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INTERRELATIONSHIPS BETWEEN HUMAN CAPITAL AND SOCIAL CAPITAL: IMPLICATIONS FOR ECONOMIC DEVELOPMENT IN TRANSITION ECONOMIES

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Abstract

One of the main tasks of the transition economies is to catch up with the advanced levels of highly developed economies. The lack of social capital is a major impediment to this process, as it does not allow taking advantage of the comparatively high level of human capital in these countries. The purpose of the current paper is to study the interrelationships between human capital and social capital, with the main emphasis on how social capital affects the accumulation of human capital. In general, social capital acts like a filter through which human and financial capital flow from the parents and the community to the child, producing better educational outcomes and thus helping to achieve better results in development.

Keywords: human capital, social capital, economic development, transition economies

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TABLE OF CONTENTS

Introduction

One of the main tasks of the transition countries is to raise their welfare levels which, compared to the developed economies, are low. The growth of a society's wealth depends on its total capital, which consists of physical capital, natural resources, human capital and social capital. It has been shown that the share of physical capital constitutes only 15–36% of a society's total capital (Hjerppe, 2000). Hence it is important to lay greater emphasis on the role of human and social capital in economic development.

The purpose of the current paper is to study the interrelationships between human capital and social capital, looking more closely at how social capital affects the accumulation of human capital. Both of them play a significant role in the economic development of the transition countries.

Social capital is defined as the institutions, social relationships, networks, trust and norms shaping the quality and quantity of a society's social interactions (World Bank, 2003). Human capital (related to good education and strong health) is mainly influenced by civil (horizontal) social capital. Social capital is like a filter through which human and financial capital flow from the parents and the community to the child, producing better educational outcomes. Where social capital is weak, there are conflicting values and a significant lack of trust — the latter is correlated to personal distress and a higher average mortality rate. In view of this, it is important to increase social participation and cohesion in the transition countries in order to generate more human capital and achieve better results in development.

The first and the second part of the paper focus on the discussion of the concepts of social and human capital, their

differences and consistency with the term "capital". The main emphasis is on social capital as a concept that is less known than human capital. The third part investigates the effect of social and human capital on the process of economic development. In the fourth part of the paper, the concept of social capital is applied to the problem human capital generation. Here an overview of the recent literature in this field is given. The level and possible relationships between human and social capital in the transition countries are analysed in the fifth part of the paper. Most of the data used in the research have been drawn from the publications of the World Bank, UNDP and IMF.

1. Basic definitions of human capital and social capital

The concept of human capital is related to good education and strong health, but most of the research in this field tends to concentrate only on the first aspect. As such, human capital is defined as the knowledge, skills, and experience of people that make them economically productive. Human capital can be increased by investing in education, health care, and job training. At the individual level, one's human capital (measured mainly in education, experience and tenure) is determined through the wages they can earn. Therefore, human capital can be treated as a rival good — if knowledge and skills are directed to one particular activity or sphere; their simultaneous use in others is prevented (Lucas, 1988). However, at the level of community, the set of knowledge and ideas is basically non-rival and can be implemented in many activities at the same time (Romer, 1990).

The concept of social capital is used differently by sociologists, political scientists, and economists. Views are divided both on its definition, measurement possibilities and significance. In pertaining literature, social capital has been conceptualized in a number of ways. The work of Putnam (1993) appears to be the narrowest with a focus on horizontal social networks empirically associated with norms that affect economic performance. Coleman (1988) offers a wider definition that expands the concept, including vertical, hierarchical institutions and firms and the possibility of negative as well as positive impacts on performance. Finally, North (1990) and Olson (1982) present the most encompassing perspective, which emphasizes the role of formalized institutions, such as court systems, rule of law, and political liberties in shaping the social and political environment and patterns of development. These different

perspectives are taken to be complementary rather than alternative manifestations of social capital, each offering a different view of the institutions and processes at work (Serageldin, 1998).

The World Bank defines social capital as the institutions, social relationships, networks, and norms shaping the quality and quantity of a society's social interactions (World Bank, 2003). Social capital can be divided into civil (or horizontal) and governmental (or vertical) social capital. At the micro level, civil social capital relates to values, beliefs, attitudes, and norms of behaviour. In the recent literature, civil social capital is usually divided into three basic dimensions called "bonds", "bridges" and "linkages" (Woolcock, 2000). "Bonds", or "strong ties", represent immediate family members, close friends, and professional colleagues who help (especially poor) people to "get by". "Bridges", or "weak ties", refer to the relations with more distant associates and acquaintances, which are needed to "get ahead". "Linkages" refer to the vertical dimension of social capital, the lack of which leads to powerlessness and exclusion.

