for each year that passed until 1997. The change in the income from 1991 to 1997 (T = 6) of the unemployed man in the Czech Republic ([-.014+.034]×6 = .120) is not significant.

Equation [5.6] expresses the income of the unemployed Czech man (D_1 = 1) as a function of T after 1997 (K = 1).

$$Ln(Income) = (\beta_0 + \beta_{10}) + (\beta_1 + \beta_{13} + \beta_{40} + \beta_{45}) \times T \quad [5.6]$$

Coefficients β_{40} and β_{45} (see equation [5.4]) indicate whether the trend in the income of the unemployed Czech man after 1997 is different from the trend up to 1997. This means that the actual trend after 1997 is assessed by coefficients β_1, β_{13}, β_{40}, and β_{45} (see equation [5.6]), which is indicated by the slope of line KU_2 in figure 5.5. Using the coefficients from model 2 in table H.1 for the Czech Republic, the income of the unemployed Czech man decreased after 1997 by -.014+.034+.068-.093 = -.005 for each year that passed. The change in the income from 1997 to 2002 (T = 5) of the unemployed man in the Czech Republic ([-.014+.034+.068-.092]×5 = -.020) is not significant.

5.7 Results

5.7.1 Introduction

The results from model 1 and model 2 are reported in table H.1 of Appendix H and show that the increase in R-square between the linear model (model 1) and the spline model (model 2) is significant for all countries. This means that modeling the across-time variation as a linear interrupted trend increases the explained variation and is therefore the preferred model for testing the hypotheses.

The full models with the numerous interaction effects among regressors, between regressors and time, and between the interactions among regressors and time (Gerber and Hout 1998: 27) are very complex, making them hard to comprehend. Therefore, the coefficients have been plotted in several figures. These figures present trends in the incomes of workers and of unemployed, retired, and disabled persons with few resources (A), with five years of education (B), with 10 years of education (C), living in urban areas (D), being married (E), living in a three-person household (F), and living in a six-person household (G). We have used a 25-year-old person as an example to illustrate the income

of workers, the unemployed, and the disabled. To illustrate the income of pensioners, a 65-year-old person is used as an example. In Appendix H, we have described how the coefficients reported in table H.1 led to figures 5.6 through 5.10.

5.7.2 The Czech Republic[12]

Figure 5.6 presents the trends in the incomes of workers and unemployed, retired, and disabled for the Czech Republic. A striking result is that the unemployed people have clearly have the lowest income. Furthermore, the incomes of the retired and disabled people closely resemble to each other. The figure also shows that the income of social benefit holders hardly changed over time. Most of the trends in the income of social benefit holders that we do see increased until 1997 and decreased thereafter. These results reject hypothesis 1, which predicted the opposite: decreasing trends in the income of social benefit holders up to 1997 and increasing trends thereafter.

Figures 5.6 B and C present the trends in the income of people who have five years and 10 years of education. The results provide limited support for hypothesis 2. The income of unemployed and retired people was higher if they were more highly educated; however, their income remained the same over the period from 1992 to 2002. The income of the disabled people was also higher when they were more highly educated. The income returns to years of education decreased up to 1997 for the disabled people. After 1997, the income returns to years of education increased again.

The results of the income returns to living in urban areas, presented in figure 5.6 D, provide only limited support for hypothesis 3. The 1992 income of unemployed and retired people who lived in an urban area was not higher than the income of those who lived in a rural area, and the income returns to living in an urban area did not change over time. The results for disabled people confirm hypothesis 3. Up to 1997, the income returns to living in an urban area increased; after 1997, this increasing trend leveled off.

The results presented in figure 5.6 E provide some support for hypothesis 4. The income of unemployed married people was higher than the income of unemployed people who were not married. However, the income returns to being married remained the same for unemployed people until 1997 and increased after 1997. Until 1997, married retired people did not have an income advantage over retired people who were not married. After 1997, the income returns to being married increased for retired people. The income returns to being married increased for disabled people until 1997. After 1997, the income returns to being married remained the same for the disabled people.

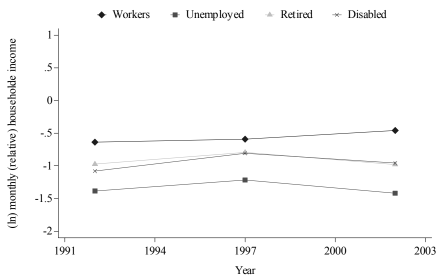
Figures 5.6 F and G present the trends in the income of people who lived in a three-person or a six-person household. The results for retired people confirm hypothesis 5. The figures clearly show that the retired people who lived in a larger household had higher incomes than those who lived without any other household members. Furthermore, the income returns to living in a large household increased until 1997 and decreased thereafter. The results for the unemployed and disabled people provide partial support for hypothesis 5: the income of unemployed and retired people was higher when they were living in a larger household; however, the income returns to living in a large household did not change over time for the unemployed and disabled people.

[12] When we speak of a decreasing or increasing trend in income, the combined coefficient to determine the trends was significant. When we speak of income that remained the same, the combined coefficient that indicates the trend in income was not significant.

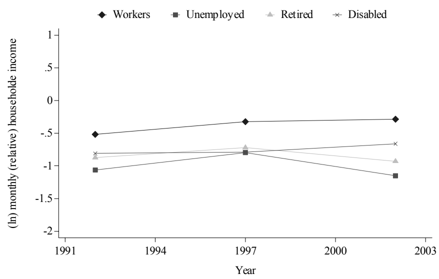
Figure 5.6 (ln) Income trends for workers and for unemployed, retired, and disabled persons in the Czech Republic, 1992-2002

A: Persons with few resources[a]

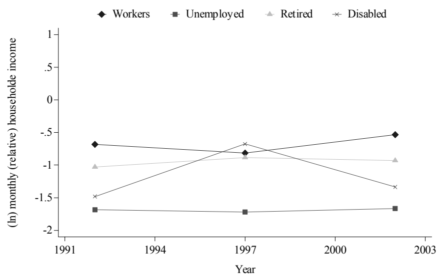
B: Persons with 5 years of education



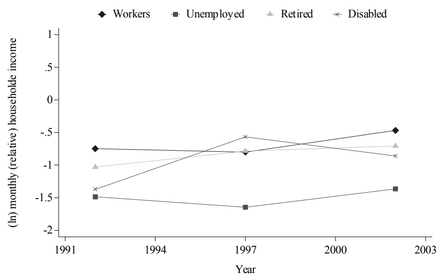
C: Persons with 10 years of education



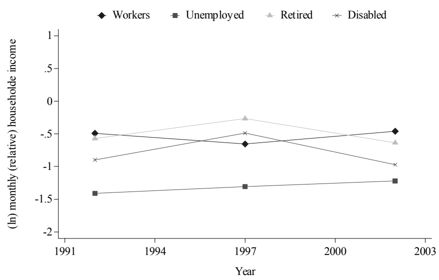
D: Persons living in urban area



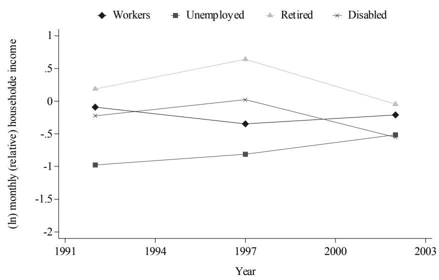
E: Persons who are married



F: Persons living in 3 person household



G: Persons living in 6 person household



Note
[a]A person with no education, who lives in a rural area, who is not married, and who lives without any other household members

5.7.3 Hungary

The trends in the income of workers and of the unemployed, the retired, and the disabled people in Hungary are presented in figure 5.7, which shows that the incomes of the unemployed, retired, and disabled people closely resemble to each other. The results reject hypothesis 1, that the incomes of social benefit holders decreased during the early years of the market transformation process and increased later on. The trends that were found in the income of social benefit holders showed an increase up to 1997 and decreased thereafter.

The incomes of people with five and 10 years of education are presented in figures 5.7 B and C. The results for unemployed and retired people partially confirm hypothesis 2: being more highly educated was beneficial; however, the income returns to years of education remained the same both before and after 1997. Hypothesis 2 is also partially confirmed by the results for disabled persons. More highly educated disabled people had more income than those with less education. However, until 1997, the income returns to years of education decreased and after 1997 the income returns to years of education increased again.

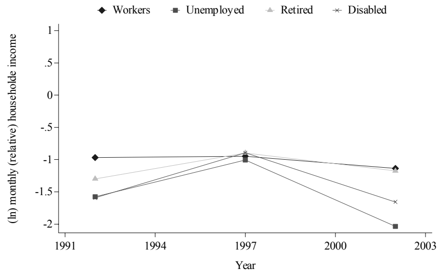
Figure 5.7 D presents the trends in the income of people who lived in urban areas, compared to those in rural areas. The results provide limited support for hypothesis 3. All three social benefit groups who lived in urban areas had higher incomes than those who lived in rural areas, but their income did not increase during the early years of market reforms. Until 1997, the income returns to living in urban areas decreased for unemployed and retired people and remained the same for the disabled people. The income returns to living in an urban area remained the same for all three social benefit groups after 1997.

The incomes of the people who were married are presented in figure 5.7 E. The results for the married unemployed people reject hypothesis 4. In 1992, the incomes of married unemployed people were comparable to the incomes of unmarried unemployed people. The income returns to being married decreased for unemployed people until 1997 and increased thereafter. The results for the retired and disabled people partially confirm hypothesis 4. In 1992, the income of married retired people was comparable to that of unmarried retired people and the income of married disabled people was lower than the income of unmarried disabled people. However, the income returns to being married increased until 1997. After 1997, the income returns to being married decreased for retired people and remained the same for the disabled people.

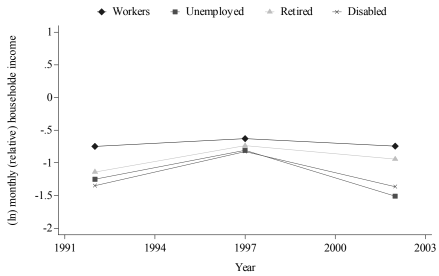
The trends in the incomes of people living in a three- and six-person household are presented in figures 5.7 F and G. The results for the unemployed people partially confirm hypothesis 5. The income of unemployed people who lived in a large household was higher than the income of unemployed people living without any other household members. However, the income returns to living in a larger household remained the same until 1997 and increased thereafter. The results for the retired and the disabled people partially confirm hypothesis 5. The retired and disabled people who lived in larger households had higher incomes than the retired and disabled people who lived without any other household members. However, the income returns to living in a larger household decreased up to 1997 for both the retired and disabled people. After 1997, the income returns to living in a larger household decreased for retired people and remained the same for the disabled people.

Figure 5.7 (ln) Income trends for workers and for unemployed, retired, and disabled persons in the Hungary, 1992-2002

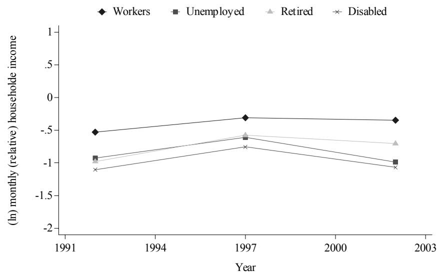
A: Persons with few resources[a]



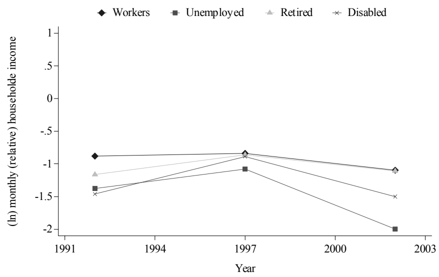
B: Persons with 5 years of education



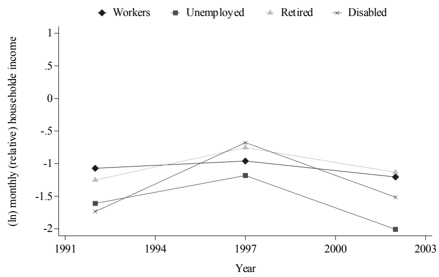
C: Persons with 10 years of education



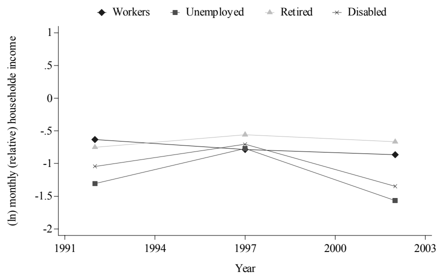
D: Persons living in urban area



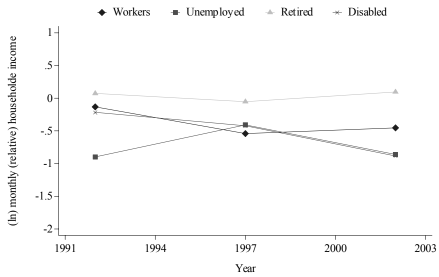
E: Persons who are married



F: Persons living in 3 person household



G: Persons living in 6 person household



Note:
[a]A person with no education, who lives in a rural area, who is not married, and who lives without any other household members

5.7.4 Poland

The trends in the incomes of workers and of the unemployed, retired, and disabled people for Poland are presented in figure 5.8. The figure shows that unemployed people had the lowest incomes. In addition, the incomes of workers and retired people closely resemble to each other. Hypothesis 1 is rejected for the unemployed and retired people, and there are hardly any trends over time. For the disabled, people hypothesis 1 is confirmed: the incomes of disabled people show decreasing trends until 1997 and increasing trends thereafter.

Figures 5.8 B and C present the trends in the income of people with five and 10 years of education. Hypothesis 2 is partially confirmed for the unemployed and retired people: being more highly educated clearly provided income advantages, but the income returns to years of education did not change during the period from 1992 to 2002. The results for disabled people confirm hypothesis 2: more highly educated disabled people had higher incomes than less well educated disabled people. The income returns to years of education increased until 1997 for the disabled people and remained the same thereafter.

The incomes of people living in urban areas are presented in figure 5.8 D. The results confirm hypothesis 3 for all three social benefit groups. The 1991 incomes of the social benefit holders living in urban areas were comparable to the 1991 incomes of those living in rural areas. However, the income returns to living in an urban area increased for social benefit holders until 1997. After 1997, the income returns to living in an urban area remained the same for unemployed and retired people and decreased for disabled people.

The income trends for married people are given in figure 5.8 E. The results for the unemployed reject hypothesis 4. The income of married unemployed people was comparable to the income of unmarried unemployed people and the income returns to being married remained the same over the period from 1992 to 2002. Hypothesis 4 is partially confirmed for the retired and disabled people. The income of the retired and disabled people who were married was higher than the income of unmarried retired and disabled people. However, until 1997, the income returns to being married remained the same for the retired and the disabled people. After 1997, the income returns to being married increased for retired people and remained the same for the disabled people.

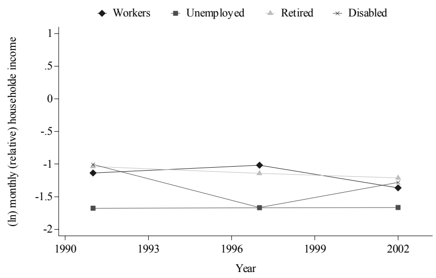
Figures 5.8 F and G present the trends in the income of people living in a three- and a six-person household. The results partially confirm hypothesis 5. For all three social benefit groups, living in larger households provided an income advantage compared to living without any other household members. However, the income returns to living in a large household remained the same during the period from 1992 to 2002 for all three social benefit groups.

5.7.5 Russia

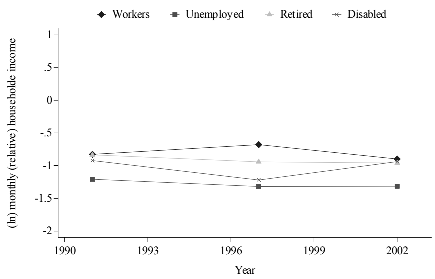
Figure 5.9 presents the trends in the incomes of workers and of unemployed, retired, and disabled people in Russia. The figure shows that the incomes of the unemployed were the lowest. Furthermore, the incomes of retired and disabled people closely resembled those of workers. The results provide scant support for hypothesis 1. Those trends in income that were found decreased until 1997, except for the trends in the income of retired people living in a six-person household.

Figure 5.8 (ln) Income trends for workers and for unemployed, retired, and disabled persons in the Poland, 1991-2002

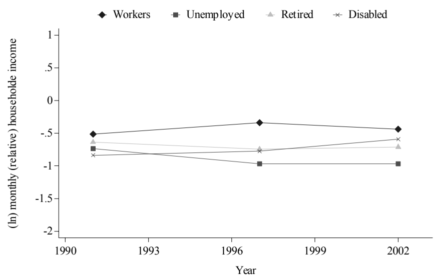
A: Persons with few resources[a]



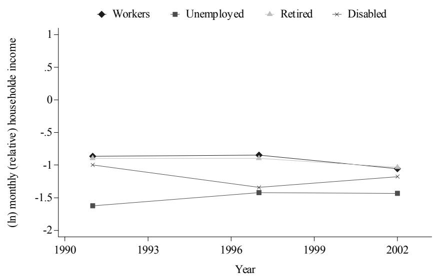
B: Persons with 5 years of education



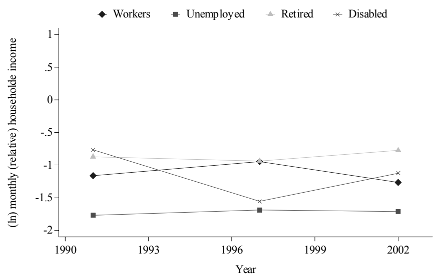
C: Persons with 10 years of education



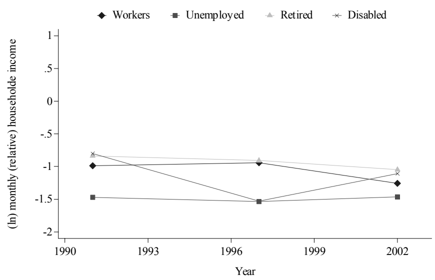
D: Persons living in urban area



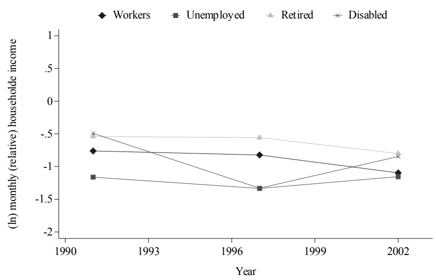
E: Persons who are married



F: Persons living in 3 person household



G: Persons living in 6 person household



Note:
[a]A person with no education, who lives in a rural area, who is not married, and who lives without any other household members

The incomes of people with five and with 10 years of education are presented in figures 5.9 B and C. The results for all three social benefit groups reject hypothesis 2. Being more highly educated did not provide income advantages for social benefit holders. Furthermore, the income returns to years of education remained the same during the period from 1991 to 2002.

The results for the income returns to living in an urban area, presented in figure 5.9 D, contradict hypothesis 3: there were no significant differences between the incomes of social benefit holders living in urban areas and those living in rural areas. Furthermore, the income returns to living in an urban area remained the same during the period from 1991 to 2002.

Figure 5.9 E presents the trends in incomes of married people. The results provide only scant support for hypothesis 4. The income of the married unemployed was comparable to the income of the unmarried unemployed and the income returns to being married did not change over the period from 1991 to 2002. Married retired people had even lower incomes than unmarried retired people. The income returns to being married increased for the retired and remained the same for the disabled until 1997. After 1997, the income returns to being married remained the same for the retired and increased for the disabled.

The results for the income returns to living in a large household, presented in figures 5.9 F and G, confirm hypothesis 5. Although the 1991 income of the unemployed living in a larger household was the same as the 1991 income of the unemployed living without any other household members, the income returns to living in a large household increased until 1997 and decreased after 1997. The incomes of retired and disabled people living in large households were higher than the incomes of retired and disabled people living without any other household members. The income returns to living in a large household increased for the retired and remained the same disabled people. After 1997, the income returns to living in a large household decreased for the retired and remained the same for the disabled.

5.7.6 Slovakia

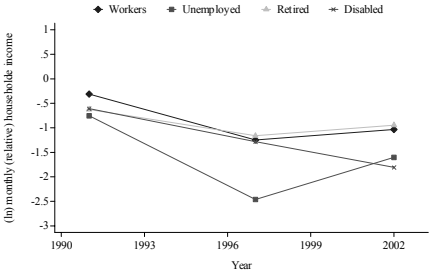
The Slovakian data are only available for three points in time. Therefore, the estimated coefficients provide only tentative results and conclusions are provisional. The results from the analysis are presented in figure 5.10. The figure shows that the incomes of the three groups of social benefit holders closely resemble each other in 1993 and in 1998. In 1997, the income of unemployed people is lower than the income of retired and disabled people. There are only few changes over time in the income of social benefit holders, which means that hypothesis 1 is rejected.