At the macro level, the government's social capital embodies the rule of law, contract enforcement, absence of corruption, transparency in decision-making, an efficient administrative system, a reliable legal system — in short, state capability and credibility (Meier, 2002). So, the concept of social capital is multi-dimensional, and different combinations of these dimensions might yield different outcomes. For example, while the poor may possess some forms of social capital (usually "bonding" social capital), they may well be lacking in others, particularly those providing access to formal institutions

Currently there has been a lot of discussion about whether social capital is consistent with the traditional meaning of the term "capital". If social capital is capital, it should give its value step-by-step to the production outcome (income), it must depreciate when used, and there should be the possibility to invest into social capital. As defined earlier, social capital defi-

nitely meets the first and third conditions. Yet, like human capital, social capital does not have a predictable rate of depreciation (Adler and Kwon, 2000). Social capital does not lose its value when used; rather it would lose its value when not in use. But this is also characteristic of the other forms of capital: unemployment decreases an individual's human capital, agricultural land loses its value if not cultivated, non-used machinery depreciates (at least) morally, etc.

However, social capital is unlike other assets that economists call capital because investment in its development does not seem amenable to quantified measurement, even in principle (Solow, 1997). Even if the benefits that flow from social capital can be measured, the "capital" label should be taken somewhat metaphorically as long as the effort involved in building social networks cannot be measured.

2. Similarities and differences between human and social capital

Many authors blur the distinction between social and human capital, taking both to be embodied in people. However, this approach is not consistent with the definitions of social capital. The critical difference between human and social capital is that education and health can be embodied in one individual and can be acquired by one individual regardless of what other people do. Social capital, on the other hand, can by definition only be acquired by a group of people and requires a form of cooperation among them (Grootaert, 1998).

Yet the concepts of social capital and human capital are closely related. The two factors can be viewed both as opposites and complements (Saraceno, 2002). According to the first argument, human capital (based on individual achievement and competition) is a key for social success, whereas social capital has only limited importance for narrow target groups (handicapped, minorities, etc.). The second approach assumes that social and human capital reinforce each other's effect on economic

growth, social control and support, health, and better governance. An individual's achievements would be higher, if he or she both competed and cooperated with others through different networks and common value systems.

Human capital and social capital also share the attribute that they are simultaneously consumption goods and investment — both can be seen as an input into the development process, and also as an output of this process (Grootaert, 1998). Education is worth pursuing for its own sake, and a well-educated population is an important outcome of successful development. Likewise, a rich network of civic associations and a well-functioning set of government institutions are worth having, independent of their effect on economic growth.

3. Social and human capital as factors of economic development

Although human capital and especially social capital may seem to be merely fashionable phrases without a significant content, there exists a long history in using these concepts as factors of economic development in economic theory. Neoclassical growth theory that was developed in the middle of the last century laid a special emphasis on physical capital, labour and the level of technology as the main factors of development. Endogenous growth models (Lucas, 1988; Romer, 1986) added human capital to the list of production factors.

Broadly speaking, there are two approaches in relating human capital to economic growth. Firstly, the growth rate of economy could be linked to the accumulation rate of human capital (Lucas, 1988). Secondly, the growth rate can be based on the stock of human capital (Aghion *et al.*, 1998). Literature about economic growth has focused mainly on education in the discussion of human capital issues, whereas health as another form of human capital has got less attention (Muysken *et al.*, 2000). The main reason for this is that little theoretical research has been done to study the interrelationship between health and

economic growth. In recent years the empirical discussion over health's effect on economic growth has become more intensive. Most of the work has been about the transition countries, because one of the main obstacles to economic growth in these countries is their societies' poor health.

Recent developments in growth theories stress that human capital creates positive externalities, for example, financial capital does not flow to poor countries with low education levels. Education causes an individual to earn more and to become more productive; therefore a rise in the average level of education of the nation's workforce would be expected to increase national income.

The theory of social capital helps to show that participation in informal networks and the trust based on it are also values that are part of the society's capital. Almost all the economic activities are connected to a network of social relations and social capital affects productivity at both micro and macro level. Informal relations do not directly increase material welfare, but without these relations the growth in welfare is harder to achieve (Evans, 1996). It is claimed that social capital complements the market in its allocation and distribution functions. Most significantly, civil social capital can raise total factor productivity, because the quantity and quality of social capital affect managerial capability in both the private sector and the public sector. Managerial capability improves when social capital reduces information costs, transaction costs and risk, and helps to avoid moral hazard and adverse selection problems (Meier, 2002). Social capital also influences the quality and the rate of accumulation of other types of capital.

The recent work of Rodrik (1999) and Easterly (1999) shows that economic growth in general, and the ability to manage shocks (e.g. transition from planned to market economy) in particular, is the twin product of coherent public institutions and societies' ability to generate the so-called "middle-class

consensus"[2]. A higher share of income for the middle class is empirically associated with a higher income, higher growth, more education, better health, better infrastructure, better economic policies, less political instability, more social "modernization" and more democracy (Easterly, 1999). Further, managing risk, shocks, and opportunities is a key ingredient in the quest to achieve sustainable economic development. Lack of social capital has been claimed to be the main reason for slow GDP growth in post-socialist countries, given the amount of physical and human capital available at the start of the transition (Paldam, 2000). Also, social capital is important for poverty alleviation, as one of the defining features of being poor is that one lacks connections with the formal economy, including material and informational resources. Helping the poor to transcend their closed networks in order to access additional resources is one of the challenges of economic development (World Bank, 2003).

To research human capital and social capital as the interacting factors of economic development is rather complicated, as the complexity of relationships is very sophisticated and inconsistent. Good (respective to individual abilities and society's needs) education and strong health, that are important characteristics of human capital, are unquestionably presumptions for future economic growth. But at the same time, investments are needed to raise the level of human capital, and those investments require resources from both individuals and society. Investment in tomorrow is always related to reduced consumption today. Whether the society agrees to these investments depends on social cohesion[3], which is one of the most important characteristics of social capital at the level of society (Kaldaru and Tamm, 2003). Social cohesion is essential for generating the trust needed to implement reforms. People have to trust that the short-term losses that inevitably arise from

[2] Middle-class consensus is defined as a higher share of income for the middle class and a low degree of ethnic polarization (Easterly, 1999).

[3] Social cohesion is defined as the inclusiveness of a country's communities (Ritzen *et al*, 2000)

reforms will be more than offset by long-term gains (Ritzen *et al*, 2000).

Economic development in its broadest sense means an increase in society's total wealth, but the new value must be divided amongst the members of society. Whether the division is fair or not, affects social cohesion, When the distribution of resources is unfairly unequal, there exist parts of society whose opportunities to invest in their human capital are restricted. The inconsistent interconnection between social capital and potential economic development becomes evident even more clearly at the level of individuals. Individuals' abilities to use social relations for fulfilling the (economic) goals could have either a positive or negative effect on the economic development at the level of society. To soften the negative effect, a part of the resources must be used to ensure the effective performance of formal institutions (it is also one type of social capital).

However, it must be mentioned that the historically and cross-sectionally strong correlation between human capital acquisition and the levels of development has not yet been demonstrated empirically for social capital. No country has achieved sustained economic growth without a high level of education, but some highly developed economies have low and arguably declining levels of social capital (measured, for example, through rising crime rates, declining family and kinship cohesion, and falling trust in government and participation in political processes (Grootaert, 1998).

Lastly, we have to remember that casual sequence runs in several directions — from social capital to human capital to economic development; from social capital directly to economic development; from human capital to social capital; and also from economic development to human capital and social capital.

4. Social capital in the creation of human capital

Empirical studies on the relationship between human and social capital mainly emphasise the effect of social capital on the accumulation of human capital. Human capital (related to good education and strong health) is influenced mainly by civil (horizontal) social capital. Most of the research done in this field could be divided into three groups: (a) social capital and child's educational achievement, (b) income inequality and educational attainment, and (c) educational credentials and labour market success.

4.1. Social capital and child's educational achievement

Several studies have shown that social capital is an important determinant of educational achievement in children. In the work of Coleman (1988), it is hypothesized that the generation of human capital depends on a family's financial capital, the human capital of the parents, and the social capital — the relationship between parent and child — that allows a child to access the human and financial capital of the parents. Community human capital also helps generate human capital by providing a wider resource base from which the child can draw, and by providing a larger community to encourage educational achievement in the child. Coleman uses a log likelihood statistical estimation to determine the impact that family and community social capital have on the likelihood that the child will drop out of school. The statistical analysis shows that the amount of social capital that a child has access to does decrease the likelihood that the child will drop out of school (Coleman, 1988).

Teachman, Paasch and Carver (1996) also use a log likelihood model to determine how various measures of social capital affect the probability that children will drop out of school. In addition to including the human and financial capital available

to parents, their study measures the strength of intra and inter-family relationships, the strength of a family's relationship to the school, and the extent to which the family is tied to their community. The second study by the same authors seeks to determine how social, human, and financial capital all combine to produce human capital in children (Teachman *et al.*, 1997). The hypothesis is that social capital is a filter through which human and financial capital flow from the parents and the community to the child. Even if the parents of a child have large amounts of human and financial capital, if the family's store of social capital in the form of conducive family relationships and links to the community is low, the child will not be able to access the parents' other forms of capital. The authors used several measures of social capital that fall into three different broad categories: family dynamics, links to the community, and the number of times a child has changed schools. They found evidence that social capital combines with human and financial capital to produce better educational outcomes, by making other forms of capital more productive (Teachman *et al.*, 1997).

Israel and Beaulieu (1995) have examined the role of social capital in promoting educational achievement among American high school students and found that family social, human, and financial capital all had significant impacts on school dropout probability. Community social capital was found to lower dropout rates for students with varying levels of family social capital, indicating that community social capital has an effect that is at least to some degree independent of family social capital.