Figures 5.10 B and C present the trends in the income of people with five and 10 years of education. In 1993, the more highly educated social benefit holders did not have any income advantages. The income returns to years of education increased for the unemployed people until 1997 and decreased thereafter. The income returns to years of education for the retired and disabled people remained the same during the whole period.

The incomes of people living in urban areas are presented in figure 5.10 D. The 1993 income of the social benefit holders living in urban areas was comparable to the 1993 income of social benefit holders living in rural areas. The income returns to living in an urban area remained the same for the social benefit holders during the whole period.

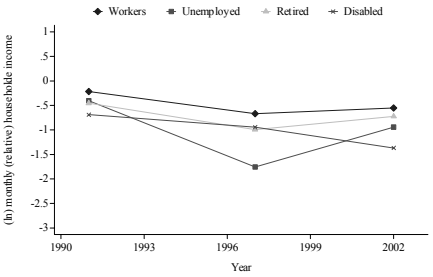
Figure 5.9 (ln) Income trends for workers and for unemployed, retired, and disabled persons in the Russia, 1991-2002

A: Persons with few resources[a]

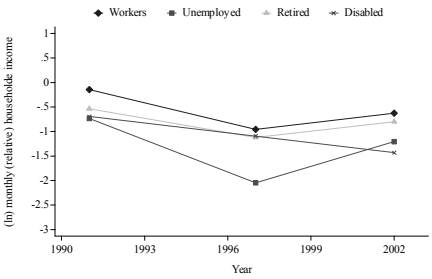


B: Persons with 5 years of education

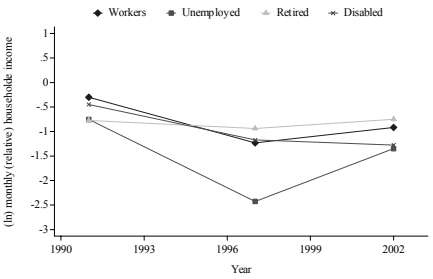
C: Persons with 10 years of education



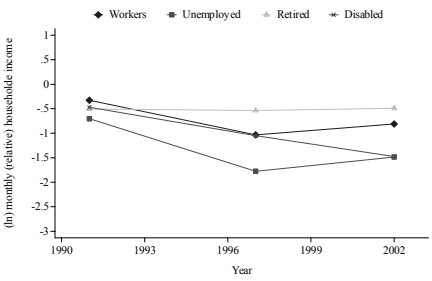
D: Persons living in urban area



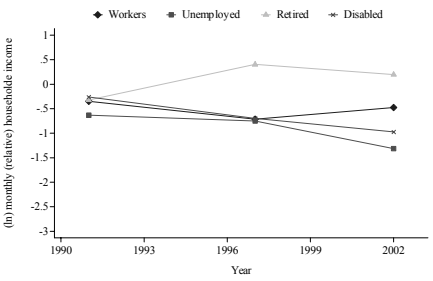
E: Persons who are married



F: Persons living in 3 person household



G: Persons living in 6 person household



Note:
[a]A person with no education, who lives in a rural area, who is not married, and who lives without any other household members

The results for married people are presented in figure 5.10 E. The incomes of married unemployed and disabled people were the same as those for unmarried unemployed and disabled people. The income returns to being married also remained the same for unemployed and disabled people. The 1993 income of married retired people was higher than the 1993 income of the unmarried retired people. For retired people, the income returns to being married decreased until 1997 and increased thereafter.

Figures 5.10 F and G present the incomes of people living in a three-person and a six-person household. Living in a larger household provided income benefits for the unemployed and retired people. The income returns to living in a larger household remained the same for unemployed people. For retired people, the income returns to living in a larger household increased until 1997 and decreased thereafter. The disabled people did not get any income advantages from living in a large household. The income returns to living in a large household also remained the same during the period from 1993 to 2002.

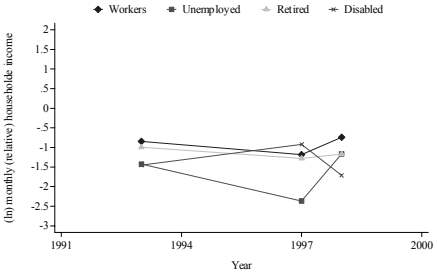
5.8 Summary and conclusions

Unlike most studies in the market transition debate, this study addressed the income position of the people who depended on the state to provide in their income: the social benefit holders. Much has changed for the social benefit holders since the 1989-reforms. Negative economic growth, hyperinflation, raising unemployment, and the generous social safety net inherited from the Communist era placed heavy burdens on the state budget. Rigorous institutional changes were inevitable, not only in the economic domain but the social safety net had to be adjusted as well. Such a changeable and unstable situation will have had repercussions for the income position of social benefit holders.

Two questions were raised in this study. First, did the incomes of people depending on social benefits change in post-Communist countries? We analyzed changes over time in the income of the unemployed, retired, and disabled in the Czech Republic, Hungary, Poland, Russia, and Slovakia. In total, 53 cross-sectional data sets covering the period from 1991 to 2002 were standardized and analyzed using elaborated regression models. To assess the changes over this period, it is important to describe the income of social benefit holders in 1991. Social benefit holders with few resources, especially the unemployed people, had a lower income than the minimum-wage group. The low income of the unemployed is not surprising, because unemployment benefits tend to be low. The idea is that unemployed people are stimulated to go back to work when their benefits are kept low. It is also known that retirement and disability pensions were misused. People were pushed into early retirement and some used sick leave from their main job to work in the ‘second economy’ (Fajth 1999; Müller 2002a). This could distort our findings, but there is no available information to assess the extent of any distortion.

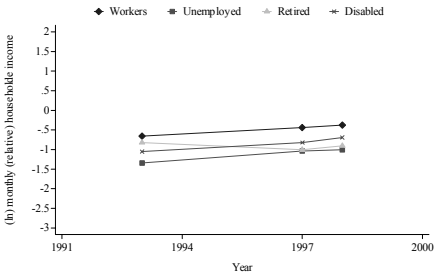
Figure 5.10 (ln) Income trends for workers and for unemployed, retired, and disabled persons in the Slovakia, 1993-1998

A: Persons with few resources[a]

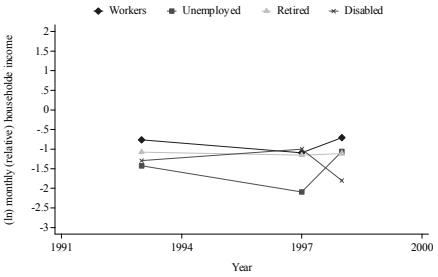


B: Persons with 5 years of education

C: Persons with 10 years of education



D: Persons living in urban area



E: Persons who are married

F: Persons living in 3 person household

G: Persons living in 6 person household

Note:
[a]A person with no education, who lives in a rural area, who is not married, and who lives without any other household members

The income of social benefit holders with few resources in Russia and the income of the disabled with few resources in Poland decreased during the early years of market reform and increased later on. It is known that the real wages dropped in Russia during the early stage of the transformation process (Gerber and Hout 1998), the same appears to be true for the incomes of the social benefit holders. The opposite was found in the Czech Republic and Hungary, and in Poland and Slovakia no trends were found. Thus, the income of social benefit holders with few resources changed during the transformation process, but not necessarily for the worst. Only in Russia did we find a deterioration of the income of all three groups of social benefit holders with few resources.

In general, the income situation of retired people was relatively less bad than the income situation of the unemployed and disabled people. Comparable results have been found in earlier studies where high social (cash) transfers were reported for Poland, especially with pensions (Keane and Prasad 2002b; Müller 2002a). In Russia, the income position of pensioners was also relatively less bad than the income position of the unemployed and disabled. This could result from retired people in Russia being organized well enough to get their devaluated pensions compensated.

Second, this study investigated whether social benefit holders found ways to maintain or supplement their income during the worst times. The second question addressed the idea that during the market transformation process, having additional resources would be beneficial in income attainment. In other words, to what extent can changes in income be explained by the amount of resources people depending on social benefits had? Additional resources were approximated by education, living in an urban area, living in a large household, and being married. In general, education, living in a city, and living in a large household provided income advantages for social benefit holders. Some support was found for the idea that these resources were especially important during the early stage of the market transformation process. The results as to whether being married served as an additional resource were not clear and varied between the three groups of social benefit holders as well as between the five countries. Thus, no decisive conclusions can be given.

It seems that on average, social benefit holders were to some extent successful in maintaining their income during the market transformation process. However, in relative terms – compared to the income of the minimum-wage group – the income of social benefit holders was lower. Retired people living in large households were a striking exception. During the early stage of the market transformation process, when the influences of the generous social safety net of the Communist era were still present, this income difference decreased, but it increased again after 1997, when the impact of the reforms in the social safety was likely to have become visible. In additional, education, an important resource that brings income advantages during market transformations, seems to have been more beneficial to workers than to social benefit holders. On the other hand, living in an urban area, being married, and living in a large household, which were not typically important resources during the market transformation process, brought income advantages for social benefit holders. Market related resources are more beneficial for workers and non-market related resources for social benefit holders, which may result in a relative decline in the income of social benefit holders.

Thus, this study has shown that social benefit holders were among the losers of the market transformation process, but they did have chances to maintain and supplement their income.

5.9 Discussion

The analytical design used in this study has a major drawback. As discussed in section 5.5.1, analyzing monthly household income introduces the problem that the dependent variable is not applicable only to the respondent. The partner may also contribute to the monthly household income. This means that it is important to take the characteristics of the partner, such as education and employment status, into account. Having a more highly educated partner who contributes to the monthly household income will offer more income protection during hard times than having a partner with no education. Another interesting question is what happens when both the respondent and the partner are social benefit holders? It is obvious that an analytical design that enables one to control for important characteristics of the partner would have been more suitable. However, in view of the available data, such a design would have resulted in a dramatic loss of data. Therefore, it was not possible to take the partner's characteristics into account.

Another drawback of this study is the arbitrarily chosen knot of the spline, which was placed in 1997. This year falls in the middle of the period under investigation. It was argued that if the institutional changes of the market transformation process had an effect, these would show up several years after the changes took place. It would have been more convincing if some macro economic indicator could have been used to indicate where knot should have been. Using inflation rates was suggested, but these data are much too changeable from one year to another to be suitable.

6

CONCLUSIONS AND DISCUSSION

6.1 Introduction

The socialist experiment and the dramatic shift from the redistributive economies of Communism to capitalist market economies offer unique opportunities to study changing mechanisms of stratification. Communism publicly claimed an ideology of equality and, through state intervention, society was destratified. This indeed was visible in the relatively low levels of income inequality in Communist countries. After the 'velvet' revolutions and the fall of the Berlin Wall, Communism broke down, the ideal of equality was put aside, and market reforms shifted the balance of socioeconomic inequalities. This became visible in the rising inequality in incomes in post-Communist countries (described in chapter 1).

That the inequality in incomes would increase when markets were introduced in redistributive economies is not surprising. However, many scientists are puzzled about why the income inequality increased so dramatically, especially during the first few years of market reform. In addition, an increase in income inequality would imply that the differences in income between particular social groups would increase. Therefore, social scientists are also interested in determining the winners and losers of the market transformation process. These research efforts have resulted in an extensive literature, which has often been referred to as the 'Market Transition Debate'.

In view of this extensive research literature, this study first evaluated previous studies and summarized their empirical results. This pointed to several main issues to which there were as yet no satisfactory answers: (1) To what extent was the market transformation process uniform across transitional countries, having a similar effect on stratification outcomes? (2) What happened to the income advantages of the members of the Communist Party? (3) Did the market transformation process create difficulties for the unemployed, retired, and disabled, in particular? The secondary analyses performed in this study addressed these issues. Five post-Communist countries in Central and Eastern Europe were analyzed: the Czech Republic, Hungary, Poland, Russia, and Slovakia. And only one dependent variable was examined: namely, income. This study not only examined the effects of income determinants, per se, but also focused on changes in the effects of income determinants over time.

From a scientific perspective, this study contributed to the existing literature by addressing some of the theoretical and empirical inconsistencies in the market transition debate. First, we attempted to achieve theoretical progress. The market-transition debate is mainly centered on the Market Transition Theory (MTT), introduced by Nee (1989), who noticed changes in stratification outcomes during the market reforms of the Chinese rural economy. Since its first publication in 1989, the MTT has been used extensively to explain changing stratification outcomes in reforming and post-Communist

societies. In this respect, the theory has been used as a general theory of transition, which should make it applicable to all societies undergoing a process of transformation from a redistributive to a market economy. In this study, we evaluated this idea to see if MTT predictions would hold when applied to several Central and Eastern European (CEE) countries. This evaluation has resulted in suggestions to improve and elaborate the theory. Some of these suggestions have been transformed into new hypotheses, which have been examined in more detail 'previous chapters'.

Second, we attempted to make methodological progress in three ways. To begin with, a meta-analysis was applied, using regression coefficients reported in sociological and economic studies. So far, there have only been a few attempts to apply meta-analysis in sociology (Wagner and Weiß 2002, 2003, 2006). Opponents argue that sociological studies are too different from each other with respect to designs, models, measurements, and data, and that the results retrieved from them are not comparable. Using a 'meta-regression' analysis provided the opportunity to control for study differences to a great extent and it has been argued that meta-analysis can be used to summarize results from sociological studies (Verhoeven, Jansen, and Dessens 2005).

In addition, we attempted to improve the comparative scope of earlier studies. In trying to capture the influence of the market transformation process on stratification outcomes, earlier studies analyzed several countries (or regions within one country) in one year or in one country over several years. In these cases, either the difference in progressing market reforms between countries or regions was used to capture the influence of the transformation process or time was used as a measure of market transformation. In this study, 65 surveys of five CEE countries, covering a period from 1991 to 2002, were standardized. Two rich, valuable datasets from before 1989 were also analyzed. This provided some insight into the income situation under the Communist regime and provided the opportunity to study income differences before and after 1989.

Finally, these standardized datasets were analyzed using two-step analyses to explain variation in the effects of income determinants cross-nationally and across time. Changes over time in the effects of income determinants were estimated as broken trends, with the trends allowed to be different before and after a certain breaking point. We also used restricted interrupted linear models – also referred to as 'spine' models. Chapters 2 and 5 discuss these models in more detail.

6.2 Conclusions

6.2.1 General research problem

This study addressed only one stratification outcome: income. Our general research question was the following:

Who are the winners and losers in income attainment during the transformation process in post-Communist societies?

In order to obtain a clear answer to the general research question, it was divided into five sub-questions that aimed to identify winners and losers. These questions are discussed in chapters 2 through 5. Because we examined the influence of the market transformation process on several income

determinants, using several study designs, drawing conclusions was rather complicated and difficult. Therefore, the hypotheses and empirical results of chapters 2 through 5 have been summarized in table 6.1. Note that both the main effects of income determinants as well as the trends over time have been reported in this overview, and that in this respect, the transformation process was measured as time progressed after the 1989-reforms. The effects of the income determinants are indicated by + (positive effect), 0 (no effect), and – (negative effect). The trends in table 6.1 are indicated by > (effect gets stronger), = (effect remains the same), and < (effect gets weaker). For example, we expected a positive income effect for CP membership, which would be indicated by +. It was hypothesized that the income effect of CP membership decreased during the transformation process. This is indicated by <, meaning that the income effect of CP membership got weaker.

6.2.2 Market Transition Theory: A meta-analysis of studies on income attainment

As mentioned earlier, the market-transition debate is centered on the MTT. While Nee originally proposed the theory for China, it has been formulated as a general theory of transition. As mentioned in chapter 2, many scholars have used the theory to explain changing stratification outcomes in China as well as in CEE countries. Instead of adding yet another study to this extensive literature by testing the predictions derived from the MTT for countries separately, we first summarized existing empirical results for income returns to the various forms of capital. We then evaluated whether all these research efforts have resulted in a better understanding of the relationship between marketization processes and stratification outcomes.

The MTT has been used to derive predictions about who the winners and losers are during the market transformation process. In order to determine the winners and losers, individual traits and resources that determine income have been analyzed. The productivity of some resources was expected to increase (e.g., returns to education) during the market transformation process, while the productivity of other resources was expected to decrease (e.g., returns to political capital). Winners are the people who had resources or traits that increased their income during the market transformation process and losers are the people who did not have these resources or traits or who retrieved their incomes based on resources that became devalued during the market transformation process. Therefore, the first sub-question of this study, addressed in chapter 2, reads as follows:

1. To what extent have the income returns to human, political, and market capital changed during the market transformation process?

The results from the meta-analysis are summarized in the 'Meta-Analysis' columns of table 6.1. They show that to some extent, the MTT was able to describe the relationship between market reforms and the changing effect of income determinants. The main effects of membership in the Communist Party (CP), education, work experience, private sector employment, and gender were found to be as expected. However, few changes were found in the effects of income determinants over time, indicating limited support for the expected influence of the market transformation process. The results concerning the income returns to political capital were based only on studies in urban China, and show a tendency towards an increasing trend during the market transformation process, contradicting the

Table 6.1 Overview of findings from this study (chapters 2 through 5), income effects and trends

	Hypotheses		Empirical results				
			Meta-Analysis		Data		
	Effect	Trend	Effect	Trend	Effect	Trend	Path Dependency
Market Transition Theory							
Political capital							
CP membership	+	<	+[a]	>[a]	+	Mixed	Partially
Human capital							
Education	+	>	+	=	+	>	Yes
Experience	+	>	+	=	+	Mixed	Yes
Market resources							
Self-employment	+	>			+	=	Indecisive
Private sector employment	+	>	+	=	+	Mixed	Yes
Gender							
Women	–	<	–	Mixed	–	Mixed	Yes
New hypotheses							
Social benefits		←97→				←97→	
Unemployment	–	> <			–	= =	
Retirement	–	> <			–	< >	
Disability	–	> <			–	< >	
Additional resources[b]:	–	> <					
Education	+	> <			+	< >	
Urban region	–	> <			0/–	= <	
Household size	+	> <			+	< =	
Marital status	+	> <			0/–	> <	

Note: + positive relationship, – negative relationship, 0 no relationship, < relationship gets weaker, > relationship gets stronger, = relationship does not change, ←97→ period until and after 1997.
[a]Findings only concern urban China.
[b]The additional resources are approximated by education, region, household size, and marital status (see chapter 5).

hypothesis that the changing power structure would lead to diminishing income advantages for CP members. The gender income gap decreased in urban China (as predicted) but remained stable in CEE countries. In general, differences were found between urban China and several CEE countries analyzed as one region, suggesting that the market transformation processes influenced income attainment differently between the two regions.

In chapter 2, we conclude that in its current state, the MTT needs revision and elaboration to accurately describe the relationship between the market transformation process and income attainment. To begin with, the relationship between market transformation and income returns to political capital seems more complex than suggested by the MTT. The argument that changes in the power structure resulted in the diminishing value of political capital did not hold for urban China; CP members have been able to find ways to maintain their income advantages. In chapter 4, this issue is discussed in more detail for Central and Eastern Europe.

The second conclusion of chapter 2 is that additional propositions are needed to specify the conditions under which the MTT predictions hold and under which they do not. The MTT is formulated as a general theory, which explains changing stratification outcomes during times of market reforms in reforming or post-Communist countries. This implies that the theory can be used to predict changes in the stratification order in any country undergoing such processes. The meta-analysis showed that this was not the case. Income returns changed differently for urban China versus Central and Eastern Europe. In chapter 3, we argue that to increase our understanding of how the shift from a command economy to a market economy has influenced stratification outcomes, specific characteristics of the transformation processes occurring in transitional countries should be identified.

Finally, in chapter 2, we conclude that the MTT does not deal with the 'real' losers of the market transformation process. The three interrelated theses of the MTT provide little understanding about the way in which the market transformation process influences the income position of the poor and the weak: the unemployed, retired, and disabled. These are the social groups that can easily drop below the poverty line. This issue has been addressed in chapter 5, where the MTT has been used to derive new hypotheses about how the transformation process influenced the income of social benefit holders.