Buchel and Duncan (1998) have examined the German data about whether parental social activity — participation in sports, socializing with friends, volunteering, etc. — influence children's educational achievement (more precisely, whether a child will attend the Gymnasium or a vocational or trade school). The authors hypothesize that their parents' socializing will have an overall positive effect on children's educational achievement. Positive effects could come from increased information flow to both parents and children regarding jobs and

school. Another positive effect could be that children will develop better social skills as a result of their parents' socializing. Finally, inasmuch as socializing contributes to the happiness and wellbeing of the parents, it may have a positive effect on the child as well. Negative effects could stem from parents spending less time with their children as a result of socializing. Thus, parents invest less direct social capital into their children, and the child's educational performance suffers. The results of the model disclosed that certain social activities contribute to a child's educational skills, while others seem to detract from them. One surprising result was that the fathers' social activities had significant positive and negative effects, while mothers' social activities did not affect a child's educational achievement. Fathers' participation in active sports and volunteering had a positive impact on a child's educational achievement, while socializing with friends and helping relatives and friends had a negative impact.

4.2. Income inequality and educational attainment

Mayer (2001) estimated the effect of changes in income inequality on mean educational attainment and on the disparity in educational attainment between rich and poor children, focusing on changes in the overall dispersion of household income. She found that income inequality can affect educational attainment through (a) the incentives provided by higher returns to schooling, (b) the declining utility of family income, and (c) processes that are independent of a family's own income (e.g. changes in subjective feelings, changes in the political processes, and changes in economic segregation). Mayer found that the growth in inequality in the U.S. since 1970 did not have much affect on high school graduation, but it increased the overall number of years of schooling mainly by increasing college entrance rates. The growth in income inequality also contributed to an increase in inequality in educational attainment between rich and poor children, which is likely to

contribute to further income inequality in future generations. Lastly, an increase in expenditures per pupil at the elementary and secondary level, and lower college costs are positively associated with state inequality, and both raise educational attainment.

4.3. Educational credentials and labour market success

Much debate has also focused on the ways in which educational credentials reflect or contribute to an individual's stock of human, social and cultural capital. Lee and Brinton (1996) have examined (based on male university graduates in South Korea) the impact of a degree from an elite university on labour market success, and whether it is derived from the student's own characteristics or from the unique opportunities offered by elite institutions. They identified educational institutions as providing a basis for 'institutional social capital', which is different from the 'private social capital' gained through networks of family and friends. The roles of the two types of social capital are asserted to be linked to the specific recruitment practices of firms. Research suggests that non-university trained males and females are recruited through informal channels that rely more heavily on private social capital, while university trained males rely more on institutional social capital. The results found that institutional, rather than private, social capital leads to the best employment outcomes (Lee and Brinton, 1996). The prestige of the attended university was found to be an important factor for gaining employment in large, prestigious firms, whereas private social capital was found to play a minor role. The latter, however, does play an important role in gaining admittance to prestigious universities.

Montgomery (1992) examined how the size and composition of the social network affect the job search process. He found that individuals with larger networks and weaker ties are likely to receive more job offers and therefore have a higher reservation wage. Therefore, network size has a positive impact on the job

seeker's wage. However, contrary to the hypothesis, it appeared that jobs obtained through weak ties offer lower wages.

Finally, attempts have been made to provide a comprehensive and thorough analysis of how social values and norms are interrelated with educational institutions. The work of eight scholars (Montgomery, 1990) explores the relationship between core values in Asia and the Pacific and the educational systems that reflect them. The authors suggest that the most immediate and obvious source of social capital is formal and informal education that links generations of people. They examine how values influence and respond to education and how institutions affect values, both in the formal and informal arenas.

When interpreting and generalizing the empirical results descrybed in this section, one should keep in mind that the majority of the research has been done on country-level; therefore we should take into account that cultural aspects have probably influenced these results. Also, different research methods and data sources could give different outcomes. Furthermore, it should be emphasized that such studies often do not specifically attempt to measure different forms of social capital, and that some of the variables that are used as proxies for social capital may be inadequate. As a consequence, the results should be considered more as indicative of possible relationships between human and social capital rather than as definitive proof of the importance of social capital.

5. Human and social capital in the transition economies

The discussion around social capital and human capital in the transition economies is of particular importance for several reasons. The old communist regimes built physical and human capital, but destroyed social capital. Lack of social capital has been claimed to be the main reason for slow GDP growth in the post-socialist countries, given the amount of physical and human capital available at the outset of the transition. Recent

evidence indicates that these initially high human capital levels have rapidly decreased in most of the countries under consideration (Kaasa, 2003). This refers to the insufficient government expenditures on education and health care, and inappropriate measures to raise school enrolment (see Table 1). Most problematic is the situation in health care, which is characterized by increasing mortality (including suicides and crimes) and decreasing life expectancy, respectively. Also, negative population growth rates (accompanying the process of demographic transformation) and ageing put further tension on human capital creation.

Table 1.

Indicators of human capital in selected transition countries

Country	Annual population growth rate, %, 2000–2015	Probability at birth of not surviving to age 60, % of cohort, 1995–2000	Public expenditure per sec.school student, % of per capita GDP, 2000	Public expenditure on education, % of total government expenditure, 2000
Estonia	–1.1	23.8	30.8	…
Hungary	–0.5	21.9	18.7	14.1
Latvia	–1.59	23.7	25.2	…
Poland	–0.1	17.5	12.0	11.4
Slovakia	…	16.6	19.2	13.8
Bulgaria	–1.0	18.8	17.1	…
Russia	–0.6	30.1	20.5	…
Ukraine	–0.9	26.3	21.2	15.7
Moldova	…	26.4	28.7	15.0

Sources: *World Development Indicators 2003, Human Development Report 2002*.

Considering human development in general, all the EU accession countries have belonged to the group of high human

development since 2000. Other transition countries (except the less developed Moldova, Tajikistan and Yugoslavia) have a medium human development level. But even these countries are performing quite well, as their human development index (HDI) ranks higher than their GDP per capita — showing that their' human development situation is more favourable than wealth. Yet, the worsening life expectancy for the early 1990s and the deteriorating quality of education in some countries may cause further decline in their human development indexes, and thus affect their potential for economic growth (World Bank, 1999).

In addition to the low standard of living, there are severe problems with poverty and income distribution in many countries. But unequal income distribution has a negative effect on social cohesion, the latter influencing economic growth and particularly society's ability to manage shocks (Easterly, 1999). Only a few transition economies (Hungary, the Czech Republic and Slovakia) have succeeded in keeping inequality levels relatively low and will probably benefit from this in their future development.

Although the income distribution measures are fairly similar in many transitional and developed countries, the problems of the transition countries arise from differences in average income and poverty levels (see also Table 2 for data about selected countries). The output collapse in the post-Communist countries has partly been linked to the destruction of the old state-sector middle class, before a new middle class could be established. While developed economies are enjoying a high average income and low poverty levels, the income inequality of the transitional countries is combined with a low average income and high poverty levels. Another aspect of the problem of income distribution is that historically the people in the post-socialist countries were simply used to high equality (although this meant that everyone was equally poor), and now it is painful to get used to income differences, which inevitably exist in all market economies.

Table 2.

Interrelationships between income level, income inequality and poverty

Country	GDP per capita, USD PPP, 2000	Gini index, 1995–98	Income ratio, low 40% / high 20%, 1995–96	Population below income line $4 a day, 1996–99
EU accession countries	10,439	29.0	0.59	10.4
Estonia	10,066	35.4	0.44	18
Latvia	7,045	32.4	0.51	28
Slovakia	11,243	19.5	0.88	8
Other transition countries	6,133	35.6	…	…
Bulgaria	5,710	28.3	0.6	22
Russia	8,377	48.7	0.24	53
Moldova	…	34.4	0.45	82
EU countries	23,646	30.5	…	…
Finland	24,996	25.6	0.68	…
Germany	25,103	30.0	0.56	…
Portugal	17,290	35.6	0.44	…

Sources: *World Development Report 2000/2001, Human Development Report 2002* and the author's calculations.

Concerning the relations between income distribution and human capital, the recent empirical work by Kaasa (2003) has shown that human capital creation is one of the most important factors of income inequality. Figure 1 tries to give an insight into these relations, although the gaps in the data set do not allow presenting a more complete picture (e.g., interrelationships between the Gini index and school enrolment ratios, etc.).

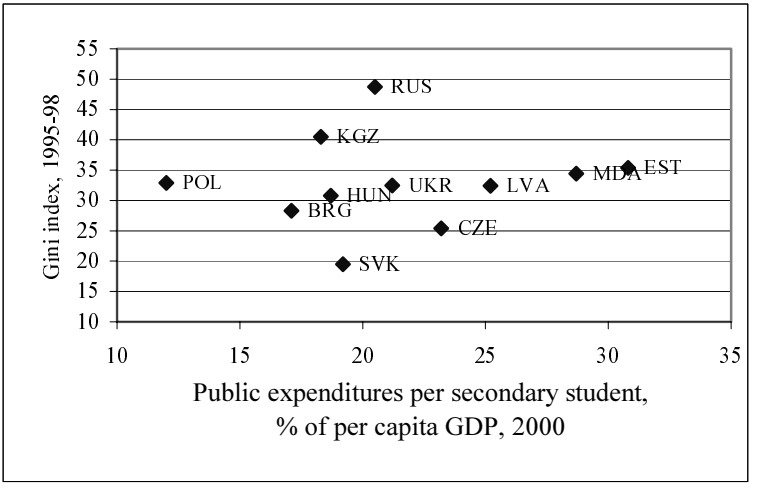

Figure 1. Income inequality and expenditures on education in selected transition countries (data from Appendixes 1 and 2).