6.2.3 Market Transition Theory: A secondary analysis of post-Communist societies

Let us now turn to one of the major issues in the market-transition debate: whether market transformations in post-Communist countries should be regarded as being uniform (as assumed by the MTT) or whether they are unique, varying between countries depending on the institutions inherited from the Communist regimes and those adopted thereafter (the second conclusion of chapter 2). This could not be examined sufficiently in the meta-analysis of chapter 2, where only two regions were distinguished: urban China and Central and Eastern Europe. Still, the differences between these two regions that were found in the meta-analysis indicated that more attention should be given to this issue. Therefore, this topic was studied in chapter 3 and the second sub-question of this study reads:

> *2. To what extent have the income returns to human and market capital the same pattern in CEE countries during the market transformation process? And how can differences be related to different path dependent transformation processes occurring in these countries?*

In order to find an answer to the first part of sub-question 2, the MTT was applied to predict trends in the effects of income determinants for the five CEE countries. Because the MTT treats market transformation processes as being uniform, similar trends between the CEE countries were predicted. The results from the analyses of the standardized data sets are reported in the 'Data' columns of table 6.1. Similar to the results from the meta-analysis, the main effects of education, work experience, self-employment, private sector employment, and gender were as predicted. But, the trends were not the same for the five CEE countries. Although for all five CEE countries the income effect of education increased, the trends varied between countries. Mixed results were found for the trends in the income effects of work experience, private sector employment, and gender. In some countries, increasing trends were found, while in other countries, decreasing or no trends were found. No trends were found in the income effect of self-employment. Altogether, the clear differences between the countries seem to suggest that CEE countries experienced country specific transformation processes that affected their stratification outcomes differently.

This was examined in greater detail by relating the empirical trends summarized above to the theoretical notion of path dependent transformation processes occurring in CEE countries (the second part of sub-question 2). Looking at the trends in income effects in more detail, groups of countries could be identified. The trends were similar within these groups and were different between the groups. Stark's typology of privatization strategies was used to group the countries on a theoretical basis. This 'empirical' classification corresponded to a great extent to the theoretical classification of CEE countries. Note that these results were preliminary in the sense that hypotheses tests could not be conducted and that they only provided an indication of the relationship between path dependent transformation processes and different trends in income effects across CEE countries.

6.2.4 Winners and losers in market transition: CP members

Another heavily debated issue in the market-transition debate is the notion of the decline of political capital. According to the MTT, political capital will lose its value during the market transformation process. With the meta-analysis, the income effect of CP membership could only be analyzed for urban China, but the consequences of the Chinese and the Central and Eastern European market transformation process will clearly have been different for CP members. China is a reforming Communist country, meaning that China is still governed by the CP. In CEE countries, the Communist regimes collapsed and the CP did not remain in power in most countries after the 1989-reforms; the institutional basis to gain benefits and advantages for CP members ceased to exist. This makes the Central and Eastern European situation interesting because the expected decline in the income returns to political capital should apply here, and a separate chapter has been devoted to the income returns to political capital, based on the available information on CP membership in the standardized datasets. Chapter 4 addressed this topic and the following sub-question was investigated:

3. What are the remaining income advantages of CP members over non-CP members in post-Communist societies when taking into account their differences in resources?

The results from the analyses conducted in chapter 4 are summarized in the 'Data' columns of table 6.1. CP members earned more before and during the transformation process. This is especially true for

the high rank CP members (the political elite). The results provide only limited support for the prediction that the value of political capital declined during the transformation process. A significant drop in the income advantages of CP members was found only in Slovakia and Hungary; thus, much of the income advantages CP members had during the Communist era remained during the transformation process. Note that these remaining income advantages cannot be explained by alternative suggestions, such as having more education and managerial skills, as has been proposed by critics of the MTT. The analyses controlled for differences in occupation (EGP categories) between CP members and non-CP members, which could be interpreted as controlling for the effect of managerial skills, and for differences in education (see chapter 4 for more details on the matching procedure). Similar results have also been reported by other authors (Bian 1994; Bian, Shu, and Logan 2001; Róna-Tas 1994), but here, we have demonstrated it in a cross-national and across time comparative design.

In addition, there were differences between CEE countries, which have been related to the notion of path dependent transformation processes. Here, Walder's (2003) classification of elite opportunity and Stark's (1992a) classification of privatization strategies were used to rank countries according to the extent of expected convergence between the income of CP and non-CP members. The empirical results have been compared with these theoretical rankings of countries and some support was found for the relationship between path dependent transformation processes and the convergence of the income of CP members and non-CP members. Although we could not conduct empirical tests, there seems to be some indication that more insight could be gained by specifying the path dependent conditions under which MTT predictions hold and under which they do not.

6.2.5 Winners and losers in market transition: The unemployed, retired, and disabled

The general research question about the losers of the market transformation process has not been well examined in previous studies. Researchers participating in the market-transition debate have paid little or no attention to determining who the 'real' losers are. The welfare systems of Communist countries were known to have been to be very generous. All this changed with the 1989 market reforms. During the first years of the transformation process, CEE countries experienced negative economic growth, hyperinflation, and a dramatic rise in unemployment – developments that placed a heavy burden on state budgets, with the result that expenditures had to be cut. It was only after a few years of market reform that scientists and policymakers devoted more attention to how the social security system worked in this dynamic environment. They decided that it had to be reconstructed to meet the standards of the new market society. This was expressed in a fundamental shift in philosophy: the promised 'cradle-to-grave' income security was traded for a policy that stressed increased individual responsibility for one's own life. These developments can be expected to have had repercussions for the weak and the poor in post-Communist societies. We addressed this issue in chapter 5, and the fourth sub-question reads as follows:

> *4. How have the incomes of people depending on social benefits changed in post-Communist societies? And have the incomes of people who were dependent on social benefits changed differently when taking into account the differences in their resources?*

The results from the analysis of chapter 5 are summarized in the lower part of table 6.1. To begin with, the unemployed, retired, and disabled people with few resources had lower incomes than the income of the minimum wage group. To some extent, additional resources helped social benefit holders to supplement their income.[1] Being more highly educated, living in a large household, and living in a rural area had a positive effect on the income of all three social benefit groups. On the other hand, the results concerning being married were unclear. For unemployed people, being married had a negative effect on their income, while for the retired and disabled, being married did not have any influence on their income.

Because the reconstruction of the social safety net began relatively late compared to the reforms in the economic domain, it has been suggested that social benefit holders would have more problems during the early years of the transformation process. Their income disadvantages were expected to subside later on during the transformation process. A rather arbitrary turning point was placed at 1997 to test whether the trend in income effects up to and after 1997 were different. Indeed, the income of the unemployed and retired decreased up to 1997 and increased thereafter. The income of the disabled remained the same up to 1997 and decreased thereafter. Note that these results apply to social benefit holders with few resources (no education, living in rural areas, living alone, and not married).

In chapter 5, it was also hypothesized that having additional resources should help social benefit holders to maintain their income position during the hard times of the first years of market reform. As mentioned earlier, years of education, living in an urban area, living in a large household, and being married were used to approximate additional resources for social benefit holders. The results showed that during the early years of reform, living in an urban area, living in a large household, and being married indeed served as additional resources for social benefit holders in regard to maintaining their income. After 1997, only living in an urban area served as an additional resource. No increasing income returns to education were found for social benefit holders. During the transformation process, the income of well-educated social benefit holders neither increased nor decreased more than the income of less well-educated social benefit holders.

6.3 Discussion

6.3.1 Evaluation of the Market Transition Theory

In this study, answers to the research questions and explanations of who wins and who loses during the market transformation process were derived from the MTT. In this respect, the MTT was applied in different ways and its predictions were thoroughly tested. First, the theory was used to derive predictions about what happened to the income advantages of CP members. Second, it was used to derive predictions about changes in income determinants resulting from the changing political and economic institutions. Third, it was employed to derive predictions about what happened to the income of people who were dependent on the state for their income.

[1] The findings in this section concerning the additional resources are not specified separately for each social benefit group. This would compromise the summary character of the overview and the findings are presented in detail in chapter 5.

To start with the developments in the income advantages of CP members, the MTT holds that the introduction of markets changed the power structure in countries in transition. The CP lost its monopoly over resources and CP members had to give way to entrepreneurs and professionals in the competition over market resources. Thus, the income returns to political capital diminished during the market transformation process. As a result, we predicted that the income advantages of CP members would decrease. In chapter 4, we show that the empirical results rejected this MTT prediction. This study, as well as previous studies, found that CP members, especially the political elite, did not necessarily lose their income advantages during the market transformation process. It is apparent that this part of the MTT needs improvement.

As was mentioned in the previous section, the fate of CP members and the political elites is a heavily debated issue, also referred to as the research puzzle of 'Circulation versus Reproduction' (Szelényi and Szelényi 1995).[2] Researchers participating in this debate have drawn two contradictory conclusions about who would benefit the most from the market transformation process, dividing the literature into two groups. One group of scholars argues that direct producers, entrepreneurs, managers, and professionals were the main beneficiaries (amongst these is Nee with his MTT). The second group of scholars argues that the 'old' Communist elite benefited the most from the market transformation process. Within this second group, there are several alternative explanations about the income advantages of CP members during the market transformation process: first, the argument of technocratic continuity holds that during its reign, the CP increasingly recruited members based on technocratic principles rather than ideological principles (Bian 1994; Bian, Shu, and Logan 2001; Szelényi and Manchin 1987), which resulted in a technocratic cadre that maintained its advantageous position through its acquired expertise (Róna-Tas 1994). Education played an important role in this process. Both CP and entrepreneurial recruitment relied on education for selection, which is the main source of continuity of CP members' advantages. Thus, besides political capital, most CP members also had high levels of education or more valuable types of education.[3] When the value of their political capital diminished, they could count on their education to maintain their income advantages.

Second, the argument of power conversion holds that under the Communist regime, CP members accumulated power that could be converted into valuable market assets. The political elite not only possessed political capital, but higher levels of human and social capital as well. When confronted with social change, they were able to switch between forms of capital that were losing value and forms of capital that were valued more (Eyal, Szelényi, and Townsley 1998). The latter forms of capital could be used to attain valuable market assets, which would give them an edge over other social groups during the market transformation process. CP members were able to accumulate such valuable resources because they were operating the state enterprises, which provided them with a personal network for gaining access to valuable business information. In their strategically located positions, they had access to informal connections that enabled them to acquire property (Staniszkis 1991). In addition, operating companies provided them with managerial skills that were highly rewarded during the market transformation process.

[2] For an elaborate discussion of this, see chapter 4.

[3] Because the large industrial sector needed a lot of technical workers, the central authority, who determined the number of students allocated to various majors, emphasized technical specialties like engineering, science, and the like (Gerber and Schaefer 2004).

Third, it is also possible that the fact that CP members were able to maintain their income advantages was not so much to do with changing institutions but more to do with who they were. Apart from changes in the way goods are distributed they might have been individuals who were better able to acquire most of these goods, regardless of the distribution system. In other words, they had the capability to use the redistributive economy as well as the market economy to their advantage. Gerber (2000a; Gerber 2001a), who proposed a selection theory, has suggested that the attributes that made people members of the CP – such as ambition, submission to organizational discipline, or even opportunism – also gave them an edge in the competition over material advantages within the market economy.

Finally, this study also revealed that the extent to which CP members were able to maintain their income advantages varied between countries. This suggests that changing institutions did, at least partially, influence the ability of CP members to maintain their income advantages. This ability depended on two processes that have been not been obvious in the current literature: the extent of regime change and the disposition of public assets (Walder 2003).[4] Opportunities remained for the elite as long as the CP had the political power to influence career opportunities. In this situation, there was limited regime change. Opportunities also remained when the elite controlled the privatization of public assets. These two processes varied across post-Communist countries, resulting in differences in elite opportunity. Unfortunately, hypotheses such as Walder's are hard to test empirically.

It must be said that the argument above is especially applicable to the political elite; however, this study has shown that even the 'rank-and-file' CP members maintained their income advantages. This could be in part because of poor measurement of who belonged to the elite and who did not. On the other hand, rank-and-file members may also have benefited from personal networks, from the skills they attained in their positions during Communism, from limited regime change, and so forth.

Let us now turn to how the MTT has been used to predict trends in the effects of income determinants. Being an institutionalist theory, it treats state-socialist and capitalist societies as different entities. Political and economic changes are regarded as a transition between two fundamentally different institutional settings. It is implicitly assumed that Communist societies developed into a predetermined end state: a capitalist society with a market economy. Subsequently, this implies that the process is similar across countries in transition, which should be reflected in similar changes in stratification outcomes. This study has shown that the trends in the effects of income determinants across countries in transition were different; rejecting the MTT predictions that changes in stratification outcomes would be similar across countries in transition. We argue that progress can be achieved by specifying conditions under which the MTT predictions hold and under which they do not hold.

The market transition debate provides theoretical notions for the argument that conditions need to be specified to which the MTT predictions applies and to which not. More attention should be addressed to the different initial institutional settings in which market reforms were introduced. During the Communist era, Communist societies were already different with respect to their political and economic institutions. Some Communist governments allowed some markets to exist in the command economy, while in other countries, markets could only exist illegally as a 'second economy'. Besides

[4] Stark (1992a) also suggested that the different privatization strategies in CEE countries influenced stratification outcomes differently.

differences in the institutional settings inherited from the Communist era, governments also differed in their strategies of market reform. The extent to which these strategies of market reforms resulted in the desired changes in stratification outcomes was dependent on the institutional setting inherited from the Communist era. This has also been described as the paths countries in transition followed away from the Communist command economies. It has been assumed that countries followed their own path, hence the term 'path dependency'.

Nee's (1991) interpretation of path dependency is that changing stratification outcomes are dependent on the extent of market reform, which he calls 'partial reform'. The more markets have been introduced, the more stratification outcomes change as predicted by the MTT. This argument also applies to differences between countries. Market reforms take place at a different pace in countries in transition. The observed differences in stratification outcomes are explained by differences in the extent to which markets are in place. The problem with this proposition is that it is not falsifiable. At least there is no indication of when the implicitly assumed end state will be reached. If the predicted changes in stratification outcomes cannot be observed, it is only a matter of time and eventually, until the time that enough markets are introduced, they will show up. Until that happens, the predictions cannot be rejected.

Opponents of the MTT give alternative explanations for the observed differences in trends in the effect of income determinants. These alternative explanations focus more on specific institutions that changed. An important aspect of the 1989-reforms was the privatization of public assets. Stark (1992a) has shown that privatization strategies varied across post-Communist countries and he has classified post-Communist countries according to their privatization strategy. The problem with this typology is how to use it to derive predictions about how different privatization strategies have led to different stratification outcomes. It is difficult, if not impossible, to argue that a specific privatization strategy will result in increasing income returns to education while another strategy will not or will to a lesser extent.

Another important aspect of the 1989-reforms was the extent of political change. Walder (2003) has formulated a theory of elite opportunity and has argued that the opportunities of the Communist-era elite depended on the extent of regime change in combination with constraints on appropriation of public assets. This theory focuses on the opportunities of the Communist-era elite, but the stress on the importance of political change is relevant across a wider scope. In a situation in which the CP remains the governing party instead of becoming an electoral party, and market reforms proceed, not only will the Communist-era elite remain in power but professionals and entrepreneurs will also have limited opportunities to gain control over resources and assets. It could be expected that in such a situation, the MTT predictions would not be supported to the extent that they would in a situation where the CP disintegrated simultaneously with the onset of market reform.

One final important aspect that might determine the extent to which the MTT predictions hold is the scale of the agricultural sector in the Communist country. Introducing market reforms in a predominantly agrarian society will have a different impact on the effects of income determinants than the introduction of market reforms in a predominantly industrial society. For instance, marketization of the agricultural sector may give farmers the opportunity to accumulate their own land and, subsequently, increase their income, but this would not necessarily increase the income returns to education. Thus, differences in the size of the agricultural sector between countries in transition could

result in differences in the stratification outcomes of such countries. The scale of the agricultural sector can be used as an indicator to specify conditions under which the MTT predictions hold and under which they do not.

Finally, the MTT is applied to explain changing disadvantages in the income of social benefit holders in transitional countries. This research area is relatively underdeveloped and until now has received only limited attention from researchers interested in reforming and post-Communist countries. In this study, we looked at the idea that additional resources provide opportunities for social benefit holders to maintain and supplement their income. The same idea has also been suggested in regard to China's urban elderly (Raymo and Xie 2000). It has been assumed that resources for which income returns increase during the market transformation process will be beneficial to social benefit holders in terms of maintaining or supplementing their income. Based on the MTT, which predicts that income returns to education increase, it has been theorized that more highly educated social benefit holders would be better able to maintain their income position than social benefit holders with little education.

In this study, only a first attempt has been made to investigate to what extent social benefit holders were able to cope with the changes brought about by the market transformation process. Much has yet to be done to gain a better understanding of this sociological problem. Some authors point out that retirement and disability pensions have been misused. Some people were pushed into early retirement and some used sick leave from their main job to work in the 'second economy' (Fajth 1999; Müller 2002a). A specific group might misuse the social safety net, and people who were pushed into early retirement would also be a specific group. Identifying these groups could shed more light on the impact of the market transformation process on the stratification order.

Nee (1991) points out another important aspect to take into account when determining the winners and losers of the market transformation process. He argues that under conditions where marketization leads to economic growth, the weak and poor might experience material gains. Thus, the income of social benefit holders could increase in absolute terms. However, this does not automatically mean that social benefit holders would belong to the winners of the market transformation process. If the income of the working population increased more rapidly, the income position of social benefit holders would get worse in relative terms. In this latter scenario, the social benefit holders would still be among the losers of the market transformation process, despite their increasing income in absolute terms.

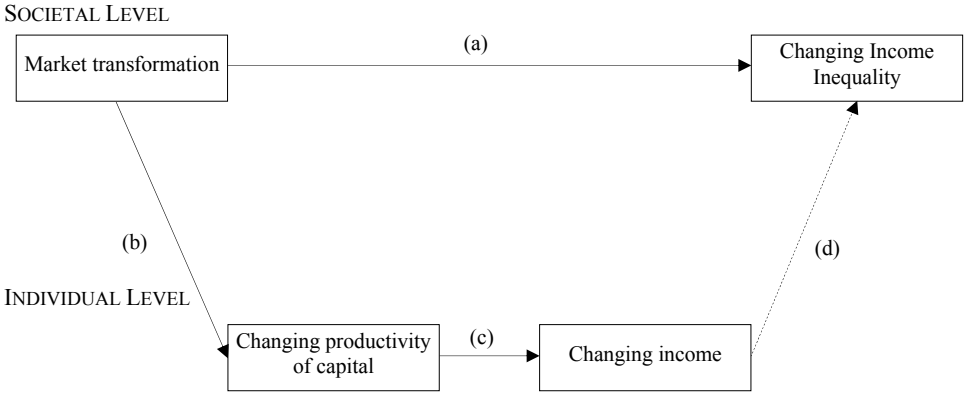
6.3.2 Explaining income inequality

It is interesting to see how the conclusions about the winners and losers of the market transformation process translate into how the income distribution has changed. This has been discussed briefly in chapter 1 (section 1.6), where it was argued that in order to understand changes in the distribution of income, changes in the incomes of individuals should be studied. The relationship between market reforms and changes in the income distribution in post-Communist countries is depicted in figure 6.1, which is related to the models advanced by Coleman (1990). There are two levels: the macro (societal) level at the top and the micro (individual) level below. The model should be read from left to right and it provides an understanding of how a relationship at the societal level can be explained by macro-micro, micro-micro, and micro-macro processes.

To understand the relationship between market transformation and changes in the income distribution, relationship (a) in figure 6.1, researchers have proposed macro-micro propositions (b),

micro-micro propositions (c), and micro-macro propositions (d). Note that the market transformation process occurs over time. This has consequences for the interpretation of the propositions discussed below.

Figure 6.1 Relationship between market transformation and the changing income distribution



To begin with, let us consider relationship (c) at the individual level. The income of individuals is determined by the personal characteristics and the resources these individuals have. These personal characteristics and resources are often referred to as *capital*. There are different forms of capital, such as human capital, social capital, market capital, and political capital. Mincer (1958), Schultz (1961), and Becker (1993) have provided the theoretical foundations for estimating the income returns to human capital, operationalized as years of schooling, type of education, and years of work experience. They argue that people can choose to invest in schooling, which means that during the period of study, they lack income. This should be compensated from the time they enter the labor market in terms of getting into occupations that provide better salaries. There is a large body of empirical research using the notion that the (log of) earnings are a function of years of schooling, years of work experience, and years of work experience squared, which came to be known as the 'Mincer equation'.

At the individual level, people make choices about the forms of capital in which they are going to invest over their lifetime. These investments determine their income and, in this respect, it is possible to speak of the income attainment process. The choices people make are partly dependent on the value of the various forms of capital (which in this study is expressed in terms of income returns). People are more likely to invest in forms of capital that generate high economic returns than in forms of capital that generate low economic returns. The distribution systems of societies determine to a large extent which forms of capital are highly rewarded economically and which are not.

The 1989-reforms in post-Communist societies altered the distribution systems of these countries. Researchers of post-socialist or reforming-socialist societies have proposed that the expected values of the various forms of capital changed under the influence of the changing political and economic institutions (Fligstein 1996; Nee 1996; Oberschall 1996; Parish and Michelson 1996; Stark 1996;

Szelényi and Kostello 1996; Walder 1996; Xie and Hannum 1996), which is depicted by relationship (b) in figure 6.1.