As human capital creation has a decreasing trend in most transition economies, this can lead to a further increase in income inequality. These problems should be overcome by implementing an appropriate government policy. Otherwise, tensions will cause rising crime and personal distress (correlated to a higher average mortality rate), which in turn will destroy human capital. In addition to social inequality, there are other reasons for rather high crime rates in the transitional countries (see Tables in Appendix). Namely, the communist system needed a set of so-called grey/black networks to give it the necessary flexibility. These networks were tolerated, but controlled. When the communist regime ceased to exist, the official organizations collapsed, as did most of the control systems. This allowed a flourishing of the grey/black networks (which are one form of negative social capital), which can be harmful to the operations of a market economy (Paldam, 2000).

The weakness of institutional social capital in the transition countries can be best illustrated by the weakness of governance

and public administration, and by the widespread corruption which breeds distrust of public institutions (see Appendixes). For example, although a high percentage of people vote in national elections in the transition countries, most voters distrust the politicians and parties for whom they have voted. Empirical evidence shows that lower trust is positively correlated with lower foreign direct investments (FDI) inflow (see Figure 2), thus hindering future development perspectives in many transition countries.

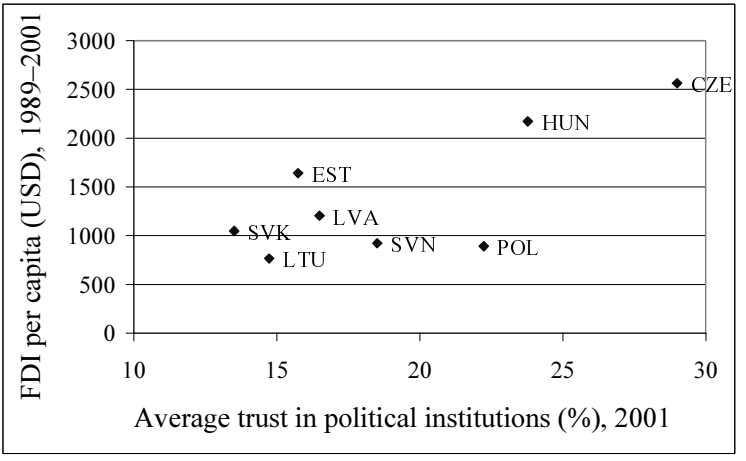

Figure 2. Relations between trust and FDI in EU accession countries (data from Appendix 1 and the author's calculations).

The level of trust is also closely correlated to the level of corruption (see Figure 3), which is found to be the best measure of negative social capital (Paldam, 2001). The poorer country, the more corrupt and less trustful it generally is. Empirical evidence shows that more than 60% of the cross-country variation in corruption can be explained by GDP per capita (*ibid*).

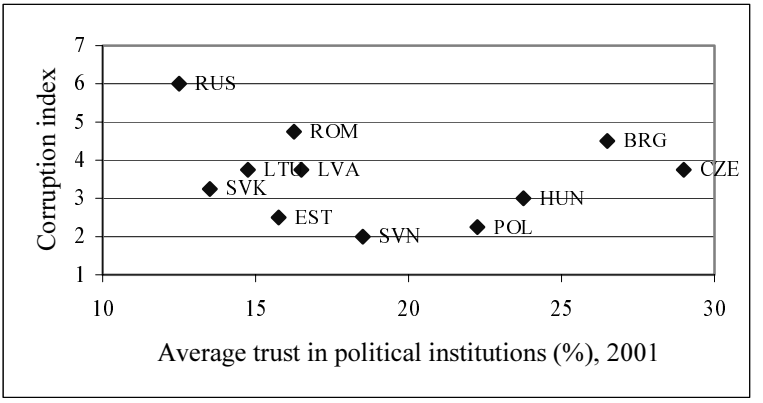

Figure 3. Corruption and trust levels in selected transition countries (data from *Nations in Transit*, 2002).

Among the EU candidate countries, the perception of corruption is highest in Lithuania and Latvia, where more than 90% of people regard most or almost all public officials as taking bribes and dispensing favors (Freedom House, 2002). Only four countries (Slovenia, Poland, Estonia and Hungary) were considered to have a low level of corruption in 2002 (*ibid*).

Despite the relatively high corruption level, many transition countries (EU candidates and Bulgaria) are classified by Freedom House as consolidated democracies and consolidated market economies, which means belonging to the highest-ranking group (Freedom House, 2002). Others are still in a transitional phase of development. However, the data show improvement in the field of governance and public administration, and also in macroeconomic policy.

CONCLUSIONS

Systematic theorizing about human capital and especially social capital as factors of economic development is comparatively recent. Human capital is related to good education and strong health, which make people economically more productive. Social capital, broadly defined as the norms and networks that enable collective action, also affects productivity. At the micro-economic level, this is seen primarily through the ways in which social capital improves the functioning of markets. At the macroeconomic level, institutions, legal frameworks, and the government's role in organizing production are seen as affecting macroeconomic performance. Also, it has been shown that key development outcomes are more likely to be associated with countries that are both socially cohesive and governed by effective public institutions.

It is rather complicated to research human capital and social capital as interacting factors of economic development. The key factor here is the unequal distribution of financial resources, which restricts poor people's opportunities to invest in their human capital. Inequality, in turn, affects social cohesion. Therefore, equal investments into educating both poor and rich children are necessary.