Thus, the productivity of the various forms of capital changed during the market transformation process, which in turn, changed the investment strategies of the people living in post-Communist countries. The expected increase in income returns to human capital would encourage people to invest in schooling. Because of the expected decrease in income returns to political capital, people would be expected to stop investing in the CP and might cancel their membership. Researchers of post-socialist or reforming-socialist societies have proposed that "each individual possesses a portfolio of 'stocks' of different forms of capital, and when they confront social change they try to reshuffle this portfolio to get rid of forms of capital which are losing value, and convert them into forms of capital which are more valuated (Eyal, Szelényi, and Townsley 1998: 7)."

The process described by propositions (b) and (c) indicates whether the income of the members of transitional societies will increase, decrease, or remain the same during the market transformation process. The interesting issue here is to what extent our knowledge on income attainment at the individual level helps to explain changing income inequality at the societal level, which is depicted by relationship (d). In other words, is relationship (d) simply a matter of aggregating income on the individual level to the income distribution on the societal level?

For example, this study has shown that the income returns to years of education increased during the market transformation process. This means that the income difference between people with more education and people with less education became larger during the transformation process. One might reason that this translates into rising income inequality: the distance between the incomes of people who are highly educated and people who are poorly educated has increased. However, there might be counter forces at work, which at least have the potential to weaken the relationship between the increase in income returns to education and the rise in income inequality. Perhaps the market reforms also motivated people to invest more in education, which could result in less of a difference between people in regard to education. Government policies to limit social inequalities might also weaken the relationship between increasing income returns to years of education and rising income inequality. In other words, it is a precarious business to aggregate the results on income attainment to the income distribution.

Although it is hard to judge how explaining changes in income at the individual level translates into changes in the income distribution, this study indicates sources that have been at least partially responsible for the rise in income inequality and provides some indication about why changes in income inequality were different in different CEE countries. In chapter 1, we reported that the inequality in earnings rose most dramatically in Russia. This coincided with the trends in the effects of income determinants reported in chapter 3. The income effect of years of education and of private sector employment increased the most rapidly in Russia, and the income gap between men and women grew more in Russia. The earnings inequality increased more in Hungary and Poland than in the Czech Republic and Slovakia, which could be attributed to more rapidly increasing income returns to years of education in Hungary and the more rapid increase in income returns to private sector employment in both Hungary and Poland. On the other hand, the gender income gap grew less in Hungary and Poland than in the Czech Republic and Slovakia, which would have a leveling effect on the income distributions of Hungary and Poland, as opposed to those of the Czech Republic and

Slovakia. The link between the trends in inequality in per capita household income (also reported in chapter 1) and the trends in the effects of income determinants is less obvious. This seems logical because per capita household income is less strongly determined by individual characteristics than earnings are.

6.3.3 Suggestions for future research

Although we have answered the sub-questions posed in this study and have gained a better understanding of the general research problem on the winners and losers of the market transformation process, we have not dealt with one important finding. We tested hypotheses about the impact of market reforms on stratification outcomes in different regions, and from these analyses, we found that stratification outcomes changed differently across these regions. However, an attempt to explain these differences using the notion that these regions experienced path dependent transformation processes has failed. This can partially be attributed to the fact that interpretations of the notion of path dependency are more a critical reply to the MTT than specific assumptions and propositions. As a result, it remains difficult to use the notion of path dependent transformation processes to come up with hypotheses that predict how stratification outcomes have been affected. Another reason for the failure to explain the observed differences between regions is the limited number of regions that have been analyzed. Only five CEE countries were included in the analyses performed in this study. Thus, it would not be possible to empirically test any hypotheses derived about the relationship between path dependent transformation processes and changing stratification outcomes.

Consequently, this study has raised new research problems. Suggestions for how future research could further increase the understanding of the research problem at hand can be made in three general areas: (1) new research questions, (2) theoretical progress, (3) improvement of data and measurement.

Macro-level income inequality. To start with the first issue – new research questions – this study has addressed some interesting research questions, and the empirical results have raised more questions to get at the mechanisms of how institutional changes influence the stratification order. In section 6.3.2, it was argued that explaining changes in income at the individual level helps to understand the relationship between the market transformation process and the changing income distributions. This study focused mainly on the macro-micro and micro-micro propositions and attempted to explain changes in personal and household income. The micro-macro link has been assumed to be a matter of aggregating income at the individual level to the distribution of income at the societal level. However, as suggested in section 6.3.2, it would be interesting to examine changes in the income distribution directly: to use a measure of income inequality instead of income as the dependent variable. New research questions should address how the market transformation process affected income inequality. There are numerous measures of income inequality that could be used for this purpose. Subsequently, there is a methodological challenge concerning how these income inequality measures could be decomposed. Decomposing income inequality measures means estimating how much of the inequality can be attributed to various income sources or to selected socioeconomic characteristics like education, work experience, gender, self-employment, and the

like.[5] The knowledge accumulated in this study about the changing effects of income determinants could be applied to explaining changes in the income distribution.

Unemployment and self-employment. This study addressed only one stratification outcome: income. Although income is a good indicator of how societies are stratified, much could be gained by addressing other stratification outcomes, such as the 'risk' of becoming unemployed and the 'risk' of becoming self-employed. Both risks were virtually nonexistent during Communism and both have a major influence on the stratification order. More research should be directed to discover who became unemployed and why. Comparing countries could also offer insights into how the transformation process influenced who lost their job and who did not.

The economic freedom achieved through the market transformation process has generated new job opportunities, such as self-employment. Some people chose to start their own businesses and could be labeled as *entrepreneurs*. They probably fared well with the progressing market reforms and are likely to belong to the winners. On the other hand, there are people who lost their jobs and were forced into starting up their own businesses. It is questionable whether this latter group of self-employed people would do well during the market transformation process. These are interesting issues that deserve more research attention.

Political institutions and public opinion. The market transformation process is more broadly encompassing than the changing economic institutions addressed in this study. Extending research to include how changing political institutions and changing public opinion (or other social institutions such as unions) would affect changes in stratification outcomes could increase our understanding of the impact of the market transformation process. The changing political context and changes in public opinion could be used to specify the conditions under which market reforms will have the desired effect and under which they do not. To a large extent, governments shape and guide the market transformation process. In addition, governments and firms might have had great ideas about how to change a country from a Communist one into a capitalist one, but they needed support from the people who actually had to make the changes work (who had to adjust to the new market principles). Focusing on these other domains in which transformation took place might also explain differences between countries in the extent to which market reforms had the desired outcome.

The second issue – theoretical progress – comes out of the extensive literature review conducted in this study and out of the attempts to come up with new, more precise predictions about the relationship between changing economic institutions and the changing effect of income determinants in CEE countries. The latter exercise has shown that specifying the market transformation process in terms of different transformation paths between countries is an underdeveloped field but that it has the potential to specify the conditions under which the MTT predictions hold and under which they do not. However, the notion of path dependency has not yet developed into a well-structured set of propositions. It is one thing to argue, for example, that reforming and post-Communist countries used different privatization strategies, but how this affected stratification outcomes is another. This link, especially, has been underdeveloped. It could provide a greater understanding of the impact of the transformation process on stratification. Future research has to come up with hypotheses that link

[5] Comparable techniques have been used to estimate the extent to which various sources of income generate income inequality (e.g., Drescher 1999; Garner and Terrell 1998).

different institutional changes between CEE countries and in different domains – economic, political, and social – to changing stratification outcomes.

As mentioned earlier, the extent of regime change and differences in political ideology in terms of left- or right-wing governments are interesting notions to apply to post-Communist countries. Rereading Lenski's work on political ideologies brings up new hypotheses. Political parties can be ranked from left to right on the political spectrum. The more the governing party of a society is to the left of the political spectrum, the more equal the income distribution (Lenski 1966; Lenski, Lenski, and Nolan 1991). Equalizing the income distribution can be achieved by a variety of social interventions such as progressive tax systems, legislation on social security, restricting the ownership of private property, and so forth. Adopting a macro-micro-macro scheme, propositions are needed to derive hypotheses about the extent to which the ideology of governments influences income attainment. Left-wing governments may have been able to slow down the opportunities of entrepreneurs and managers have for enriching themselves, and these governments may also be able to safeguard the incomes of the weak and poor. Linking this to income inequality in societies, this would have a leveling effect on the income distribution.

The CP was the political party that was most to the left of the political spectrum, and in countries where no CP exists, the social-democratic party occupies the left, but less so than the CP. During the 1990s, so-called 'green' parties emerged in some industrial countries. These are more to the left than social-democratic parties and most often have a strong affiliation with environmental issues. In most industrial societies, liberal and conservative parties occupy the right wing of the political spectrum, where conservative parties are more to the right than the liberal parties. Two hypotheses can be derived from this. First, income inequality in Communist societies will be smaller than income inequality in societies with a social-democratic government (this is also referred to as the 'Communism hypothesis'). Second, income inequality in societies with a social-democratic government is smaller than income inequality in societies with a liberal or conservative government (this is also referred to as the 'social-democracy-hypothesis') (Ultee, Arts, and Flap 2003).

As is the case with the changing economic institutions, societies in transition differ with respect to changes in regime. In some countries, the CP has remained the governing party, while in others, the CP has become a relatively small electoral party that does not necessarily have a place in the government. Thus, there is variation between these countries in the extent to which the governments remained to the left of the political spectrum or shifted to the right. We would argue that the more governments changed to the right of the political spectrum (became liberal and conservative), the more the MTT predictions about income attainment would hold. Future research should address the question of what kind of democracy emerged in post-Communist countries and use this to derive hypotheses about the observed differences in stratification outcomes. This should result in new and more accurate predictions about the consequences of the market transformation process in regard to the stratification order.

Another way to proceed is to incorporate the extent to which Eastern Europeans legitimize market principles, such as being rewarded for productivity and procedural justice instead of redistributive justice. The effectiveness of the newly emerging institutions is dependent on the extent to which Eastern Europeans change their opinions about how much inequality is just and the extent to which the government should intervene in social life and in the economy (Arts and Gelissen 2001; Arts,

Gelissen, and Luijkx 2003). Research has shown that Eastern Europeans are still not completely used to the new ideology and the new market institutions, and variation between countries has also been observed (Arts, Gelissen, and Luijkx 2003; Arts and Gijsberts 1998; Arts, Hermkens, and Van Wijck 1995). This literature can be used to explain differences in stratification outcomes across post-Communist countries.

The third issue – improvement of data and measurement – confronts researchers with probably the biggest challenge. This study has attempted to improve the comparative scope of previous studies, but much can still be gained in this field. In view of the theoretical suggestions, extending the number of countries to get more variation in institutional contexts is necessary in order to empirically test predictions about the influence of institutional differences between post-Communist countries. Looking only at the Central and Eastern European situation might result in too few countries to guarantee the needed variation in institutional settings. One way to proceed could be to look at regions rather than countries. Profound regional differences in market transformation within CEE countries could be useful to investigate. Alternatively, the general research problem at hand concerns how the shift from command economies to market economies has influenced stratification outcomes. Testing predictions derived from transition theories like the MTT about the relationship between marketization and increasing inequality can also be done using data from South American and Asian countries. There, comparable shifts from command economies to market economies have taken place or are still taking place.

In addition, most studies use time to indicate market reforms (as we did here).[6] Time is a plausible measure because one can usually assume that change is in one direction – toward the spread of market allocation (Walder 1996: 1064). This argument holds when one country is studied over time, but problems arise when several countries are studied simultaneously over time. Changes in stratification outcomes between countries are compared over the same period, arguing that observed changes are a result of the market transformation process. The transformation processes in post-Communist countries started in different initial settings, and the pace of development has been different across countries. Thus, observed differences in stratification outcomes may, in a sense, be artificial because of the differences in the pace of reform. A country where little or no change in stratification outcomes has been observed might have been governed by a hard-line CP that allowed no markets during the Communist era, or market reforms might have developed slowly in this country. The interesting challenges are whether the market transformation process can be captured by adding macro-measures of economic and political institutions (economic growth; size of agricultural, industrial, and service sector; percentage unemployed labor force; political coalitions; etc.) and, if so, whether differences in these macro-measures between countries can be linked to differences in changing stratification outcomes.

[6] Exceptions are Cao (2001), Nee (1996), Nee and Cao (1999), and Xie and Hannum (1996).

APPENDIX A: INCOME INEQUALITY MEASURES

Table A.1 Gini coefficients of earnings and per capita income for Czechoslovakia and the Czech Republic, 1958-2003

Year	Gross earnings					Per capita household income						
1958						**27.1**[f]						
1959	**19.6**[a]											
1960												
1961	**19.1**											
1962	**19.0**											
1963	**18.5**											
1964	**18.8**											
1965						**22.6**						
1966	**18.7**											
1967												
1968	**19.4**											
1969												
1970	**19.8**					**22.5**						
1971												
1972												
1973	**19.7**					**21.0**						
1974												
1975	**19.5**											
1976						**20.7**						
1977	**19.5**											
1978												
1979	**19.6**											
1980						**20.5**						
1981	**19.7**											
1982												
1983	**19.8**											
1984												
1985	**19.8**					**19.9**						
1986												
1987	**19.8**	19.8[b]										
1988			20.0[c]			**20.1**	20.0[g]	**20.0**[h]				
1989	**19.8**	19.8		21.2[d]	**20.4**[e]			**20.0**	19.4[i]	19.8[j]		
1990								**20.6**	19.7	19.0		
1991		21.2		22.0	**21.2**			**21.0**	18.9			
1992		21.2	25.0	22.1	**21.4**		23.0	**21.4**	20.3	21.5	**22.8**[k]	
1993		25.7		26.0	**25.8**			**25.7**	21.6	21.4		21.4[l]
1994				26.8	**26.0**			**26.0**	22.1	23.0	**27.0**	23.0
1995				28.5	**28.2**			**28.0**	21.5	23.9		21.6
1996			24.0	25.3	**25.4**		26.0	**25.3**	28.1	21.2	**25.8**	23.0
1997					**25.9**			**25.8**	27.6	23.2	**23.0**	23.9
1998					**25.8**					21.2	**23.9**	
1999					**25.7**					23.2	**21.2**	
2000					**27.0**					23.1	**23.2**	
2001					**27.2**					23.7	**23.1**	
2002					**27.3**					23.4	**23.7**	
2003											**23.4**	

Note: The numbers are presented in figures 1.1 and 1.2 in bold print.
[a]Gross earnings; Source: Atkinson and Micklewright (1992: Table CSE1).
[b]Gross earnings from national economy; Source: Rutkowski (1996: 49).
[c]Earnings based on microcensus data; Source: Večerník (2003: 214).
[d]Source: UNU/WIDER (2000).
[e]Personal income; Source: TransMONEE (2004).
[f] Net per capita income; Source: Atkinson and Micklewright (1992: Table CSI1).
[g]Source: Večerník (2003: 214).
[h]Source: Hölscher (2000: 9).
[i]Source: UNU/WIDER (2000).
[j]Personal income; Source: TransMONEE (2004).
[k]Per capita income; Source: Mitra and Yemtsov (2006: 8).
[l]Source: Flemming and Micklewright (2000: 912).

APPENDIX A

Table A.2 Gini coefficients of earnings and per capita income for Hungary, 1955-2002

Year	Gross earnings							Per capita household income			
1955	**22.7**[a]										
1956	**22.2**										
1957	**20.5**										
1958	**20.0**										
1959											
1960	**20.4**										
1961	**20.1**										
1962	**20.1**							**25.7**[g]			
1963											
1964	**20.5**										
1965											
1966	**21.0**										
1967								**22.7**			
1968	**21.0**										
1969											
1970	**22.9**	**22.9**[b]									
1971											
1972		**22.6**						**23.6**			
1973											
1974		**22.1**									
1975											
1976		**21.9**									
1977								**21.4**			
1978		**21.4**	**20.8**[b]								
1979											
1980			**20.7**	**19.7**[b]							
1981											
1982			**21.4**	**20.5**				**20.9**			
1983											
1984				**21.3**							
1985											
1986				**22.1**							
1987						20.7[d]	20.7[e]	**24.4**			
1988				**26.8**	26.8[c]						
1989						24.8	20.7	**26.8**[f]	21.4[h]	**22.5**[i]	
1990					29.1			**29.3**			
1991							19.5		20.4	**20.9**	
1992					30.4			**30.5**			
1993					31.5	22.9	23.4	**32.0**	22.7	**23.1**	**23.1**[j]
1994								**32.4**	23.2	**23.4**	
1995									24.3	**24.2**	**24.2**
1996							24.2		24.5	**24.6**	**24.6**
1997								**35.0**	24.6	**25.4**	**25.4**
1998									25.3		**25.0**
1999											**25.3**
2000											**25.9**
2001								**38.6**			**27.2**
2002											**26.7**
2003											**26.8**

Note: The numbers are presented in figures 1.1 and 1.2 in bold print.
[a]Gross earnings from state sector; Source: Atkinson and Micklewright (1992: Table HE4).
[b]Gross earnings from socialized sector; Source: Atkinson and Micklewright (1992: Table HE1).
[c]Gross earnings from national economy; Source: Rutkowski (1996: 50).
[d]Gross per capita income; Source: Milanovic (1999: 341).
[e]Equivalized (OECD equivalence scale) earnings; Source: Kattuman and Redmond (2001: 46).
[f]Earnings; Source: TransMONEE (2004).
[g]Net per capita income; Source: Atkinson and Micklewright (1992: Table HI1).
[h]Net per capita income; Source: UNU/WIDER (2000).
[i]Per capita income; Source: Flemming and Micklewright (2000: 912).
[j]Per capita income; Source: Mitra and Yemtsov (2006: 8).

Table A.3 Gini coefficients of earnings and per capita income for Poland, 1956-2003

Year	Gross earnings					Per capita household income						
1956	**25.9**[a]											
1957	**26.6**											
1958	**26.0**											
1959	**25.8**											
1960	**25.0**											
1961	**24.7**											
1962	**25.1**											
1963	**24.9**											
1964	**24.7**											
1965	**25.0**											
1966												
1967	**25.1**											
1968												
1969												
1970	**25.2**	**23.2**[b]										
1971												
1972		**23.2**										
1973												
1974												
1975												
1976		**24.1**										
1977												
1978		**24.2**				**24.4**[f]						
1979						**24.5**						
1980		**22.9**				**24.9**						
1981		**21.8**				**23.3**						
1982		**20.2**				**20.9**						
1983		**22.0**				**24.5**		24.6[h]				
1984		**22.0**				**25.9**		25.8				
1985		**22.4**	21.6[c]			**25.3**		25.3	25.3[i]	27.0[j]		
1986		**24.2**	22.0			**25.5**		25.0		27.4		
1987		**23.0**	21.8			**25.8**	25.0[g]	25.0		27.0		
1988		**21.2**	22.1	21.2[d]		**25.4**	24.4	24.6	24.6	27.2		
1989		**20.7**	23.1	20.7	**20.7**[e]	**26.7**	26.0	26.8	26.8	27.8	27.5[k]	
1990			22.8	23.7		**26.2**	25.5		25.8	27.1	26.8	
1991			22.9	23.0	**23.9**	**25.5**	24.7		25.3	26.6	26.5	**26.5**[l]
1992			23.9	24.6	**24.7**	**29.1**	25.5		26.0	26.4	27.4	**27.4**
1993				25.3	**25.6**	**33.1**	29.8			28.5	31.7	**28.5**
1994			25.9	27.7	**28.1**		36.2			29.8	32.3	
1995			26.2	28.2	**29.0**		25.6			29.4	32.1	**32.0**
1996			26.1		**30.2**					30.1	32.8	**32.8**
1997					**30.0**					31.9	33.4	**33.4**
1998					**29.4**							**32.6**
1999					**30.5**							**33.4**
2000												**34.5**
2001												**34.1**
2002												**35.3**
2003												**35.6**

Note: The numbers are presented in figures 1.1 and 1.2 in bold print.
[a]Gross earnings; Source: Atkinson and Micklewright (1992: Table PE4).
[b]Net earnings; Source: Atkinson and Micklewright (1992: Table PE1).
[c]Earnings based on Household Budget Survey; Source: Keane and Prasad (2002a: 48).
[d]Earnings based on Rocnik Statystycnyk; Source: Caselli and Battini (1997: 4).
[e]Earnings; Source: TransMONEE (2004).
[f]Person equivalent gross income; Source: Milanovic and Ying (1996).
[g]Per capita gross income; Source: Milanovic (1999: 340).
[h]Per capita net income; Source: Atkinson and Micklewright (1992: Table PI1).
[i]Income data from Household Budget Survey; Source: Caselli and Battini (1997: 2).
[j]Per capita income; Source: Keane and Prasad (2002b: 329).
[k]Per capita income; Source: Flemming and Micklewright (2000: 912).
[l]Per capita income; Source: Mitra and Yemtsov (2006: 8).

APPENDIX A

Table A.4 Gini coefficients of earnings and per capita income for Russia, 1968-2003

Year	Gross earnings				Per capita household income							
1968	**26.2**[a]											
1969												
1970												
1971												
1972	**26.5**											
1973												
1974												
1975												
1976	**26.0**											
1977												
1978												
1979	**24.9**											
1980					**24.6**[e]	29.0[f]						
1981	**25.8**											
1982												
1983												
1984	**24.9**											
1985					**25.6**	28.4		**24.5**[h]				
1986	**27.6**											
1987												
1988					**26.2**	29.0						
1989	**27.2**	**27.1**[b]	26.5[c]		**27.7**	27.5		**26.5**				
1990		**26.9**	26.3			28.1			23.6[i]			
1991		**32.5**	30.9						25.7	**26.0**[j]		
1992		**37.1**	38.0					**28.9**	36.3	**28.9**		
1993		**46.1**						**39.8**	38.1	**39.8**		
1994		**44.6**	44.9				27.2[g]	**40.9**	40.5	**40.9**	40.9[k]	44.1[l]
1995		**47.1**	45.9				28.3	**38.1**	38.5	**38.1**	38.1	43.9
1996		**48.3**	42.4				37.8	**37.5**		**37.5**	38.7	50.1
1997			40.8					**37.5**		**38.1**	40.1	
1998										**39.8**	39.9	44.6
1999										**39.9**	40.0	
2000										**39.4**	39.9	43.2
2001				**52.1**[d]						**39.6**		42.2
2002				**49.1**						**39.8**		
2003										**40.4**		

Note: The numbers are presented in figures 1.1 and 1.2 in bold print.
[a]Gross earnings; Source: Atkinson and Micklewright (1992: Table UE4).
[b]Person earnings; Source: UNU/WIDER (2000).
[c]Gross earnings; Source: UNU/WIDER (2000).
[d]Person earnings; Source: TransMONEE (2004).
[e]Per capita gross income; Source: Atkinson and Micklewright (1992: Table UI1).
[f]Per capita income; Source: Alexeev amd Gaddy (1993: 29).
[g]Source: UNU/WIDER (2000).
[h]Per capita income; Source: Frolova (1998).
[i]Per capita income; Source: UNU/WIDER (2000).
[j]Total income (1991 and 1992) and money incomes (from 1993); Source: Mitra and Yemtsov (2006: 8).
[k]Per capita real income; Source: Kalugina and Najman (2003: 35).
[l]Per Capita income; Source: TransMONEE (2004).

Table A.5 Gini coefficients of earnings and per capita income for Czechoslovakia and Slovakia, 1958-2003

Year	Gross earnings		Per capita household income			
1958			**27.1**[c]			
1959	**19.6**[a]					
1960						
1961	**19.1**					
1962	**19.0**					
1963	**18.5**					
1964	**18.8**					
1965			**22.6**			
1966	**18.7**					
1967						
1968	**19.4**					
1969						
1970	**19.8**		**22.5**			
1971						
1972						
1973	**19.7**		**21.0**			
1974						
1975	**19.5**					
1976			**20.7**			
1977	**19.5**					
1978						
1979	**19.6**					
1980			**20.5**			
1981	**19.7**					
1982						
1983	**19.8**					
1984						
1985	**19.8**		**19.9**			
1986						
1987	**19.8**	**19.4**[b]				
1988			**20.1**			
1989	**19.8**	**19.6**	**18.1**[d]		22.1[f]	18.3[g]
1990			**17.8**		21.6	18.0
1991			**18.0**		23.3	18.0
1992			**18.6**		24.5	18.9
1993		**29.7**	**19.7**			
1994			**20.8**			
1995			**20.0**			
1996			**24.8**	**23.7**[e]		
1997			**23.4**	**24.9**		
1998				**26.2**		
1999				**24.9**		
2000				**26.4**		
2001				**26.3**		
2002				**26.7**		
2003				**29.9**		

Note: The numbers are presented in figures 1.1 and 1.2 in bold print.
[a]Gross earnings; Source: Atkinson and Micklewright (1992: Table CSE1).
[b]Net earnings (1987 and 1988) and gross earnings (1993) from public sector; Source: Rutkowski (1996: 54).
[c]Net per capita income; Source: Atkinson and Micklewright (1992: Table CSI1).
[d]Source: UNU/WIDER (2000).
[e]Personal income; Source: TransMONEE (2004).
[f]Household gross income; Source: Cornia (1994).
[g]Household net income; Source: Cornia (1994).

APPENDIX B: INTERPRETATION OF COEFFICIENTS FROM META-REGRESSION

Example 1: Interpretation of coefficients from the power analysis

We introduce the coefficients of the basic model, reported in table 2.2, in equation [2.4] (see chapter 2):

$$ES_{pow} = .053 - .017 * Year + .018 D_{80} * (Year - 1980) \qquad [B.1]$$

During the period before 1980 the constant decreases with .017 for each additional year. This can derived from the way D_{80} has been coded ('1' if *year* ≥ 1980 and '0' if *year* < 1980).

Before: $ES_{pow} = .053 - .017 * Year$ [B.2]

If we look at the period after 1980 the spline-component is introduced; D_{80} is one. Note that (*Year* – 1980) starts counting after 1980, indicating that after 1980 each additional year increases the constant with -.017 + .018 = .001 compared to a .017 decrease of the constant for each additional year before 1980.

After: $ES_{pow} = .053 - .017 * Year + .018 * (Year - 1980)$ [B.3]

Example 2: Interpretation of coefficients from the education analysis

We introduce the coefficients of the basic model, reported in table 2.5, in equation [2.5] (see chapter 2):

$$\begin{aligned} ES_{educ} &= .058 - .044 * China + .002 * Year - .002 * China * Year \\ &\quad + .001 * D_{91} * (1 - China) * (Year - 1991) + .000 * D_{80} * China * (Year - 1980) \end{aligned} \qquad [B.4]$$

During the period before 1980 in China an additional year does not change the constant: .002-.002 = 0. This can derived from the way China ('1' if China and '0' if CEE) and D_{80} have been coded ('1' if *year* ≥ 1980 and '0' if *year* < 1980). During the period before in CEE an additional year increases the constant with .002. Given the way *China* and D_{91} ('1' if *year* ≥ 1991 and '0' if *year* < 1991). In both situations the spline-components are eliminated from the equation.

China before: $ES_{educ} = (.058 - .044) + (.002 - .002) * Year$ [B.5]

CEE before: $ES_{educ} = .058 + .002 * Year$ [B.6]

For the period after 1980 in China and the period after 1991 in CEE the spline-components are introduced (respectively D_{80} and D_{91} are one). Note that (*Year* – 1980) starts counting after 1980 and that (*Year* – 1991) starts counting after 1991. This indicates that, in China, after 1980 each additional

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year increases the constant with .002 – .002 + .001 = .001 compared to no changes of the constant for each additional year before 1980. For CEE this leads to the same increase of .002 + .000 = .002 for each additional year as for the period before 1991.

China after: $ES_{educ} = (.058 - .044) + (.002 - .002 + .001) * Year$ [B.7]

CEE after: $ES_{educ} = .058 + (.002 + .000) * Year$ [B.8]

Note that *year* is a variable constructed by subtracting 1960 from the actual years and that it has been centered around 1991. This means 1991 is actually zero and that 1980 is actually minus eleven. Introducing this information in the equation for China, results in the following mean effect size for year 1991.

China 1991: $ES_{educ} = (.058 - .044) + (.001) * 11 = .025$ [B.9]

APPENDIX C: SCATTERPLOTS OF EFFECT SIZES OVER TIME

Figure C.1 Effect sizes of Market Power Thesis

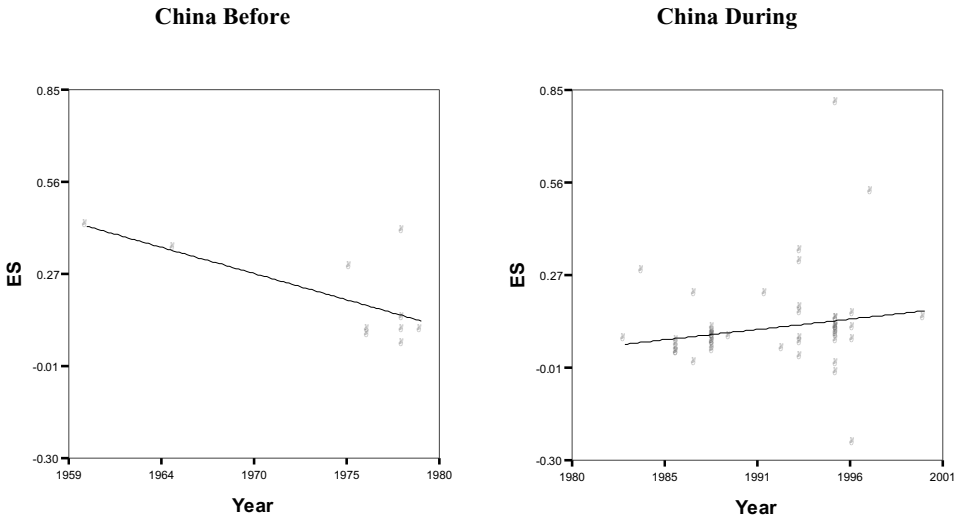

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Figure C.2 Effect sizes of Market Incentive Thesis (education)

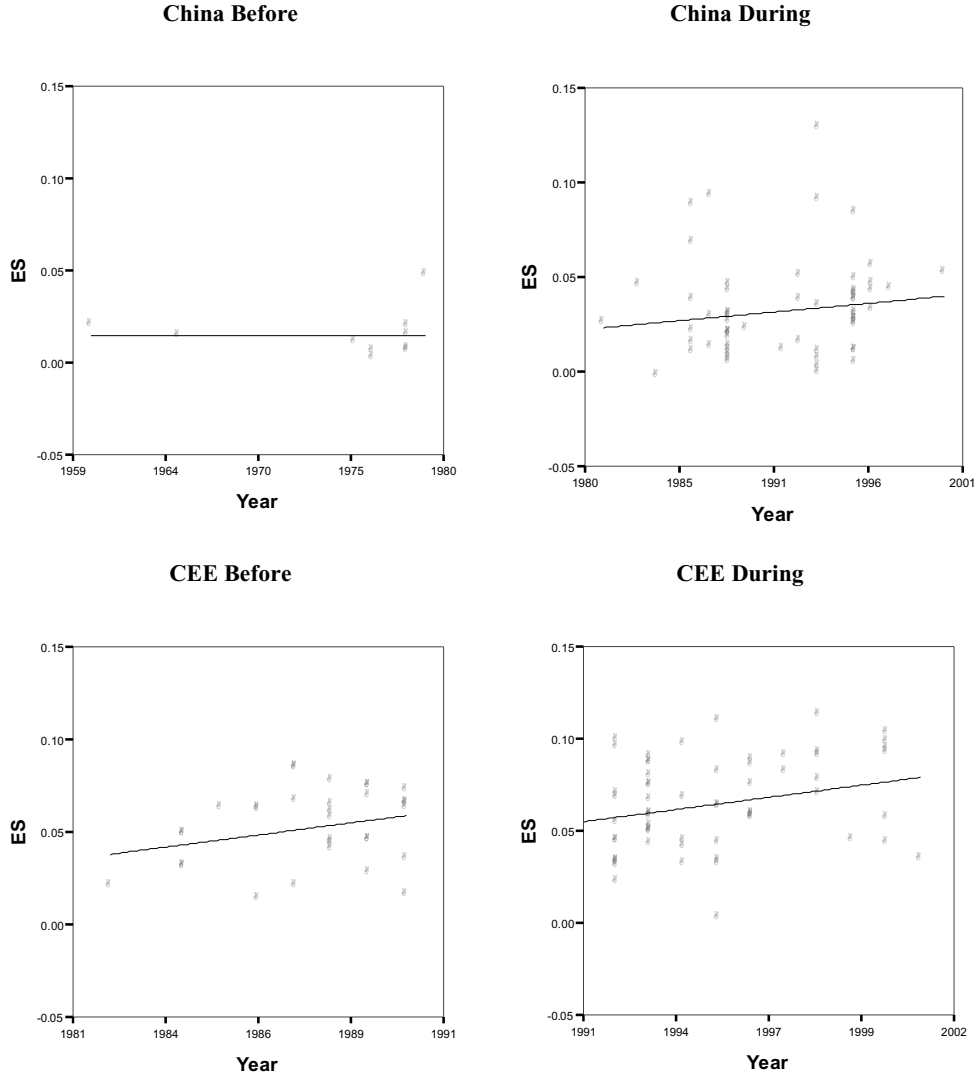
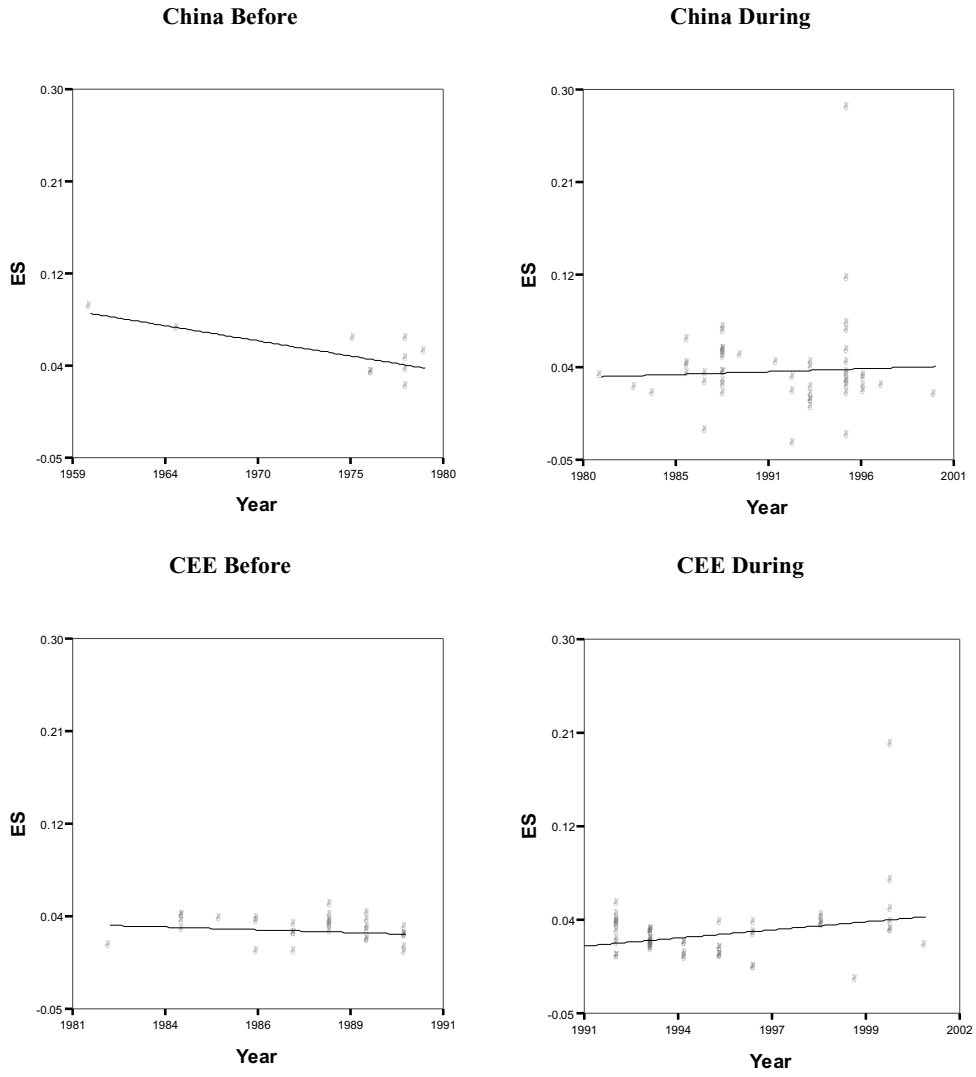


Figure C.3 Effect sizes of Market Incentive Thesis (experience)[a]



Notes:

[a]Walder (1990) excluded because the effect sizes are outliers. This does not influence conclusions.

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Figure C.4 Effect sizes of Market Opportunity Thesis (entrepreneurship)

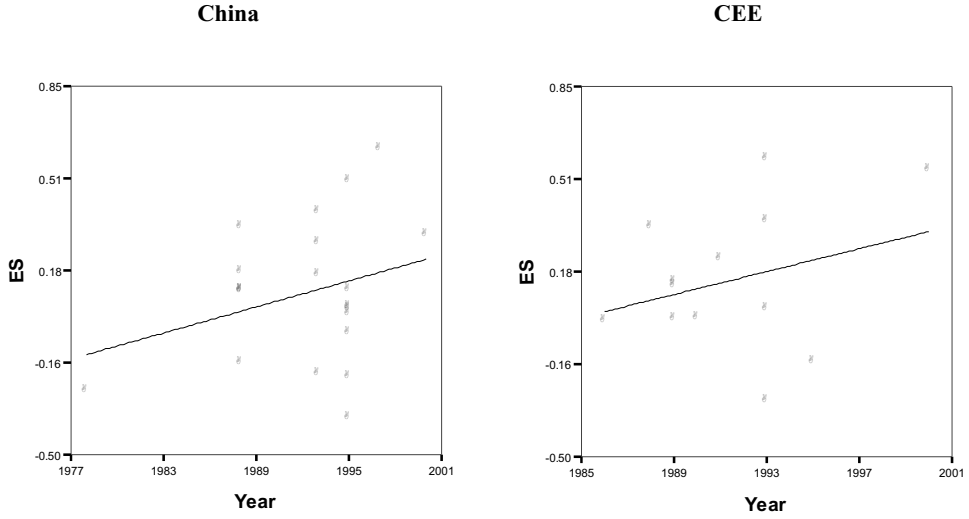

Figure C.5 Effect sizes of Market Opportunity Thesis (private sector employment)

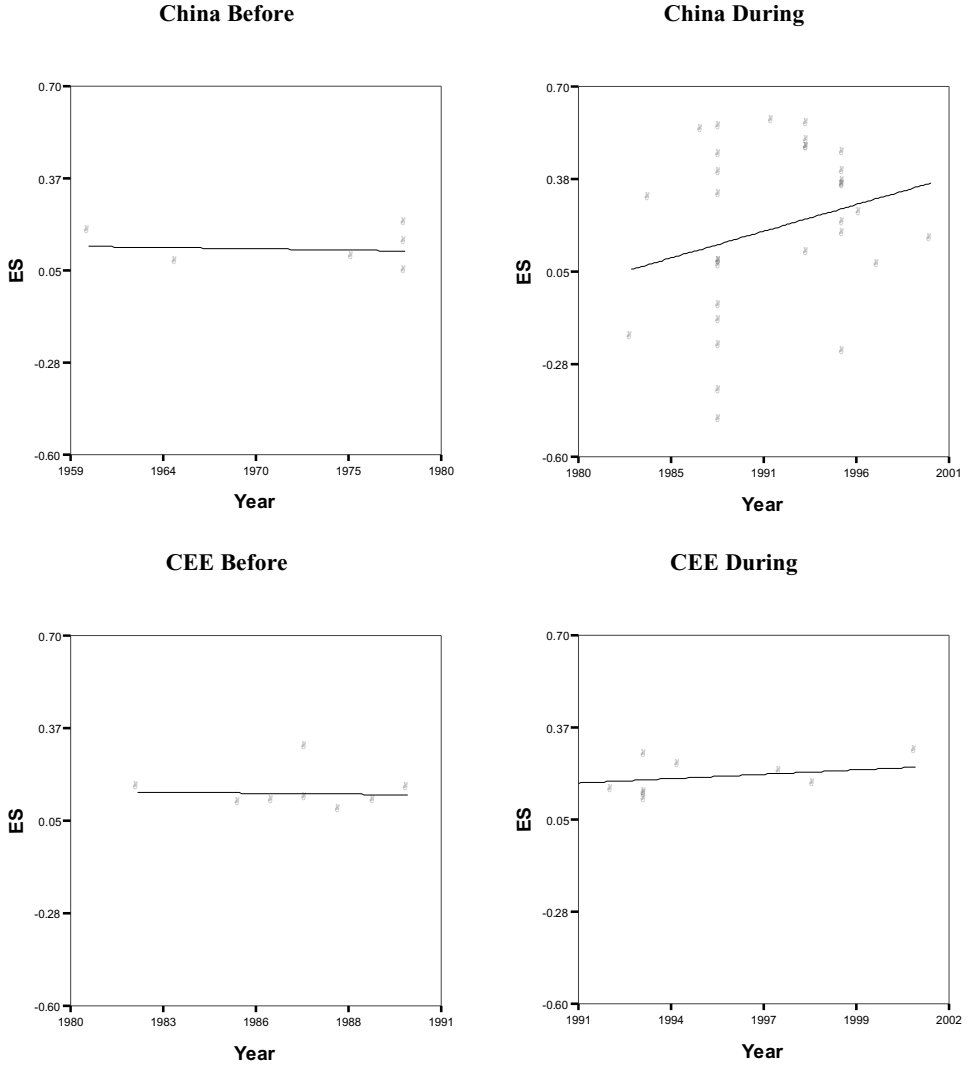

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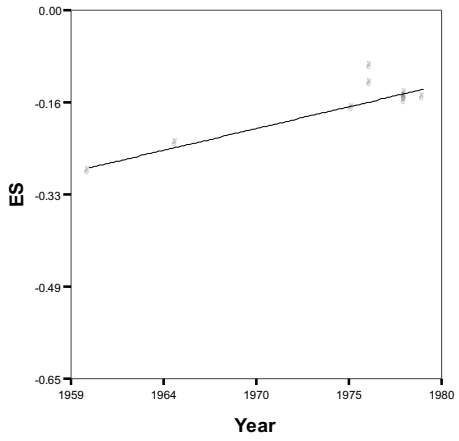
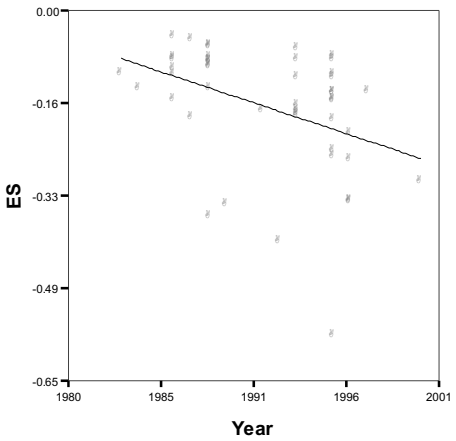
Figure C.6 Effect sizes Gender Gap hypothesis