Empirical studies of the relationship between human and social capital mainly emphasise the effect of social capital in accumulating human capital. Human capital is influenced mainly by civil social capital. Social capital is an important determinant of educational achievement in children. There is considerable evidence to confirm that family, community and state involvement in education improves outcomes by decreasing the probability that the child may drop out of school. Unfortunately, it was not possible to make a deeper empirical analysis of these

relationships in the transitional countries, mainly due to lack of reliable and comparable data.

Given the importance of human and social capital as factors of economic development, the fundamental question is how to encourage their accumulation in the transition countries? Declining trends in human capital creation could be stopped by implementing an appropriate government policy, i.e. by increasing investments in education, health care, and job training. The process of social capital building is more complicated. In general, the logic of social capital warns against active interference; the best that governments can do is creating proper enabling environments for social capital generation and fighting against negative social capital, especially corruption.

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KOKKUVÕTE

Inimkapitali ja sotsiaalse kapitali seosed ning mõju siirderiikide majandusarengule

Nii Eesti kui ka teised siirderiigid on aktiivselt integreerumas maailmamajandusse. Paljud neist loodavad näiteks Euroopa Liiduga ühinedes saavutada kiirema majanduskasvu, mille aluseks on kaupade ja tootmistegurite vaba liikumine ning teised integratsiooniga kaasnevad positiivsed efektid. Samas võivad loodetud kiire kasvu saavutamist hakata takistama ebapiisavad investeeringud inimkapitali ning sotsiaalse kapitali madal tase siirderiikides. Käesoleva kirjutise eesmärgiks on analüüsida sotsiaalse ja inimkapitali omavahelisi seoseid ja nende mõju majandusarengule. Esmalt tuuakse lühidalt välja uurimisvaldkonna põhimõistete definitsioonid, pöörates põhitähelepanu sotsiaalse kapitali kui seni vähem uuritud arenguteguri defineerimisele ning sotsiaalse- ja inimkapitali mõistete erinevusele. Seejärel analüüsitakse nimetatud kapitaliliikide (koos-)mõju majandusarengule teoreetilisel tasemel. Järgneb ülevaade varasematest uurimustest, mis käsitlevad sotsiaalse kapitali rolli inimkapitali kujunemisel. Artikli viimane osa hõlmab siirderiikide probleeme majandusarengu tagamiseks vajaliku sotsiaalse ja inimkapitali loomisel.

Inimkapital on seotud hea hariduse ja tugeva tervisega; kitsamalt defineeritakse inimkapitali kui inimeste teadmisi, oskusi ja kogemusi, mis suurendavad inimtöö tootlikkust. Sotsiaalne kapital hõlmab ühiskonnas ja gruppides kehtivaid norme, reegleid ja usaldust ning institutsioone ja mitteformaalseid võrgustikke, mis võimaldavad kollektiivset tegutsemist. Mõlemad kapitaliliigid on olulised jätkusuutliku majandus- ja inimarengu tagamiseks ning vaesuse leevendamiseks.

Sotsiaalne kapital toimib teatud filtrina, mis vahendab ühiskonna ja lapsevanemate sotsiaalse ja finantskapitali jõudmist lasteni. Paljud uurimused näitavad, et sotsiaalne kapital mõjutab positiivselt koolis edasijõudmist ning noorte edasisi valikuvõimalusi tööturul. Teisalt takistab paljude laste ja noorte juurdepääsu kvaliteetsele haridusele sissetulekute madal tase ja ebavõrdne tulujaotus siirderiikides. Viimane mõjutab omakorda ühiskonna sotsiaalset sidusust, mis on üks olulisemaid sotsiaalse kapitali avaldumisvorme ühiskonna tasandil. Sotsiaalse kapitali vähesust siirderiikides iseloomustab ka madal haldussuutlikkus, vähene usaldus poliitiliste institutsioonide vastu ning kõrge korruptsioonitase. Kõik need näitajad on omakorda tihedalt seotud riigi üldise arengutasemega.

Kuna statistika kohaselt on ka algselt kõrge inimkapitali tase hakanud siirderiikides alanema, siis on väga oluline efektiivsete majanduspoliitiliste meetmete rakendamine. Eelkõige on vajalikud täiendavad investeeringud haridusse ning meetmed varandusliku kihistumise ja korruptsiooni pidurdamiseks.