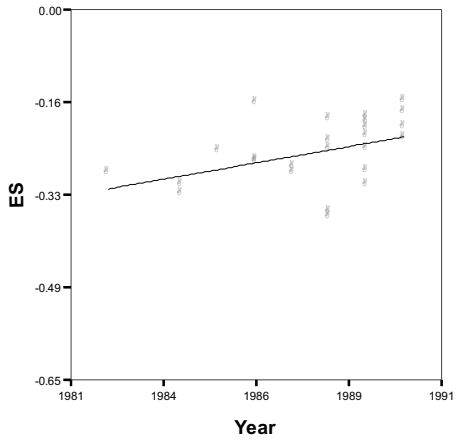
China Before



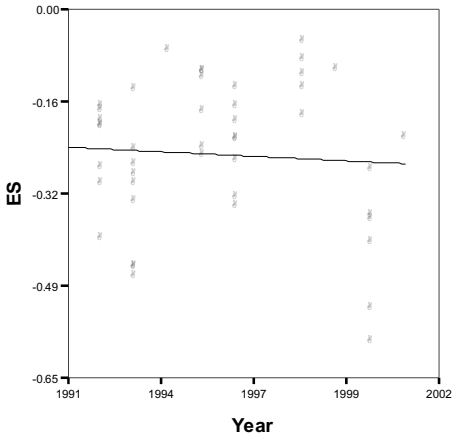
China During



CEE Before



CEE During



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APPENDIX E: DATA SOURCES FOR SECONDARY ANALYSES

A large collection of population sample data have been analyzed from five Central and Eastern European countries on different points in time. Extracts have been produced for 67 datasets that contain information on personal and household income, employment and occupational status, educational attainment, party membership, and elementary demographics. These variables are available in standardized and comparable codes. Table E.1 gives an overview of all extract files by acronym. At the end of this appendix, the references to the original files are given.

Table E.1 Acronyms by country and by year

	Czech Republic	Hungary	Poland	Russia	Slovakia
1984	CZR84[a]	–	–	–	SLO84[a]
1985	–	–	–	–	–
1986	–	HUN86[a]	–	–	–
1987	–	–	–	–	–
1988	–	–	–	–	–
1989	–	–	–	–	–
1990	–	–	–	–	–
1991	CZR91j	HUN91j HUN91i	POL91j POL91i	RUS91j RUS91i	SLO91j
1992	CZR92i	HUN92i	POL92i	RUS92i	–
1993	CZR93e[a] CZR93i[b]	HUN93e[a] HUN93i	POL93i	RUS93e[a] RUS93i	SLO93e[a]
1994	CZR94i	HUN94i	POL94e[a] POL94i	RUS94i	–
1995	CZR95i	HUN95i	POL95i	RUS95i	SLO95i
1996	CZR96j CZR96i	HUN96j HUN96i	POL96i	RUS96i	–
1997	CZR97i	HUN97i	POL97i	RUS97i[c]	–
1998	CZR98i	HUN98i	POL98i	RUS98s[a] RUS98i	SLO98i
1999	CZR99i	HUN99i	POL99i	RUS99i	SLO99i
2000	CZR00i[b]	–	–	RUS00s[a] RUS00i	–
2001	CZR01i	HUN01i[b]	POL01i	RUS01s[a] RUS01i	–
2002	CZR02i	HUN02i	POL02i	RUS02i	SLO02i

Note: – No data available.
[a]Datasets have information on party membership.
[b]Datasets only have information on household income.
[c]Dataset only has household income in categories.

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Table E.2 Datasets by Distributor

File	Distributor	File	Distributor
CZR84	CSAS	POL94e	UCLA
CZR91j	ZA 3522	POL94i	ZA 2620
CZR92i	ZA 2310	POL95i	ZA 2880
CZR93e	UCLA	POL96i	ZA 2900
CZR93i	ZA 2450	POL97i	ZA 3090
CZR94i	ZA 2620	POL98i	ZA 3190
CZR95i	ZA 2880	POL99i	ZA 3430
CZR96j	ZA 3522	POL01i	ZA 3680
CZR96i	ZA 2900	POL02i	ZA 3880
CZR97i	ZA 3090		
CZR98i	ZA 3190	RUS91j	ZA 3522
CZR99i	ZA 3430	RUS91i	ZA 2150
CZR00i	ZA 3440	RUS92i	ZA 2310
CZR01i	ZA 3680	RUS93e	UCLA
CZR02i	ZA 3880	RUS93i	ZA 2450
		RUS94i	ZA 2620
HUN86	TARKI	RUS95i	ZA 2880
HUN91j	ZA 3522	RUS96i	ZA 2900
HUN91i	ZA 2150	RUS97i	ZA 3090
HUN92i	ZA 2310	RUS98s	ICPSR 2732
HUN93e	UCLA	RUS98i	ZA 3190
HUN93i	ZA 2450	RUS99i	ZA 3430
HUN94i	ZA 2620	RUS00s	Gerber
HUN95i	ZA 2880	RUS00i	ZA 3440
HUN96j	ZA 3522	RUS01s	ICPSR 4206
HUN96i	ZA 2900	RUS01i	ZA 3680
HUN97i	ZA 3090	RUS02i	ZA 3880
HUN98i	ZA 3190		
HUN99i	ZA 3430	SLO84	CSAS
HUN01i	ZA 3680	SLO91j	ZA 3522
HUN02i	ZA 3880	SLO93e	UCLA
		SLO95i	ZA 2880
POL91j	ZA 3522	SLO98i	ZA 3190
POL91i	ZA 2150	SLO99i	ZA 3430
POL92i	ZA 2310	SLO02i	ZA 3880
POL93i	ZA 2450		

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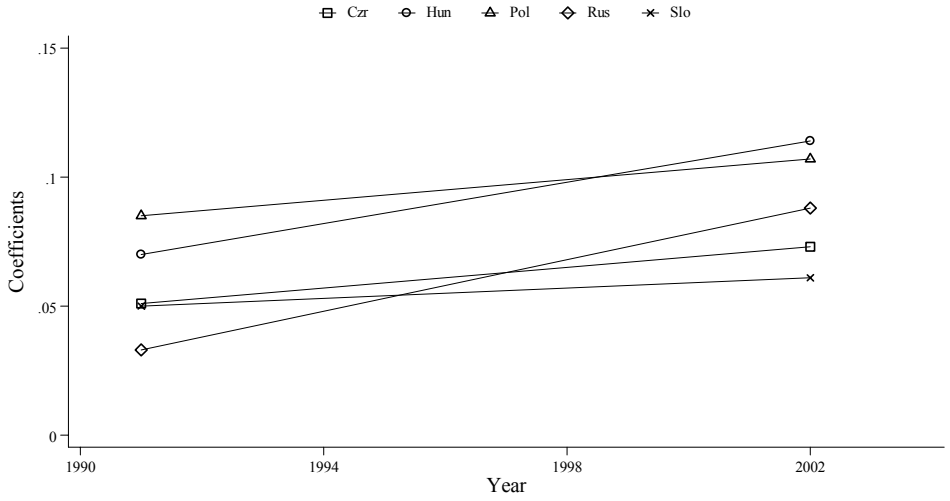
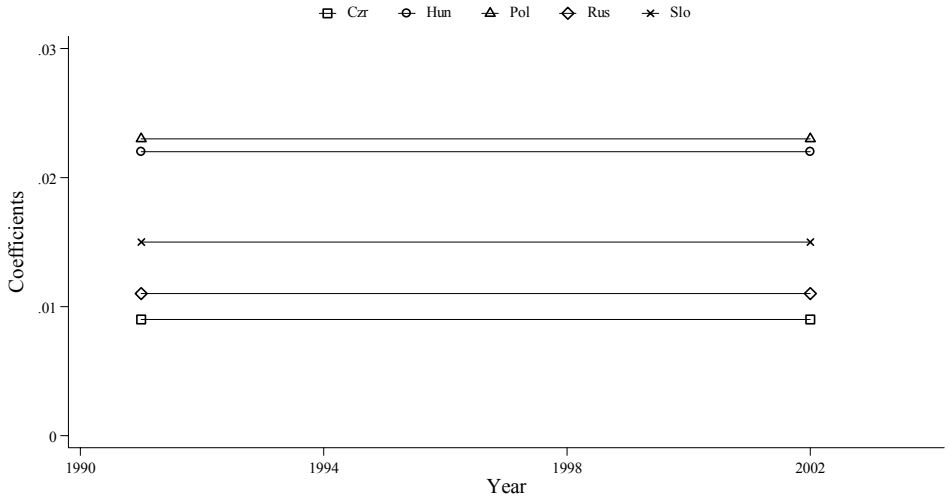
APPENDIX F: GRAPHICAL REPRESENTATION OF REGRESSION MODELS

Figure F.1 Trends in the effect of years of education on log personal income in post-Communist countries



Note: Czr = the Czech Republic; Hun = Hungary; Pol = Poland; Rus = Russia; Slo = Sovakia.

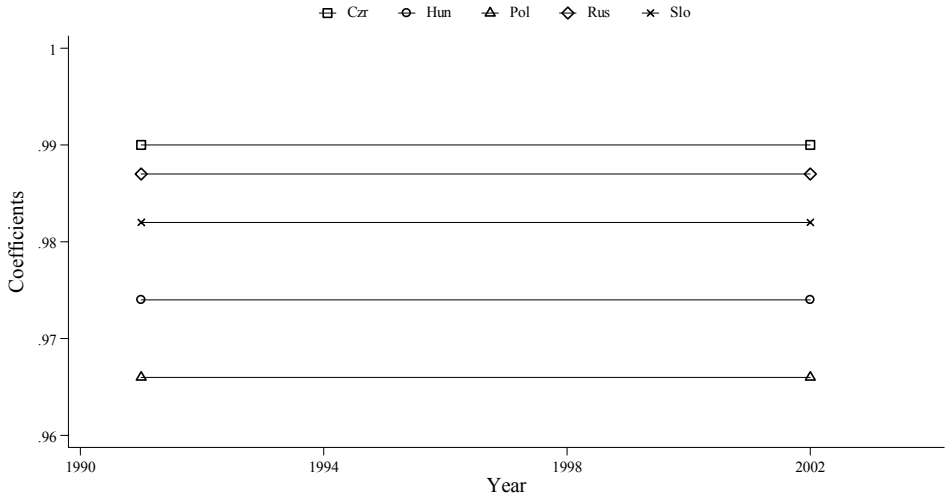
Figure F.2a Trends in the effect of 5 years of experience on log personal income in post-Communist countries



Note: Czr = the Czech Republic; Hun = Hungary; Pol = Poland; Rus = Russia; Slo = Sovakia.

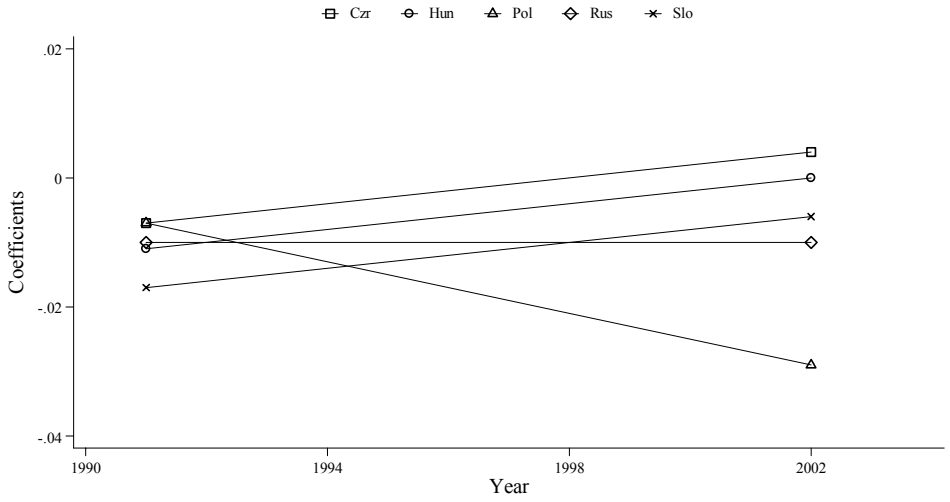
APPENDIX F

Figure F.2b Trends in the effect of year of experience on log personal income for maximum income returns in post-Communist countries



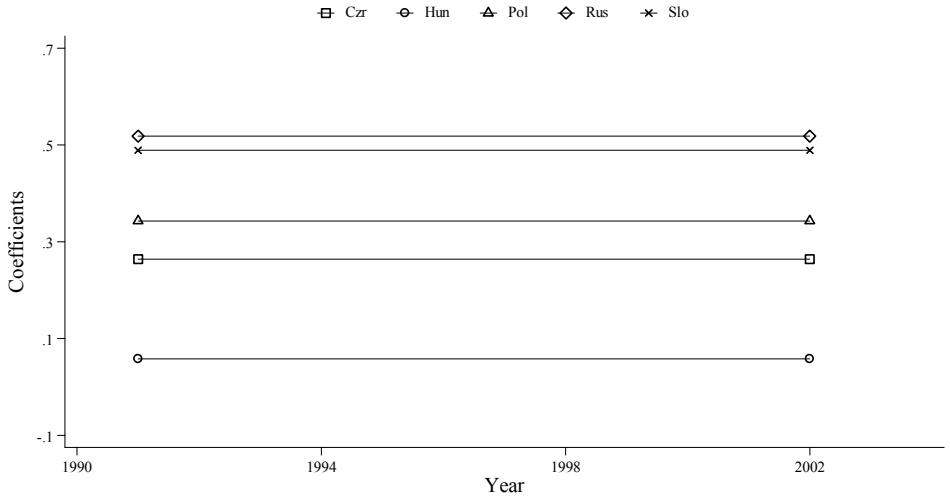
Notes: Czr = the Czech Republic; Hun = Hungary; Pol = Poland; Rus = Russia; Slo = Sovakia.

Figure F.2c Trends in the effect of 40 years of experience on log personal income in post-Communist countries



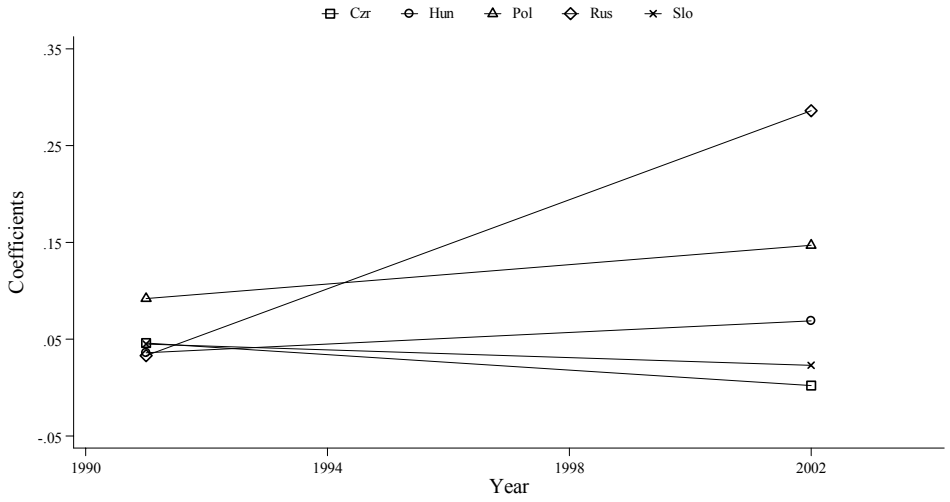
Note: Czr = the Czech Republic; Hun = Hungary; Pol = Poland; Rus = Russia; Slo = Sovakia.

Figure F.3 Trends in the effect of self-employment on log personal income in post-Communist countries



Note: Czr = the Czech Republic; Hun = Hungary; Pol = Poland; Rus = Russia; Slo = Sovakia.

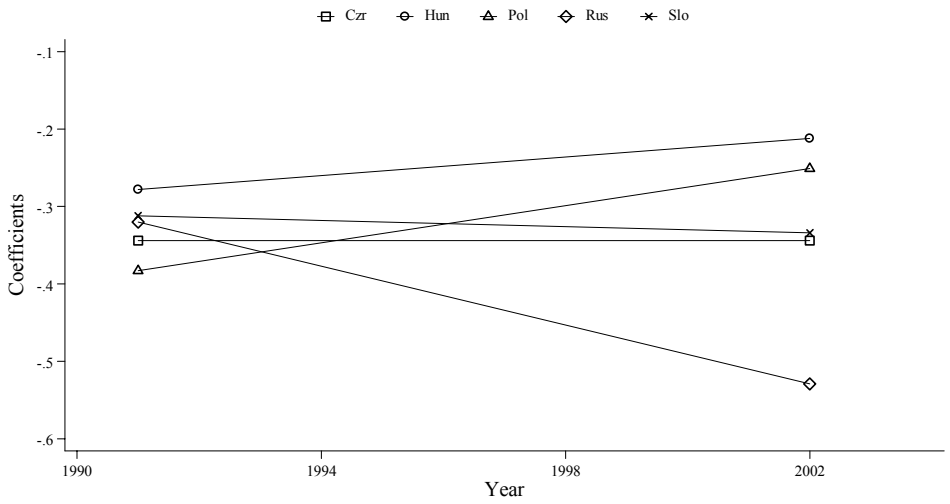
Figure F.4 Trends in the effect of private sector employment on log personal income in post-Communist countries



Note: Czr = the Czech Republic; Hun = Hungary; Pol = Poland; Rus = Russia; Slo = Sovakia.

APPENDIX F

Figure F.5 Trends in the gender income gap in post-Communist countries



Note: Czr = the Czech Republic; Hun = Hungary; Pol = Poland; Rus = Russia; Slo = Sovakia.

APPENDIX G: DESCRIPTIVE STATISTICS OF MATCHING PROCEDURE

Table G.1 Mean (ln) income and number of CP members and their matched non-CP members separated by rank

	Members	Non-Members	High rank	Non-Members	Low rank	Non-Members
Czech territory of Czechoslovakia						
1984	5.798	5.592	5.913	5.708	5.715	5.552
	[445]	[1,295]	[187]	[329]	[258]	[966]
Czech Republic						
1993	8.514	8.360	8.684	8.554	8.401	8.280
	[534]	[1,444]	[213]	[423]	[321]	[1,021]
Slovak territory of Czechoslovakia						
1984	5.802	5.617	5.907	5.735	5.721	5.580
	[197]	[509]	[86]	[119]	[111]	[390]
Slovakia						
1993	8.384	8.302	8.509	8.488	8.314	8.232
	[473]	[1,345]	[170]	[367]	[303]	[978]
Hungary						
1986	8.897	8.536	9.062	8.748	8.741	8.468
	[713]	[2,626]	[347]	[639]	[366]	[1,987]
1993	9.872	9.732	10.139	9.953	9.674	9.616
	[268]	[635]	[114]	[219]	[154]	[416]
Russia						
1993	10.169	9.960	10.277	10.039	9.973	9.862
	[445]	[1,332]	[287]	[737]	[158]	[595]
1998	6.723	6.558	6.837	6.583	6.587	6.525
	[275]	[741]	[149]	[417]	[126]	[324]
2000	7.404	7.297	7.572	7.418	7.244	7.192
	[223]	[553]	[109]	[258]	[114]	[295]
2001	7.829	7.710	7.972	7.791	7.712	7.677
	[304]	[852]	[137]	[400]	[167]	[452]

Note: Number of respondents in brackets

APPENDIX H: EXPLANATION OF FIGURES 5.6 THRU 5.10

An unemployed Czech man of 25 years old with five years of education will be used as an example to explain how the coefficients of table H.1 lead to the figure 5.6. Only Z_1 (indicating the (ln) income effect of years of education) of the explanatory variables is used and only D_1 (indicating the (ln) income effect of being unemployed) of the dummy variables is used. Note that this person lives in a rural area, lives without any other household members, and is not married (the income of this person is plotted in figure 5.6B). The regression equation is as follows:

$$\begin{aligned} Ln(Income) = {} & \beta_0 + \beta_A(Age-18) + \beta_{A\times T}(Age-18)\times T + \beta_{A^2}(Age-18)^2 + \beta_{A^2\times T}(Age-18)^2\times T \\ & + \beta_1 T + \beta_2 Z_1 + \beta_6 Z_1\times T + \beta_{10} D_1 + \beta_{13} D_1\times T + \beta_{16} Z_1\times D_1 + \beta_{28} Z_1\times D_1\times T \\ & + \beta_{40} K\times(T-6) + \beta_{41} Z_1\times K\times(T-6) + \beta_{45} D_1\times K\times(T-6) \\ & + \beta_{48} Z_1\times D_1\times K\times(T-6) \end{aligned} \qquad [H.1]$$

To assess the estimated (ln) income of the 25 years old unemployed man with five years of education in 1992, the coefficients are retrieved from model 2 in table H.1 for the Czech Republic. Additionally, *Age*=25; *T*=1; *Education* Z_1=5; *Unemployed* D_1=1; and *K*=0. The estimated (ln) income of this person in 1992 is -1.380.

The estimated (ln) income of this person in 1997 is assessed by using *T*=6 instead of *T*=1, which comes down to -1.215. To test whether this increase in (ln) income is significant $VAR(42\beta_{AT} + 294\beta_{A^2T} + 6\beta_1 + 30\beta_6 + 6\beta_{13} + 30\beta_{28})$ is calculated. The increase in the estimated (ln) income from 1992 until 1997 of the unemployed Czech man with five years of education is not significant. The estimated (ln) income in 2002 is assessed by using the complete regression equation [H.1] and using *T*=11 instead of *T*=6, which comes down to -1.420. The estimated (ln) income difference between 1997 and 2002 is not significant, which has been tested by computing $VAR(35\beta_{AT} + 245\beta_{A^2T} + 5\beta_1 + 25\beta_6 + 5\beta_{13} + 25\beta_{28} + 5\beta_{40} + 25\beta_{41} + 5\beta_{45} + 25\beta_{48})$. Figures 5.5 C thru G are computed in the same way.

Table H.1 OLS regression models of (ln) monthly household income, employment status, selected control variables, and interactions with time for the Czech Republic, Hungary, Poland, Russia, and Slovakia, 1991-2002

		Czech Republic[a]		Hungary[a]		Poland		Russia		Slovakia[b]	
		Model 1	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**
(β_0)	Intercept	-.851*	-.791*	-.995*	-1.037*	-1.066*	-1.169*	-.490*	-.327*	-.891*	-.708*
(…)	Woman	.018	.018	-.012	-.014	-.045*	-.045*	-.077*	-.084*	-.049*	-.050*
(…)	Woman × T	-.007*	-.007*	.002	.002	.004	.004	-.007*	-.006*	.007	.007
(…)	Age-18	.007*	.008*	.010*	.010*	.005*	.005*	.003	.002	.003	.004
(…)	Age-18 × T	-.001*	-.001*	-.001*	-.001*	-.002*	-.002*	-.002*	-.001*	-.002*	-.002*
(…)	Age-18^2 (× 1000)	-.015	-.040	-.080*	-.084*	-.025	-.025	-.055	-.035	.067	.060
(…)	Age-18^2 × T (× 1000)	.002	.004	.011*	.011*	.030*	.030*	.029*	.026*	.018	.016
(β_1)	Time	.010	-.014	-.004	.010	-.006	.032	-.066*	-.150*	.019	-.071
(β_{40})	Knot × (T-6)	–	.068*	–	-.041	–	-.089*	–	.199*	–	.526*
(β_2)	Education	.030*	.018*	.042*	.040*	.058*	.062*	.017*	.010*	.027*	.008
(β_6)	Education × T	.002*	.006*	.004*	.004*	.002*	.001	.004*	.008*	.002	.011*
(β_{41})	Education × Knot × (T-6)	–	-.010*	–	-.001	–	.004	–	-.010*	–	-.049*
(β_3)	Urban	.065*	.083*	.099*	.081*	.221*	.270*	.165*	.171*	.100*	.079*
(β_7)	Urban × T	.001	-.006	-.002	.005	.002	-.016*	.022*	.020*	-.009	.001
(β_{42})	Urban × Knot × (T-6)	–	.015	–	-.019	–	.043*	–	.003	–	-.052
	Marital status (single):										
(…)	Widowed	-.312*	-.315*	-.226*	-.224*	-.181*	-.181*	-.195*	-.197*	-.120*	-.110*
(…)	Widowed × T	.020*	.020*	.005	.004	.008	.007	.004	.005	-.024*	-.027*
(β_4)	Married	-.013	.001	-.094*	-.123*	-.011	-.028	.006	.013	.248*	.416*
(β_8)	Married × T	.016*	.010	.007	.019*	.012*	.017*	.007*	.001	-.041*	-.115*
(β_{43})	Married × Knot × (T-6)	–	.009	–	-.031*	–	-.012	–	.018	–	.383*
(β_5)	Household size	.136*	.139*	.154*	.184*	.064*	.075*	.003	-.007*	.057*	.019
(β_9)	Household size × T	-.005*	-.006*	-.006*	-.017*	-.002*	-.006*	.012*	.019*	.015*	.032*
(β_{44})	Household size × Knot × (T-6)	–	.002	–	.028*	–	.009*	–	-.018*	–	-.095*
	Employment status (employed):										
(β_{10})	Unemployed	-.828*	-.978*	-.394*	-.718*	-.632*	-.542*	-1.109*	-.441	-.774*	-.275
(β_{13})	Unemployed × T	-.006	.034	-.002	.110*	.017	-.018	.026	-.129*	.046	-.152
(β_{45})	Unemployed × Knot × (T-6)	–	-.092	–	-.278*	–	.088	–	.258*	–	.912
(β_{11})	Retired	-.464*	-.611*	-.529*	-.626*	-.142*	-.047	-.310*	-.315*	-.342*	-.462*
(β_{14})	Retired × T	.037*	.093*	.057*	.093*	.015	-.022	.029*	.050*	-.001	.058
(β_{46})	Retired × Knot × (T-6)	–	-.141*	–	-.095*	–	.093*	–	-.066	–	-.348
(β_{12})	Disabled	-.223	-.716*	-.306*	-.762*	-.182	.128	-.116	-.294	-.528	-1.042
(β_{15})	Disabled × T	.005	.125*	.023	.136*	-.017	-.129*	-.041*	.043	.002	.217
(β_{47})	Disabled × Knot × (T-6)	–	-.257*	–	-.251*	–	.275*	–	-.191*	–	-1.451

Table H.1 Continued

		Czech Republic[a]		Hungary[a]		Poland		Russia		Slovakia[b]	
		Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	Education by employment status (employed):										
(β_{16})	Unemployed × education	.048*	.042	.010	.030*	.031*	.032*	.025	.025	.025	-.025
(β_{28})	Unemployed × education × T	-.003	-.002	-.002	-.009*	-.004*	-.005	-.001	-.002	-.005	.014
(β_{48})	Unemployed × education × Knot × (T-6)	–	.000	–	.019*	–	.000	–	.003	–	-.093
(β_{17})	Retired × education	-.008	.003	-.010*	-.008	-.021*	-.022*	.001	.007	-.011	.007
(β_{29})	Retired × education × T	-.002*	-.007*	-.003*	-.004*	-.002*	-.001	-.004*	-.008*	-.001	-.009
(β_{49})	Retired × education × Knot × (T-6)	–	.010*	–	.004	–	-.002	–	.011*	–	.047
(β_{18})	Disabled × education	-.010	.046*	-.006	.016	-.023*	-.045*	-.021*	-.018	-.016	.038
(β_{30})	Disabled × education × T	-.002	-.016*	-.004*	-.011*	.003	.011*	.001	-.001	.005	-.017
(β_{50})	Disabled × education × Knot × (T-6)	–	.031*	–	.017*	–	-.020*	–	.005	–	.147
	Region by employment status (employed):										
(β_{19})	Unemployed × urban	-.103	-.047	.060	.171*	-.109*	-.215*	-.056	-.148	-.034	-.133
(β_{31})	Unemployed × urban × T	.002	-.014	-.019*	-.059*	.010	.048*	.013	.046	.017	.054
(β_{51})	Unemployed × urban × Knot × (T-6)	–	.027	–	.095*	–	-.078*	–	-.074	–	-.167
(β_{20})	Retired × urban	-.049	-.026	.020	.075*	-.040	-.130*	-.113*	-.082	-.179*	-.204*
(β_{32})	Retired × urban × T	.003	-.006	-.003	-.025*	.001	.034*	-.015*	-.028*	.031*	.041
(β_{52})	Retired × urban × Knot × (T-6)	–	.020	–	.045*	–	-.075*	–	.026	–	-.056
(β_{21})	Disabled × urban	-.061	-.273*	-.052	.077	-.096	-.261*	-.243*	-.256*	.102	.128
(β_{33})	Disabled × urban × T	.004	.062*	.011	-.030	.008	.068*	.020	.026	-.028	-.048
(β_{53})	Disabled × urban × Knot × (T-6)	–	-.119*	–	.074*	–	-.138*	–	-.012	–	.086
	Married by employment status (employed):										
(β_{22})	Unemployed × married	.060	.258*	-.005	.115	-.060	-.065	.020	-.013	-.169	-.212
(β_{34})	Unemployed × married × T	-.001	-.055	-.005	-.047*	-.006	-.005	.008	.005	.015	.043
(β_{54})	Unemployed × married × Knot × (T-6)	–	.103*	–	.100*	–	-.005	–	.019	–	-.194
(β_{23})	Retired × married	-.004	.034	.152*	.151*	.130*	.193*	-.042	-.165*	.250*	.288*
(β_{35})	Retired × married × T	.012*	-.002	-.002	.000	.013	-.010	.018*	.062*	-.040*	-.056
(β_{55})	Retired × married × Knot × (T-6)	–	.031	–	-.008	–	.051*	–	-.087*	–	.105
(β_{24})	Disabled × married	-.009	-.081	.042	-.091	.218*	.268*	.046	.148	-.081	-.362
(β_{36})	Disabled × married × T	.027*	.047	.021*	.053*	-.020	-.039	.029*	-.009	.042	.150
(β_{56})	Disabled × married × Knot × (T-6)	–	-.040	–	-.056	–	.044	–	.074	–	-.603
	Household size by employment status (employed):										
(β_{25})	Unemployed × household size	-.022	.002	-.045*	-.046*	.020	.028	.171*	.032	.085*	.139*
(β_{37})	Unemployed × household size × T	.016*	.010	.012*	.014*	.003	.000	-.012*	.034*	.001	-.024
(β_{57})	Unemployed × household size × Knot × (T-6)	–	.008	–	-.002	–	.004	–	-.092*	–	.145
(β_{26})	Retired × household size	.136*	.103*	.100*	.111*	.046*	.024*	.074*	.068*	-.013	-.130*
(β_{38})	Retired × household size × T	.002	.016*	.000	-.004	.000	.009*	.008*	.023*	.031*	.084*
(β_{58})	Retired × household size × Knot × (T-6)	–	-.033*	–	.010	–	-.019*	–	-.041*	–	-.299*

Table H.1 Continued

		Czech Republic[a]		Hungary[a]		Poland		Russia		Slovakia[b]	
		Model 1	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**
(β_{27})	Disabled × household size	.092*	.097*	.051*	.127*	.028	.028	.066*	.076*	.040	.123
(β_{39})	Disabled × household size × T	-.004	-.005	-.004	-.019*	.000	.000	-.004	-.011*	.004	-.028
(β_{59})	Disabled × household size × Knot × (T-6)	–	.003	–	.020	–	.001	–	.020	–	.144
	Adjusted R^2	.475	.479	.431	.438	.281	.283	.278	.284	.388	.392
	F-change	273.621*	5.430*	221.615*	9.315*	130.423*	2.232*	261.366*	13.405*	87.458*	3.073*
	N	14,285	14,285	13,448	13,448	15,255	15,255	31,038	31,038	6,397	6,397

Note:
[a]For the Czech Republic and Hungary: 1992-2002.
[b]For Slovakia there are only three data sets: 1993/95/98.
* $P < .05$, one-tailed.

SAMENVATTING (SUMMARY IN DUTCH)

Introductie

Landen in Centraal en Oost Europa (COE) hebben in de vorige eeuw twee ingrijpende gebeurtenissen meegemaakt. De eerste is de overgang naar het Communisme. Geïnspireerd door de politieke filosofie van Marx probeerden socialistische regimes sociale ongelijkheden uit te bannen. Het Communistisch systeem kenmerkt zich door een een-partijen stelsel en een planeconomie waarbij de centrale staat een grote rol speelt. Het kapitaal en de wijze van productie was in handen van de staat, de planeconomie draaide op het volledig benutten van de beroepsbevolking, staatsbedrijven waren de belangrijkste werkgevers, er werd een inkomensnivellerend beleid gevoerd waardoor het vergaren van privé kapitaal werd bemoeilijkt en de basis sociale voorzieningen waren voor iedereen beschikbaar (Mikhalev 2003).

De tweede ingrijpende gebeurtenis vond plaats omstreeks 1989. Veel COE landen probeerde al voor 1989 marktwerking te herintroduceren in hun planeconomieën. Echter, het waren de 'fluwelen' revoluties en de val van de Berlijnse muur die de weg echt vrijmaakte voor de markt. Het markt transformatie proces kenmerkt zich door het afschaffen van prijscontrole, het teruggeven van staatseigendommen aan burgers of aan private bedrijven en het vrijgeven van de arbeidsmarkten, de wisselkoersen en de buitenlandse handel. De herintroductie van markt mechanismen in de Communistische planeconomieën van COE heeft verregaande politieke, economische en sociale gevolgen gehad welke uitgebreid onderzocht zijn. De onderzoeksliteratuur richt zich op twee belangrijke vragen: (1) Resulteren de economische hervormingen in een stijgende of dalende ongelijkheid? en (2) Zijn de economische hervormingen onevenredig voordelig geweest voor bepaalde sociale groepen ten koste van andere sociale groepen? (Xie and Hannum 1996).

De verwachting van de meeste wetenschappers, politici en beleidsmakers was dat de ongelijkheid zou toenemen, maar de cijfers laten een wel erg sterke stijging van de inkomensongelijk zien na 1989. Figuren 1.1 en 1.2 in hoofdstuk 1 presenteren trends in inkomensongelijkheid als Gini coëfficiënten gebaseerd op respectievelijk bruto loon en per capita huishoudinkomen. Beide maten vóór inkomensongelijkheid laten voor de hervormingen van 1989, op kleine stijgingen en dalingen na, relatief stabiele trends zien in Tsjechoslowakije, Hongarije, Polen en Rusland. Hoewel de trends in inkomensongelijkheid stabiel zijn tot 1989, zijn er wel verschillen in de omvang van de inkomensongelijkheid tussen de landen. Tsjechoslowakije is het minst ongelijk en Rusland is het meest ongelijk. De inkomensongelijkheid in Hongarije en Polen schommelt er tussen in.

De figuren laten tevens een sterke stijging in inkomensongelijkheid zien na 1989. Deze stijging in inkomensongelijkheid neemt midden jaren negentig van de twintigste af en lijkt te stabiliseren op een hoger niveau van inkomensongelijkheid in vergelijking met dat van voor 1989. Ook hier valt op dat de stijging in inkomensongelijkheid niet voor elk land even sterk is. De verschillende ontwikkelingen maken het interessant om de landen te vergelijken.

Het is bekend dat vooral de cijfers van voor 1989 niet de meest betrouwbare zijn en dat er problemen zijn met het vergelijken van de cijfers tussen COE landen. Binnen COE landen is het soms moeilijk om de cijfers van voor 1989 te vergelijken met cijfers van na 1989. Toch roept de plotselinge

stijging in de inkomensongelijkheid vragen op. De groei in Gini coëfficiënten betekent dat de inkomens van de mensen in de betreffende landen verder uit elkaar zijn komen te liggen. Met andere woorden: de verschillen in inkomen tussen bepaalde sociale groepen in postcommunistische landen zijn toegenomen. Dit proefschrift richt zich op een verdere uitwerking van de vraag of de economische hervormingen onevenredig voordelig zijn geweest voor bepaalde sociale groepen ten koste van andere sociale groepen. Hierbij wordt gekeken of bepaalde sociale groepen er op vooruit zijn gaan in hun **inkomen** ten koste van andere sociale groepen. Dit wordt verwoord door de centrale probleemstelling:

Wie zijn de winnaars en verliezers van inkomensverwerving tijdens het transformatie proces in postcommunistische landen?

Markt Transitie Theorie

Een belangrijke theorie in de literatuur naar de vraag wie de winnaars en verliezers zijn in postcommunistische landen is de Markt Transitie Theorie (MTT). Deze theorie beschrijft hoe markt hervormingen stratificatie uitkomsten zoals inkomensongelijkheid en inkomen kunnen beïnvloeden (Nee 1989, 1991, 1996). De kern van de theorie bestaat uit drie met elkaar samenhangende hypothesen. De eerste is de 'marktmachthypothese'. Deze hypothese houdt in dat de introductie en uitbreiding van marktwerking in de planeconomieën resulteren in een verschuiving van de politieke en economische macht; de invloed van politiek kapitaal zal afnemen. De tweede is de 'marktprikkelshypothese'. Deze hypothese houdt in dat de introductie en uitbreiding van marktwerking het investeren in onderwijs stimuleert. De derde is de 'marktkansenhypothese'. Deze hypothese houdt in dat er door de introductie en uitbreiding van marktwerking meer mogelijkheden ontstaan om inkomen te verwerven. Naast het werken voor staatsbedrijven kunnen mensen werken voor bedrijven in de private sector of mensen kunnen zelfstandige worden. Dit alles leidt ertoe dat het niet meer alleen de leidende figuren uit de Communistische Partij zijn die de controle hebben over en toegang hebben tot de belangrijke hulpbronnen. Directe producenten van goederen en de 'nieuwe' economische elite trekken steeds meer macht naar zich toe. Arbeidsmarkten worden vrijer en de mogelijkheden om privaat kapitaal te vergaren nemen toe met als resultaat dat humaan en markt kapitaal meer inkomensopbrengsten opleveren, terwijl de inkomensopbrengsten van politiek kapitaal afnemen.

In termen van winnaars en verliezers houdt de MTT in dat de voormalige politieke elite tot de verliezers behoren. Zij moeten plaatsmaken voor een 'nieuwe' economische elite bestaande uit hoog opgeleide professionals, managers en entrepreneurs. Zij worden gezien als de belangrijkste winnaars van de markt hervormingen. Naast de groeiende mogelijkheden voor entrepreneurs worden ook degenen die in de private sector werken tot de winnaars gerekend. De toenemende mogelijkheden en toenemende opbrengsten van humaan kapitaal zouden tevens moeten resulteren in een meer gelijke beloning tussen mannen en vrouwen (Nee and Matthews 1996).

Hoofdstuk 2: Een Meta-Analyse van studies naar inkomensverwerving

De MTT is oorspronkelijk geformuleerd om de invloeden van markt hervormingen op stratificatie uitkomsten in China te verklaren. De theorie is daarna ook gebruikt om veranderingen in stratificatie uitkomsten in COE landen na de val van het Communisme in COE landen te verklaren. De MTT kan gezien worden als een algemene transitie theorie. In de uitgebreide literatuur over China en COE wordt de MTT geconfronteerd met empirische tegenstrijdigheden en met alternatieve theoretische verklaringen. Dit vraagt om een evaluatie van de huidige stand van zaken in de literatuur en een scherper antwoord op de vraag: in hoeverre er een beter begrip is ontstaan van de invloed van markt hervorming op stratificatie uitkomsten. Hiertoe zijn veranderingen in de inkomensopbrengsten van de verschillende vormen van kapitaal onderzocht.

In hoeverre zijn de inkomensopbrengsten van humaan, politiek en markt kapitaal veranderd tijdens het markt transformatie proces?