Appendix 1

Selected indicators of human capital, social capital and economic development in the EU accession countries

	CZE	EST	HUN	LVA	LTU	POL	SVK	SVN
GDP and growth								
GDP per capita, PPP US$, 2000	13,991	10,066	12,416	7,045	7,106	7,045	11,243	17,367
Cumulative change in real GDP, 1990–97, index 1990=100	91.4	83.3	93.2	59.0	51.7	125.2	97.4	104.1
FDI per capita, USD, 1989–2001	2,570	1,637	2,177	1,200	771	890	1,050	925
Shadow economy, % of GDP, 1996	5–7.5	2.0	12.0	14.0	14.0	6.0	10.8	9.5
Human development								
Human development index rank, 2000	33	42	36	53	49	37	36	29
HDI rank change, compared to 1990	–4	…	5	–4	–7	8	–3	–3
Population avg. annual growth rate, %, 2000	–0.05	–1.28	–0.46	–1.59	–0.11	–0.01	0.12	0.13
Total fertility rate, births per woman, 2000	1.15	1.24	1.29	1.16	1.27	1.40	1.34	1.22
Probability at birth of not surviving to age 60, % of cohort, 1995–2000	13.7	23.8	21.9	23.7	21.6	17.5	16.6	13.8
Education and employment								
People lacking functional literacy skills, % age 16–65, 1994–98	15.7	…	33.8	…	…	42.6	…	42.2
Long-term unemployment, % of labour force, 2000	4.4	…	3.1	…	…	6.1	10.2	…
Expenditures per sec. school student, % of GDP per capita, 2000	23.2	30.8	18.7	25.2	…	12.0	19.2	…

	CZE	EST	HUN	LVA	LTU	POL	SVK	SVN
Poverty and crime								
Population below income line $4 a day, 1996–99	<1	18	<1	28	17	10	8	<1
Gini index, 1995–96	25.4	35.4	30.8	32.4	32.4	32.9	19.5	26.8
Lowest40% / highest20%, 1995/96	0.69	0.44	0.53	0.51	0.51	0.5	0.88	0.64
Registered crime total, 1996 index, 1989=100	328	198	213	138	217	161	210	92
Suicides per 100,000 people, 1993–98	15.4	39.2	32.4	35.7	43.7	14.4	…	31
Trust in political institutions								
Voter turnout at latest elections, %, 1996–98	74	57	56	72	53	48	84	74
Parliament, % trusted, 2001	20	10	16	8	9	20	9	10
Parties, % trusted, 2001	22	8	14	7	8	8	9	8
Courts, % trusted, 2001	34	26	36	24	16	25	15	26
Police, % trusted, 2001	40	19	29	27	26	36	21	30
Corruption index (scale 1–7), 2000	3.75	2.50	3.00	3.75	3.75	2.25	3.25	2.00

Sources: *World Development Report* 2000/2001, *Human Development Report* 2002, *World Development Indicators* 2002–2003, *Nations in Transit* 2002.

Appendix 2

Selected indicators of human capital, social capital and economic development in the other transition countries

	RUS	BRG	ROM	ARM	KAZ	UKR	TKM	KGZ	MDA
GDP and growth									
GDP per capita, PPP US$, 2000	8,377	5,710	6,423	2,559	5,871	3,816	3,956	…	…
Cumulative change in real GDP, 1990–97, index 1990=100	58.2	70.6	91.4	63.0	61.8	42.0	92.5	56.2	40.1
Average inflation rate, %, 1999–2001	42.8	6.2	41.9	1.0	10.0	21.1	14.6	20.7	27.2
FDI per capita, USD, 1989–2001	67	491	356	213	741	79	189	101	116
Human development									
Human development index rank, 2000	60	62	63	76	79	80	87	102	105
Annual population growth rate, %, 2000–2015	–0.6	–1.0	–0.3	…	–0.1	–0.9	1.6	…	…
Population under age 15, % of total, 2000	18.0	15.7	18.3	23.7	27.0	17.8	37.6	…	…
Probability at birth of not surviving to age 60, % of cohort, 1995–2000	30.1	18.8	21.6	14.7	31.6	26.3	27.6	26.4	27.4
Expenditures per sec. school student, % of GDP per capita, 2000	20.5	17.1	…	22.2	…	21.2	…	18.3	28.7

	RUS	BRG	ROM	ARM	KAZ	UKR	TKM	KGZ	MDA
Poverty and crime									
Population below income line $4 a day, 1996–99	53	22	23	…	62	25	…	88	82
Gini index, 1995–98	48.7	28.3	28.2	…	35.4	32.5	40.8	40.5	34.4
Lowest40% / highest20%, 1995/96	0.24	0.6	0.6	…	0.43	0.5	0.34	0.35	0.45
Registered crime total, 1996 index, 1989=100	162	348	684	137	137	201	67	146	86
Suicides per 100,000 people, 1993–98	43.3	17.5	12.7	2.3	30.7	23.7	5.75	10.7	…
Institutional quality									
Corruption index (scale 1–7)	6.0	4.5	4.75	5.75	6.25	6.0	6.25	6.0	6.25
Democratization score (scale 1–7)	4.81	3.0	3.31	4.56	5.88	4.69	6.94	5.38	4.19
Voter turnout at latest elections, %, 1996–99	62	68	76	52	63	70	99	61	…

Sources: *World Development Report* 2000/2001, *Human Development Report* 2002, *World Development Indicators* 2002–2003, *Nations in Transit* 2002.