Met behulp van een meta-analyse zijn reeds gepubliceerde empirische resultaten uit de MTT literatuur samengevat. Deze analyse heeft geleid tot een beter gestructureerd overzicht van die literatuur. Tevens wordt inzicht verkregen in hoeverre de MTT in staat is gebleken om de relatie tussen economische hervormingen en veranderende effecten van determinanten van inkomens te verklaren. De resultaten van de meta-analyse laten zien dat lidmaatschap van de Communistische Partij, opleiding, werkervaring, zelfstandige zijn en werkzaam zijn in de private sector een positief effect hebben op het individuele inkomen. Daarnaast blijken vrouwen minder te verdienen dan mannen. Er worden echter weinig veranderingen over de tijd in deze effecten geconstateerd. Voor zover uitspraken gedaan kunnen worden over veranderingen in de inkomensopbrengsten van politiek kapitaal[1] lijken deze opbrengsten toe te nemen tijdens het markt transformatie proces. Een afnemend verschil in inkomen tussen mannen en vrouwen is alleen gevonden in stedelijk China. Voor de effecten van de overige inkomensdeterminanten zijn geen veranderingen over de tijd gevonden. Verder zijn er verschillen gevonden tussen stedelijk China en COE hetgeen suggereert dat markt transformatie processen verschillen tussen regio's. De resultaten van de meta-analyse bieden weinig ondersteuning voor de MTT.

Op basis van de meta-analyse kunnen drie belangrijke conclusies getrokken worden. Als eerste dient de MTT herzien en verder uitgewerkt te worden om de relatie tussen economische hervormingen van planeconomieën en stratificatie uitkomsten nauwkeuriger te kunnen verklaren. Zo blijkt de relatie tussen marktwerking en veranderingen in de inkomens van leden van de Communistische Partij complexer te zijn dan door de MTT gesuggereerd wordt. Het inkomenseffect van politiek kapitaal blijkt niet af te nemen in stedelijk China. Dit wijst erop dat leden van de Communistische Partij in staat zijn gebleken andere manieren te vinden om hun inkomen veilig te stellen.

De tweede conclusie is dat aanvullende proposities nodig zijn om de condities te specificeren waaronder de MTT voorspellingen wel opgaan en onder welke niet. Veranderingen in stratificatie uitkomsten verschillen tussen regio's en het blijkt dus moeilijk om de MTT te gebruiken als een algemene transitie theorie om stratificatie uitkomsten te verklaren in verschillende institutionele contexten. Door specifieke kenmerken van de verschillende transformatie processen te identificeren

[1] The resultaten met betrekking tot politiek kapitaal zijn alleen gebaseerd op studies over stedelijk China.

kunnen uitspraken gedaan worden onder welke condities de MTT verklaringen opgaan en onder welke niet.

De derde conclusie is dat de MTT geen voorspellingen doet over de daadwerkelijke verliezers van het markt transformatie proces. De groepen die makkelijk onder de armoede grens terecht komen (werklozen, gepensioneerden en arbeidsongeschikten) blijven buiten beschouwing. Deze sociale groepen verdienen meer aandacht omdat leden van deze groepen in de problemen komen wanneer zij niet blijken te kunnen profiteren van de invoering van marktwerking of zelfs juist door de marktwerking achterop raken.

Hoofdstuk 3: Een secondaire analyse van postcommunistische landen

Uit de resultaten van de meta-analyse in hoofdstuk 2 is gebleken dat de effecten van inkomensdeterminanten in regio's verschillend beïnvloed worden door het markt transformatie proces. In hoofdstuk 3 worden verschillen tussen regio's verder uitgewerkt en wordt de MTT getoetst met behulp van een secondaire analyse van cross-sectionele data sets uit Tsjechië, Hongarije, Polen, Rusland en Slowakije. Tevens wordt een verklaring voor verschillen tussen landen gepresenteerd die gerelateerd wordt aan de empirische resultaten. De centrale vraag uit dit hoofdstuk luidt:

> *In hoeverre zijn de trends in inkomensopbrengsten van humaan en markt kapitaal gelijk tussen postcommunistische samenlevingen? En hoe kunnen verschillende trends gerelateerd worden aan de verschillende landenspecifieke transformatie processen?*

Omdat de MTT de markt transformaties als een uniform proces ziet, worden op basis van deze theorie gelijke trends in de effecten van inkomensdeterminanten tussen postcommunistische landen voorspeld. De resultaten van de secondaire analyses uit hoofdstuk 3 laten zien dat de inkomenseffecten van jaren opleiding, jaren werkervaring, zelfstandige zijn en werkzaam zijn in de private sector positief zijn en dat het inkomen van vrouwen lager is dan dat van mannen. Deze resultaten komen overeen met de resultaten die gevonden zijn in de meta-analyse. Wanneer gekeken wordt hoe de effecten van de inkomensdeterminanten veranderen over de tijd dan blijkt dat er duidelijke verschillen zijn tussen de vijf COE landen. Dit suggereert dat de transformatie processen in postcommunistische landen specifiek zijn voor de afzonderlijke landen en dat er geen sprake is van één uniform transformatie proces.

Alternatieve verklaringen stellen dat postcommunistische landen verschillende institutionele achtergronden hebben die geleid hebben tot een verscheidenheid aan institutionele contexten waarin economische hervormingen zijn ingevoerd. Dit maakt dat de gevolgen van de markt hervormingen bezien moeten worden in de landenspecifieke contexten. Deze verklaringen worden ook wel 'padafhankelijkheid' genoemd (zie bijvoorbeeld: Stark 1992a; Walder 1996). Uit de gegevens van de secondaire analyse blijkt dat de COE landen gegroepeerd kunnen worden naar gelijke trends in de effecten van de inkomensdeterminanten. De trends tussen de gevonden groepen zijn verschillend. Deze classificatie op basis van empirische trends komt in grote mate overeen met Strak's typologie van privatiseringsstrategieën (Stark 1992a). Er dient benadrukt te worden dat dit een voorlopige conclusie is die hoogstens een indicatie geeft voor een relatie tussen padafhankelijke transformatie processen en verschillen in trends in de effecten van inkomensdeterminanten tussen COE landen.

Winnaars en verliezers tijdens markt transformatie

Hoofdstuk 4: Leden van de Communistische Partij

De invloed van het transformatie proces op inkomensopbrengsten van politiek kapitaal en de consequenties hiervan voor de inkomens van de leden van de Communistische Partij (vanaf hier CP-leden) vormen een hevig bediscussieerd onderwerp in de transitie literatuur. Volgens de MTT verliest politiek kapitaal haar waarde tijdens het markt transformatie proces. Dit komt omdat de Communistische Partij haar alleenrecht over politieke en economische hulpbronnen verliest en dat er andere sociale groepen zijn die politieke en economische hulpbronnen vergaren. Het lidmaatschap van de Communistische Partij brengt niet meer de privileges mee zoals het deed onder het Communisme waardoor de inkomensvoordelen van de leden kleiner zouden zijn geworden. Volgens de MTT behoren de CP-leden tot de verliezers van het markt transformatie proces.

Tegenstanders van de MTT beweren echter dat CP-leden mogelijkheden hebben gevonden om hun politiek kapitaal in te ruilen voor marktbezittingen. Het is mogelijk dat zij in hun bevoorrechte posities tijdens het Communisme waardevolle kennis en hulpbronnen (bijvoorbeeld: werkervaring, management vaardigheden en een sociaal netwerk) hebben kunnen eigen maken die zij gebruiken om hun posities veilig te stellen tijdens de hervormingen. Weer anderen stellen dat CP-leden specifieke persoonlijke eigenschappen hebben – zoals ambitie en prestatiegerichtheid – die hen in staat stelt om in elk economisch regime een goede positie te verwerven (Gerber 2000a, 2001a). Het is dus interessant om te onderzoeken in hoeverre de inkomensvoordelen van CP-leden blijven bestaan wanneer rekening gehouden wordt met waardevolle individuele hulpbronnen. Dat leidt tot de volgende vraag:

Wat zijn de inkomensverschillen tussen CP-leden en niet-leden in postcommunistische samenlevingen wanneer rekening gehouden wordt met verschillen in hulpbronnen tussen beide groepen?

Voor de beantwoording van deze vraag zijn de inkomens van de CP-leden vergelijken met die van vergelijkbare niet-leden. De resultaten uit hoofdstuk 4 laten zien dat zowel voor als na de markt hervormingen de inkomens van de CP-leden hoger zijn dan die van de niet-leden. Dit is zeker het geval voor de CP-leden met een hoge rang (de ‘nomenklatoera’ of politieke elite). Er is weinig ondersteuning gevonden voor de voorspelling dat de inkomensopbrengsten van politiek kapitaal afgenomen zijn tijdens het markt transformatie proces. Deze resultaten spreken de MTT tegen. Let wel, de analyses controleren voor opleiding en in zekere zin management vaardigheden (benaderd door de EGP-indeling van beoepsgroepen). Beide vormen dus ook geen afdoende verklaring voor de blijvende inkomensvoordelen van de CP-leden.

Ook hier is een poging gedaan om de verschillen tussen de COE landen te relateren aan het idee van padafhankelijke transformatie processen. De vier COE landen zijn gerangschikt met behulp van Walder’s categorisering van landen op basis van de mogelijkheden die de elite heeft (Walder 2003) en Stark’s categorisering van landen op basis van privatiseringsstrategieën (Stark 1992a). Hier wordt gesuggereerd dat de CP-leden in Tsjechië en Slowakije de minste mogelijkheden hebben om hun inkomensvoordelen te behouden, dat ze in Hongarije meer mogelijkheden hebben en dat ze in Rusland

de meeste mogelijkheden hebben om hun inkomen te behouden. Deze rangorde van landen is vergeleken met de empirische resultaten. De gevonden overeenkomsten lijken te wijzen op het bestaan van een relatie tussen padafhankelijke transformatie processen en de mate van het behoud van inkomensvoordelen van CP-leden. Ook hier moet benadrukt worden dat dit een voorlopige conclusie betreft en dat geen hypothesen getoetst zijn aan de empirie.

Hoofdstuk 5: Werklozen, gepensioneerden en arbeidsongeschikten

Bij de vraag naar wie de winnaars en verliezers zijn is veel aandacht uitgegaan naar de CP-leden. Er is maar weinig onderzoek gedaan naar de zwakke groepen in de samenleving. Deze groepen bestaan over het algemeen uit mensen die niet (kunnen) werken en voor hun inkomen afhankelijk zijn van de staat. Hiervoor kunnen verschillende redenen bestaan. In deze studie zijn de veranderingen in de inkomens van werklozen, gepensioneerden en arbeidsongeschikten (vanaf hier samengenomen als uitkeringsgerechtigden) onderzocht.

Voor de uitkeringsgerechtigden is veel veranderd na de hervormingen van 1989. De sociale voorzieningen tijdens het Communisme stonden bekend als genereus. Iedereen in de samenleving werd voorzien in zijn/haar basis behoeften. Dit was een erg kostbaar systeem van sociale voorzieningen. Tijdens het Communisme werden deze hoge kosten gedeeltelijk ondervangen door ervoor te zorgen dat zoveel mogelijk mensen werkten en de salarissen en sociale uitkeringen werden relatief laag gehouden. Dit alles veranderde na 1989. Zeker gedurende de eerste paar jaar van de hervormingen ondervonden de postcommunistische samenlevingen een negatieve economische groei, torenhoge inflaties en een groeiende werkloosheid. Dit leidde tot financiële problemen en het werd duidelijk dat het systeem van sociale vernieuwingen hervormd diende te worden. In deze studie is onderzocht in hoeverre hervormingen van het systeem van sociale voorzieningen de inkomens positie van uitkeringsgerechtigden beïnvloed heeft.

Hoe veranderen de inkomens van uitkeringsgerechtigden in postcommunistische samenlevingen? En veranderen de inkomens van uitkeringsgerechtigden verschillend wanneer rekening gehouden wordt met verschillen in hulpbronnen?

De resultaten van de analyses uit hoofdstuk 5 laten zien dat de inkomens van uitkeringsgerechtigden die weinig hulpbronnen bezitten minder inkomen hebben dan werkende mensen die weinig hulpbronnen bezitten. Verder blijken opleiding, omvang van het huishouden en op het platteland leven (deze kenmerken worden gebruikt om aan te geven in hoeverre mensen hulpbronnen bezitten) positieve effecten op het inkomen te hebben.

De COE landen kenden vooral moeilijke tijden gedurende de eerste paar jaar van hervormingen. In deze studie is aangenomen dat uitkeringsgerechtigden vooral in deze tijd hun inkomenspositie hebben zien verslechteren. Tevens is aangenomen dat het juist in deze tijd belangrijk is om voldoende hulpbronnen te bezitten. De resultaten uit hoofdstuk 5 bevestigen dit ten dele. Tot 1997, wat een arbitrair gekozen afbakening is tussen de vroege en de laate periode in het transformatie proces, blijken alleen omvang van het huishouden en getrouwd zijn hulpbronnen te zijn die het inkomen van uitkeringsgerechtigden op peil kunnen houden. Na 1997 levert alleen het leven in de stad

inkomensvoordelen op voor uitkeringsgerechtigden. Er zijn geen veranderingen gevonden in de inkomensopbrengsten van opleiding voor de uitkeringsgerechtigden.

Afsluiting

De resultaten van de meta-analyse uit hoofdstuk 2 hebben laten zien dat de huidige literatuur op een aantal punten ~~nog~~ geen bevredigende antwoorden heeft gegeven: (1) In hoeverre ondergingen postcommunistische landen een uniform markt transformatie proces dat stratificatie uitkomsten op dezelfde manier heeft veranderd? (2) Wat is er gebeurd met de inkomensvoordelen van de leden van de Communistische Partij? (3) Was het markt transformatie proces in het bijzonder nadelig voor de werklozen, de gepensioneerden en de arbeidsongeschikten? De relevantie van deze studie ligt in de aandacht die aan deze drie punten besteed wordt.

Op theoretisch gebied heeft deze studie vooruitgang geboekt door een prominente theorie, de MTT, kritisch te toetsen en waar mogelijk te verbeteren of uit te breiden. Hierbij is aandacht besteed aan twee belangrijke discussiepunten in de literatuur. Ten eerste is de aanname van de MTT dat de transformatie processen uniform zijn afgezet tegen het alternatief dat de transformatie processen bepaald worden door de specifieke institutionele contexten van COE landen. Ten tweede is de voorspelling dat CP-leden tot de verliezers behoren afgezet tegen de voorspelling dat CP-leden manieren hebben gevonden om hun bevoorrechte positie te behouden. Ten derde zijn nieuwe hypothesen afgeleid over de consequenties van de markt hervormingen voor de inkomenspositie van uitkeringsgerechtigden.

Met deze studie is ook geprobeerd om op methodisch gebied vooruitgang te boeken. Als eerste is een meta-analyse uitgevoerd op basis van sociologische en economische studies. Tot op dit moment bestaan er maar weinig meta-analyses in de sociologische literatuur (Wagner and Weiß 2002, 2003, 2006). Vaak wordt gesteld dat meta-analyse niet goed mogelijk is omdat sociologische studies te veel van elkaar verschillen op het gebied van opzet, modellen, operationalisaties van begrippen en de gebuikte data. Deze studie heeft laten zien dat het gebruik van meta-regressie analyse de mogelijkheid biedt om te controleren voor deze verschillen tussen studies (Verhoeven, Jansen, and Dessens 2005).

Ten tweede is een poging gedaan om het vergelijkende karakter te vergroten en te verbeteren. In de huidige literatuur wordt vaak een aantal landen op één tijdstip onderzocht of wordt één land op meerdere tijdstippen geanalyseerd. In deze studie zijn deze beide manieren van vergelijkend onderzoek gecombineerd en zijn de Tsjechische Republiek, Hongarije, Polen, Rusland en Slowakije gedurende het markt transformatie proces onderzocht. Er zijn in totaal 67 cross-sectionele surveys gestandaardiseerd waarvan twee waardevolle en informatierijke dateren van voor 1989.

Ten derde is de variatie tussen landen en de variatie over de tijd in de effecten van de inkomensdeterminanten in twee stappen geanalyseerd. Daarnaast zijn de veranderingen over de tijd als gebroken trends gemodelleerd. Voor en na een bepaald breekpunt worden verschillende trends toegestaan. Het specifieke model dat gebruikt wordt, wordt ook wel ‘spline’ genoemd. Dit model zorgt ervoor dat de geschatte trends voor en na het breekpunt op elkaar aansluiten.

Deze studie heeft niet alleen onderzoeksvragen beantwoord maar heeft ook een aantal nieuwe onderzoeksproblemen onder de aandacht gebracht. Aanbevelingen voor toekomstig onderzoek worden

op de volgende drie gebieden gedaan: (1) nieuwe onderzoeksvragen; (2) theoretische vooruitgang; (2) verbetering van de data, operationalisaties en metingen.

Allereerst wordt ingegaan op het stellen van nieuwe onderzoeksvragen. Deze studie is vooral gericht op het beantwoorden van vragen op het micro-niveau (het niveau van de individuen). Dit roept echter de vraag op of de kennis van de relatie tussen het markt transformatie proces en individueel inkomen gebruikt kan worden om meer inzicht te verkrijgen in de relatie tussen het markt transformatie proces en inkomensongelijkheid. Dit vraagstuk bevindt zich op het macro-nieveau. Daarnaast heeft deze studie alleen aandacht besteed aan inkomen als stratificatie uitkomst. Het is interessant om meer aandacht te besteden aan het 'risico' om werkloos of zelfstandige te worden. Beide bestonden niet of nauwelijks tijdens het Communisme maar hebben wel een grote invloed op het stratificatie systeem. Als laatste is in deze studie alleen gekeken naar het economische aspect van de hervormingen. Om een beter begrip te krijgen van de consequenties van het markt transformatie proces zal ook naar andere aspecten zoals veranderende politieke instituten en veranderende publieke opinie gekeken moeten worden.

Theoretische vooruitgang kan geboekt worden door condities te specificeren waaronder de voorspellingen van de MTT wel opgaan en onder welke condities niet. Hiervoor dienen hypothesen afgeleid te worden over landenspecifieke kenmerken en hoe die het stratificatie systeem beïnvloeden. Hierbij kan gedacht worden aan macro-economische landenkenmerken maar ook aan politieke kenmerken zoals de mate van regimeverandering. Ook verschillen tussen COE landen in de mate waarin de burgers de marktprincipes geaccepteerd hebben kunnen leiden tot een verschillende invloed op het stratificatie systeem.

Als laatste kan het vergelijkende aspect zoals in deze studie is nagestreefd verder verbeterd worden. Het specificeren van condities waaronder MTT voorspelling wel en niet van toepassing zijn vraagt meer variatie op institutioneel niveau. Om dit te bereiken dient het aantal landen dat onderzocht wordt vergroot te worden. Gezien het beperkte aantal COE landen zal naar andere manieren gezocht dienen te worden om de variatie op institutioneel niveau te vergroten. Eén manier is om niet naar COE landen te kijken maar naar regio's binnen COE landen. De verschillen in markt hervormingen op het niveau van regio's binnen COE landen wordt dan als institutioneel niveau gehanteerd.

Een ander alternatief is om het onderzoeksgebied niet te beperken tot COE landen maar landen die een overgang van een planeconomie naar een markt economie ondergaan hebben in zijn algemeenheid te onderzoeken. Op die manier kunnen ook landen in Zuid-Amerika en Azië in het onderzoek betrokken. Dit is een mooi vervolg op de huidige studie waarbij 'macro (transformatie proces) → micro (inkomensverwerving) → macro (inkomensongelijkheid)'-proposities afgeleid kunnen worden om de invloed van de markt transformatie op de inkomensverdeling te verklaren.

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CURRICULUM VITAE

Willem-Jan Verhoeven was born in Helmond, the Netherlands, on July 20, 1974. He studied Sociology at Utrecht University, where he earned his master's degree in 2000. From 2000 to 2001, he worked as a researcher at the Institute for Socio-Economic Research [Instituut voor Sociologisch-Economisch Onderzoek (ISEO)] in Rotterdam. He participated in research projects focused on the educational and labor market position of the second-generation ethnic minority youth and on labor market and public security in the four largest cities in the Netherlands. In 2001, he became a PhD student at the Interuniversity Center for Social Science Theory and Methodology (ICS) and worked on this thesis at the Department of Sociology of Utrecht University. In 2003, he participated in the Summer Workshop Luxembourg Income Study (LIS): comparative research in income distribution and social policy. In 2004, he spent a traineeship of four month at the department of Sociology/Center for Demography and Ecology of the University of Wisconsin-Madison, where he worked with Professor Theodore P. Gerber. As of August 2006, he is an assistant professor at the Department of Criminology at the Erasmus University Rotterdam.

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